Appendix A

Initial Study, Notice of Preparation, and Scoping Comments

Notice of Preparation of a Draft Environmental Impact Report and Notice of a Public Scoping Meeting

Date: September 18, 2023

To: State Agencies, Responsible Agencies, Local and Public Agencies, and Interested Parties

From/Lead Agency: Town of Apple Valley, Planning Department

Project Applicant: Synergy Consulting CA
410 Patti Ann Woods Drive
Henderson, NV 89002

Subject: Notice of Preparation of a Draft Environmental Impact Report and Notice of a Public Scoping Meeting for the Inland Empire North Logistics Center Apple Valley Project

This Notice of Preparation (NOP) has been prepared to notify agencies and interested parties that the Town of Apple Valley (Town), as lead agency, is commencing preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) to evaluate the potential environmental effects associated with implementation of the Inland Empire North Logistics Center Apple Valley Project (Project).

The Town is requesting input from interested individuals, organizations, and agencies regarding the scope and content of the environmental analysis to be included in the upcoming EIR. In accordance with CEQA, the Town requests that agencies provide comments on the environmental issues related to the statutory responsibilities of their particular agency. This NOP contains a description of the Project, its location, and a preliminary determination of the environmental resource topics to be addressed in the EIR.

Project Location

The approximately 177.74-acre Project site is in the northern part of the Town, which is within the Victor Valley Region of San Bernardino County (Figure 1, Project Location). The Project site is southeast of Interstate (I) 15, south of Norco Road, north of Falchion Road, and north of Apple Valley Road. The Project site consists of one Assessor's Parcel Number: 0472-031-08. Specifically, the Project site is in Section 26, Township 6N, Range 4W, as depicted on the U.S. Geological Survey Apple Valley North and Victorville, California 7.5-minute topographic quadrangle maps. Regional access to the Project site is provided via I-15, immediately adjacent to the northeast of the Project site.

Project Summary

The Project would include construction and operation of two industrial/warehouse buildings totaling approximately 2,604,446 square feet on approximately 177.74 acres (Figure 2, Site Plan). Building 1, the northernmost building, would be approximately 1,507,326 square feet, and Building 2, the southernmost

building, would be approximately 1,097,120 square feet. The Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

Potential Environmental Impacts of the Project

An Initial Study has been prepared to accompany this NOP and to inform the scope and content of the EIR. As discussed in the Initial Study, the Project could have a potentially significant impact and/or cumulatively significant impact in the following topic areas, which will be addressed in the forthcoming EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Public Services
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

The EIR will also address all other CEQA-mandated topics, including cumulative impacts, growth-inducing impacts, significant irreversible changes, and Project alternatives.

The Project was found to not have a potentially significant impact in the following topic areas, and therefore will not be addressed in the forthcoming EIR:

Agriculture

Geology related to:

- Alquist-Priolo Fault Zones, strong seismic ground shaking, liquefaction, landslides
- soil erosion and/or loss of top-soil
- unstable soils
- expansive soils
- soils incapable of supporting the use of septic tanks or alternative waste water disposal system

Hazards related to:

- proximity of the project to a school
- project site located on a hazardous materials site
- project site located within an Airport Land Use Compatibility Plan
- wildland fire

Hydrology related to:

- flood hazard, tsunami, or seiche zone

Land Use related to:

- physically dividing an established community

Population and Housing related to:

- inducing a substantial unplanned population
- displacing a substantial number of existing people, necessitation the construction of replacement housing

Public Services related to:

- schools
- parks
- other facilities

Recreation related to:

- increase the use of existing parks or include recreational facilities
- the expansion of recreational facilities

Public Scoping Comment Period and Meeting

Public Scoping Comment Period

The Town established a 30-day public scoping period from **September 18, 2023, through October 17, 2023**. During the scoping period, the Town's intent is to disseminate Project information to the public and solicit comments from agencies, organizations, and interested parties, including nearby residents and business owners, regarding the scope and content of the environmental information to be included in the EIR, including mitigation measures or Project alternatives to reduce potential environmental effects.

During this period, this NOP and the Project's Initial Study may be accessed electronically at the following website:

https://www.applevalley.org/services/planning-division/environmental

This NOP and the Project's Initial Study are also available for review in person at Apple Valley Town Hall (Planning Department, 14955 Dale Evans Parkway, Apple Valley, California 92307) and at the San Bernardino County Library (14901 Dale Evans Parkway, Apple Valley, California 92307).

Public Scoping Meeting

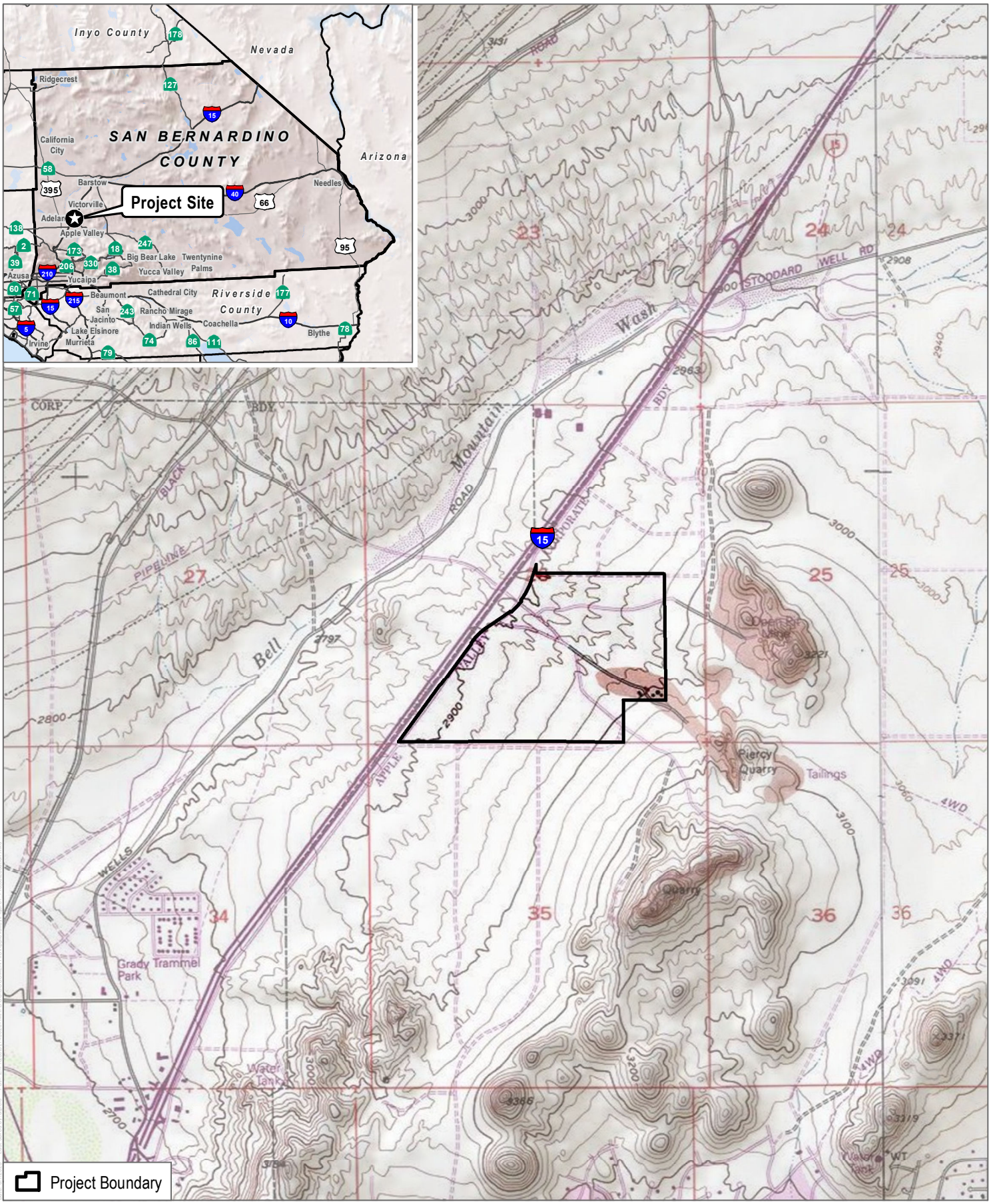
During the 30-day public scoping period, the Town will hold a public scoping meeting on **October 5, 2023, at 5:00 p.m.** at Apple Valley Town Hall, 14955 Dale Evans Parkway, Apple Valley, California 92307. The public scoping meeting will be available online at **https://bit.ly/3ZbNErF**. The public scoping meeting will provide an additional opportunity to receive and disseminate information, identify potential environmental issues of concern, and discuss the scope of analysis to be included in the EIR. The scoping meeting is not a public hearing, and no decisions on the Project will be made at this meeting. It is an additional opportunity for agencies, organizations, and the public to provide comments in person on what environmental issues should be addressed in the EIR. All public agencies, organizations, and interested parties are encouraged to attend and participate in this meeting.

Scoping Comments

All scoping comments must be received in writing by **5:00 p.m. on October 17, 2023**, which marks the end of the 30-day public scoping period. All written comments should indicate an associated contact person for the agency or organization, if applicable, and reference the Project name in the subject line. Pursuant to CEQA, responsible agencies are requested to indicate their statutory responsibilities in connection with the Project when responding. mail or email comments and direct any questions to the following contact person:

Daniel Alcayaga, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, California 92307
Phone: (760) 240-7000, Ext. 7200
Email: dalcayaga@applevalley.org

Attachments:
Figure 1, Project Location
Figure 2, Site Plan



SOURCE: USGS 7.5-minute Series Victorville Quadrangle

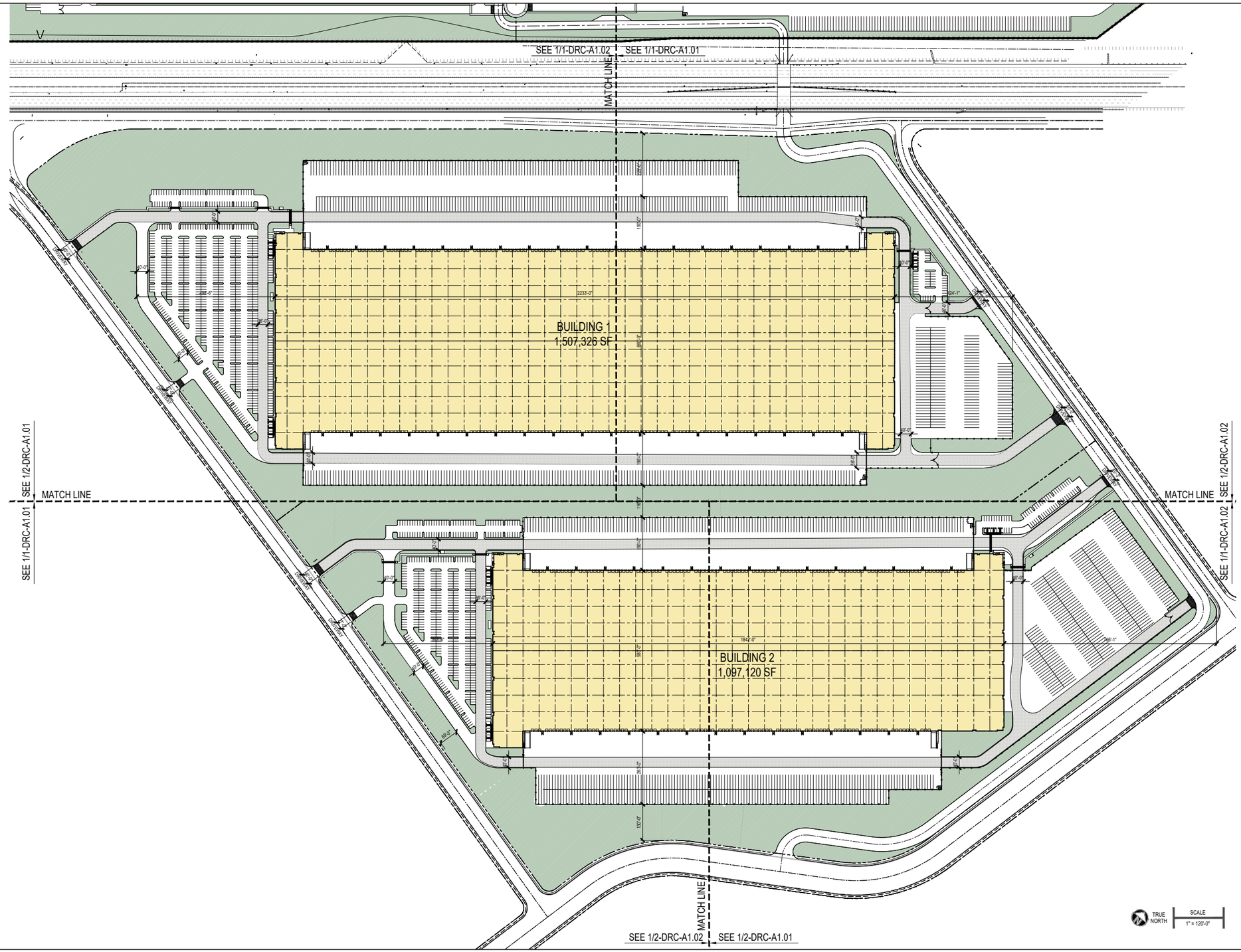
DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Inland Empire North Logistics Center Apple Valley NOP



PROJECT DATA

Apple Valley

SITE AREA		4,134,712	SF
		94.92	Acres
BUILDING AREA			
1ST FLOOR	WAREHOUSE	1,487,326	SF
	OFFICE	10,000	SF
1ST TOTAL		1,497,326	SF
2ND FLOOR	OFFICE	10,000	SF
TOTAL		**1,507,326**	SF
PROJECT FACT			
	F.A.R		0.36
	CLEAR HEIGHT		42'
	CONTRUCTION TYPE		IHB
	OCCUPANCY		S-1 AND B
	FIRE SPRINKLER		ESFR SYSTEM
ZONING			
ZONE ORDINANCE		REGIONAL COMMERCIAL (C-R)	
SET BACK		LANDSCAPE	BLDG
	FRONT	15'	45'
	STREET SIDE	0	30'
	REAR	0'	30'
PARKING REQ.			
	AUTO PARKING		
	SIZE	9'X19'	
	WAREHOUSE	1/500 SF 15T 10K	20
	WAREHOUSE	1/1,000 SF ABV 10K	1498
	TOTAL		1518
	Office included with 25% of GFA		
PARKING PROVIDED			
	AUTO PARKING		SW19
	STANDARD		827
	ADA		17
	EV READY		98
	TOTAL		942
	DOCK DOORS		264
	TRAILER		144

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINES UNLESS NOTED OTHERWISE.
2. ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH A SMART AUTOMATIC IRRIGATION SYSTEM.
3. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING SITE DRAINAGE, TOPOGRAPHY AND UTILITIES.
4. FOR PAVING SECTIONS, CONCRETE CURBS, SWALES AND GUTTERS SEE CIVIL DRAWINGS.
5. PROPERTY LINE ARE REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR HORIZONTAL CONTROL.
6. LANDSCAPE AREAS SHALL BE DELINEATED WITH A MIN. 6" CONCRETE CURB.

KEYNOTES

1. SITE PAVING WITH HEAVY BROOM FINISH. SEE CIVIL FOR PAVEMENT THICKNESS
2. DECORATIVE PAVEMENT AT ENTRY - COLORED CONCRETE W/ SAW CUT PATTERN
3. PRIMARY BUILDING
4. PEDESTRIAN CONCRETE WALKWAY WITH MEDIUM BROOM FINISH
5. NOT USED.
6. DECORATIVE WROUGHT IRON FENCE 8'H FT, BLACK
7. 8'H BLACK PAINTED VEHICULAR ROLLING GATE WITH KNOX PAD LOCK. MANUALLY OPERATED. PROVIDE CONDUITS FOR FUTURE OPERATOR
8. 5'-6" X 6' X 4" THICK CONCRETE LANDING PAD AT ALL EXTERIOR MANDOORS WITH MEDIUM BROOM FINISH.
9. FUTURE MONUMENT SIGN WITH ELEC. CONDUITS
10. EMPLOYEE BREAK AREA, TENANT FURNISHED UNLESS NOTED OTHERWISE
11. TRASH ENCLOSURE
12. PUMP HOUSE
13. EXTERIOR CONCRETE STAIR
14. APPROXIMATE LOCATION OF ELEC. TRANSFORMER WITH BOLLARD PROTECTION AND LANDSCAPE SCREENING
15. NOT USED.
16. SHORT TERM - BICYCLE RACK 8% OF PARKING STALL
17. DESIGNATED SMOKING AREA - 25' AWAY FROM ANY ENTRY

LEGEND

- STANDARD PARKING STALL 9' X 19'
- CLEAN AIR, VANPOOL / EV 9' X19'
- ADA PARKING VAN 12' X 19' OR STANDARD 9' X 19' WITH 5' CLR AISLE
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL. MAX 5% SLOPE AND MAX 2% CROSS SLOPE WITH 48" MIN. CLEAR, UNLESS NOTED OTHERWISE WITH ADA ACCESSIBLE RAMP
- LANDSCAPE, SEE LANDSCAPE DRAWINGS

SOURCE: LHA, May 2023

FIGURE 2

Site Plan

Apple Valley Stoddard Wells Warehouse Project NOP

DUDEK

Initial Study

Inland Empire North Logistics Center Apple Valley Project

AUGUST 2023

Prepared for:

TOWN OF APPLE VALLEY
14955 Dale Evans Parkway
Apple Valley, California 92307
Contact: Daniel Alcayaga, Planning Manager

Prepared by:

DUDEK

38 N. Marengo Avenue
Pasadena, California 91101
Contact: Ronelle Candia, Project Manager

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CAL FIRE	California Department of Forestry and Fire Protection
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
I	Interstate
Project	Inland Empire North Logistics Center Apple Valley Project
Town	Town of Apple Valley

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1 Introduction

1.1 Project Overview

The Town of Apple Valley (Town) received an application from Synergy Consulting CA (Project Applicant) for the development of the Inland Empire North Logistics Center Apple Valley Project (Project). The Project includes the construction and operation of approximately 2,604,446 square feet of industrial/warehouse space on approximately 177.74 acres of vacant land generally southeast of Interstate (I) 15, north of Apple Valley Road, south of Norco Road, and north of Falchion Road. Building 1, the westernmost building, would be approximately 1,507,326 square feet and Building 2, the easternmost building, would be approximately 1,097,120 square feet. The Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

1.2 California Environmental Quality Act Compliance

The California Environmental Quality Act (CEQA) serves as the main framework of environmental law and policy in California. CEQA emphasizes the need for public disclosure and identifying and preventing environmental damage associated with proposed projects. Unless a project is deemed categorically or statutorily exempt, CEQA is applicable to any project that must be approved by a public agency in order to be processed and established. The proposed Project considered herein does not fall under any of the statutory or categorical exemptions listed in the 2022 CEQA Statute and Guidelines (California Public Resources Code, Section 21000 et seq.; 14 CCR 15000 et seq.); therefore, it must meet CEQA requirements.

The intent of this document is to provide an overview and analysis of the environmental impacts associated with the proposed Project by the Town, acting as the lead agency. The document is accessible to the public, in accordance with CEQA, in order to receive feedback on the Project's potential impacts, as well as the scope of the Project's Environmental Impact Report (EIR) (14 CCR Section 15121[a]).

1.3 Availability of the Notice of Preparation and Initial Study

The Initial Study and Notice of Preparation for the Project are being distributed directly to agencies, organizations, and interested groups and persons during the scoping period. The Initial Study and Notice of Preparation are also available for review in person at Apple Valley Town Hall (Planning Department, 14955 Dale Evans Parkway, Apple Valley, California 92307) and at the San Bernardino County Library (14901 Dale Evans Parkway, Apple Valley, California 92307). These documents are also available on the Town's website at https://www.applevalley.org/services/planning-division/environmental.

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2 Project Description

2.1 Project Location

The approximately 177.74-acre Project site is in the northern part of the Town, which is within the Victor Valley Region of San Bernardino County (Figure 1, Project Location). The Project site is north of Falchion Road, east of I-15, and south of Norco Road. The Project site consists of one Assessor's Parcel Number 0472-031-08. Specifically, the Project site is in Section 26, Township 6N, Range 4W, as depicted on the U.S. Geological Survey Apple Valley North and Victorville, California 7.5-minute topographic quadrangle maps. Regional access to the Project site is provided via I-15, immediately adjacent to the northeast of the Project site.

2.2 Environmental Setting

Town of Apple Valley

The Town is approximately 72 square miles in the Victor Valley region of San Bernardino County. The Town is bordered by the City of Victorville to the west, the City of Hesperia to the southwest, and unincorporated County to the north and east.

Existing Project Site

The approximately 177.74-acre, irregularly shaped project site consists of vacant, undeveloped land, and a series of small rolling hills. The Project site is bordered to the west by I-15, which runs northeast/southwest, and to the southeast by the CalPortland Cement Plant, which gives the site its roughly trapezoidal shape. According to the Town's General Plan, the land use and zoning designations for the project site are Regional Commercial (C-R) (Town of Apple Valley 2015, 2019) (see Figure 2, Land Use Designations, and Figure 3, Zoning Designations).

Surrounding Land Uses

Land uses surrounding the Project site primarily consist of vacant land. Specific land uses in the immediate vicinity of the Project site include the following:

- **North:** Norco Street and vacant land
- **East:** CalPortland Cement Plant
- **South:** Falchion Road and Apple Valley Road
- **West:** I-15 and Outer Highway 15 S Road

2.3 Project Characteristics

The Project would include construction of two industrial/warehouse buildings and associated improvements on 177.74 acres of vacant land (see Figure 4, Site Plan). Building 1, the westernmost building, would be approximately 1,507,326 square feet and Building 2, the easternmost building, would be approximately 1,097,120 square feet. The Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

On-Site and Off-Site Improvements

The Project would include improvements along Outer Highway 15 S, Falchion Road, Norco Street, and Apple Valley Road, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse buildings and throughout the Project site.

Site Access and Circulation

Access to the Project site would be provided via Norco Street on the northern boundary of the project site, as well as driveways off Falchion Road and Norco Street. Paved passenger vehicle parking areas would be provided within areas north, south, east and west of Buildings 1 and 2, and tractor-trailer stalls and loading docks would be surrounding Buildings 1 and 2 to the north, east and west. In total, the Project would provide approximately 264 loading dock positions, approximately 546 tractor-trailer stalls, roughly 940 passenger vehicle spaces.

The Project would include several improvements to the local circulation system, including improvements to Falchion Road and Outer Highway 15 and the construction of Norco Road and Apple Valley Road. These improvements would occur along the immediate frontage of the Project. The ultimate design of these roadway improvements is not yet available and would be determined by the Town's Engineering Department. To account for all possible development scenarios that may occur, it is assumed that the proposed roadway improvements could occur within the entirety of the planned rights-of-way as identified on the Town's Circulation Element.

In addition, the Project would involve a General Plan Amendment to modify the Town's Circulation Element to realign Apple Valley Road (see Figure 5, Proposed General Plan Amendment to Circulation Element). Apple Valley Road is designated as a Major Divided Arterial roadway with a 128-foot right-of-way. From the Project site's southern boundary at Falchion Road, Apple Valley Road has not yet been constructed but is planned to traverse north through the Project site to Stoddard Wells Road. The proposed General Plan Amendment would shift the proposed alignment slightly to the east boundary of the project site where it would continue north. The Project would involve the construction of this roadway along the Project's frontage between Falchion Road and Norco Street. The ultimate construction of Apple Valley Road north of the Project site between Norco Street and Stoddard Wells Road would be constructed at a future time by the Town or future developers and subject to additional environmental review pursuant to CEQA. It is not necessary for Project implementation and is unrelated to the Project.

Utility Improvements

Given the vacant, undeveloped nature of the Project site, both wet and dry utilities, including domestic water, sanitary sewer, storm drainage, and electricity, would need to be extended onto the Project site.

Operations

Tenants for the Project have not been identified and the two industrial warehouse buildings are considered speculative. Business operations would be expected to be conducted within the enclosed buildings, with the exception of ingressing and egressing of trucks and passenger vehicles accessing the site, passenger and truck parking, the loading and unloading of trailers within designated truck courts/loading area, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week. Cold storage would not be permitted in any of the proposed buildings.

Construction, Phasing, and Schedule

Construction was assumed to commence in January 2024 and last approximately 22 months. On-site facility development and off-site improvements were accounted for within this schedule. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Site preparation: January 2024–October 2024
- Mass grading: October 2024–December 2024
- Building construction: December 2024–September 2025
- Architectural coating: June 2025–September 2025
- Fine grading: August 2025–September 2025
- Concrete laydown: September 2025–November 2025

Construction activities would include site preparation (e.g., vegetation clearing, grubbing, tree removal, discing), grading, building construction, paving, and architectural coating. The Project is assumed to have a balanced cut and fill.

2.4 Project Approvals

At this time, it is anticipated that that the Project would require approval of the Site Plan Review and the General Plan Amendment, and approval of the Project and certification of the EIR. This list is preliminary and may not be comprehensive. Subsequent non-discretionary approvals (which would require separate processing through the Town) would include, but may not be limited to, a grading permit, building permits, and occupancy permits.

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3 Initial Study Checklist

1. **Project title:**

   Inland Empire North Logistics Center, Apple Valley Project

2. **Lead agency name and address:**

   Town of Apple Valley, Planning Division
   14955 Dale Evans Parkway
   Apple Valley, California 92307

3. **Contact person and phone number:**

   Daniel Alcayaga, Planning Manager
   Town of Apple Valley
   14955 Dale Evans Parkway
   Apple Valley, California 92307
   (760) 240-7000, ext. 7200

4. **Project location:**

   The approximately 177.74-acre Project site is in the northern part of the Town, which is within the Victor Valley Region of San Bernardino County. The Project site is on the northeast quadrant of I-15 and Falchion Road. The Project site is north of Falchion Road, south of Norco Street, and east of I-15 and Outer Highway 15 S Road. The Project site consists of Assessor's Parcel Number 0472-031-08. Specifically, the Project site is in Section 26, Township 6N, Ranges 4W, as depicted on the U.S. Geological Survey Apple Valley North and Victorville, California 7.5-minute topographic quadrangle maps. Regional access to the Project site is provided via I-15, immediately adjacent to the northeast of the Project site.

5. **Project sponsor's name and address:**

   Synergy Consulting CA
   410 Patti Ann Woods Drive
   Henderson, Nevada 89002

6. **General plan designation:**

   Regional Commercial (C-R)

7. **Zoning:**

   Regional Commercial (C-R)

8. **Description of project. (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary):**

   The Project includes the construction and operation of approximately 2,604,446 square feet of industrial/warehouse buildings on approximately 177.74 acres of vacant land generally east of I-15, south

of Stoddard Wells Road, and north of Falchion Road. Building 1, the easternmost building, would be 1,507,326 square feet, and Building 2, the westernmost building, would be 1,097,120 square feet. In total, the Project would provide two buildings totaling in 2,604,446 square feet of industrial/warehouse space and associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

The Project would include several improvements to the local circulation system, including improvements to Falchion Road and Outer Highway 15 and the construction of Norco Road and Apple Valley Road. These improvements would occur along the immediate frontage of the Project. The ultimate design of these roadway improvements is not yet available and would be determined by the Town's Engineering Department. To account for all possible development scenarios that may occur, it is assumed that the proposed roadway improvements could occur within the entirety of the planned rights-of-way as identified on the Town's Circulation Element.

In addition, the Project would involve a General Plan Amendment to modify the Town's Circulation Element to realign Apple Valley Road. Apple Valley Road is Major Divided Arterial roadway with a 128-foot right-of-way. From the Project site's southern boundary at Falchion Road, Apple Valley Road has not yet been constructed but is planned to traverse north through the Project site to Stoddard Wells Road. The proposed General Plan Amendment would shift the proposed alignment slightly to the east boundary of the project site where it would continue north. The Project would involve the construction of this roadway along the Project's frontage between Falchion Road and Norco Street. The ultimate construction of Apple Valley Road north of the Project site between Norco Street and Stoddard Wells Road would be constructed at a future time by the Town or future developers and subject to additional environmental review pursuant to CEQA. It is not necessary for Project implementation and is unrelated to the Project.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

Land uses surrounding the Project site primarily consist of vacant land. Specific land uses in the immediate vicinity of the Project site include the following:

- **North:** Norco Street and vacant land
- **East:** CalPortland Cement Plant
- **South**: Falchion Road and Apple Valley Road
- **West**: I-15 and Outer Highway 15 S Road

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

No discretionary approvals from other outside agencies are anticipated at this time.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

In accordance with California Assembly Bill 52 requirements, the Town will initiate Tribal consultation, the results of which will be summarized in the Draft EIR.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Energy
☒ Geology and Soils	☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☒ Hydrology and Water Quality	☒ Land Use and Planning	☒ Mineral Resources
☒ Noise	☐ Population and Housing	☒ Public Services
☐ Recreation	☒ Transportation	☒ Tribal Cultural Resources
☒ Utilities and Service Systems	☒ Wildfire	☒ Mandatory Findings of Significance

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

3.1 Aesthetics

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**AESTHETICS** – Except as provided in Public Resources Code Section 21099, would the project**:**				
a)	Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☒	☐	☐	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☒	☐	☐	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

a) ***Would the project have a substantial adverse effect on a scenic vista?***

b) ***Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***

c) ***In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?***

d) ***Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?***

Potentially Significant Impact. The Project would include construction of two industrial/warehouse buildings and associated improvements on currently undeveloped, vacant land. In total, the Project would provide two buildings totaling in 2,604,446 square feet of industrial/warehouse space and associated improvements, including loading docks, truck and vehicle parking, and landscaped areas. Due to this proposed increase in on-site development intensity, there is a potential for the Project to affect public views of scenic vistas or otherwise alter the existing visual character or quality of public views, despite the fact that the Project must be designed and constructed in accordance with the design standards set forth in the

Town's Development Code. In addition, implementation of the Project would include the installation of new nighttime lighting, which could potentially adversely affect nighttime views in the area, including drivers on I-15. Such lighting would include lighting for on-site parking and facilities, and light generated by vehicles entering and existing the Project site. Therefore, impacts are potentially significant, and these issues will be analyzed in the Draft EIR.

3.2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. According to the California Department of Conservation's California Important Farmland Finder, the Project site contains grazing land (CDOC 2016). Grazing land is described as land on which the existing vegetation is suited to the grazing of livestock. Grazing land does not include land designated or previously designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (collectively "Important Farmland"). Therefore, no impacts would occur, and no further analysis is proposed for the Draft EIR.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. According to the Town's General Plan EIR, the Project site is not located on or adjacent to any lands under a Williamson Act contract (Town of Apple Valley 2009a). In addition, the Project site and surrounding area are not zoned for agricultural uses, but instead for Regional Commercial uses (Town of Apple Valley 2019). As such, implementation of the Project would not conflict with existing zoning for agricultural use or land under a Williamson Act contract. Therefore, no impacts would occur, and no further analysis is proposed for the Draft EIR.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. According to the Town's Zoning Map, the Project site is not located on or adjacent to forestland, timberland, or timberland zoned timberland production (Town of Apple Valley 2019). Therefore, no impacts would occur, and no further analysis is proposed for the Draft EIR.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site is not located on or adjacent to forestland. No private timberlands or public lands with forests are located in the Town. Therefore, no impact would occur, and no further analysis is proposed for the Draft EIR.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The Project site is not on or adjacent to any parcels identified as Important Farmland or forestland (CDOC 2016). In addition, the Project would not involve changes to the existing environment that would result in the indirect conversion of Important Farmland or forestland located away from the Project site. Therefore, no impacts would occur, and no further analysis is proposed for the Draft EIR.

3.3 Air Quality

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**AIR QUALITY** – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

a) ***Would the project conflict with or obstruct implementation of the applicable air quality plan?***

b) ***Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?***

c) ***Would the project expose sensitive receptors to substantial pollutant concentrations?***

d) ***Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?***

Potentially Significant Impact. Project construction and operations would involve activities that would generate both short-term and long-term criteria pollutant and other emissions. Further air quality analysis is required to determine whether the Project could potentially result in any adverse effects related to air quality. Therefore, these issues will be analyzed in the Draft EIR.

3.4 Biological Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☒	☐	☐	☐

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Potentially Significant Impact. Implementation of the Project would result in construction and operational activities upon a currently undeveloped, vacant site. Such activities could potentially have an adverse effect on candidate, sensitive, or special-status species; sensitive natural communities; migratory wildlife corridors; and protected trees. Further biological resources analysis is required to determine whether the Project could potentially result in any adverse effects related to biological resources. Therefore, these issues will be analyzed further in the Draft EIR.

3.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Impact. Implementation of the Project would result in construction and operational activities upon a currently undeveloped, vacant site. Such activities could potentially have an adverse effect on currently unrecorded, unknown historical, archaeological, or tribal cultural resources. Further cultural

resources analysis is required to determine whether the Project could potentially result in any adverse effects related to cultural resources. Therefore, these issues will be analyzed further in the Draft EIR.

3.6 Energy

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy – Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

a) ***Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?***

b) ***Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?***

Potentially Significant Impact. Project construction and operations would involve activities that would require the use of energy, including electricity and petroleum. Further energy usage analysis is required to determine whether the Project could potentially result in any adverse effects related to energy consumption. Therefore, these issues will be analyzed in the Draft EIR.

3.7 Geology and Soils

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS – Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The Alquist–Priolo Earthquake Zoning Act (Alquist–Priolo Act) requires the delineation of fault zones along active faults in California. The purpose of the Alquist–Priolo Act is to regulate development on or near active fault traces to reduce hazards associated with fault rupture. The Alquist–Priolo Earthquake Fault Zones are the regulatory zones that include surface traces of active faults. According to the California Department of Conservation, the Project site is not in an Alquist–Priolo Earthquake Fault Zone (CDOC 2015). The nearest fault is the Helendale Fault located approximately 7 miles northeast of the Project site. Thus, the potential for surface rupture is low on the Project site. Therefore, no impacts would occur, and this issue will not be evaluated further in the EIR.

ii) Strong seismic ground shaking?

Less-Than-Significant Impact. Similar to other areas located in seismically active Southern California, the Town is susceptible to strong ground shaking during an earthquake. However, the Project site is not within an Alquist–Priolo Earthquake Fault Zone, and the site would not be

affected by ground shaking more than any other area in this seismic region. Pursuant to Title 8, Buildings and Construction, of the Apple Valley Municipal Code, the Project's geotechnical report will be subject to review and approval by Town staff prior to issuance of a grading permit. Compliance with the recommendations of the geotechnical report is mandated by Section 8.12.010 of the Apple Valley Municipal Code, and compliance is subject to inspection by the Town Building Official. With implementation of the recommendations of the Project's geotechnical report, impacts associated with strong seismic ground shaking would be less than significant, and no further analysis will be conducted in the Draft EIR.

iii) Seismic-related ground failure, including liquefaction?

Less-Than-Significant Impact. Soil liquefaction is a seismically induced form of ground failure that has been a major cause of earthquake damage in Southern California. Liquefaction is a process by which water-saturated granular soils transform from a solid to a liquid state because of a sudden shock or strain such as an earthquake. According to the Earthquake Zones of Required Investigation map (CDOC 2023), the Project site is not within an area of the Town that has the potential for liquefaction. Therefore, impacts associated with potential seismic-related ground failure, including liquefaction, would be less than significant, and no further analysis will be conducted in the Draft EIR.

iv) Landslides?

No Impact. According to Exhibit III-11 of the Town's General Plan EIR (Town of Apple Valley 2009a), the Project site is not in an area identified as susceptible to slope instability. The Project site is relatively flat with a few small rolling hills at the northwest portion of the project site and is not adjacent to any potentially unstable topographical feature such as a steep slope or riverbank. Therefore, no impacts would occur, and no further analysis will be conducted in the Draft EIR.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less-Than-Significant Impact. The Project would involve earthwork and other construction activities that would disturb surface soils and temporarily leave exposed soil on the ground's surface. Common causes of soil erosion from construction sites include stormwater, wind, and soil being tracked off site by vehicles. To help curb erosion, Project construction activities must comply with all applicable federal, state, and local regulations for erosion control. The Project would be required to comply with standard regulations, including South Coast Air Quality Management District Rules 402 and 403, which would reduce construction erosion impacts. Rule 402 requires that dust suppression techniques be implemented to prevent dust and soil erosion from creating a nuisance off site (SCAQMD 1976). Rule 403 requires that fugitive dust be controlled with best available control measures so that it does not remain visible in the atmosphere beyond the property line of the emissions source (SCAQMD 2005).

Because Project construction activities would disturb 1 or more acres, the Project must adhere to the provisions of the National Pollutant Discharge Elimination System Construction General Permit. Construction activities subject to this permit include clearing, grading, and ground disturbances such as stockpiling and excavating. The Construction General Permit requires implementation of a stormwater pollution prevention plan, which would include construction features for the Project (i.e., best management practices) designed to prevent erosion and protect the quality of stormwater runoff. Sediment-control best

management practices may include stabilized construction entrances, straw wattles on earthen embankments, sediment filters on existing inlets, or the equivalent. Therefore, impacts during construction would be less than significant, and no further analysis will be conducted in the Draft EIR.

Once developed, the Project site would include buildings, paved surfaces, and other on-site improvements that would stabilize and help retain on-site soils. The remaining portions of the Project site containing pervious surfaces would primarily consist of landscape areas. These landscape areas would include a mix of trees, shrubs, plants, and groundcover that would help retain on-site soils while preventing wind and water erosion from occurring. Therefore, operational impacts related to soil erosion would be less than significant. No further analysis will be conducted in the Draft EIR.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less-Than-Significant Impact. As discussed previously, the potential for the Project to result in or be affected by landslides and liquefaction is low, and these issues are not anticipated at the Project site. Project activities may occur on geologically unstable soils such as those susceptible to lateral spreading, subsidence, or collapse. Pursuant to Title 8, Buildings and Construction, of the Apple Valley Municipal Code, the Project's geotechnical report will be subject to review and approval by Town staff prior to issuance of a grading permit. Compliance with the recommendations of the geotechnical report is mandated by Section 8.12.010 of the Apple Valley Municipal Code, and compliance is subject to inspection by the Town Building Official. With implementation of the recommendations of the Project's geotechnical report, impacts would be less than significant, and no further analysis will be conducted in the Draft EIR.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less-Than-Significant Impact. Expansive soils are characterized by their potential shrink/swell behavior. Shrink/swell is the change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the cycle of wetting and drying. Clay minerals are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near-surface soils, the higher the potential for substantial expansion.

Alluvial fan sediments, composed primarily of granular soils, underlie the low-lying areas of the Town and the expansion potential ranges from very low to moderately low. Additionally, the U.S. Department of Agriculture's Web Soil Survey does not identify the Project site or surrounding area as containing clay soils, which are typically expansive (USDA 2022). Therefore, impacts would be less than significant, and no further analysis will be conducted in the Draft EIR.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The Project would connect to the Town's municipal sewer lines. The Project would not require septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur, and no further analysis will be conducted in the Draft EIR.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Impact. According to the Town's General Plan EIR, the Town has potential for paleontological finds (Town of Apple Valley 2009a). As such, development and construction activities associated with the project have the potential to unearth potentially significant paleontological resources. Therefore, impacts would be potentially significant, and further analysis is proposed in the Draft EIR.

3.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Would the project generate conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. Project construction and operations would involve activities that would generate both short-term and long-term greenhouse gas emissions. Further greenhouse gas analysis is required to determine whether the Project could potentially result in any adverse effects related to greenhouse gases. Therefore, these issues will be analyzed in the Draft EIR.

3.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Potentially Significant Impact. Development of the Project would result in the construction of two industrial/warehouse buildings and associated improvements on currently undeveloped, vacant land. Project implementation could potentially result in impacts related to hazardous materials and wildland fire. Therefore, these issues will be analyzed in the Draft EIR.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. There are no schools within a 3-mile radius of the Project site. As such, the closest school is well outside of a 0.25-mile radius around the Project site. Therefore, no impacts would occur, and this issue will not be evaluated further in the Draft EIR.

d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Hazardous Waste and Substances Sites List (Cortese List) is a planning document providing information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency to develop, at least annually, an updated Cortese List. The Department of Toxic Substances Control is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous materials release information for the Cortese List (CalEPA 2022). A review of Cortese List online data resources does not identify hazardous materials or waste sites on the Project site or immediately surrounding area (DTSC 2022; SWRCB 2022). Therefore, no impacts would occur, and this issue will not be evaluated further in the Draft EIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The nearest operational public-use airport to the Project site is the Southern California Logistics Airport, which is approximately 9.5 miles to the west, and Apple Valley Airport, approximately 7.8 miles to the east. According to the Comprehensive Land Use Plan, the Project site is not within a runway protection zone or safety zone area, which would have potential safety and noise impacts (San Bernardino County 2008). Therefore, impacts would not occur, and this issue will not be evaluated further in the Draft EIR.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Potentially Significant Impact. Construction activities that may temporarily restrict vehicular traffic would be required to implement appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures. Typical Town requirements include prior notification of any land or road closures with sufficient signage before and during any closures, flag crews with radio communication when necessary to coordinate traffic flow, and other necessary precautions. The Project developer would be required to comply with these requirements, which would maintain emergency access and allow for evacuation if needed during construction activities.

The Town's General Plan designates Central Road, State Highway 18, and Bear Valley Road as evacuation routes. The Project does not propose any changes to the geometry of these roadways, and moreover, the Project's truck trips would not be directed toward these roads (as they would be directed toward I-15). However, the project would introduce new workers to the project site, who would potentially need to utilize designated evacuation routes in the case of an emergency. It is anticipated that workers would come from the existing population in the Town and nearby communities and would already be accounted for in existing

evacuation plans. This may shift the use to designated evacuation routes beyond what was previously planned and therefore, as a result, the Project could potential affect emergency response or evacuation activities. Therefore, impacts related to impairment of adopted emergency response plan or evacuation plan will be evaluated further in the Draft EIR.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less-Than-Significant Impact. The California Department of Forestry and Fire Protection's (CAL FIRE) Fire Hazard Severity maps have determined that the Project site is not in or near land classified as a Very High Fire Hazard Severity Zone (CAL FIRE 2021), and impacts associated with wildfire in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones are not anticipated. Therefore, the risk of wildland fires would be less than significant, and these issues will not be evaluated further in the Draft EIR.

3.10 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☒	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☒	☐	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☒	☐	☐	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☒	☐	☐	☐
iv) impede or redirect flood flows?	☒	☐	☐	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site?

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

iv) Impede or redirect flood flows?

Potentially Significant Impact. Implementation of the Project would result in construction and operational activities upon a currently undeveloped, vacant site. Such activities could potentially have an adverse effect on existing drainage patterns, which could subsequently impact surface water and groundwater quality, as well as both on-site and local hydrology. Therefore, these issues will be analyzed in the Draft EIR.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Less-Than-Significant Impact. The Project would not be susceptible to flood hazards, tsunami, or seiche. Seiche is generally associated with oscillation of enclosed bodies of water (e.g., reservoirs, lakes) typically caused by ground shaking associated with a seismic event; however, the Project site is not near an enclosed body of water. Flooding from tsunami conditions is not expected because the Project site is approximately 100 miles from the Pacific Ocean.

In addition, the Federal Emergency Management Agency Flood Map Service Center identifies the Project site as Zone D, which is classified as an area of undetermined flood hazard (FEMA 2021). As such, the Project would not risk release of pollutants due to inundation. Therefore, impacts associated with seiche, tsunami, or flooding would be less than significant, and this issue will not be evaluated further in the Draft EIR.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Potentially Significant Impact. Implementation of the Project would result in construction and operational activities upon a currently undeveloped, vacant site. Such activities could potentially have an adverse effect on existing drainage patterns, which could subsequently impact surface water and groundwater quality, as well as both on-site and local hydrology. Therefore, these issues will be analyzed in the Draft EIR.

3.11 Land Use and Planning

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

a) Would the project physically divide an established community?

No Impact**.** The physical division of an established community typically refers to the construction of a linear feature (e.g., a major highway or railroad tracks) or removal of a means of access (e.g., a local road or bridge) that would impair mobility within an existing community or between a community and outlying area.

Under the existing condition, the Project site is vacant land and is not used as a connection between established communities. Instead, connectivity within the area surrounding the Project site is facilitated via local roadways. As such, the Project would not impede movement within the Project area, within an established community, or from one established community to another. Therefore, no impacts would occur, and this issue will not be evaluated further in the Draft EIR.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. Although the Project would be consistent with the General Plan and Zoning Code, further analysis is required to determine if the Project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, these issues will be analyzed in the Draft EIR.

3.12 Mineral Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☒	☐	☐	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☒	☐	☐	☐

a) ***Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?***

b) ***Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?***

Potentially Significant Impact. According to the Energy and Mineral Resources Element in the Town's General Plan, mineral resources such as sand, gravel, and stone have been identified within the Town (Town of Apple Valley 2009b). According to Figure III-8 in the Town's General Plan, the Project site is not within an area designated as a Mineral Resource Zone (Town of Apple Valley 2009b). Additionally, the Project would be within an area that is not zoned for mineral resource extraction operations, and thus, such activities cannot currently occur on the Project site. However, due the Project's proximity to existing, active mining operations and quarries (CDOC 2022), further analysis is required to determine if the Project would result in an impact to mineral resources. Therefore, these issues will be analyzed in the Draft EIR.

3.13 Noise

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE – Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐

a) ***Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***

b) ***Would the project result in generation of excessive groundborne vibration or groundborne noise levels?***

c) ***For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

Potentially Significant Impact. Project construction and operations would involve activities that would generate both short-term and long-term noise. Further noise analysis is required to determine whether the Project could potentially result in any adverse effects related to increased noise levels. Therefore, these issues will be analyzed in the Draft EIR.

3.14 Population and Housing

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING – Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less-Than-Significant Impact. The Project would require a temporary construction workforce and a permanent operational workforce, both of which could potentially induce population growth in the Project area. The temporary workforce would be needed to construct the warehouse buildings and associated improvements. The number of construction workers needed during any given period would largely depend on the specific stage of construction but would likely range from a dozen to several dozen workers on a daily basis. These short-term positions are anticipated to be filled primarily by construction workers who reside in the Project site's vicinity; therefore, construction of the Project would not generate a permanent increase in population within the Project area.

Because the future tenants are not known yet, the number of jobs that the Project would generate cannot be precisely determined. Thus, for purposes of analyses, employment estimates were calculated using average employment density factors reported by the Southern California Association of Governments. The Southern California Association of Governments reports that for every 2,111 square feet of warehouse space in San Bernardino County, the average numbers of jobs supported is one employee (SCAG 2001). The Project would include 2,604,446 square feet of industrial/warehouses space, excluding associated improvements. As such, the estimated number of employees required for operation would be approximately 1,234.

According to the 2010 U.S. Census, the population of the Town was approximately 69,136 residents. According to the Town's General Plan, upon build-out, the Town could support a population of 185,858 residents (Town of Apple Valley 2009b). As such, the Project-related increase of approximately 1,200 employees would represent a nominal percentage of the Town's projected future population upon General Plan build-out.[1]

In addition, data provided by the California Employment Development Department in February 2022 found that the unemployment rate for San Bernardino County is at 5%, which is similar to the state average (5.4%) (EDD 2022). As such, the Project's temporary and permanent employment requirements could likely be met by the Town's existing labor force without people needing to relocate into the Project region, and the Project would not stimulate population growth or a population concentration above what is assumed in local and regional land use plans. Therefore, impacts would be less than significant, and no further analysis will be conducted in the Draft EIR.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project site is currently vacant and contains no housing or other residential uses. Given that no residential uses are located on site, it follows that the site does not support a residential population. Therefore, no impacts would occur, and no further analysis will be conducted in the Draft EIR.

[1] Note that this represents a conservative approach because this finding assumes that all future employees will have relocated to the Town as a result of the Project from outside of the Town, and that no future employees are already residents of the Town.

3.15 Public Services

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES – Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☒	☐	☐	☐
Police protection?	☒	☐	☐	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a) ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***

Fire protection?

Potentially Significant Impact. The Project could result in an increase in calls for service to the Project site that may result in the need for new fire protection facilities. Further analysis is required to determine whether the Project could potentially result in adverse environmental impacts associated with the construction of new fire protection facilities. Therefore, this issue will be analyzed in the Draft EIR.

Police protection?

Potentially Significant Impact. The Project could result in an increase in calls for service to the Project site that may result in the need for new police protection facilities. Further analysis is required to determine whether the Project could potentially result in adverse environmental impacts associated with the construction of new police protection facilities. Therefore, this issue will be analyzed in the Draft EIR.

Schools?

No Impact. As previously discussed, the Project would not directly or indirectly induce unplanned population growth in the Town. Although the Project would require employees to construct and operate the Project, these short-term and long-term employees would likely already reside within the broader Project area. As such, it is not anticipated that many people would relocate to the Town as a result of the Project, and an increase in school-age children requiring public education is not expected to occur as a result.

Similar to other development projects in the Town, the Project would be subject to Senate Bill 50, which requires payment of mandatory impact fees to offset any impact to school services or facilities. The provisions of Senate Bill 50 are deemed to provide full and complete mitigation of school facilities impacts, notwithstanding any contrary provisions in CEQA or other state or local laws (Government Code Section 65996). In accordance with Senate Bill 50, the Project Applicant would pay its fair share of impact fees based on the Project's square footage per Government Code Section 65995(h). These impact fees are required of most residential, commercial, and industrial development projects in the Town. Therefore, no impacts would occur, and no further analysis will be conducted in the Draft EIR.

Parks?

No Impact. The Project would construct two industrial/warehouse buildings in the Town. The Project does not propose any residential uses and would not directly or indirectly induce unplanned population growth in the Town. As such, the Project would not increase the use of existing neighborhood parks or regional parks in the Town and surrounding area. Therefore, no impacts would occur, and no further analysis will be conducted in the Draft EIR.

Other public facilities?

No Impact. Given industrial nature of the Project and the lack of population growth that would result from the Project, it is unlikely that the Project would increase the use of libraries and other public facilities. Therefore, no impacts would occur, and no further analysis will be conducted in the Draft EIR.

3.16 Recreation

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact**.** The Project would construct two industrial/warehouse building and associated improvements. The Project does not propose any residential uses and would not directly or indirectly result in a substantial and unplanned increase in population growth within the Project area. As such, the Project would not increase the use of existing neighborhood parks or regional parks in the Town and surrounding area. In addition, as an industrial use, the Project does not propose recreational facilities or require the construction or expansion of recreational facilities. Therefore, no impacts would occur, and no further analysis will be conducted in the Draft EIR.

3.17 Transportation

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION – Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☒	☐	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
d) Result in inadequate emergency access?	☒	☐	☐	☐

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) Would the project result in inadequate emergency access?

Potentially Significant Impact. Project operations would involve industrial/warehouse activities that would generate truck and passenger vehicle traffic that may conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, or otherwise result in both localized and broader transportation impacts. Further traffic impact analysis is required to determine whether the Project could potentially result in any adverse effects related the local and regional circulation system. Therefore, these issues will be analyzed in the Draft EIR.

3.18 Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☒	☐	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) ***Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?***

b) ***A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.***

Potentially Significant Impact. Implementation of the Project would result in construction and operational activities upon a currently undeveloped, vacant site. Such activities could potentially have an adverse effect on currently unrecorded, unknown, historical, archaeological, or Tribal cultural resources. Further cultural resources analysis is required to determine whether the Project could potentially result in any adverse effects related to cultural resources. Therefore, these issues will be analyzed further in the Draft EIR.

3.19 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Require or result in the relocation or construction of new or expanded water, waste water treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☒	☐	☐	☐
c) Result in a determination by the waste water treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☒	☐	☐	☐

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Potentially Significant Impact. Project construction and operations would involve activities that would require the use of energy and would generate the need for domestic water, sanitary sewer, stormwater, and solid waste disposal. Given the vacant, undeveloped nature of the Project site, these, and likely other dry and wet utilities and services would need to be extended onto the Project site. Additionally, the Project would be subject to Senate Bill 610, which requires the preparation of a Water Supply Assessment because the Project involves the development of an industrial project that is greater than 650,000 square feet. Further air quality analysis is required to determine whether the Project could potentially result in any adverse effects related to utilities and services systems and to determine whether the Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, these issues will be analyzed in the Draft EIR.

3.20 Wildfire

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less-Than-Significant Impact. Construction activities that may temporarily restrict vehicular traffic would be required to implement appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures. Typical Town requirements include prior notification of any

land or road closures with sufficient signage before and during any closures, flag crews with radio communication when necessary to coordinate traffic flow, and other potential precautions. The Project developer would be required to comply with these requirements, which would maintain emergency access and allow for evacuation if needed during construction activities.

The Town's General Plan designates Central Road, State Highway 18, and Bear Valley Road as evacuation routes. The Project does not propose any changes to the geometry of these roadways, and moreover, the Project's truck trips would not be directed toward these roads (as they would be directed toward I-15). Thus, it follows that these roadways' ability to serve as emergency evacuation routes would not be compromised. As a result, the Project would not significantly affect emergency response or evacuation activities. Therefore, impacts would be less than significant, and this issue will not be evaluated further in the Draft EIR.

b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less-Than-Significant Impact. CAL FIRE's Fire Hazard Severity maps have determined that the Project site is not in or near land classified as a Very High Fire Hazard Severity Zone (CAL FIRE 2021), and impacts associated with wildfire in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones are not anticipated. The Project site is in an area that is generally flat, lacking any steep slopes, and characterized as vacant land; these factors are not typically associated with the uncontrolled spread of wildfire. Therefore, impacts associated with the spread of wildfire would be less than significant, and this issue will not be evaluated further in the Draft EIR.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less-Than-Significant Impact. As previously addressed, the Project site is not within or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones (CAL FIRE 2021). Although the Project would not include the construction of fuel breaks, the Project would involve the installation or improvement of infrastructure, including roads, water, wastewater treatment, electrical connections, and storm drainage facilities. The installation of this infrastructure would be typical of development within the greater Project area and would not require the use of specialized techniques or machinery that would result in temporary or ongoing impacts beyond those impacts discussed within this Initial Study. Any impacts associated with the installation of this infrastructure would be done in compliance with existing regulatory requirements, such as Stormwater Pollution Prevention Plan requirements, that would reduce potential impacts associated with construction of these facilities to below a level of significance. Therefore, impacts associated with infrastructure exacerbating fire risk would be less than significant, and this issue will not be evaluated further in the Draft EIR.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less-Than-Significant Impact. As discussed above, the Project site is not within or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones (CAL FIRE 2021). As discussed in Section 3.7, Geology and Soils, and Section 3.10, Hydrology and Water Quality, the Project would not result in significant risks associated with flooding or landslides, and the Project does not propose

the use of fire (such as for a controlled vegetation burn) that would result in post-fire slope instability. Therefore, impacts associated with runoff, post-fire slope instability, or drainage changes would be less than significant, and this issue will not be evaluated further in the Draft EIR.

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) ***Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?***

Potentially Significant Impact. The Project has the potential to degrade the quality of the environment, reduce the habitat of a plant or wildlife species, cause a plant or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal (see Section 3.4, Biological Resources). In addition, the Project may have the potential to eliminate important examples of California history or prehistory during grading activities due to the potential for unanticipated cultural resources (see Section 3.5, Cultural Resources). Therefore, impacts are considered potentially significant, and this issue will be analyzed in the Draft EIR.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Potentially Significant Impact. The Project could have impacts that are individually limited but cumulatively considerable. The EIR will analyze past, present, and reasonably foreseeable projects in the vicinity of the Project site. Therefore, impacts are considered potentially significant, and this issue will be analyzed in the Draft EIR.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. The Project could have environmental effects that could cause substantial adverse effects on human beings. Therefore, impacts are considered potentially significant, and this issue will be analyzed in the Draft EIR.

4 References and Preparers

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4.2 List of Preparers

Dudek

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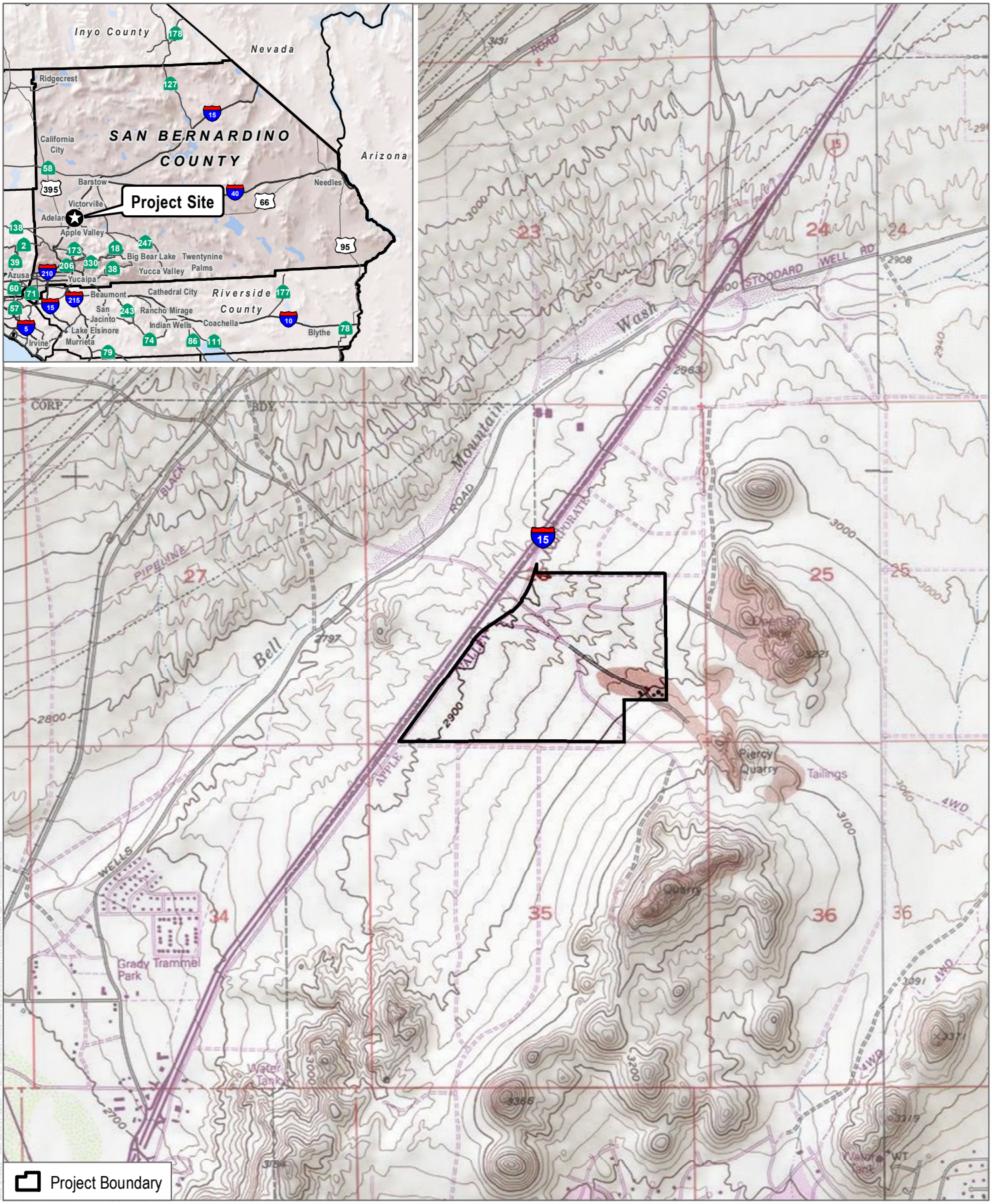
Clarisa Olaguez – Environmental Planner
Hayley Ward – Environmental Planner



SOURCE: USGS 7.5-minute Series Victorville Quadrangle

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Inland Empire North Logistics Center Apple Valley Initial Study

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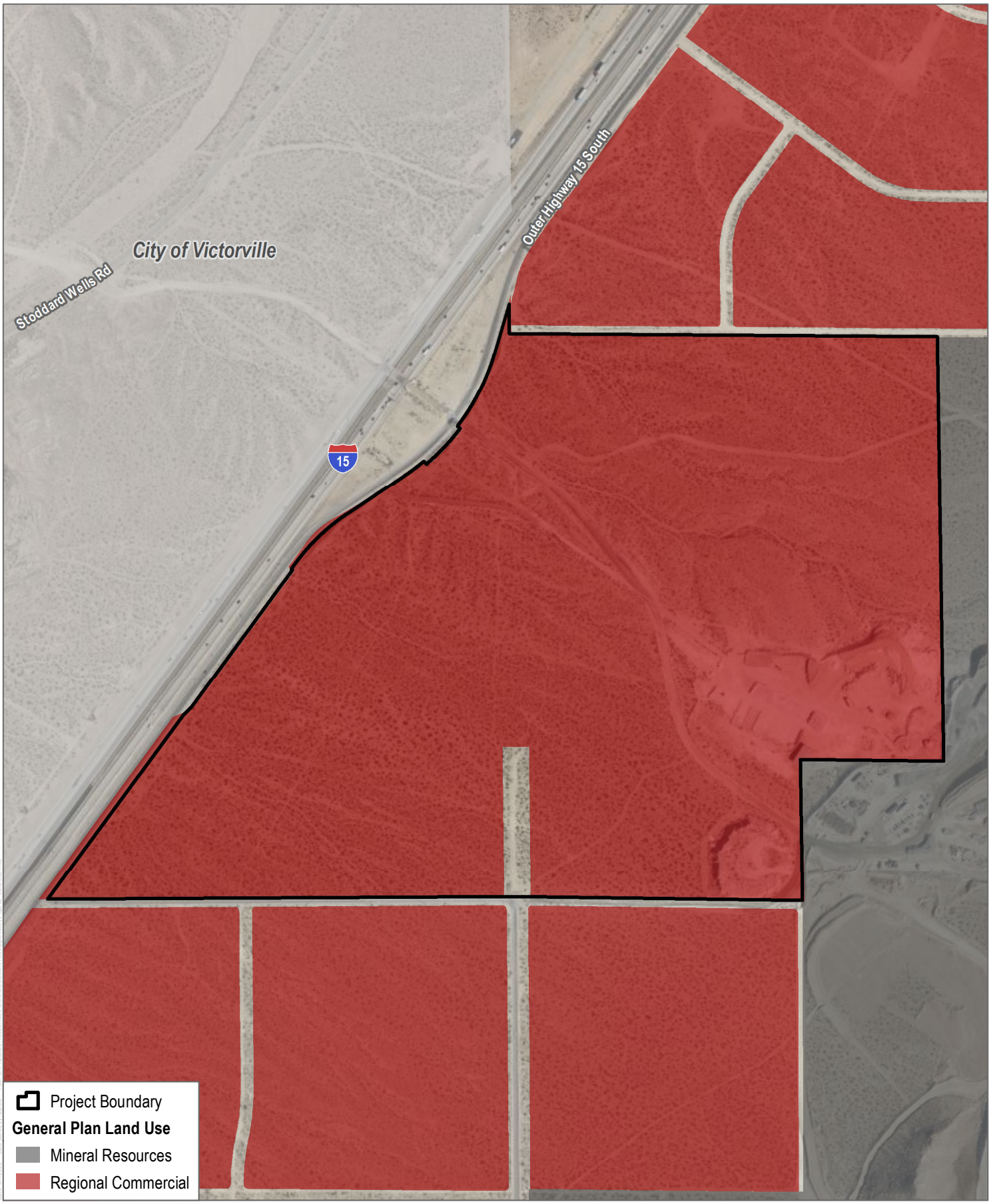

SOURCE: Apple Valley 2015; Open Street Map; Bing Maps

DUDEK

0 300 600 Feet

FIGURE 2

Land Use Designations

Inland Empire North Logistics Center Apple Valley Initial Study

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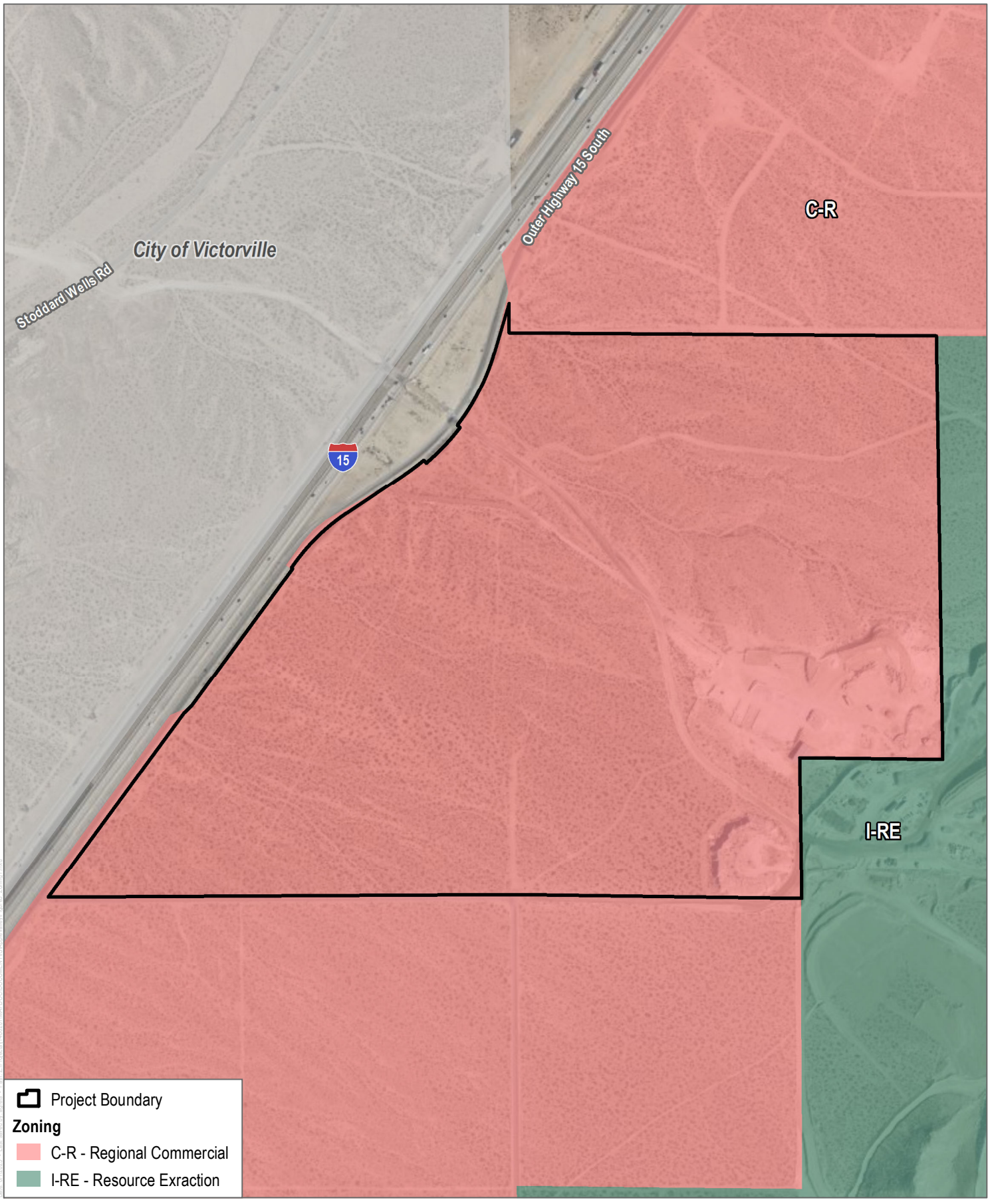

SOURCE: County of San Bernardino; Open Street Map; Bing Maps

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FIGURE 3

Zoning Designations

Inland Empire North Logistics Center Apple Valley Initial Study

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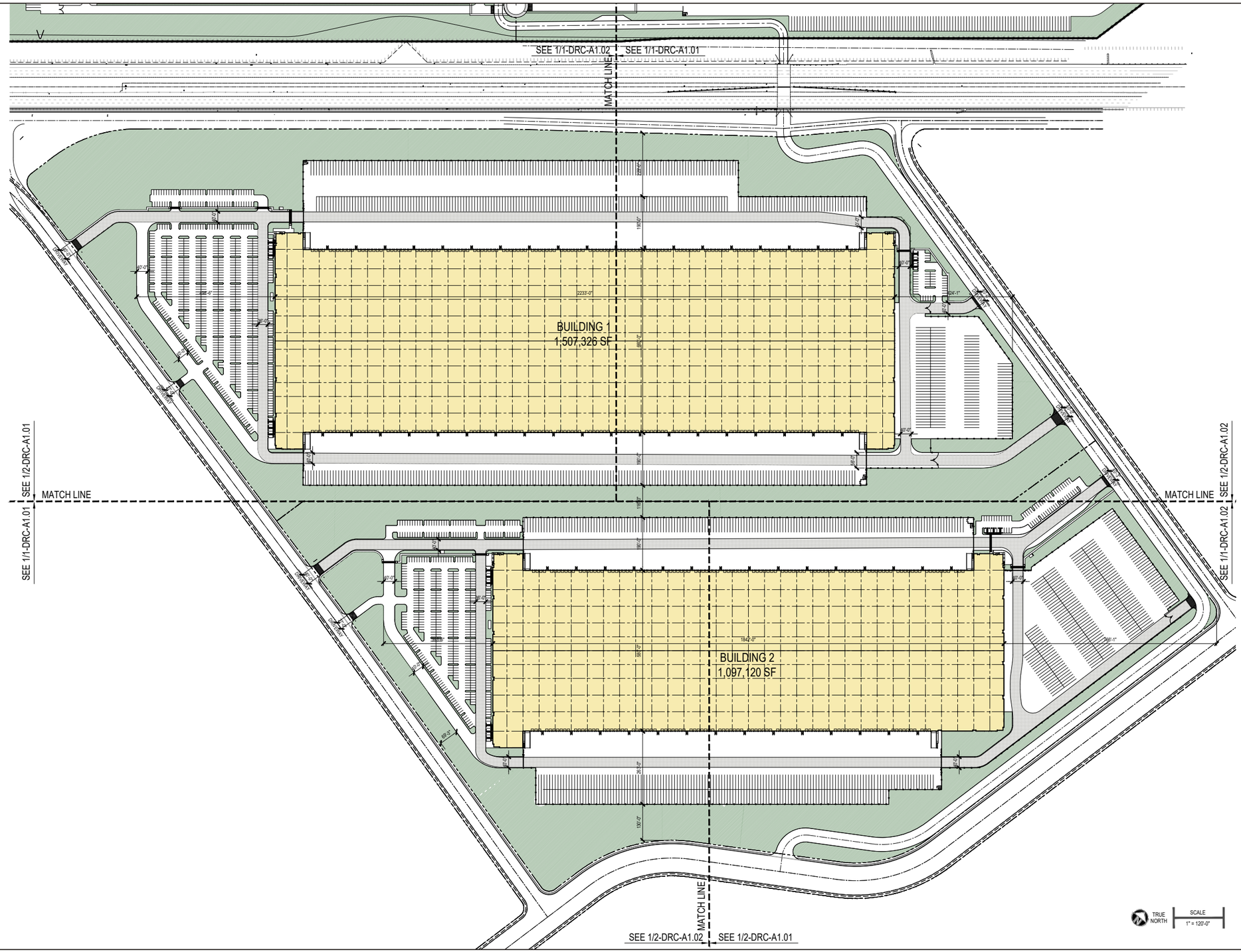

PROJECT DATA

Apple Valley

SITE AREA		4,134,712	SF
		94.92	Acres
BUILDING AREA			
1ST FLOOR	WAREHOUSE	1,487,326	SF
	OFFICE	10,000	SF
1ST TOTAL		1,497,326	SF
2ND FLOOR	OFFICE	10,000	SF
TOTAL		**1,507,326**	SF
PROJECT FACT			
	F.A.R		0.36
	CLEAR HEIGHT		42'
	CONTRUCTION TYPE		IHB
	OCCUPANCY		S-1 AND B
	FIRE SPRINKLER		ESFR SYSTEM
ZONING			
ZONE ORDINANCE		REGIONAL COMMERCIAL (C-R)	
SET BACK		LANDSCAPE	BLDG
	FRONT	15'	45'
	STREET SIDE	0	30'
	REAR	0'	30'
PARKING REQ.			
	AUTO PARKING		
	SIZE	9'X19'	
	WAREHOUSE	1/500 SF 15T 10K	20
	WAREHOUSE	1/1,000 SF ABV 10K	1498
	TOTAL		1518
	Office included with 25% of GFA		
PARKING PROVIDED			
	AUTO PARKING		SW19
	STANDARD		827
	ADA		17
	EV READY		98
	TOTAL		942
	DOCK DOORS		264
	TRAILER		144

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINES UNLESS NOTED OTHERWISE.
2. ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH A SMART AUTOMATIC IRRIGATION SYSTEM.
3. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING SITE DRAINAGE, TOPOGRAPHY AND UTILITIES.
4. FOR PAVING SECTIONS, CONCRETE CURBS, SWALES AND GUTTERS SEE CIVIL DRAWINGS.
5. PROPERTY LINE ARE REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR HORIZONTAL CONTROL.
6. LANDSCAPE AREAS SHALL BE DELINEATED WITH A MIN. 6" CONCRETE CURB.

KEYNOTES

1. SITE PAVING WITH HEAVY BROOM FINISH. SEE CIVIL FOR PAVEMENT THICKNESS
2. DECORATIVE PAVEMENT AT ENTRY - COLORED CONCRETE W/ SAW CUT PATTERN
3. PRIMARY BUILDING
4. PEDESTRIAN CONCRETE WALKWAY WITH MEDIUM BROOM FINISH
5. NOT USED.
6. DECORATIVE WROUGHT IRON FENCE 8'H FT, BLACK
7. 8'H BLACK PAINTED VEHICULAR ROLLING GATE WITH KNOX PAD LOCK. MANUALLY OPERATED. PROVIDE CONDUITS FOR FUTURE OPERATOR
8. 5'-6" X 6' X 4" THICK CONCRETE LANDING PAD AT ALL EXTERIOR MANDOORS WITH MEDIUM BROOM FINISH.
9. FUTURE MONUMENT SIGN WITH ELEC. CONDUITS
10. EMPLOYEE BREAK AREA, TENANT FURNISHED UNLESS NOTED OTHERWISE
11. TRASH ENCLOSURE
12. PUMP HOUSE
13. EXTERIOR CONCRETE STAIR
14. APPROXIMATE LOCATION OF ELEC. TRANSFORMER WITH BOLLARD PROTECTION AND LANDSCAPE SCREENING
15. NOT USED.
16. SHORT TERM - BICYCLE RACK 8% OF PARKING STALL
17. DESIGNATED SMOKING AREA - 25' AWAY FROM ANY ENTRY

LEGEND

- STANDARD PARKING STALL 9' X 19'
- CLEAN AIR, VANPOOL / EV 9' X19'
- ADA PARKING VAN 12' X 19' OR STANDARD 9' X 19' WITH 5' CLR AISLE
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL. MAX 5% SLOPE AND MAX 2% CROSS SLOPE WITH 48" MIN. CLEAR, UNLESS NOTED OTHERWISE WITH ADA ACCESSIBLE RAMP
- LANDSCAPE, SEE LANDSCAPE DRAWINGS

SOURCE: LHA, May 2023

FIGURE 4

Site Plan

Apple Valley Stoddard Wells Warehouse Project Initial Study

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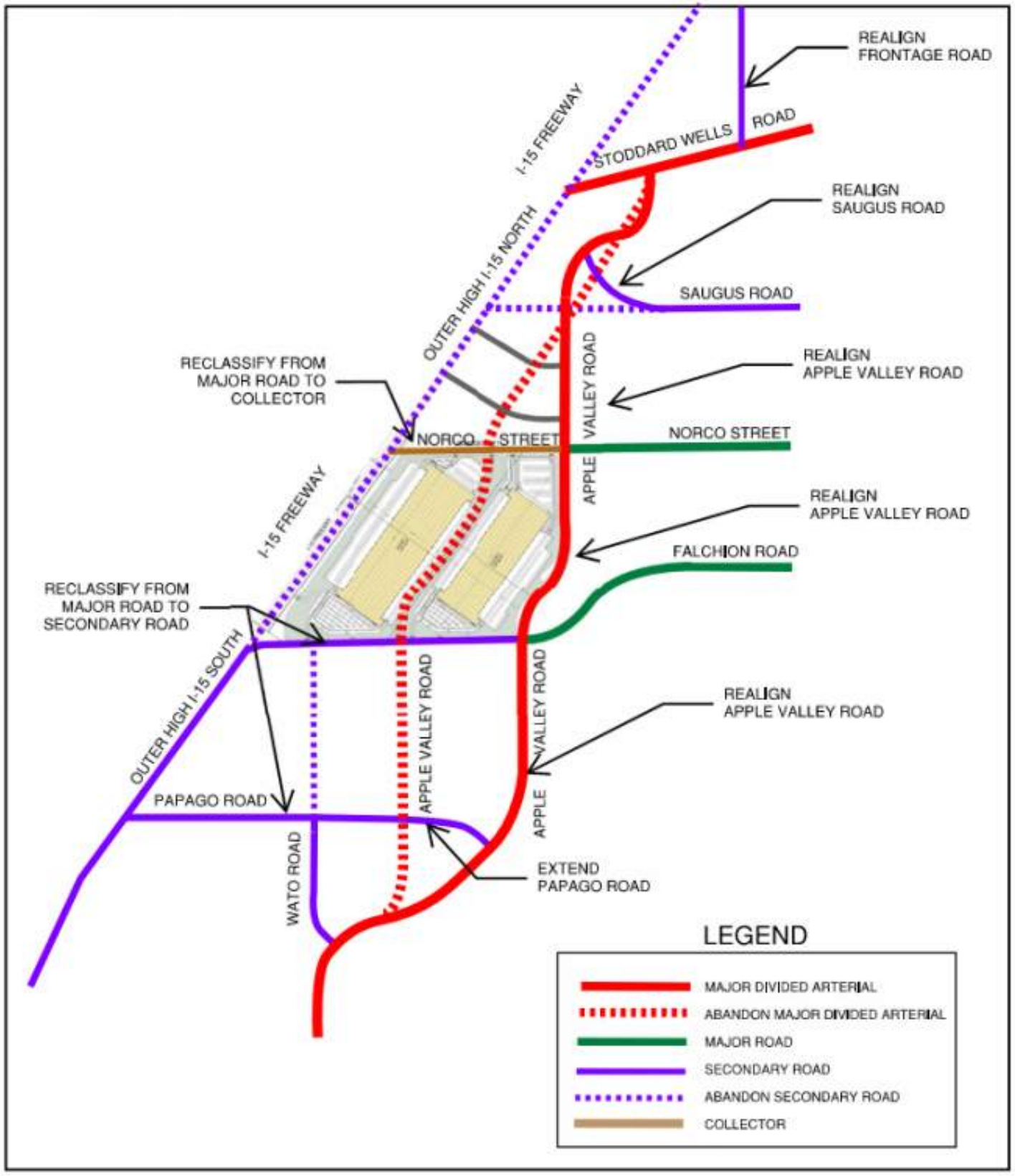

SOURCE: David Evans and Associates Inc., 2023

FIGURE 5

Proposed General Plan Amendment to Circulation Element

Apple Valley Stoddard Wells Warehouse Project Initial Study

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NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
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Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
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West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

September 25, 2023

Daniel Alcayaga, AICP
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

Re: 2023090366, Inland Empire North Logistics Center Apple Valley Project, San Bernardino County

Dear Mr. Alcayaga:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cameron.Vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

cc: State Clearinghouse

Mojave Desert Air Quality Management District
Brad Poiriez, *Executive Director*
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 • Fax 760.245.2022
www.MDAQMD.ca.gov • @MDAQMD

September 28, 2023

Daniel Alcayaga, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA 92307

Project: Inland Empire North Logistics Center Apple Valley Project

Dear Mr. Alcayaga:

The Mojave Desert Air Quality Management District (District) has received a request for comments on the Draft Environmental Impact Report (DEIR) for the proposed Inland Empire North Logistics Center Project in Apple Valley. The Project includes the construction and operation of two industrial/warehouse buildings totaling approximately 2,604,446 square feet on approximately 177.74 acres (Figure 2, Site Plan). Building 1, the northernmost building, would be approximately 1,507,326 square feet, and Building 2, the southernmost building, would be approximately 1,097,120 square feet. The Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

The District has reviewed the project notice and agrees with the findings of the initial study that the project construction and operations would involve activities that would generate both short-term and long-term criteria air pollutants and other emissions or odors. Therefore, impacts are considered potentially significant and should be further analyzed in the EIR.

The District requires that the following dust mitigation measures be required for the construction portion of the development (enforceable by the District AND by the land use agency) should the project be approved:

- Prepare and submit to the MDAQMD, prior to commencing earth-moving activity, a dust control plan that describes all applicable dust control measures that will be implemented at the project;

- Signage compliant with Rule 403 Attachment B shall be erected at each project site entrance not later than the commencement of construction.

- Use a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes to minimize visible fugitive dust emissions. For projects with exposed sand or fines deposits (and for projects that expose such soils through earthmoving), chemical stabilization or covering with a stabilizing layer of gravel will be required to eliminate visible dust/sand from sand/fines deposits.

- All perimeter fencing shall be wind fencing or the equivalent, to a minimum of four feet of height or the top of all perimeter fencing. The owner/operator shall maintain the wind fencing as needed to keep it intact and remove windblown dropout. This wind fencing requirement may be superseded by local ordinance, rule or project-specific biological mitigation prohibiting wind fencing.

- All maintenance and access vehicular roads and parking areas shall be stabilized with chemical, gravel or asphaltic pavement sufficient to eliminate visible fugitive dust from vehicular travel and wind erosion. Take actions to prevent project-related trackout onto paved surfaces, and clean any project-related trackout within 24 hours. All other earthen surfaces within the project area shall be stabilized by natural or irrigated vegetation, compaction, chemical or other means sufficient to prohibit visible fugitive dust from wind erosion.

- Obtain District permits for any miscellaneous process equipment that may not be exempt under District Rule 219 including, but not limited to: Internal Combustion Engines with a manufacture's maximum continuous rating greater than 50 brake horsepower.

Thank you for the opportunity to review this planning document, the District looks forward to reviewing the DEIR. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726, or Bertrand Gaschot at extension 4020.

Sincerely,

Chris Anderson
Planning and Air Monitoring Supervisor

CA/bg Apple Valley Inland Empire North Logistics Center 2023 Sep 27

10/17/2023

VIA EMAIL ONLY

Daniel Alcayaga, Planning Manager,
Town of Apple Valley,
14955 Dale Evans Parkway,
Apple Valley, CA 92307.
dalcayaga@applevalley.org

RE: NOP Comments for the Inland Empire North Logistics Center Apple Valley Project

Dear Mr. Alcayaga,

The comments are submitted on behalf of Californians Allied for a Responsible Economy ("CARE CA") regarding the Notice of Preparation ("NOP") of a Draft Environmental Impact Report ("DEIR") for Inland Empire North Logistics Center Apple Valley ("the Project"). CARE CA understands that the proposed Project consists of the construction and operation of two industrial/warehouse buildings totaling approximately 2,604,446 square feet on approximately 177.74 acres.

The goal of an EIR is to provide decisionmakers and the public with detailed information about the effects of a proposed project on the environment, how significant impacts will be minimized and alternatives to the project (Pub. Res. Code § 21002.2). We, therefore, respectfully request a complete analysis of all identified impacts, imposition of all feasible mitigation and study of a reasonable range of alternatives. In addition, we wish to provide the following comments:

i) The DEIR should provide details of any and all proposed future industrial/warehouse uses of the Project, clearly articulated and quantified. Ideally, the DEIR should study a combination of the five primary logistics-type uses at the site, including providing justification and square footage assumed for each use analyzed to ensure that the unique impacts of each use are comprehensively evaluated (i.e., both truck and vehicular trips, air quality, GHG emissions, public health risk and other environmental effects).

ii) The Initial Study states that the Project will not include cold storage. We suggest that the City follow the California Air Resources Board (CARB) recommendations to require contractual language in tenant lease agreements or restrictive covenant over parcels to prohibit use of transport refrigeration units (TRUs).

iii) The Air Quality analysis should be based on actual emissions data from existing similar sized warehouse projects rather than computer generated estimates. In addition, a Health Risk Assessment (HRA) should be prepared as part of the DEIR that accurately reflects all proposed future industrial/warehouse uses, and accounts for other emission sources such as backup generators, and forklifts.

iv) To determine the significance of the Project's GHG, we urge the City to adopt thresholds that embody climate change's existential threat to humankind and provide detailed discussion on the Applicant's plan to offset the Project's GHG emissions.

Thank you for the opportunity to submit NOP comments. Again, CARE CA respectfully requests under CEQA full analysis of the environmental impacts, feasible mitigation, and reasonable alternatives to the Project. We look forward to reviewing and commenting on the DEIR.

Sincerely,



Jeff Modrzejewski

Executive Director

October 11, 2023

Town of Apple Valley
Attn: Daniel Alcayaga, Planning Manager
14955 Dale Evans Parkway
Apple Valley, CA 92307
Submitted via email to dalcayaga@applevalley.org.

Re: Inland Empire North Logistics Center Apple Valley Project Notice of Preparation (SCH #2023090366)

Dear Daniel Alcayaga,

This letter is on behalf of the Center for Community Action and Environmental Justice (CCAEJ) to respond to the Notice of Preparation for the proposed Inland Empire North Logistics Center, Apple Valley Project which would be built there in Apple Valley. After reviewing the documents, CCAEJ would like to make sure that several items receive thorough study and mitigation as part of the EIR process.

As noted in the summary chart on pages 14 and 21 of the Initial Study, the Project would have a Potentially Significant Impact for all four topics under Air Quality and both of the topics under Greenhouse Gas Emissions. It is critical that the EIR process identify full mitigation methods for these potential impacts and although Apple Valley is located outside of the South Coast Air Quality Management District, adopting the measures identified in their Rule 2305 to reduce the impacts of warehouses be voluntarily adopted and put in place to help achieve the reductions necessary to fully reduce the emissions.

A critical issue with any warehouse is to ensure that they do not burden the surrounding communities, particularly with their truck traffic. While the Project is located several miles from any sizable communities, it nevertheless is important to ensure that the Project is designed such that truck traffic is directed to nearby interchanges instead of through existing communities south of the Project site, including a Census Tract in Victorville which is at the 87th percentile in CalEnviroScreen (Figure 1) and worsen the pollution burden which they face.

Another concern is for ensuring that the road infrastructure built for or due to the Project includes the appropriate accommodation for cyclists. It is not clear that the City has yet updated its standard sections to provide allowance for designs based on the latest and safest bike facilities (Figure 2). Nevertheless, it is crucial that as these sorts of projects are undertaken in areas which in some instances lack even so much as a paved road, that the associated construction be done to

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the latest standards *now*. This is to avoid creating hazards by design and resulting in a situation which at best, needs additional reconstruction at a later date to retrofit in place what should have been built from the beginning, a situation which is likely to result once SB 932 (Portantino, 2022) is implemented.

We urge the Town to ensure that any locations where the developer is being conditioned to build/widen roads do so with standard sections based on the principles provided by Figure 2 so that no hazardous conditions are created in those locations. In addition to being vital for improved safety, the provision of the safer bike facilities can be a powerful tool available to reduce the VMT and projected significant Air Quality and Greenhouse Gas Emissions impacts which this Project may have by providing a place where people feel more willing to travel by (electric) bicycle[12] or other non-motorized options.

Thank you for your time and consideration of these comments to ensure that these issues are addressed as part of the EIR process. If there are any questions or clarifications, please do not hesitate to contact me for clarification.

Sincerely,

Marven E. Norman, Policy Coordinator

Cc:
Inland Empire Biking Alliance

CCAEJ is a long-standing community based organization with over 40 years of experience advocating for stronger regulations through strategic campaigns and building a base of community power. Most notably, CCAEJ's founder Penny Newman won a landmark federal case against Stringfellow Construction which resulted in the 'Stringfellow Acid Pits' being declared one of the first Superfund sites in the nation. ***CCAEJ*** prioritizes community voices as we continue our grassroots efforts to bring lasting environmental justice to the Inland Valley Region.

[1] Popovich, N., Gordon, E., Shao, Z., Xing, Y., Wang, Y., & Handy, S. (2014). Experiences of electric bicycle users in the Sacramento, California area. *Travel Behaviour and Society*, *1*(2), 37-44.
[2] Karpinski, E. (2021). Estimating the effect of protected bike lanes on bike-share ridership in Boston: a case study on Commonwealth Avenue. *Case studies on transport policy*, *9*(3), 1313-1323.

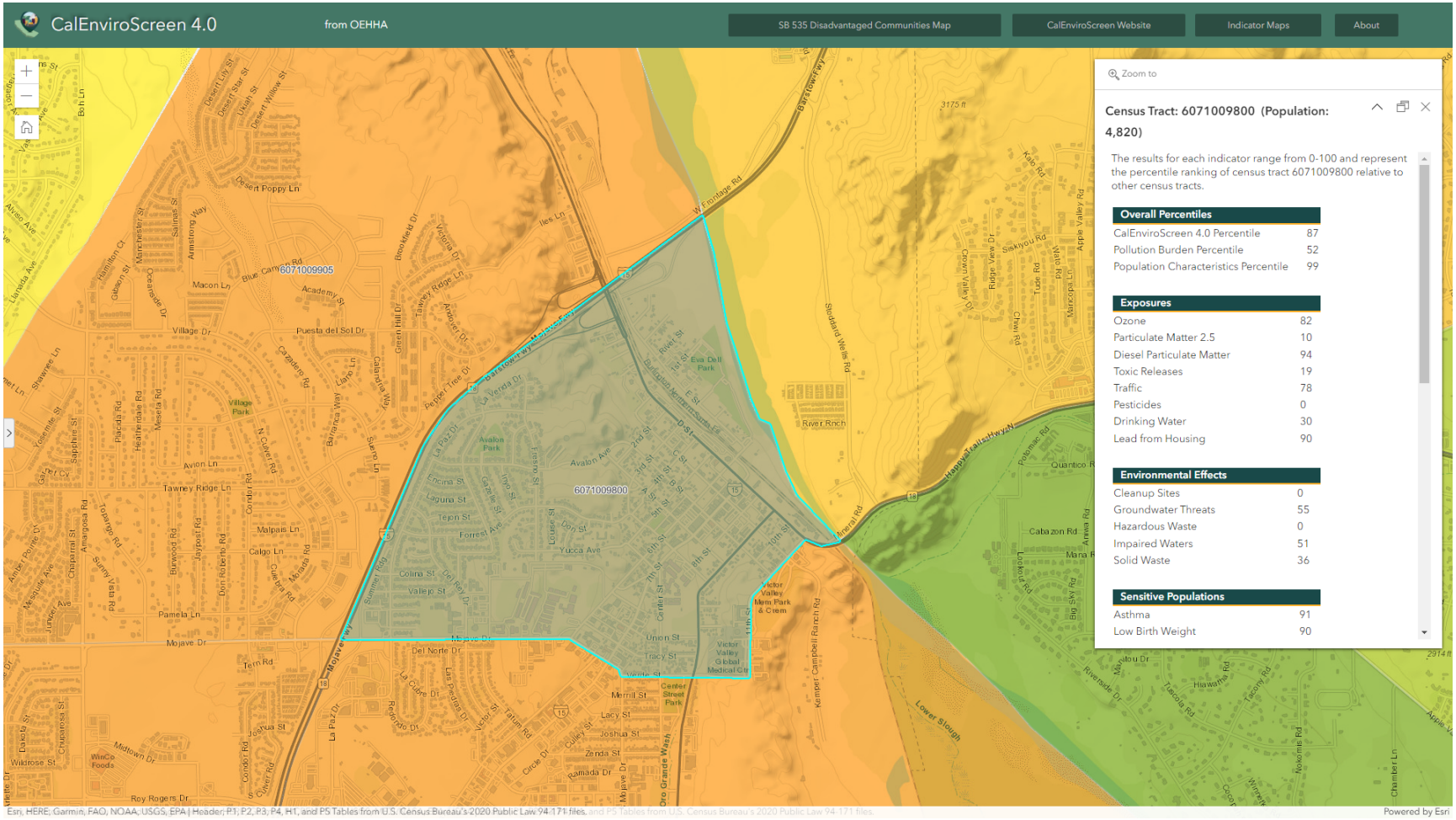

Figure 1: CalEnviroScreen 4.0 results for Census Tract 6071009800 which is at the 87th percentile.

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Attachment A

Caltrans Contextual Guidance for Preferred Bicycle Facilities**

Place Type and Surrounding Land-Use [1]	Design Year ADT	Posted Speed 15-20	25-30	35-45	> 45
Urban Areas & Suburban Main Streets	<2,500	Standard Shoulder or Shared Lane	Standard Shoulder or Shared Lane	Class II or Class IV	Class IV
	2,500-5,000				
	5,000-10,000	Class II or Class IV	Class II or Class IV	Class IV	
	>10,000	Class IV	Class IV		
Rural Areas (Developing Corridors)		15-20	25-30	35-45	> 45
	<2,500	Standard Shoulder (may be designated as a Class III facility)[2]			
	2,500-5,000				
	5,000-10,000				
	>10,000				
		15-20	25-30	35-45	> 45
Rural Main Streets	<2,500	Standard Shoulder or Shared Lane	Class II	Class II	Class I or IV
	2,500-5,000				
	5,000-10,000	Class II			
	>10,000			Class I, II, or IV	

1 Highway Design Manual (HDM) Index 81.3

2 HDM, Tables 302.1 and 307.2

** Chart is not a replacement for engineering judgement. Intended for planning purposes, to identify minimum preferred bikeway facility under different place type, volume and speed conditions.

Figure 3: Caltrans Contextual Guidance for Preferred Bicycle Facilities.[3]

[3] https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/planning-contextual-guidance-memo-03-11-20-a11y.pdf

Appendix B1

Air Quality, Greenhouse Gas and Energy Modeling

Apple Valley IENL Detailed Report

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Data Field	Value
Project Name	Apple Valley IENL
Construction Start Date	9/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	5.00
Precipitation (days)	12.4
Location	34.57380227725771, -117.26665611369768
County	San Bernardino-Mojave Desert
City	Apple Valley
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5160
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	1,933	1000sqft	44.4	1,932,795	1,522,047	—	—	—

Parking Lot	2,721	Space	24.5	0.00	0.00	—	—	—
Unrefrigerated Warehouse-Rail	672	1000sqft	0.00	0.00	528,953	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-13	Use Low-VOC Paints for Construction

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	207	207	36.2	137	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
Mit.	48.1	47.9	36.2	137	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
% Reduced	77%	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	207	207	36.6	99.2	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939
Mit.	47.9	47.7	36.6	99.2	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939
% Reduced	77%	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.8	25.7	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774

Mit.	6.13	6.10	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774
% Reduced	76%	76%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.70	4.70	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
Mit.	1.12	1.11	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
% Reduced	76%	76%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.46	3.75	36.2	34.6	0.05	1.60	7.95	9.55	1.47	4.01	5.48	—	5,751	5,751	0.23	0.08	1.55	5,781
2025	10.5	9.50	35.0	137	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
2026	207	207	2.10	22.9	< 0.005	0.02	3.69	3.71	0.02	0.86	0.89	—	4,165	4,165	0.17	0.14	13.7	4,225
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.45	3.74	36.3	34.1	0.06	1.60	7.95	9.55	1.47	4.01	5.48	—	7,057	7,057	0.28	0.09	0.04	7,090
2025	9.03	8.03	36.6	99.2	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939
2026	207	207	5.35	15.6	0.01	0.24	3.69	3.71	0.22	0.86	0.89	—	3,704	3,704	0.06	0.14	0.35	3,747
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.05	0.88	8.50	7.90	0.01	0.37	1.46	1.83	0.34	0.69	1.03	—	1,514	1,514	0.06	0.02	0.17	1,521
2025	5.28	4.67	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774
2026	25.8	25.7	0.97	3.18	< 0.005	0.03	0.48	0.52	0.03	0.11	0.14	—	656	656	0.01	0.02	0.79	664
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	0.19	0.16	1.55	1.44	< 0.005	0.07	0.27	0.33	0.06	0.13	0.19	—	251	251	0.01	< 0.005	0.03	252
2025	0.96	0.85	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
2026	4.70	4.70	0.18	0.58	< 0.005	0.01	0.09	0.09	0.01	0.02	0.03	—	109	109	< 0.005	< 0.005	0.13	110

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.46	3.75	36.2	34.6	0.05	1.60	7.95	9.55	1.47	4.01	5.48	—	5,751	5,751	0.23	0.08	1.55	5,781
2025	10.5	9.50	35.0	137	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
2026	48.1	47.9	2.10	22.9	< 0.005	0.02	3.69	3.71	0.02	0.86	0.89	—	4,165	4,165	0.17	0.14	13.7	4,225
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.45	3.74	36.3	34.1	0.06	1.60	7.95	9.55	1.47	4.01	5.48	—	7,057	7,057	0.28	0.09	0.04	7,090
2025	9.03	8.03	36.6	99.2	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939
2026	47.9	47.7	5.35	15.6	0.01	0.24	3.69	3.71	0.22	0.86	0.89	—	3,704	3,704	0.06	0.14	0.35	3,747
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.05	0.88	8.50	7.90	0.01	0.37	1.46	1.83	0.34	0.69	1.03	—	1,514	1,514	0.06	0.02	0.17	1,521
2025	5.28	4.67	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774
2026	6.13	6.10	0.97	3.18	< 0.005	0.03	0.48	0.52	0.03	0.11	0.14	—	656	656	0.01	0.02	0.79	664
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.19	0.16	1.55	1.44	< 0.005	0.07	0.27	0.33	0.06	0.13	0.19	—	251	251	0.01	< 0.005	0.03	252
2025	0.96	0.85	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
2026	1.12	1.11	0.18	0.58	< 0.005	0.01	0.09	0.09	0.01	0.02	0.03	—	109	109	< 0.005	< 0.005	0.13	110

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	85.4	80.3	302	497	3.66	7.50	172	180	7.17	44.7	51.9	2,474	461,277	463,750	258	44.8	1,075	484,621
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	68.8	64.9	316	298	3.55	7.36	172	180	7.05	44.7	51.8	2,474	450,608	453,081	258	44.9	27.9	472,956
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	76.4	71.9	321	366	3.58	7.43	171	178	7.11	44.4	51.5	2,474	453,100	455,574	258	45.0	464	475,906
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.9	13.1	58.5	66.7	0.65	1.36	31.2	32.6	1.30	8.10	9.40	410	75,016	75,425	42.8	7.45	76.8	78,792

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Area	58.9	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	82,854	82,854	5.56	0.53	—	83,152
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616

Off-Road	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	85.4	80.3	302	497	3.66	7.50	172	180	7.17	44.7	51.9	2,474	461,277	463,750	258	44.8	1,075	484,621
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Area	44.0	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	82,854	82,854	5.56	0.53	—	83,152
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	68.8	64.9	316	298	3.55	7.36	172	180	7.05	44.7	51.8	2,474	450,608	453,081	258	44.9	27.9	472,956
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.1	19.2	298	305	3.47	6.00	171	177	5.73	44.4	50.1	—	361,387	361,387	2.07	41.6	464	374,295
Area	51.4	50.8	0.35	41.5	< 0.005	0.07	—	0.07	0.06	—	0.06	—	170	170	0.01	< 0.005	—	171
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	82,854	82,854	5.56	0.53	—	83,152
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	76.4	71.9	321	366	3.58	7.43	171	178	7.11	44.4	51.5	2,474	453,100	455,574	258	45.0	464	475,906
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969
Area	9.37	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Energy	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	13,717	13,717	0.92	0.09	—	13,767
Water	—	—	—	—	—	—	—	—	—	—	—	191	883	1,074	19.6	0.47	—	1,706
Waste	—	—	—	—	—	—	—	—	—	—	—	218	0.00	218	21.8	0.00	—	764

Off-Road	0.26	0.22	1.63	1.41	0.01	0.06	—	0.06	0.06	—	0.06	—	555	555	0.02	< 0.005	—	557
Total	13.9	13.1	58.5	66.7	0.65	1.36	31.2	32.6	1.30	8.10	9.40	410	75,016	75,425	42.8	7.45	76.8	78,792

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Area	58.9	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	82,854	82,854	5.56	0.53	—	83,152
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	85.4	80.3	302	497	3.66	7.50	172	180	7.17	44.7	51.9	2,474	461,277	463,750	258	44.8	1,075	484,621
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Area	44.0	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	82,854	82,854	5.56	0.53	—	83,152
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	68.8	64.9	316	298	3.55	7.36	172	180	7.05	44.7	51.8	2,474	450,608	453,081	258	44.9	27.9	472,956
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	22.1	19.2	298	305	3.47	6.00	171	177	5.73	44.4	50.1	—	361,387	361,387	2.07	41.6	464	374,295
Area	51.4	50.8	0.35	41.5	< 0.005	0.07	—	0.07	0.06	—	0.06	—	170	170	0.01	< 0.005	—	171
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	82,854	82,854	5.56	0.53	—	83,152
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	76.4	71.9	321	366	3.58	7.43	171	178	7.11	44.4	51.5	2,474	453,100	455,574	258	45.0	464	475,906
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969
Area	9.37	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Energy	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	13,717	13,717	0.92	0.09	—	13,767
Water	—	—	—	—	—	—	—	—	—	—	—	191	883	1,074	19.6	0.47	—	1,706
Waste	—	—	—	—	—	—	—	—	—	—	—	218	0.00	218	21.8	0.00	—	764
Off-Road	0.26	0.22	1.63	1.41	0.01	0.06	—	0.06	0.06	—	0.06	—	555	555	0.02	< 0.005	—	557
Total	13.9	13.1	58.5	66.7	0.65	1.36	31.2	32.6	1.30	8.10	9.40	410	75,016	75,425	42.8	7.45	76.8	78,792

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.73	4.33	0.01	0.21	—	0.21	0.19	—	0.19	—	696	696	0.03	0.01	—	699
Dust From Material Movement	—	—	—	—	—	—	1.01	1.01	—	0.52	0.52	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.86	0.79	< 0.005	0.04	—	0.04	0.04	—	0.04	—	115	115	< 0.005	< 0.005	—	116

Dust From Material Movement	—	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.58	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.02	265
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.52	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.2	31.2	< 0.005	< 0.005	0.06	31.7
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.6	25.6	< 0.005	< 0.005	0.03	26.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.17	5.17	< 0.005	< 0.005	0.01	5.24
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.24	4.24	< 0.005	< 0.005	< 0.005	4.41
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.73	4.33	0.01	0.21	—	0.21	0.19	—	0.19	—	696	696	0.03	0.01	—	699
Dust From Material Movement	—	—	—	—	—	—	1.01	1.01	—	0.52	0.52	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.86	0.79	< 0.005	0.04	—	0.04	0.04	—	0.04	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.58	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.02	265
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.52	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.2	31.2	< 0.005	< 0.005	0.06	31.7
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.6	25.6	< 0.005	< 0.005	0.03	26.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.17	5.17	< 0.005	< 0.005	0.01	5.24

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.24	4.24	< 0.005	< 0.005	< 0.005	4.41
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.38	3.69	3.25	0.01	0.16	—	0.16	0.14	—	0.14	—	710	710	0.03	0.01	—	713
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	118	118	< 0.005	< 0.005	—	118
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	0.03	267
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.2	29.2	< 0.005	< 0.005	0.05	29.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.02	21.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	< 0.005	3.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.38	3.69	3.25	0.01	0.16	—	0.16	0.14	—	0.14	—	710	710	0.03	0.01	—	713
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	118	118	< 0.005	< 0.005	—	118

Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	0.03	267
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.2	29.2	< 0.005	< 0.005	0.05	29.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.02	21.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	< 0.005	3.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.63	5.37	0.01	0.23	—	0.23	0.22	—	0.22	—	1,253	1,253	0.05	0.01	—	1,257
Dust From Material Movement	—	—	—	—	—	—	0.68	0.68	—	0.27	0.27	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	207	207	0.01	< 0.005	—	208
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.66	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	292	292	0.01	0.01	1.07	296
Vendor	0.01	0.01	0.19	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.52	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.11	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	262
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	50.5	50.5	< 0.005	< 0.005	0.09	51.2
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.3	36.3	< 0.005	< 0.005	0.04	37.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.36	8.36	< 0.005	< 0.005	0.01	8.47
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.01	6.01	< 0.005	< 0.005	0.01	6.26
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.63	5.37	0.01	0.23	—	0.23	0.22	—	0.22	—	1,253	1,253	0.05	0.01	—	1,257

Dust From Material Movement	—	—	—	—	—	—	0.68	0.68	—	0.27	0.27	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	207	207	0.01	< 0.005	—	208
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.66	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	292	292	0.01	0.01	1.07	296
Vendor	0.01	0.01	0.19	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.52	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.11	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	262
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	50.5	50.5	< 0.005	< 0.005	0.09	51.2
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.3	36.3	< 0.005	< 0.005	0.04	37.8

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.36	8.36	< 0.005	< 0.005	0.01	8.47
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.01	6.01	< 0.005	< 0.005	0.01	6.26
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.55	5.12	6.39	0.01	0.21	—	0.21	0.19	—	0.19	—	1,176	1,176	0.05	0.01	—	1,180

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.17	< 0.005	0.04	—	0.04	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.39	7.69	6.81	117	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	20,480	20,480	0.82	0.70	74.8	20,783
Vendor	0.74	0.68	17.7	7.76	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,456	17,456	0.04	2.34	47.8	18,202
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.01	6.28	7.44	78.3	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	18,128	18,128	0.88	0.70	1.94	18,359
Vendor	0.67	0.62	18.8	7.90	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,475	17,475	0.04	2.34	1.24	18,174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.47	3.11	3.95	42.9	0.00	0.00	8.93	8.93	0.00	2.09	2.09	—	9,153	9,153	0.43	0.34	15.9	9,281
Vendor	0.35	0.32	9.20	3.83	0.07	0.12	2.28	2.40	0.12	0.63	0.75	—	8,565	8,565	0.02	1.15	10.1	8,917
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.63	0.57	0.72	7.83	0.00	0.00	1.63	1.63	0.00	0.38	0.38	—	1,515	1,515	0.07	0.06	2.63	1,537
Vendor	0.06	0.06	1.68	0.70	0.01	0.02	0.42	0.44	0.02	0.12	0.14	—	1,418	1,418	< 0.005	0.19	1.67	1,476
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.55	5.12	6.39	0.01	0.21	—	0.21	0.19	—	0.19	—	1,176	1,176	0.05	0.01	—	1,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.17	< 0.005	0.04	—	0.04	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.39	7.69	6.81	117	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	20,480	20,480	0.82	0.70	74.8	20,783
Vendor	0.74	0.68	17.7	7.76	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,456	17,456	0.04	2.34	47.8	18,202
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.01	6.28	7.44	78.3	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	18,128	18,128	0.88	0.70	1.94	18,359
Vendor	0.67	0.62	18.8	7.90	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,475	17,475	0.04	2.34	1.24	18,174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.47	3.11	3.95	42.9	0.00	0.00	8.93	8.93	0.00	2.09	2.09	—	9,153	9,153	0.43	0.34	15.9	9,281
Vendor	0.35	0.32	9.20	3.83	0.07	0.12	2.28	2.40	0.12	0.63	0.75	—	8,565	8,565	0.02	1.15	10.1	8,917
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.63	0.57	0.72	7.83	0.00	0.00	1.63	1.63	0.00	0.38	0.38	—	1,515	1,515	0.07	0.06	2.63	1,537
Vendor	0.06	0.06	1.68	0.70	0.01	0.02	0.42	0.44	0.02	0.12	0.14	—	1,418	1,418	< 0.005	0.19	1.67	1,476
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	5.31	7.06	0.01	0.26	—	0.26	0.24	—	0.24	—	1,072	1,072	0.04	0.01	—	1,075
Paving	1.07	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.7	35.7	< 0.005	< 0.005	—	35.8
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.90	5.90	< 0.005	< 0.005	—	5.92
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.89	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	207	207	0.01	0.01	0.02	209
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.08	7.08	< 0.005	< 0.005	0.01	7.18
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.62
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.17	1.17	< 0.005	< 0.005	< 0.005	1.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	5.31	7.06	0.01	0.26	—	0.26	0.24	—	0.24	—	1,072	1,072	0.04	0.01	—	1,075
Paving	1.07	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.7	35.7	< 0.005	< 0.005	—	35.8
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.90	5.90	< 0.005	< 0.005	—	5.92
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.89	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	207	207	0.01	0.01	0.02	209
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.08	7.08	< 0.005	< 0.005	0.01	7.18
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.62
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.17	1.17	< 0.005	< 0.005	< 0.005	1.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.08	7.03	0.01	0.24	—	0.24	0.22	—	0.22	—	1,071	1,071	0.04	0.01	—	1,074
Paving	1.07	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.89	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Paving	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	0.01	0.12	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.82	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.02	205
Vendor	0.01	0.01	0.20	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	188	188	< 0.005	0.03	0.01	195
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.04	26.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.8	23.8	< 0.005	< 0.005	0.03	24.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	0.01	4.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.95	3.95	< 0.005	< 0.005	< 0.005	4.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.08	7.03	0.01	0.24	—	0.24	0.22	—	0.22	—	1,071	1,071	0.04	0.01	—	1,074
Paving	1.07	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.89	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Paving	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.82	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.02	205
Vendor	0.01	0.01	0.20	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	188	188	< 0.005	0.03	0.01	195
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.04	26.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.8	23.8	< 0.005	< 0.005	0.03	24.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	0.01	4.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.95	3.95	< 0.005	< 0.005	< 0.005	4.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	206	206	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	206	206	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.5
Architectural Coatings	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.73	2.73	< 0.005	< 0.005	—	2.73
Architectural Coatings	4.63	4.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.49	1.35	1.24	21.8	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	4,032	4,032	0.16	0.14	13.7	4,091
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.34	1.19	1.37	14.5	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	3,570	3,570	0.06	0.14	0.35	3,613
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.18	2.01	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	453	453	0.01	0.02	0.73	459
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.12	76.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	46.4	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	46.4	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.5
Architectural Coatings	5.72	5.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.73	2.73	< 0.005	< 0.005	—	2.73

Architect Coatings	1.04	1.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.49	1.35	1.24	21.8	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	4,032	4,032	0.16	0.14	13.7	4,091
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.34	1.19	1.37	14.5	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	3,570	3,570	0.06	0.14	0.35	3,613
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.18	2.01	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	453	453	0.01	0.02	0.73	459
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.12	76.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	16.0	14.3	16.6	328	0.92	0.35	86.4	86.8	0.33	21.8	22.1	—	93,038	93,038	1.41	1.71	299	93,882
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.61	6.31	262	65.4	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,350	276,350	0.61	39.6	775	288,952
Total	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	14.5	12.9	18.4	214	0.82	0.35	86.4	86.8	0.33	21.8	22.1	—	82,646	82,646	1.45	1.84	7.76	83,238
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.35	6.09	276	65.1	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,419	276,419	0.60	39.7	20.1	288,279
Total	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	2.68	2.38	3.53	43.9	0.15	0.06	15.6	15.7	0.06	3.94	4.00	—	14,074	14,074	0.24	0.31	21.4	14,195
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1.36	1.13	50.9	11.8	0.48	1.03	15.6	16.6	0.99	4.16	5.15	—	45,757	45,757	0.10	6.57	55.4	47,773
Total	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	16.0	14.3	16.6	328	0.92	0.35	86.4	86.8	0.33	21.8	22.1	—	93,038	93,038	1.41	1.71	299	93,882
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.61	6.31	262	65.4	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,350	276,350	0.61	39.6	775	288,952
Total	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	14.5	12.9	18.4	214	0.82	0.35	86.4	86.8	0.33	21.8	22.1	—	82,646	82,646	1.45	1.84	7.76	83,238
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.35	6.09	276	65.1	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,419	276,419	0.60	39.7	20.1	288,279
Total	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	2.68	2.38	3.53	43.9	0.15	0.06	15.6	15.7	0.06	3.94	4.00	—	14,074	14,074	0.24	0.31	21.4	14,195
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1.36	1.13	50.9	11.8	0.48	1.03	15.6	16.6	0.99	4.16	5.15	—	45,757	45,757	0.10	6.57	55.4	47,773
Total	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	13,011	13,011	0.81	0.10	—	13,060
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,522	4,522	0.28	0.03	—	4,539
undefined	—	—	—	—	—	—	—	—	—	—	—	—	48,091	48,091	2.98	0.36	—	48,274
Total	—	—	—	—	—	—	—	—	—	—	—	—	66,986	66,986	4.16	0.50	—	67,240
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	13,011	13,011	0.81	0.10	—	13,060
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,522	4,522	0.28	0.03	—	4,539
undefined	—	—	—	—	—	—	—	—	—	—	—	—	48,091	48,091	2.98	0.36	—	48,274
Total	—	—	—	—	—	—	—	—	—	—	—	—	66,986	66,986	4.16	0.50	—	67,240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,154	2,154	0.13	0.02	—	2,162
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	225	225	0.01	< 0.005	—	226

Unrefrig Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	749	749	0.05	0.01	—	751
undefined	—	—	—	—	—	—	—	—	—	—	—	—	7,962	7,962	0.49	0.06	—	7,992
Total	—	—	—	—	—	—	—	—	—	—	—	—	11,090	11,090	0.69	0.08	—	11,132

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	13,011	13,011	0.81	0.10	—	13,060
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,522	4,522	0.28	0.03	—	4,539
undefined	—	—	—	—	—	—	—	—	—	—	—	—	48,091	48,091	2.98	0.36	—	48,274
Total	—	—	—	—	—	—	—	—	—	—	—	—	66,986	66,986	4.16	0.50	—	67,240
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	13,011	13,011	0.81	0.10	—	13,060

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,522	4,522	0.28	0.03	—	4,539
undefined	—	—	—	—	—	—	—	—	—	—	—	—	48,091	48,091	2.98	0.36	—	48,274
Total	—	—	—	—	—	—	—	—	—	—	—	—	66,986	66,986	4.16	0.50	—	67,240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,154	2,154	0.13	0.02	—	2,162
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	225	225	0.01	< 0.005	—	226
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	749	749	0.05	0.01	—	751
undefined	—	—	—	—	—	—	—	—	—	—	—	—	7,962	7,962	0.49	0.06	—	7,992
Total	—	—	—	—	—	—	—	—	—	—	—	—	11,090	11,090	0.69	0.08	—	11,132

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.20	0.10	1.80	1.51	0.01	0.14	—	0.14	0.14	—	0.14	—	1,950	1,950	0.17	< 0.005	—	1,955
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Unrefrigerated Warehouse-Rail	0.07	0.03	0.63	0.53	< 0.005	0.05	—	0.05	0.05	—	0.05	—	678	678	0.06	< 0.005	—	679
Total	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	2,627	2,627	0.23	< 0.005	—	2,634

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Unrefrigerated	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.20	0.10	1.80	1.51	0.01	0.14	—	0.14	0.14	—	0.14	—	1,950	1,950	0.17	< 0.005	—	1,955
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.07	0.03	0.63	0.53	< 0.005	0.05	—	0.05	0.05	—	0.05	—	678	678	0.06	< 0.005	—	679
Total	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	2,627	2,627	0.23	< 0.005	—	2,634

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.4	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.54	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipm	15.0	13.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Total	58.9	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.4	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.54	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	44.0	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	7.56	7.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.46	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.35	1.24	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Total	9.37	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.4	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.54	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	15.0	13.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Total	58.9	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.4	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.54	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	44.0	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	7.56	7.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.46	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	1.35	1.24	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Total	9.37	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	856	3,959	4,816	88.1	2.12	—	7,648
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	298	1,376	1,674	30.6	0.74	—	2,658
Total	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	856	3,959	4,816	88.1	2.12	—	7,648
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Unrefrig Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	298	1,376	1,674	30.6	0.74	—	2,658
Total	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	142	655	797	14.6	0.35	—	1,266
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	49.3	228	277	5.07	0.12	—	440
Total	—	—	—	—	—	—	—	—	—	—	—	191	883	1,074	19.6	0.47	—	1,706

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	856	3,959	4,816	88.1	2.12	—	7,648
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	298	1,376	1,674	30.6	0.74	—	2,658
Total	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	856	3,959	4,816	88.1	2.12	—	7,648
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	298	1,376	1,674	30.6	0.74	—	2,658
Total	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	142	655	797	14.6	0.35	—	1,266
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	49.3	228	277	5.07	0.12	—	440
Total	—	—	—	—	—	—	—	—	—	—	—	191	883	1,074	19.6	0.47	—	1,706

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	979	0.00	979	97.9	0.00	—	3,426
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	340	0.00	340	34.0	0.00	—	1,191
Total	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	979	0.00	979	97.9	0.00	—	3,426
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	340	0.00	340	34.0	0.00	—	1,191
Total	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	162	0.00	162	16.2	0.00	—	567
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Unrefrig Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	56.3	0.00	56.3	5.63	0.00	—	197
Total	—	—	—	—	—	—	—	—	—	—	—	218	0.00	218	21.8	0.00	—	764

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	979	0.00	979	97.9	0.00	—	3,426
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	340	0.00	340	34.0	0.00	—	1,191
Total	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	979	0.00	979	97.9	0.00	—	3,426
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	340	0.00	340	34.0	0.00	—	1,191
Total	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	162	0.00	162	16.2	0.00	—	567
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	56.3	0.00	56.3	5.63	0.00	—	197
Total	—	—	—	—	—	—	—	—	—	—	—	218	0.00	218	21.8	0.00	—	764

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Forklifts	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.26	0.22	1.63	1.41	0.01	0.06	—	0.06	0.06	—	0.06	—	555	555	0.02	< 0.005	—	557
Total	0.26	0.22	1.63	1.41	0.01	0.06	—	0.06	0.06	—	0.06	—	555	555	0.02	< 0.005	—	557

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Total	1.43	1.20	8.94	7.70	0.03	0.34	—	0.34	0.31	—	0.31	—	3,354	3,354	0.14	0.03	—	3,365
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.26	0.22	1.63	1.41	0.01	0.06	—	0.06	0.06	—	0.06	—	555	555	0.02	< 0.005	—	557
Total	0.26	0.22	1.63	1.41	0.01	0.06	—	0.06	0.06	—	0.06	—	555	555	0.02	< 0.005	—	557

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	9/1/2024	11/6/2024	5.00	48.0	—
Grading	Grading	11/7/2024	4/7/2025	5.00	108	—
Building Construction	Building Construction	4/8/2025	12/14/2025	5.00	179	—
Paving	Paving	12/15/2025	3/6/2026	5.00	60.0	—
Architectural Coating	Architectural Coating	3/28/2026	5/29/2026	5.00	45.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Site Preparation	Tractors/Loaders/Back	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	6.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1,404	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	548	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	16.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	6.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	282	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	6.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1,404	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	548	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT

Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	16.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	6.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	282	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	2,899,193	966,398	64,004

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	72.0	0.00	—
Grading	—	—	324	0.00	—
Paving	0.00	0.00	0.00	0.00	24.5

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	24.5	100%
Unrefrigerated Warehouse-Rail	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005
2026	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	4,561	4,561	4,561	1,664,910	124,731	124,731	124,731	45,526,728
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1,585	1,585	1,585	578,591	98,440	98,440	98,440	35,930,491

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	4,561	4,561	4,561	1,664,910	124,731	124,731	124,731	45,526,728
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1,585	1,585	1,585	578,591	98,440	98,440	98,440	35,930,491

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	2,899,193	966,398	64,004

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	8,927,006	532	0.0330	0.0040	36,743,746
Parking Lot	934,465	532	0.0330	0.0040	0.00
Unrefrigerated Warehouse-Rail	3,102,323	532	0.0330	0.0040	12,769,226

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	8,927,006	532	0.0330	0.0040	36,743,746
Parking Lot	934,465	532	0.0330	0.0040	0.00
Unrefrigerated Warehouse-Rail	3,102,323	532	0.0330	0.0040	12,769,226

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	446,958,936	33,695,896
Parking Lot	0.00	0.00
Unrefrigerated Warehouse-Rail	155,327,526	11,710,245

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	446,958,936	33,695,896
Parking Lot	0.00	0.00
Unrefrigerated Warehouse-Rail	155,327,526	11,710,245

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	1,817	—
Parking Lot	0.00	—
Unrefrigerated Warehouse-Rail	631	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	1,817	—
Parking Lot	0.00	—
Unrefrigerated Warehouse-Rail	631	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Electric	Average	308	24.0	82.0	0.20
Forklifts	Diesel	Average	3.00	24.0	200	0.20

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Electric	Average	308	24.0	82.0	0.20
Forklifts	Diesel	Average	3.00	24.0	200	0.20

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	34.2	annual days of extreme heat
Extreme Precipitation	1.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	1.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	0	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	80.0
AQ-PM	7.52
AQ-DPM	21.9
Drinking Water	34.9
Lead Risk Housing	27.7

Pesticides	0.00
Toxic Releases	37.1
Traffic	59.7
Effect Indicators	—
CleanUp Sites	52.1
Groundwater	44.8
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	51.2
Solid Waste	84.7
Sensitive Population	—
Asthma	88.0
Cardio-vascular	89.5
Low Birth Weights	91.9
Socioeconomic Factor Indicators	—
Education	26.9
Housing	11.6
Linguistic	—
Poverty	52.5
Unemployment	90.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	44.97626075
Employed	30.46323624
Median HI	35.0442705
Education	—

Bachelor's or higher	42.93596818
High school enrollment	100
Preschool enrollment	39.79212113
Transportation	—
Auto Access	85.40998332
Active commuting	24.00872578
Social	—
2-parent households	51.18696266
Voting	75.34967278
Neighborhood	—
Alcohol availability	88.37418196
Park access	16.65597331
Retail density	8.469138971
Supermarket access	2.399589375
Tree canopy	0.71859361
Housing	—
Homeownership	62.60746824
Housing habitability	64.39112024
Low-inc homeowner severe housing cost burden	17.8108559
Low-inc renter severe housing cost burden	77.19748492
Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	64.22430386
Arthritis	4.4
Asthma ER Admissions	7.6
High Blood Pressure	8.9
Cancer (excluding skin)	9.1
Asthma	30.0

Coronary Heart Disease	6.8
Chronic Obstructive Pulmonary Disease	13.3
Diagnosed Diabetes	35.6
Life Expectancy at Birth	34.2
Cognitively Disabled	41.3
Physically Disabled	11.3
Heart Attack ER Admissions	2.7
Mental Health Not Good	48.5
Chronic Kidney Disease	20.1
Obesity	46.5
Pedestrian Injuries	48.3
Physical Health Not Good	39.9
Stroke	15.1
Health Risk Behaviors	—
Binge Drinking	57.0
Current Smoker	46.7
No Leisure Time for Physical Activity	58.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	58.1
Elderly	16.8
English Speaking	81.5
Foreign-born	11.0
Outdoor Workers	47.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	90.2
Traffic Density	37.9

Traffic Access	23.0
Other Indices	—
Hardship	32.7
Other Decision Support	—
2016 Voting	75.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	46.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction schedule obtained from data needs request response from client.
Construction: Off-Road Equipment	Changes made according to client's response to data needs request.
Construction: Trips and VMT	Updated defaults to match information provided by client.

Operations: Fleet Mix	changed according to information provided by client and Traffic Impact Analysis figures.
Operations: Vehicle Data	updated caleemod defaults based on information provided by client. Truck trip length is from Streetlight data average for region.
Operations: Off-Road Equipment	Updated as per client information to account for 308 forklifts and 3 yard hostlers operating 24 hours per day, 365 days per year.
Operations: Energy Use	Electricity values are Caleemod defaults for proposed land use type and climate zone.

Apple Valley IENL mitigated Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Apple Valley IENL mitigated
Construction Start Date	9/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	5.00
Precipitation (days)	12.4
Location	34.57380227725771, -117.26665611369768
County	San Bernardino-Mojave Desert
City	Apple Valley
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5160
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	1,933	1000sqft	44.4	1,932,795	1,522,047	—	—	—
Parking Lot	2,721	Space	24.5	0.00	0.00	—	—	—
Unrefrigerated Warehouse-Rail	672	1000sqft	0.00	0.00	528,953	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-13	Use Low-VOC Paints for Construction
Energy	E-2	Require Energy Efficient Appliances
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes
Water	W-7	Adopt a Water Conservation Strategy
Waste	S-1/S-2	Implement Waste Reduction Plan

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.5	207	36.2	137	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
Mit.	10.5	47.9	36.2	137	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
% Reduced	—	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.03	207	36.6	99.2	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939
Mit.	9.03	47.7	36.6	99.2	0.16	1.60	23.0	23.7	1.47	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939
% Reduced	—	77%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.24	25.7	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774
Mit.	5.24	6.10	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774
% Reduced	—	76%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.96	4.70	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
Mit.	0.96	1.11	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
% Reduced	—	76%	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.46	3.75	36.2	34.6	0.05	1.60	7.95	9.55	1.47	4.01	5.48	—	5,751	5,751	0.23	0.08	1.55	5,781
2025	10.5	9.50	35.0	137	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
2026	1.63	207	2.10	22.9	< 0.005	0.02	3.69	3.71	0.02	0.86	0.89	—	4,165	4,165	0.17	0.14	13.7	4,225

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.45	3.74	36.3	34.1	0.06	1.60	7.95	9.55	1.47	4.01	5.48	—	7,057	7,057	0.28	0.09	0.04	7,090
2025	9.03	8.03	36.6	99.2	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939
2026	1.49	207	5.35	15.6	0.01	0.24	3.69	3.71	0.22	0.86	0.89	—	3,704	3,704	0.06	0.14	0.35	3,747
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.05	0.88	8.50	7.90	0.01	0.37	1.46	1.83	0.34	0.69	1.03	—	1,514	1,514	0.06	0.02	0.17	1,521
2025	5.24	4.67	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774
2026	0.27	25.7	0.97	3.18	< 0.005	0.03	0.48	0.52	0.03	0.11	0.14	—	656	656	0.01	0.02	0.79	664
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.19	0.16	1.55	1.44	< 0.005	0.07	0.27	0.33	0.06	0.13	0.19	—	251	251	0.01	< 0.005	0.03	252
2025	0.96	0.85	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
2026	0.05	4.70	0.18	0.58	< 0.005	0.01	0.09	0.09	0.01	0.02	0.03	—	109	109	< 0.005	< 0.005	0.13	110

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.46	3.75	36.2	34.6	0.05	1.60	7.95	9.55	1.47	4.01	5.48	—	5,751	5,751	0.23	0.08	1.55	5,781
2025	10.5	9.50	35.0	137	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	40,334	40,334	0.95	3.05	123	41,391
2026	1.63	47.9	2.10	22.9	< 0.005	0.02	3.69	3.71	0.02	0.86	0.89	—	4,165	4,165	0.17	0.14	13.7	4,225
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.45	3.74	36.3	34.1	0.06	1.60	7.95	9.55	1.47	4.01	5.48	—	7,057	7,057	0.28	0.09	0.04	7,090
2025	9.03	8.03	36.6	99.2	0.16	1.24	23.0	23.7	1.14	5.60	6.24	—	38,000	38,000	1.02	3.05	3.18	38,939

2026	1.49	47.7	5.35	15.6	0.01	0.24	3.69	3.71	0.22	0.86	0.89	—	3,704	3,704	0.06	0.14	0.35	3,747
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.05	0.88	8.50	7.90	0.01	0.37	1.46	1.83	0.34	0.69	1.03	—	1,514	1,514	0.06	0.02	0.17	1,521
2025	5.24	4.67	24.1	59.0	0.09	0.58	12.0	12.5	0.54	3.01	3.55	—	20,282	20,282	0.55	1.52	26.1	20,774
2026	0.27	6.10	0.97	3.18	< 0.005	0.03	0.48	0.52	0.03	0.11	0.14	—	656	656	0.01	0.02	0.79	664
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.19	0.16	1.55	1.44	< 0.005	0.07	0.27	0.33	0.06	0.13	0.19	—	251	251	0.01	< 0.005	0.03	252
2025	0.96	0.85	4.41	10.8	0.02	0.11	2.18	2.29	0.10	0.55	0.65	—	3,358	3,358	0.09	0.25	4.33	3,439
2026	0.05	1.11	0.18	0.58	< 0.005	0.01	0.09	0.09	0.01	0.02	0.03	—	109	109	< 0.005	< 0.005	0.13	110

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	40.0	79.1	293	489	3.63	7.16	172	179	6.85	44.7	51.6	2,474	459,065	461,539	258	44.7	1,075	482,402
Mit.	40.0	79.1	293	489	3.63	7.16	172	179	6.85	44.7	51.6	1,166	452,208	453,374	126	43.9	1,075	470,693
% Reduced	—	—	—	—	—	—	—	—	—	—	—	53%	1%	2%	51%	2%	—	2%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	23.3	63.7	307	290	3.52	7.01	172	179	6.74	44.7	51.4	2,474	448,396	450,870	258	44.9	27.9	470,737
Mit.	23.3	63.7	307	290	3.52	7.01	172	179	6.74	44.7	51.4	1,166	441,540	442,705	126	44.1	27.9	459,028
% Reduced	—	—	—	—	—	—	—	—	—	—	—	53%	2%	2%	51%	2%	—	2%

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.0	70.7	312	358	3.55	7.09	171	178	6.79	44.4	51.2	2,474	450,889	453,362	258	45.0	464	473,687
Mit.	31.0	70.7	312	358	3.55	7.09	171	178	6.79	44.4	51.2	1,166	444,032	445,198	126	44.2	464	461,978
% Reduced	—	—	—	—	—	—	—	—	—	—	—	53%	2%	2%	51%	2%	—	2%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.65	12.9	56.9	65.3	0.65	1.29	31.2	32.5	1.24	8.10	9.34	410	74,650	75,059	42.8	7.45	76.8	78,424
Mit.	5.65	12.9	56.9	65.3	0.65	1.29	31.2	32.5	1.24	8.10	9.34	193	73,515	73,708	20.9	7.31	76.8	76,486
% Reduced	—	—	—	—	—	—	—	—	—	—	—	53%	2%	2%	51%	2%	—	2%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Area	15.0	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	83,997	83,997	5.63	0.54	—	84,299
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	40.0	79.1	293	489	3.63	7.16	172	179	6.85	44.7	51.6	2,474	459,065	461,539	258	44.7	1,075	482,402
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Area	—	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	83,997	83,997	5.63	0.54	—	84,299
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	23.3	63.7	307	290	3.52	7.01	172	179	6.74	44.7	51.4	2,474	448,396	450,870	258	44.9	27.9	470,737
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.1	19.2	298	305	3.47	6.00	171	177	5.73	44.4	50.1	—	361,387	361,387	2.07	41.6	464	374,295
Area	7.37	50.8	0.35	41.5	< 0.005	0.07	—	0.07	0.06	—	0.06	—	170	170	0.01	< 0.005	—	171
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	83,997	83,997	5.63	0.54	—	84,299
Water	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Waste	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	31.0	70.7	312	358	3.55	7.09	171	178	6.79	44.4	51.2	2,474	450,889	453,362	258	45.0	464	473,687
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969
Area	1.35	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Energy	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	13,907	13,907	0.93	0.09	—	13,957
Water	—	—	—	—	—	—	—	—	—	—	—	191	883	1,074	19.6	0.47	—	1,706
Waste	—	—	—	—	—	—	—	—	—	—	—	218	0.00	218	21.8	0.00	—	764
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	5.65	12.9	56.9	65.3	0.65	1.29	31.2	32.5	1.24	8.10	9.34	410	74,650	75,059	42.8	7.45	76.8	78,424

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Area	15.0	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	78,619	78,619	5.30	0.50	—	78,901
Water	—	—	—	—	—	—	—	—	—	—	—	836	3,856	4,692	86.0	2.07	—	7,456
Waste	—	—	—	—	—	—	—	—	—	—	—	330	0.00	330	33.0	0.00	—	1,154
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	40.0	79.1	293	489	3.63	7.16	172	179	6.85	44.7	51.6	1,166	452,208	453,374	126	43.9	1,075	470,693
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Area	—	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	78,619	78,619	5.30	0.50	—	78,901
Water	—	—	—	—	—	—	—	—	—	—	—	836	3,856	4,692	86.0	2.07	—	7,456
Waste	—	—	—	—	—	—	—	—	—	—	—	330	0.00	330	33.0	0.00	—	1,154
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	23.3	63.7	307	290	3.52	7.01	172	179	6.74	44.7	51.4	1,166	441,540	442,705	126	44.1	27.9	459,028
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	22.1	19.2	298	305	3.47	6.00	171	177	5.73	44.4	50.1	—	361,387	361,387	2.07	41.6	464	374,295
Area	7.37	50.8	0.35	41.5	< 0.005	0.07	—	0.07	0.06	—	0.06	—	170	170	0.01	< 0.005	—	171
Energy	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	78,619	78,619	5.30	0.50	—	78,901
Water	—	—	—	—	—	—	—	—	—	—	—	836	3,856	4,692	86.0	2.07	—	7,456
Waste	—	—	—	—	—	—	—	—	—	—	—	330	0.00	330	33.0	0.00	—	1,154
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	31.0	70.7	312	358	3.55	7.09	171	178	6.79	44.4	51.2	1,166	444,032	445,198	126	44.2	464	461,978
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969
Area	1.35	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Energy	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	13,016	13,016	0.88	0.08	—	13,063
Water	—	—	—	—	—	—	—	—	—	—	—	138	638	777	14.2	0.34	—	1,235
Waste	—	—	—	—	—	—	—	—	—	—	—	54.6	0.00	54.6	5.46	0.00	—	191
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	5.65	12.9	56.9	65.3	0.65	1.29	31.2	32.5	1.24	8.10	9.34	193	73,515	73,708	20.9	7.31	76.8	76,486

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.73	4.33	0.01	0.21	—	0.21	0.19	—	0.19	—	696	696	0.03	0.01	—	699
Dust From Material Movement	—	—	—	—	—	—	1.01	1.01	—	0.52	0.52	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.86	0.79	< 0.005	0.04	—	0.04	0.04	—	0.04	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.58	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.02	265
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.52	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.2	31.2	< 0.005	< 0.005	0.06	31.7
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.6	25.6	< 0.005	< 0.005	0.03	26.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.17	5.17	< 0.005	< 0.005	0.01	5.24
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.24	4.24	< 0.005	< 0.005	< 0.005	4.41
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.73	4.33	0.01	0.21	—	0.21	0.19	—	0.19	—	696	696	0.03	0.01	—	699
Dust From Material Movement	—	—	—	—	—	—	1.01	1.01	—	0.52	0.52	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.86	0.79	< 0.005	0.04	—	0.04	0.04	—	0.04	—	115	115	< 0.005	< 0.005	—	116
Dust From Material Movement	—	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.58	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.02	265

Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.52	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.2	31.2	< 0.005	< 0.005	0.06	31.7
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.6	25.6	< 0.005	< 0.005	0.03	26.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.17	5.17	< 0.005	< 0.005	0.01	5.24
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.24	4.24	< 0.005	< 0.005	< 0.005	4.41
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.38	3.69	3.25	0.01	0.16	—	0.16	0.14	—	0.14	—	710	710	0.03	0.01	—	713
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	118	118	< 0.005	< 0.005	—	118
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	0.03	267
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.2	29.2	< 0.005	< 0.005	0.05	29.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.02	21.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	< 0.005	3.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.38	3.69	3.25	0.01	0.16	—	0.16	0.14	—	0.14	—	710	710	0.03	0.01	—	713

Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	118	118	< 0.005	< 0.005	—	118
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	0.03	267
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	195	195	< 0.005	0.03	0.01	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.2	29.2	< 0.005	< 0.005	0.05	29.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.02	21.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.84	4.84	< 0.005	< 0.005	0.01	4.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	< 0.005	3.61

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.63	5.37	0.01	0.23	—	0.23	0.22	—	0.22	—	1,253	1,253	0.05	0.01	—	1,257

Dust From Material Movement	—	—	—	—	—	—	0.68	0.68	—	0.27	0.27	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	207	207	0.01	< 0.005	—	208
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.66	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	292	292	0.01	0.01	1.07	296
Vendor	0.01	0.01	0.19	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.52	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.11	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	262
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	50.5	50.5	< 0.005	< 0.005	0.09	51.2
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.3	36.3	< 0.005	< 0.005	0.04	37.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.36	8.36	< 0.005	< 0.005	0.01	8.47
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.01	6.01	< 0.005	< 0.005	0.01	6.26
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.72	0.61	5.63	5.37	0.01	0.23	—	0.23	0.22	—	0.22	—	1,253	1,253	0.05	0.01	—	1,257
Dust From Material Movement	—	—	—	—	—	—	0.68	0.68	—	0.27	0.27	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	207	207	0.01	< 0.005	—	208
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.66	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	292	292	0.01	0.01	1.07	296
Vendor	0.01	0.01	0.19	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.52	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.11	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	262
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	50.5	50.5	< 0.005	< 0.005	0.09	51.2

Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.3	36.3	< 0.005	< 0.005	0.04	37.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.36	8.36	< 0.005	< 0.005	0.01	8.47
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.01	6.01	< 0.005	< 0.005	0.01	6.26
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.55	5.12	6.39	0.01	0.21	—	0.21	0.19	—	0.19	—	1,176	1,176	0.05	0.01	—	1,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.17	< 0.005	0.04	—	0.04	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.39	7.69	6.81	117	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	20,480	20,480	0.82	0.70	74.8	20,783
Vendor	0.74	0.68	17.7	7.76	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,456	17,456	0.04	2.34	47.8	18,202
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.01	6.28	7.44	78.3	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	18,128	18,128	0.88	0.70	1.94	18,359
Vendor	0.67	0.62	18.8	7.90	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,475	17,475	0.04	2.34	1.24	18,174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.47	3.11	3.95	42.9	0.00	0.00	8.93	8.93	0.00	2.09	2.09	—	9,153	9,153	0.43	0.34	15.9	9,281
Vendor	0.35	0.32	9.20	3.83	0.07	0.12	2.28	2.40	0.12	0.63	0.75	—	8,565	8,565	0.02	1.15	10.1	8,917
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.63	0.57	0.72	7.83	0.00	0.00	1.63	1.63	0.00	0.38	0.38	—	1,515	1,515	0.07	0.06	2.63	1,537
Vendor	0.06	0.06	1.68	0.70	0.01	0.02	0.42	0.44	0.02	0.12	0.14	—	1,418	1,418	< 0.005	0.19	1.67	1,476
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.55	5.12	6.39	0.01	0.21	—	0.21	0.19	—	0.19	—	1,176	1,176	0.05	0.01	—	1,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.17	< 0.005	0.04	—	0.04	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.39	7.69	6.81	117	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	20,480	20,480	0.82	0.70	74.8	20,783
Vendor	0.74	0.68	17.7	7.76	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,456	17,456	0.04	2.34	47.8	18,202

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.01	6.28	7.44	78.3	0.00	0.00	18.4	18.4	0.00	4.30	4.30	—	18,128	18,128	0.88	0.70	1.94	18,359
Vendor	0.67	0.62	18.8	7.90	0.14	0.25	4.69	4.94	0.25	1.30	1.54	—	17,475	17,475	0.04	2.34	1.24	18,174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.47	3.11	3.95	42.9	0.00	0.00	8.93	8.93	0.00	2.09	2.09	—	9,153	9,153	0.43	0.34	15.9	9,281
Vendor	0.35	0.32	9.20	3.83	0.07	0.12	2.28	2.40	0.12	0.63	0.75	—	8,565	8,565	0.02	1.15	10.1	8,917
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.63	0.57	0.72	7.83	0.00	0.00	1.63	1.63	0.00	0.38	0.38	—	1,515	1,515	0.07	0.06	2.63	1,537
Vendor	0.06	0.06	1.68	0.70	0.01	0.02	0.42	0.44	0.02	0.12	0.14	—	1,418	1,418	< 0.005	0.19	1.67	1,476
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	5.31	7.06	0.01	0.26	—	0.26	0.24	—	0.24	—	1,072	1,072	0.04	0.01	—	1,075
Paving	—	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.7	35.7	< 0.005	< 0.005	—	35.8
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.90	5.90	< 0.005	< 0.005	—	5.92
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.89	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	207	207	0.01	0.01	0.02	209
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.08	7.08	< 0.005	< 0.005	0.01	7.18
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.62
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.17	1.17	< 0.005	< 0.005	< 0.005	1.19

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	5.31	7.06	0.01	0.26	—	0.26	0.24	—	0.24	—	1,072	1,072	0.04	0.01	—	1,075
Paving	—	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.7	35.7	< 0.005	< 0.005	—	35.8
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.90	5.90	< 0.005	< 0.005	—	5.92
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.89	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	207	207	0.01	0.01	0.02	209
Vendor	0.01	0.01	0.21	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	191	191	< 0.005	0.03	0.01	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.08	7.08	< 0.005	< 0.005	0.01	7.18
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.62
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.17	1.17	< 0.005	< 0.005	< 0.005	1.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.62	0.52	5.08	7.03	0.01	0.24	—	0.24	0.22	—	0.22	—	1,071	1,071	0.04	0.01	—	1,074
Paving	—	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.89	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Paving	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.82	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.02	205
Vendor	0.01	0.01	0.20	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	188	188	< 0.005	0.03	0.01	195
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.04	26.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.8	23.8	< 0.005	< 0.005	0.03	24.8

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	0.01	4.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.95	3.95	< 0.005	< 0.005	< 0.005	4.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.08	7.03	0.01	0.24	—	0.24	0.22	—	0.22	—	1,071	1,071	0.04	0.01	—	1,074
Paving	—	1.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.89	< 0.005	0.03	—	0.03	0.03	—	0.03	—	136	136	0.01	< 0.005	—	137
Paving	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6

Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.82	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.02	205
Vendor	0.01	0.01	0.20	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	188	188	< 0.005	0.03	0.01	195
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.04	26.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.8	23.8	< 0.005	< 0.005	0.03	24.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	0.01	4.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.95	3.95	< 0.005	< 0.005	< 0.005	4.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	206	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	206	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.5
Architectural Coatings	—	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.73	2.73	< 0.005	< 0.005	—	2.73
Architectural Coatings	—	4.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.49	1.35	1.24	21.8	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	4,032	4,032	0.16	0.14	13.7	4,091
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.34	1.19	1.37	14.5	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	3,570	3,570	0.06	0.14	0.35	3,613
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.18	2.01	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	453	453	0.01	0.02	0.73	459
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.12	76.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	46.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.5
Architectural Coatings	—	5.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.73	2.73	< 0.005	< 0.005	—	2.73
Architectural Coatings	—	1.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.49	1.35	1.24	21.8	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	4,032	4,032	0.16	0.14	13.7	4,091
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.34	1.19	1.37	14.5	0.00	0.00	3.69	3.69	0.00	0.86	0.86	—	3,570	3,570	0.06	0.14	0.35	3,613
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.18	2.01	0.00	0.00	0.45	0.45	0.00	0.11	0.11	—	453	453	0.01	0.02	0.73	459
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	0.12	76.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	16.0	14.3	16.6	328	0.92	0.35	86.4	86.8	0.33	21.8	22.1	—	93,038	93,038	1.41	1.71	299	93,882
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.61	6.31	262	65.4	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,350	276,350	0.61	39.6	775	288,952
Total	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	14.5	12.9	18.4	214	0.82	0.35	86.4	86.8	0.33	21.8	22.1	—	82,646	82,646	1.45	1.84	7.76	83,238
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.35	6.09	276	65.1	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,419	276,419	0.60	39.7	20.1	288,279
Total	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	2.68	2.38	3.53	43.9	0.15	0.06	15.6	15.7	0.06	3.94	4.00	—	14,074	14,074	0.24	0.31	21.4	14,195

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1.36	1.13	50.9	11.8	0.48	1.03	15.6	16.6	0.99	4.16	5.15	—	45,757	45,757	0.10	6.57	55.4	47,773
Total	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	16.0	14.3	16.6	328	0.92	0.35	86.4	86.8	0.33	21.8	22.1	—	93,038	93,038	1.41	1.71	299	93,882
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.61	6.31	262	65.4	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,350	276,350	0.61	39.6	775	288,952
Total	23.6	20.6	279	394	3.55	6.00	172	178	5.73	44.7	50.4	—	369,388	369,388	2.03	41.3	1,075	382,834
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	14.5	12.9	18.4	214	0.82	0.35	86.4	86.8	0.33	21.8	22.1	—	82,646	82,646	1.45	1.84	7.76	83,238

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	7.35	6.09	276	65.1	2.63	5.65	85.9	91.5	5.40	22.9	28.3	—	276,419	276,419	0.60	39.7	20.1	288,279
Total	21.9	19.0	294	279	3.44	6.00	172	178	5.73	44.7	50.4	—	359,065	359,065	2.05	41.5	27.9	371,516
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	2.68	2.38	3.53	43.9	0.15	0.06	15.6	15.7	0.06	3.94	4.00	—	14,074	14,074	0.24	0.31	21.4	14,195
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1.36	1.13	50.9	11.8	0.48	1.03	15.6	16.6	0.99	4.16	5.15	—	45,757	45,757	0.10	6.57	55.4	47,773
Total	4.04	3.51	54.4	55.7	0.63	1.10	31.2	32.3	1.05	8.10	9.15	—	59,832	59,832	0.34	6.89	76.8	61,969

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	13,011	13,011	0.81	0.10	—	13,060

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,522	4,522	0.28	0.03	—	4,539
undefined	—	—	—	—	—	—	—	—	—	—	—	—	49,234	49,234	3.05	0.37	—	49,421
Total	—	—	—	—	—	—	—	—	—	—	—	—	68,128	68,128	4.23	0.51	—	68,387
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	13,011	13,011	0.81	0.10	—	13,060
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,522	4,522	0.28	0.03	—	4,539
undefined	—	—	—	—	—	—	—	—	—	—	—	—	49,234	49,234	3.05	0.37	—	49,421
Total	—	—	—	—	—	—	—	—	—	—	—	—	68,128	68,128	4.23	0.51	—	68,387
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,154	2,154	0.13	0.02	—	2,162
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	225	225	0.01	< 0.005	—	226

Unrefrigerated Warehou	—	—	—	—	—	—	—	—	—	—	—	—	749	749	0.05	0.01	—	751
undefined	—	—	—	—	—	—	—	—	—	—	—	—	8,151	8,151	0.51	0.06	—	8,182
Total	—	—	—	—	—	—	—	—	—	—	—	—	11,279	11,279	0.70	0.08	—	11,322

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	12,155	12,155	0.75	0.09	—	12,201
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
undefined	—	—	—	—	—	—	—	—	—	—	—	—	49,234	49,234	3.05	0.37	—	49,421
Total	—	—	—	—	—	—	—	—	—	—	—	—	62,751	62,751	3.89	0.47	—	62,989
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	12,155	12,155	0.75	0.09	—	12,201
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1,362	1,362	0.08	0.01	—	1,367
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
undefined	—	—	—	—	—	—	—	—	—	—	—	—	49,234	49,234	3.05	0.37	—	49,421
Total	—	—	—	—	—	—	—	—	—	—	—	—	62,751	62,751	3.89	0.47	—	62,989
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,012	2,012	0.12	0.02	—	2,020
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	225	225	0.01	< 0.005	—	226
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
undefined	—	—	—	—	—	—	—	—	—	—	—	—	8,151	8,151	0.51	0.06	—	8,182
Total	—	—	—	—	—	—	—	—	—	—	—	—	10,389	10,389	0.64	0.08	—	10,429

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.20	0.10	1.80	1.51	0.01	0.14	—	0.14	0.14	—	0.14	—	1,950	1,950	0.17	< 0.005	—	1,955

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.07	0.03	0.63	0.53	< 0.005	0.05	—	0.05	0.05	—	0.05	—	678	678	0.06	< 0.005	—	679
Total	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	2,627	2,627	0.23	< 0.005	—	2,634

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.09	0.54	9.87	8.29	0.06	0.75	—	0.75	0.75	—	0.75	—	11,776	11,776	1.04	0.02	—	11,808

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.38	0.19	3.43	2.88	0.02	0.26	—	0.26	0.26	—	0.26	—	4,092	4,092	0.36	0.01	—	4,104
Total	1.46	0.73	13.3	11.2	0.08	1.01	—	1.01	1.01	—	1.01	—	15,868	15,868	1.40	0.03	—	15,912
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.20	0.10	1.80	1.51	0.01	0.14	—	0.14	0.14	—	0.14	—	1,950	1,950	0.17	< 0.005	—	1,955
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	0.07	0.03	0.63	0.53	< 0.005	0.05	—	0.05	0.05	—	0.05	—	678	678	0.06	< 0.005	—	679
Total	0.27	0.13	2.43	2.04	0.01	0.18	—	0.18	0.18	—	0.18	—	2,627	2,627	0.23	< 0.005	—	2,634

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	—	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	15.0	13.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Total	15.0	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	7.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.35	1.24	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Total	1.35	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	15.0	13.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Total	15.0	57.8	0.71	84.1	0.01	0.15	—	0.15	0.11	—	0.11	—	346	346	0.01	< 0.005	—	347
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	41.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	2.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	44.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	7.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.35	1.24	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Total	1.35	9.27	0.06	7.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.2	28.2	< 0.005	< 0.005	—	28.3

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	856	3,959	4,816	88.1	2.12	—	7,648
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	298	1,376	1,674	30.6	0.74	—	2,658
Total	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	856	3,959	4,816	88.1	2.12	—	7,648
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	298	1,376	1,674	30.6	0.74	—	2,658

Total	—	—	—	—	—	—	—	—	—	—	—	1,154	5,335	6,489	119	2.85	—	10,306
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	142	655	797	14.6	0.35	—	1,266
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	49.3	228	277	5.07	0.12	—	440
Total	—	—	—	—	—	—	—	—	—	—	—	191	883	1,074	19.6	0.47	—	1,706

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	620	2,861	3,482	63.8	1.53	—	5,533
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	216	994	1,210	22.2	0.53	—	1,923
Total	—	—	—	—	—	—	—	—	—	—	—	836	3,856	4,692	86.0	2.07	—	7,456

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	620	2,861	3,482	63.8	1.53	—	5,533
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	216	994	1,210	22.2	0.53	—	1,923
Total	—	—	—	—	—	—	—	—	—	—	—	836	3,856	4,692	86.0	2.07	—	7,456
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	103	474	576	10.6	0.25	—	916
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	35.7	165	200	3.67	0.09	—	318
Total	—	—	—	—	—	—	—	—	—	—	—	138	638	777	14.2	0.34	—	1,235

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	979	0.00	979	97.9	0.00	—	3,426
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	340	0.00	340	34.0	0.00	—	1,191
Total	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	979	0.00	979	97.9	0.00	—	3,426
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	340	0.00	340	34.0	0.00	—	1,191
Total	—	—	—	—	—	—	—	—	—	—	—	1,319	0.00	1,319	132	0.00	—	4,616
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	162	0.00	162	16.2	0.00	—	567

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	56.3	0.00	56.3	5.63	0.00	—	197
Total	—	—	—	—	—	—	—	—	—	—	—	218	0.00	218	21.8	0.00	—	764

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	245	0.00	245	24.5	0.00	—	856
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	85.1	0.00	85.1	8.50	0.00	—	298
Total	—	—	—	—	—	—	—	—	—	—	—	330	0.00	330	33.0	0.00	—	1,154
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	245	0.00	245	24.5	0.00	—	856

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	85.1	0.00	85.1	8.50	0.00	—	298
Total	—	—	—	—	—	—	—	—	—	—	—	330	0.00	330	33.0	0.00	—	1,154
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	40.5	0.00	40.5	4.05	0.00	—	142
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	14.1	0.00	14.1	1.41	0.00	—	49.3
Total	—	—	—	—	—	—	—	—	—	—	—	54.6	0.00	54.6	5.46	0.00	—	191

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	9/1/2024	11/6/2024	5.00	48.0	—
Grading	Grading	11/7/2024	4/7/2025	5.00	108	—
Building Construction	Building Construction	4/8/2025	12/14/2025	5.00	179	—
Paving	Paving	12/15/2025	3/6/2026	5.00	60.0	—

Architectural Coating	Architectural Coating	3/28/2026	5/29/2026	5.00	45.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT

Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	6.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1,404	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	548	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	16.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	6.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	282	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	6.00	10.2	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	6.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1,404	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	548	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	16.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	6.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	282	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	2,899,193	966,398	64,004

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	72.0	0.00	—
Grading	—	—	324	0.00	—
Paving	0.00	0.00	0.00	0.00	24.5

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	24.5	100%
Unrefrigerated Warehouse-Rail	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005
2026	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	4,561	4,561	4,561	1,664,910	124,731	124,731	124,731	45,526,728
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1,585	1,585	1,585	578,591	98,440	98,440	98,440	35,930,491

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	4,561	4,561	4,561	1,664,910	124,731	124,731	124,731	45,526,728
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unrefrigerated Warehouse-Rail	1,585	1,585	1,585	578,591	98,440	98,440	98,440	35,930,491

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	2,899,193	966,398	64,004

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	8,927,006	532	0.0330	0.0040	36,743,746
Parking Lot	934,465	532	0.0330	0.0040	0.00
Unrefrigerated Warehouse-Rail	3,102,323	532	0.0330	0.0040	12,769,226

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	8,339,769	532	0.0330	0.0040	36,743,746
Parking Lot	934,465	532	0.0330	0.0040	0.00
Unrefrigerated Warehouse-Rail	0.00	532	0.0330	0.0040	12,769,226

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	446,958,936	33,695,896
Parking Lot	0.00	0.00
Unrefrigerated Warehouse-Rail	155,327,526	11,710,245

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	323,777,053	23,325,124
Parking Lot	0.00	0.00
Unrefrigerated Warehouse-Rail	112,519,260	8,106,118

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	1,817	—
Parking Lot	0.00	—
Unrefrigerated Warehouse-Rail	631	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	454	—
Parking Lot	0.00	—
Unrefrigerated Warehouse-Rail	158	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Electric	Average	308	24.0	82.0	0.20
Forklifts	Electric	Average	3.00	24.0	200	0.20

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Electric	Average	308	24.0	82.0	0.20
Forklifts	Electric	Average	3.00	24.0	200	0.20

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	34.2	annual days of extreme heat
Extreme Precipitation	1.00	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	1.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	0	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	80.0
AQ-PM	7.52
AQ-DPM	21.9
Drinking Water	34.9
Lead Risk Housing	27.7
Pesticides	0.00
Toxic Releases	37.1
Traffic	59.7
Effect Indicators	—
CleanUp Sites	52.1
Groundwater	44.8
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	51.2
Solid Waste	84.7

Sensitive Population	—
Asthma	88.0
Cardio-vascular	89.5
Low Birth Weights	91.9
Socioeconomic Factor Indicators	—
Education	26.9
Housing	11.6
Linguistic	—
Poverty	52.5
Unemployment	90.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	44.97626075
Employed	30.46323624
Median HI	35.0442705
Education	—
Bachelor's or higher	42.93596818
High school enrollment	100
Preschool enrollment	39.79212113
Transportation	—
Auto Access	85.40998332
Active commuting	24.00872578
Social	—
2-parent households	51.18696266

Voting	75.34967278
Neighborhood	—
Alcohol availability	88.37418196
Park access	16.65597331
Retail density	8.469138971
Supermarket access	2.399589375
Tree canopy	0.71859361
Housing	—
Homeownership	62.60746824
Housing habitability	64.39112024
Low-inc homeowner severe housing cost burden	17.8108559
Low-inc renter severe housing cost burden	77.19748492
Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	64.22430386
Arthritis	4.4
Asthma ER Admissions	7.6
High Blood Pressure	8.9
Cancer (excluding skin)	9.1
Asthma	30.0
Coronary Heart Disease	6.8
Chronic Obstructive Pulmonary Disease	13.3
Diagnosed Diabetes	35.6
Life Expectancy at Birth	34.2
Cognitively Disabled	41.3
Physically Disabled	11.3
Heart Attack ER Admissions	2.7

Mental Health Not Good	48.5
Chronic Kidney Disease	20.1
Obesity	46.5
Pedestrian Injuries	48.3
Physical Health Not Good	39.9
Stroke	15.1
Health Risk Behaviors	—
Binge Drinking	57.0
Current Smoker	46.7
No Leisure Time for Physical Activity	58.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	58.1
Elderly	16.8
English Speaking	81.5
Foreign-born	11.0
Outdoor Workers	47.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	90.2
Traffic Density	37.9
Traffic Access	23.0
Other Indices	—
Hardship	32.7
Other Decision Support	—
2016 Voting	75.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	46.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction schedule obtained from data needs request response from client.
Construction: Off-Road Equipment	Changes made according to client's response to data needs request.
Construction: Trips and VMT	Updated defaults to match information provided by client.
Operations: Fleet Mix	changed according to information provided by client and Traffic Impact Analysis figures.
Operations: Vehicle Data	updated caleemod defaults based on information provided by client. Truck trip length is from Streetlight average for the region.
Operations: Off-Road Equipment	Updated as per client information to account for 308 forklifts and 3 yard hostlers operating 24 hours per day, 365 days per year.

Operations: Energy Use	defaults for selected land use and area.

```
 *** AERMOD - VERSION 22112  ***   ***
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA ***
10/11/23
 *** AERMET - VERSION  19191 ***   ***
***        11:02:13

PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                              ***     MODEL SETUP OPTIONS
SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM_10

 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:   2760 Source(s);       1 Source Group(s); and
28 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:   2760 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0
line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  19191
```

```
 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor
(RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting
(PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked Values
(SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for
Calm Hours
                                                                 m for
Missing Hours
                                                                 b for
Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   584.30 ;
Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC
;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      4.7 MB of RAM.

 **Input Runstream File:          aermod.inp
 **Output Print File:             aermod.out

 **Detailed Error/Message File:   Apple Valley IENL Con HRA.err
 **File for Summary of Results:   Apple Valley IENL Con HRA.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

```
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
Met Version: 19191
Profile file: KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 23161 Upper air station no.:
3120
Name: DAGGETT/FAA_AIRPORT Name:
UNKNOWN
Year: 2015 Year:
2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-24.9	0.256	-9.000	-9.000	-999.	311.	72.1	0.02	4.18	1.00	4.27	251.	10.0	272.5	2.0
15	01	01	1	02	-24.3	0.250	-9.000	-9.000	-999.	300.	68.6	0.02	4.18	1.00	4.17	240.	10.0	272.5	2.0
15	01	01	1	03	-28.4	0.292	-9.000	-9.000	-999.	379.	94.0	0.02	4.18	1.00	4.85	255.	10.0	273.1	2.0
15	01	01	1	04	-26.1	0.266	-9.000	-9.000	-999.	329.	77.8	0.02	4.18	1.00	4.51	274.	10.0	270.4	2.0
15	01	01	1	05	-32.2	0.328	-9.000	-9.000	-999.	450.	118.0	0.02	4.18	1.00	5.51	275.	10.0	270.4	2.0
15	01	01	1	06	-34.9	0.355	-9.000	-9.000	-999.	507.	138.4	0.02	4.18	1.00	5.84	252.	10.0	270.4	2.0
15	01	01	1	07	-34.8	0.355	-9.000	-9.000	-999.	508.	138.9	0.02	4.18	1.00	5.85	251.	10.0	271.4	2.0
15	01	01	1	08	-19.3	0.250	-9.000	-9.000	-999.	306.	68.6	0.02	4.18	0.57	4.15	266.	10.0	270.9	2.0
15	01	01	1	09	31.4	0.236	0.499	0.005	134.	276.	-35.7	0.02	4.18	0.36	3.40	255.	10.0	273.1	2.0
15	01	01	1	10	103.0	0.183	1.101	0.005	441.	188.	-5.0	0.02	4.18	0.29	2.15	300.	10.0	277.0	2.0
15	01	01	1	11	152.0	0.131	1.445	0.005	675.	114.	-1.3	0.04	4.18	0.26	1.08	230.	10.0	278.8	2.0
15	01	01	1	12	175.1	0.131	2.058	0.006	1692.	114.	-1.1	0.02	4.18	0.25	1.31	109.	10.0	280.4	2.0

```
 15 01 01   1 13  171.2  0.143  2.108  0.011 1860.  130.     -1.4  0.01
4.18   0.26    1.55   35.   10.0  281.4    2.0
 15 01 01   1 14  140.5  0.177  1.982  0.011 1882.  179.     -3.4  0.01
4.18   0.27    2.16   55.   10.0  282.0    2.0
 15 01 01   1 15   84.4  0.150  1.677  0.011 1895.  139.     -3.4  0.02
4.18   0.30    1.77   64.   10.0  282.5    2.0
 15 01 01   1 16    8.8  0.148  0.789  0.010 1896.  136.    -31.1  0.02
4.18   0.40    2.15   70.   10.0  282.5    2.0
 15 01 01   1 17   -7.9  0.117 -9.000 -9.000 -999.   96.     17.3  0.02
4.18   0.70    2.08   75.   10.0  279.9    2.0
 15 01 01   1 18   -3.9  0.085 -9.000 -9.000 -999.   60.     13.5  0.05
4.18   1.00    1.24  196.   10.0  277.0    2.0
 15 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 21  -10.8  0.137 -9.000 -9.000 -999.  121.     20.5  0.02
4.18   1.00    2.36  260.   10.0  274.2    2.0
 15 01 01   1 22  -19.5  0.199 -9.000 -9.000 -999.  214.     43.7  0.02
4.18   1.00    3.36  262.   10.0  272.0    2.0
 15 01 01   1 23  -18.8  0.192 -9.000 -9.000 -999.  202.     40.5  0.04
4.18   1.00    2.86  230.   10.0  272.0    2.0
 15 01 01   1 24  -28.1  0.287 -9.000 -9.000 -999.  370.     90.9  0.02
4.18   1.00    4.86  270.   10.0  272.0    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 15 01 01 01   10.0 1  251.    4.27   272.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.16355 AT (473496.16, 3825039.06, 852.73, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.16251 AT (473454.80, 3825060.10, 852.97, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.15881 AT (473710.22, 3824860.55, 853.47, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.15864 AT (473515.75, 3824987.54, 851.78, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.15855 AT (473546.96, 3824962.86, 852.42, 1379.79, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.15763 AT (473472.22, 3825010.76, 851.75, 1379.79, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.15750 AT (473435.93, 3825035.43, 852.04, 1379.79, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.15732 AT (473691.36, 3824863.45, 852.36, 1379.79, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.15416 AT (473702.97, 3824830.80, 852.66, 1379.79, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.15369 AT (473652.17, 3824861.27, 851.19, 1379.79, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	42.58142	ON 18120322:	AT (473691.36, 3824863.45, 852.36, 1379.79, 0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 637 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 191 Calm Hours Identified

A Total of 446 Missing Hours Identified (1.02 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 5712 MEOPEN: THRESH_1MIN 1-min ASOS wind speed
threshold used 0.50
ME W187 5712 MEOPEN: ADJ_U* Option for Stable Low Winds used in
AERMET
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological
File at: 18010101
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological
File at: 1 year gap

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 10/11/2023
** File: C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con
HRA\Apple Valley IENL Con HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL
Con HRA
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Apple Valley IENL Con HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC line source 1 AV warehouses
** PREFIX
** Length of Side = 10.00
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 10.00
** SZINIT = 4.65
** Nodes = 118
** 475354.114, 3826410.610, 882.15, 5.00, 4.65
** 475348.211, 3826360.436, 885.75, 5.00, 4.65
** 475900.130, 3826350.597, 904.29, 5.00, 4.65
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** Source Parameters **
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SRCPARAM L0002626     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002627     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002628     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002629     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002630     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002631     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002632     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002633     0.0003623188      5.00      4.65      4.65
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SRCPARAM L0002634     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002635     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002636     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002637     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002638     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002639     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002640     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002641     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002642     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002643     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002644     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002645     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002646     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002647     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002648     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002649     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002650     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002651     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002652     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002653     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002654     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002655     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002656     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002657     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002658     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002659     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002660     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002661     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002662     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002663     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002664     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002665     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002666     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002667     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002668     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002669     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002670     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002671     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002672     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002673     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002674     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002675     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002676     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002677     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002678     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002679     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002680     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002681     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002682     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002683     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002684     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002685     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002686     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002687     0.0003623188      5.00      4.65      4.65
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SRCPARAM L0002688     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002689     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002690     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002691     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002692     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002693     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002694     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002695     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002696     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002697     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002698     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002699     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002700     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002701     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002702     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002703     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002704     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002705     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002706     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002707     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002708     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002709     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002710     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002711     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002712     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002713     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002714     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002715     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002716     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002717     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002718     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002719     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002720     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002721     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002722     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002723     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002724     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002725     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002726     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002727     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002728     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002729     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002730     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002731     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002732     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002733     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002734     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002735     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002736     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002737     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002738     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002739     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002740     0.0003623188      5.00      4.65      4.65
SRCPARAM L0002741     0.0003623188      5.00      4.65      4.65
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   SRCPARAM L0002742     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002743     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002744     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002745     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002746     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002747     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002748     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002749     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002750     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002751     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002752     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002753     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002754     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002755     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002756     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002757     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002758     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002759     0.0003623188      5.00      4.65      4.65
   SRCPARAM L0002760     0.0003623188      5.00      4.65      4.65
** ------------------------------------------------------------------
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED "Apple Valley IENL Con HRA.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
   PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
   SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
   UAIRDATA 3120 2015
   PROFBASE 584.3 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
   PLOTFILE 1 ALL 1ST "Apple Valley IENL Con HRA.AD\01H1GALL.PLT" 31
   PLOTFILE PERIOD ALL "Apple Valley IENL Con HRA.AD\PE00GALL.PLT" 32
   SUMMFILE "Apple Valley IENL Con HRA.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    5712       MEOPEN: THRESH_1MIN 1-min ASOS wind speed
threshold used          0.50
 ME W187    5712       MEOPEN: ADJ_U* Option for Stable Low Winds used in
AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************
```

```
 *** AERMOD - VERSION 22112  ***   ***
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA ***
10/11/23
 *** AERMET - VERSION  19191 ***   ***
***        11:02:13

PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                              ***     MODEL SETUP OPTIONS
SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM_10

 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:   2760 Source(s);       1 Source Group(s); and
28 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:   2760 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0
line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  19191
```

```
 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor
(RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting
(PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked Values
(SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for
Calm Hours
                                                                 m for
Missing Hours
                                                                 b for
Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   584.30 ;
Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC
;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      4.7 MB of RAM.

 **Input Runstream File:          aermod.inp
 **Output Print File:             aermod.out

 **Detailed Error/Message File:   Apple Valley IENL Con HRA.err
 **File for Summary of Results:   Apple Valley IENL Con HRA.sum
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000001	0	0.36232E-03	475353.5	3826405.6	882.9	5.00	4.65	4.65	NO
L0000002	0	0.36232E-03	475352.4	3826395.7	883.7	5.00	4.65	4.65	NO
L0000003	0	0.36232E-03	475351.2	3826385.8	884.3	5.00	4.65	4.65	NO
L0000004	0	0.36232E-03	475350.0	3826375.8	885.2	5.00	4.65	4.65	NO
L0000005	0	0.36232E-03	475348.9	3826365.9	886.1	5.00	4.65	4.65	NO
L0000006	0	0.36232E-03	475352.7	3826360.4	886.5	5.00	4.65	4.65	NO
L0000007	0	0.36232E-03	475362.7	3826360.2	886.1	5.00	4.65	4.65	NO
L0000008	0	0.36232E-03	475372.7	3826360.0	885.0	5.00	4.65	4.65	NO
L0000009	0	0.36232E-03	475382.7	3826359.8	884.6	5.00	4.65	4.65	NO
L0000010	0	0.36232E-03	475392.7	3826359.6	885.8	5.00	4.65	4.65	NO
L0000011	0	0.36232E-03	475402.7	3826359.5	886.5	5.00	4.65	4.65	NO
L0000012	0	0.36232E-03	475412.7	3826359.3	886.0	5.00	4.65	4.65	NO
L0000013	0	0.36232E-03	475422.7	3826359.1	885.7	5.00	4.65	4.65	NO
L0000014	0	0.36232E-03	475432.7	3826358.9	885.3	5.00	4.65	4.65	NO
L0000015	0	0.36232E-03	475442.7	3826358.8	885.6	5.00	4.65	4.65	NO
L0000016	0	0.36232E-03	475452.7	3826358.6	885.9	5.00	4.65	4.65	NO

L0000017		0	0.36232E-03	475462.7	3826358.4	886.1	5.00	
4.65	4.65	NO						
L0000018		0	0.36232E-03	475472.7	3826358.2	886.8	5.00	
4.65	4.65	NO						
L0000019		0	0.36232E-03	475482.7	3826358.0	887.8	5.00	
4.65	4.65	NO						
L0000020		0	0.36232E-03	475492.7	3826357.9	888.3	5.00	
4.65	4.65	NO						
L0000021		0	0.36232E-03	475502.7	3826357.7	888.7	5.00	
4.65	4.65	NO						
L0000022		0	0.36232E-03	475512.7	3826357.5	889.1	5.00	
4.65	4.65	NO						
L0000023		0	0.36232E-03	475522.7	3826357.3	889.6	5.00	
4.65	4.65	NO						
L0000024		0	0.36232E-03	475532.7	3826357.1	889.9	5.00	
4.65	4.65	NO						
L0000025		0	0.36232E-03	475542.7	3826357.0	890.2	5.00	
4.65	4.65	NO						
L0000026		0	0.36232E-03	475552.7	3826356.8	890.8	5.00	
4.65	4.65	NO						
L0000027		0	0.36232E-03	475562.7	3826356.6	891.5	5.00	
4.65	4.65	NO						
L0000028		0	0.36232E-03	475572.7	3826356.4	892.0	5.00	
4.65	4.65	NO						
L0000029		0	0.36232E-03	475582.7	3826356.3	892.4	5.00	
4.65	4.65	NO						
L0000030		0	0.36232E-03	475592.7	3826356.1	892.9	5.00	
4.65	4.65	NO						
L0000031		0	0.36232E-03	475602.6	3826355.9	893.8	5.00	
4.65	4.65	NO						
L0000032		0	0.36232E-03	475612.6	3826355.7	894.8	5.00	
4.65	4.65	NO						
L0000033		0	0.36232E-03	475622.6	3826355.5	895.6	5.00	
4.65	4.65	NO						
L0000034		0	0.36232E-03	475632.6	3826355.4	896.2	5.00	
4.65	4.65	NO						
L0000035		0	0.36232E-03	475642.6	3826355.2	896.9	5.00	
4.65	4.65	NO						
L0000036		0	0.36232E-03	475652.6	3826355.0	897.4	5.00	
4.65	4.65	NO						
L0000037		0	0.36232E-03	475662.6	3826354.8	897.7	5.00	
4.65	4.65	NO						
L0000038		0	0.36232E-03	475672.6	3826354.7	898.2	5.00	
4.65	4.65	NO						
L0000039		0	0.36232E-03	475682.6	3826354.5	898.7	5.00	
4.65	4.65	NO						
L0000040		0	0.36232E-03	475692.6	3826354.3	899.0	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000041	0	0.36232E-03	475702.6	3826354.1	899.6	5.00	4.65	4.65	NO
L0000042	0	0.36232E-03	475712.6	3826353.9	900.1	5.00	4.65	4.65	NO
L0000043	0	0.36232E-03	475722.6	3826353.8	900.4	5.00	4.65	4.65	NO
L0000044	0	0.36232E-03	475732.6	3826353.6	900.1	5.00	4.65	4.65	NO
L0000045	0	0.36232E-03	475742.6	3826353.4	899.9	5.00	4.65	4.65	NO
L0000046	0	0.36232E-03	475752.6	3826353.2	900.1	5.00	4.65	4.65	NO
L0000047	0	0.36232E-03	475762.6	3826353.0	900.5	5.00	4.65	4.65	NO
L0000048	0	0.36232E-03	475772.6	3826352.9	900.9	5.00	4.65	4.65	NO
L0000049	0	0.36232E-03	475782.6	3826352.7	901.2	5.00	4.65	4.65	NO
L0000050	0	0.36232E-03	475792.6	3826352.5	901.3	5.00	4.65	4.65	NO
L0000051	0	0.36232E-03	475802.6	3826352.3	901.2	5.00	4.65	4.65	NO
L0000052	0	0.36232E-03	475812.6	3826352.2	901.6	5.00	4.65	4.65	NO
L0000053	0	0.36232E-03	475822.6	3826352.0	902.1	5.00	4.65	4.65	NO
L0000054	0	0.36232E-03	475832.6	3826351.8	902.4	5.00	4.65	4.65	NO
L0000055	0	0.36232E-03	475842.6	3826351.6	902.3	5.00	4.65	4.65	NO
L0000056	0	0.36232E-03	475852.6	3826351.4	902.6	5.00	4.65	4.65	NO

L0000057		0	0.36232E-03	475862.6	3826351.3	902.8	5.00	
4.65	4.65	NO						
L0000058		0	0.36232E-03	475872.6	3826351.1	903.3	5.00	
4.65	4.65	NO						
L0000059		0	0.36232E-03	475882.6	3826350.9	903.7	5.00	
4.65	4.65	NO						
L0000060		0	0.36232E-03	475892.6	3826350.7	903.9	5.00	
4.65	4.65	NO						
L0000061		0	0.36232E-03	475900.1	3826348.1	904.3	5.00	
4.65	4.65	NO						
L0000062		0	0.36232E-03	475900.2	3826338.1	904.6	5.00	
4.65	4.65	NO						
L0000063		0	0.36232E-03	475900.2	3826328.1	904.9	5.00	
4.65	4.65	NO						
L0000064		0	0.36232E-03	475900.3	3826318.1	905.3	5.00	
4.65	4.65	NO						
L0000065		0	0.36232E-03	475900.3	3826308.1	905.6	5.00	
4.65	4.65	NO						
L0000066		0	0.36232E-03	475900.3	3826298.1	905.9	5.00	
4.65	4.65	NO						
L0000067		0	0.36232E-03	475900.4	3826288.1	906.1	5.00	
4.65	4.65	NO						
L0000068		0	0.36232E-03	475900.4	3826278.1	906.3	5.00	
4.65	4.65	NO						
L0000069		0	0.36232E-03	475900.4	3826268.1	906.4	5.00	
4.65	4.65	NO						
L0000070		0	0.36232E-03	475900.5	3826258.1	906.6	5.00	
4.65	4.65	NO						
L0000071		0	0.36232E-03	475900.5	3826248.1	906.7	5.00	
4.65	4.65	NO						
L0000072		0	0.36232E-03	475900.6	3826238.1	906.6	5.00	
4.65	4.65	NO						
L0000073		0	0.36232E-03	475900.6	3826228.1	906.8	5.00	
4.65	4.65	NO						
L0000074		0	0.36232E-03	475900.6	3826218.1	907.2	5.00	
4.65	4.65	NO						
L0000075		0	0.36232E-03	475900.7	3826208.1	907.6	5.00	
4.65	4.65	NO						
L0000076		0	0.36232E-03	475900.7	3826198.1	908.1	5.00	
4.65	4.65	NO						
L0000077		0	0.36232E-03	475900.8	3826188.1	908.3	5.00	
4.65	4.65	NO						
L0000078		0	0.36232E-03	475900.8	3826178.1	908.3	5.00	
4.65	4.65	NO						
L0000079		0	0.36232E-03	475900.8	3826168.1	908.2	5.00	
4.65	4.65	NO						
L0000080		0	0.36232E-03	475900.9	3826158.1	908.2	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000081	0	0.36232E-03	475900.9	3826148.1	907.7	5.00	4.65	4.65	NO
L0000082	0	0.36232E-03	475900.9	3826138.1	907.0	5.00	4.65	4.65	NO
L0000083	0	0.36232E-03	475901.0	3826128.1	907.0	5.00	4.65	4.65	NO
L0000084	0	0.36232E-03	475901.0	3826118.1	907.5	5.00	4.65	4.65	NO
L0000085	0	0.36232E-03	475901.1	3826108.1	908.1	5.00	4.65	4.65	NO
L0000086	0	0.36232E-03	475901.1	3826098.1	908.2	5.00	4.65	4.65	NO
L0000087	0	0.36232E-03	475901.1	3826088.1	908.0	5.00	4.65	4.65	NO
L0000088	0	0.36232E-03	475901.2	3826078.1	907.8	5.00	4.65	4.65	NO
L0000089	0	0.36232E-03	475901.2	3826068.1	907.8	5.00	4.65	4.65	NO
L0000090	0	0.36232E-03	475901.3	3826058.1	907.6	5.00	4.65	4.65	NO
L0000091	0	0.36232E-03	475901.3	3826048.1	907.7	5.00	4.65	4.65	NO
L0000092	0	0.36232E-03	475901.3	3826038.1	908.3	5.00	4.65	4.65	NO
L0000093	0	0.36232E-03	475901.4	3826028.1	908.8	5.00	4.65	4.65	NO
L0000094	0	0.36232E-03	475901.4	3826018.1	908.6	5.00	4.65	4.65	NO
L0000095	0	0.36232E-03	475901.4	3826008.1	907.8	5.00	4.65	4.65	NO
L0000096	0	0.36232E-03	475901.5	3825998.1	906.7	5.00	4.65	4.65	NO

L0000097		0	0.36232E-03	475901.5	3825988.1	906.5	5.00	
4.65	4.65	NO						
L0000098		0	0.36232E-03	475901.6	3825978.1	907.6	5.00	
4.65	4.65	NO						
L0000099		0	0.36232E-03	475901.6	3825968.1	910.3	5.00	
4.65	4.65	NO						
L0000100		0	0.36232E-03	475901.6	3825958.1	914.2	5.00	
4.65	4.65	NO						
L0000101		0	0.36232E-03	475901.7	3825948.1	916.6	5.00	
4.65	4.65	NO						
L0000102		0	0.36232E-03	475901.7	3825938.1	916.7	5.00	
4.65	4.65	NO						
L0000103		0	0.36232E-03	475901.7	3825928.1	917.2	5.00	
4.65	4.65	NO						
L0000104		0	0.36232E-03	475901.8	3825918.1	916.8	5.00	
4.65	4.65	NO						
L0000105		0	0.36232E-03	475901.8	3825908.1	915.3	5.00	
4.65	4.65	NO						
L0000106		0	0.36232E-03	475901.9	3825898.1	915.2	5.00	
4.65	4.65	NO						
L0000107		0	0.36232E-03	475901.9	3825888.1	915.2	5.00	
4.65	4.65	NO						
L0000108		0	0.36232E-03	475901.9	3825878.1	915.1	5.00	
4.65	4.65	NO						
L0000109		0	0.36232E-03	475902.0	3825868.1	914.9	5.00	
4.65	4.65	NO						
L0000110		0	0.36232E-03	475902.0	3825858.1	915.1	5.00	
4.65	4.65	NO						
L0000111		0	0.36232E-03	475902.1	3825848.1	915.2	5.00	
4.65	4.65	NO						
L0000112		0	0.36232E-03	475902.1	3825838.1	915.2	5.00	
4.65	4.65	NO						
L0000113		0	0.36232E-03	475893.2	3825837.2	915.2	5.00	
4.65	4.65	NO						
L0000114		0	0.36232E-03	475883.2	3825837.4	915.0	5.00	
4.65	4.65	NO						
L0000115		0	0.36232E-03	475873.2	3825837.6	914.8	5.00	
4.65	4.65	NO						
L0000116		0	0.36232E-03	475863.2	3825837.8	914.6	5.00	
4.65	4.65	NO						
L0000117		0	0.36232E-03	475853.2	3825838.0	914.4	5.00	
4.65	4.65	NO						
L0000118		0	0.36232E-03	475843.2	3825838.3	914.1	5.00	
4.65	4.65	NO						
L0000119		0	0.36232E-03	475833.2	3825838.5	913.7	5.00	
4.65	4.65	NO						
L0000120		0	0.36232E-03	475823.2	3825838.7	913.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000121	0	0.36232E-03	475813.2	3825838.9	913.3	5.00	4.65	4.65	NO
L0000122	0	0.36232E-03	475803.2	3825839.1	912.8	5.00	4.65	4.65	NO
L0000123	0	0.36232E-03	475793.2	3825839.3	912.3	5.00	4.65	4.65	NO
L0000124	0	0.36232E-03	475783.2	3825839.5	911.7	5.00	4.65	4.65	NO
L0000125	0	0.36232E-03	475773.2	3825839.7	911.5	5.00	4.65	4.65	NO
L0000126	0	0.36232E-03	475763.2	3825839.9	911.1	5.00	4.65	4.65	NO
L0000127	0	0.36232E-03	475753.2	3825840.1	910.6	5.00	4.65	4.65	NO
L0000128	0	0.36232E-03	475743.2	3825840.3	910.2	5.00	4.65	4.65	NO
L0000129	0	0.36232E-03	475733.2	3825840.5	910.0	5.00	4.65	4.65	NO
L0000130	0	0.36232E-03	475723.2	3825840.7	909.7	5.00	4.65	4.65	NO
L0000131	0	0.36232E-03	475713.2	3825840.9	909.7	5.00	4.65	4.65	NO
L0000132	0	0.36232E-03	475703.2	3825840.3	909.8	5.00	4.65	4.65	NO
L0000133	0	0.36232E-03	475699.4	3825833.8	909.8	5.00	4.65	4.65	NO
L0000134	0	0.36232E-03	475699.2	3825823.8	909.6	5.00	4.65	4.65	NO
L0000135	0	0.36232E-03	475699.1	3825813.8	909.7	5.00	4.65	4.65	NO
L0000136	0	0.36232E-03	475699.0	3825803.8	910.1	5.00	4.65	4.65	NO

L0000137		0	0.36232E-03	475698.9	3825793.8	910.7	5.00	
4.65	4.65	NO						
L0000138		0	0.36232E-03	475698.8	3825783.8	911.2	5.00	
4.65	4.65	NO						
L0000139		0	0.36232E-03	475698.7	3825773.8	911.3	5.00	
4.65	4.65	NO						
L0000140		0	0.36232E-03	475698.5	3825763.8	911.7	5.00	
4.65	4.65	NO						
L0000141		0	0.36232E-03	475698.4	3825753.8	912.2	5.00	
4.65	4.65	NO						
L0000142		0	0.36232E-03	475698.3	3825743.8	912.3	5.00	
4.65	4.65	NO						
L0000143		0	0.36232E-03	475698.2	3825733.8	912.4	5.00	
4.65	4.65	NO						
L0000144		0	0.36232E-03	475698.1	3825723.8	912.8	5.00	
4.65	4.65	NO						
L0000145		0	0.36232E-03	475698.0	3825713.8	913.3	5.00	
4.65	4.65	NO						
L0000146		0	0.36232E-03	475697.9	3825703.8	914.3	5.00	
4.65	4.65	NO						
L0000147		0	0.36232E-03	475697.7	3825693.8	920.9	5.00	
4.65	4.65	NO						
L0000148		0	0.36232E-03	475697.6	3825683.8	922.2	5.00	
4.65	4.65	NO						
L0000149		0	0.36232E-03	475697.5	3825673.8	922.3	5.00	
4.65	4.65	NO						
L0000150		0	0.36232E-03	475697.4	3825663.8	922.5	5.00	
4.65	4.65	NO						
L0000151		0	0.36232E-03	475697.3	3825653.8	922.8	5.00	
4.65	4.65	NO						
L0000152		0	0.36232E-03	475697.2	3825643.8	923.0	5.00	
4.65	4.65	NO						
L0000153		0	0.36232E-03	475697.0	3825633.8	922.8	5.00	
4.65	4.65	NO						
L0000154		0	0.36232E-03	475696.9	3825623.8	922.9	5.00	
4.65	4.65	NO						
L0000155		0	0.36232E-03	475696.8	3825613.8	923.0	5.00	
4.65	4.65	NO						
L0000156		0	0.36232E-03	475695.9	3825604.7	923.0	5.00	
4.65	4.65	NO						
L0000157		0	0.36232E-03	475685.9	3825604.7	922.8	5.00	
4.65	4.65	NO						
L0000158		0	0.36232E-03	475675.9	3825604.7	922.6	5.00	
4.65	4.65	NO						
L0000159		0	0.36232E-03	475665.9	3825604.7	922.5	5.00	
4.65	4.65	NO						
L0000160		0	0.36232E-03	475655.9	3825604.7	922.3	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000161	0	0.36232E-03	475645.9	3825604.8	918.7	5.00	4.65	4.65	NO
L0000162	0	0.36232E-03	475635.9	3825604.8	914.6	5.00	4.65	4.65	NO
L0000163	0	0.36232E-03	475625.9	3825604.8	914.0	5.00	4.65	4.65	NO
L0000164	0	0.36232E-03	475615.9	3825604.8	913.7	5.00	4.65	4.65	NO
L0000165	0	0.36232E-03	475605.9	3825604.8	913.3	5.00	4.65	4.65	NO
L0000166	0	0.36232E-03	475595.9	3825604.9	912.8	5.00	4.65	4.65	NO
L0000167	0	0.36232E-03	475585.9	3825604.9	912.4	5.00	4.65	4.65	NO
L0000168	0	0.36232E-03	475575.9	3825604.9	912.0	5.00	4.65	4.65	NO
L0000169	0	0.36232E-03	475565.9	3825604.9	911.6	5.00	4.65	4.65	NO
L0000170	0	0.36232E-03	475555.9	3825604.9	911.2	5.00	4.65	4.65	NO
L0000171	0	0.36232E-03	475545.9	3825605.0	910.8	5.00	4.65	4.65	NO
L0000172	0	0.36232E-03	475535.9	3825605.0	910.5	5.00	4.65	4.65	NO
L0000173	0	0.36232E-03	475525.9	3825605.0	909.9	5.00	4.65	4.65	NO
L0000174	0	0.36232E-03	475515.9	3825605.0	909.4	5.00	4.65	4.65	NO
L0000175	0	0.36232E-03	475505.9	3825605.0	909.0	5.00	4.65	4.65	NO
L0000176	0	0.36232E-03	475495.9	3825605.1	908.6	5.00	4.65	4.65	NO

L0000177		0	0.36232E-03	475485.9	3825605.1	908.1	5.00	
4.65	4.65	NO						
L0000178		0	0.36232E-03	475475.9	3825605.1	907.8	5.00	
4.65	4.65	NO						
L0000179		0	0.36232E-03	475465.9	3825605.1	907.4	5.00	
4.65	4.65	NO						
L0000180		0	0.36232E-03	475455.9	3825605.1	907.0	5.00	
4.65	4.65	NO						
L0000181		0	0.36232E-03	475445.9	3825605.2	906.5	5.00	
4.65	4.65	NO						
L0000182		0	0.36232E-03	475435.9	3825605.2	906.0	5.00	
4.65	4.65	NO						
L0000183		0	0.36232E-03	475425.9	3825605.2	905.6	5.00	
4.65	4.65	NO						
L0000184		0	0.36232E-03	475415.9	3825605.2	905.3	5.00	
4.65	4.65	NO						
L0000185		0	0.36232E-03	475405.9	3825605.2	904.8	5.00	
4.65	4.65	NO						
L0000186		0	0.36232E-03	475395.9	3825605.3	904.4	5.00	
4.65	4.65	NO						
L0000187		0	0.36232E-03	475385.9	3825605.3	903.8	5.00	
4.65	4.65	NO						
L0000188		0	0.36232E-03	475375.9	3825605.3	903.4	5.00	
4.65	4.65	NO						
L0000189		0	0.36232E-03	475365.9	3825605.3	902.9	5.00	
4.65	4.65	NO						
L0000190		0	0.36232E-03	475355.9	3825605.3	902.6	5.00	
4.65	4.65	NO						
L0000191		0	0.36232E-03	475345.9	3825605.4	902.1	5.00	
4.65	4.65	NO						
L0000192		0	0.36232E-03	475335.9	3825605.4	901.7	5.00	
4.65	4.65	NO						
L0000193		0	0.36232E-03	475325.9	3825605.4	901.4	5.00	
4.65	4.65	NO						
L0000194		0	0.36232E-03	475315.9	3825605.4	901.1	5.00	
4.65	4.65	NO						
L0000195		0	0.36232E-03	475305.9	3825605.4	900.9	5.00	
4.65	4.65	NO						
L0000196		0	0.36232E-03	475295.9	3825605.5	900.5	5.00	
4.65	4.65	NO						
L0000197		0	0.36232E-03	475285.9	3825605.5	899.9	5.00	
4.65	4.65	NO						
L0000198		0	0.36232E-03	475275.9	3825605.5	899.5	5.00	
4.65	4.65	NO						
L0000199		0	0.36232E-03	475265.9	3825605.5	899.2	5.00	
4.65	4.65	NO						
L0000200		0	0.36232E-03	475255.9	3825605.5	898.7	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000201	0	0.36232E-03	475245.9	3825605.6	898.2	5.00	4.65	4.65	NO
L0000202	0	0.36232E-03	475235.9	3825605.6	897.8	5.00	4.65	4.65	NO
L0000203	0	0.36232E-03	475225.9	3825605.6	897.4	5.00	4.65	4.65	NO
L0000204	0	0.36232E-03	475215.9	3825605.6	896.9	5.00	4.65	4.65	NO
L0000205	0	0.36232E-03	475205.9	3825605.6	896.6	5.00	4.65	4.65	NO
L0000206	0	0.36232E-03	475195.9	3825605.7	896.1	5.00	4.65	4.65	NO
L0000207	0	0.36232E-03	475185.9	3825605.7	895.7	5.00	4.65	4.65	NO
L0000208	0	0.36232E-03	475175.9	3825605.7	895.2	5.00	4.65	4.65	NO
L0000209	0	0.36232E-03	475165.9	3825605.7	894.7	5.00	4.65	4.65	NO
L0000210	0	0.36232E-03	475155.9	3825605.7	894.7	5.00	4.65	4.65	NO
L0000211	0	0.36232E-03	475145.9	3825605.8	894.6	5.00	4.65	4.65	NO
L0000212	0	0.36232E-03	475135.9	3825605.8	893.9	5.00	4.65	4.65	NO
L0000213	0	0.36232E-03	475125.9	3825605.8	893.5	5.00	4.65	4.65	NO
L0000214	0	0.36232E-03	475115.9	3825605.8	893.8	5.00	4.65	4.65	NO
L0000215	0	0.36232E-03	475105.9	3825605.8	893.8	5.00	4.65	4.65	NO
L0000216	0	0.36232E-03	475095.9	3825605.9	893.6	5.00	4.65	4.65	NO

L0000217		0	0.36232E-03	475085.9	3825605.9	893.0	5.00	
4.65	4.65	NO						
L0000218		0	0.36232E-03	475075.9	3825605.9	892.1	5.00	
4.65	4.65	NO						
L0000219		0	0.36232E-03	475065.9	3825605.9	891.3	5.00	
4.65	4.65	NO						
L0000220		0	0.36232E-03	475055.9	3825605.9	890.8	5.00	
4.65	4.65	NO						
L0000221		0	0.36232E-03	475045.9	3825606.0	890.6	5.00	
4.65	4.65	NO						
L0000222		0	0.36232E-03	475035.9	3825606.0	890.5	5.00	
4.65	4.65	NO						
L0000223		0	0.36232E-03	475025.9	3825606.0	890.4	5.00	
4.65	4.65	NO						
L0000224		0	0.36232E-03	475015.9	3825606.0	889.9	5.00	
4.65	4.65	NO						
L0000225		0	0.36232E-03	475005.9	3825606.0	889.5	5.00	
4.65	4.65	NO						
L0000226		0	0.36232E-03	474995.9	3825606.1	889.3	5.00	
4.65	4.65	NO						
L0000227		0	0.36232E-03	474985.9	3825606.1	888.8	5.00	
4.65	4.65	NO						
L0000228		0	0.36232E-03	474975.9	3825606.1	888.4	5.00	
4.65	4.65	NO						
L0000229		0	0.36232E-03	474965.9	3825606.1	887.9	5.00	
4.65	4.65	NO						
L0000230		0	0.36232E-03	474955.9	3825606.1	887.5	5.00	
4.65	4.65	NO						
L0000231		0	0.36232E-03	474945.9	3825606.2	887.1	5.00	
4.65	4.65	NO						
L0000232		0	0.36232E-03	474935.9	3825606.2	886.5	5.00	
4.65	4.65	NO						
L0000233		0	0.36232E-03	474925.9	3825606.2	886.1	5.00	
4.65	4.65	NO						
L0000234		0	0.36232E-03	474915.9	3825606.2	885.8	5.00	
4.65	4.65	NO						
L0000235		0	0.36232E-03	474905.9	3825606.2	885.7	5.00	
4.65	4.65	NO						
L0000236		0	0.36232E-03	474895.9	3825606.3	885.4	5.00	
4.65	4.65	NO						
L0000237		0	0.36232E-03	474885.9	3825606.3	884.8	5.00	
4.65	4.65	NO						
L0000238		0	0.36232E-03	474875.9	3825606.3	884.4	5.00	
4.65	4.65	NO						
L0000239		0	0.36232E-03	474865.9	3825606.3	884.8	5.00	
4.65	4.65	NO						
L0000240		0	0.36232E-03	474855.9	3825606.3	884.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000241	0	0.36232E-03	474845.9	3825606.4	884.1	5.00	4.65	4.65	NO
L0000242	0	0.36232E-03	474835.9	3825606.4	883.9	5.00	4.65	4.65	NO
L0000243	0	0.36232E-03	474825.9	3825606.4	883.8	5.00	4.65	4.65	NO
L0000244	0	0.36232E-03	474815.9	3825606.4	884.4	5.00	4.65	4.65	NO
L0000245	0	0.36232E-03	474805.9	3825606.4	884.4	5.00	4.65	4.65	NO
L0000246	0	0.36232E-03	474795.9	3825606.5	884.3	5.00	4.65	4.65	NO
L0000247	0	0.36232E-03	474785.9	3825606.5	884.2	5.00	4.65	4.65	NO
L0000248	0	0.36232E-03	474775.9	3825606.5	884.3	5.00	4.65	4.65	NO
L0000249	0	0.36232E-03	474765.9	3825606.5	883.3	5.00	4.65	4.65	NO
L0000250	0	0.36232E-03	474755.9	3825606.5	882.8	5.00	4.65	4.65	NO
L0000251	0	0.36232E-03	474745.9	3825606.6	883.0	5.00	4.65	4.65	NO
L0000252	0	0.36232E-03	474735.9	3825606.6	882.4	5.00	4.65	4.65	NO
L0000253	0	0.36232E-03	474725.9	3825606.6	882.0	5.00	4.65	4.65	NO
L0000254	0	0.36232E-03	474715.9	3825606.6	882.2	5.00	4.65	4.65	NO
L0000255	0	0.36232E-03	474710.8	3825609.1	881.6	5.00	4.65	4.65	NO
L0000256	0	0.36232E-03	474716.8	3825617.0	881.3	5.00	4.65	4.65	NO

L0000257		0	0.36232E-03	474722.8	3825625.0	881.1	5.00	
4.65	4.65	NO						
L0000258		0	0.36232E-03	474728.9	3825633.0	880.5	5.00	
4.65	4.65	NO						
L0000259		0	0.36232E-03	474734.9	3825640.9	880.8	5.00	
4.65	4.65	NO						
L0000260		0	0.36232E-03	474740.9	3825648.9	881.2	5.00	
4.65	4.65	NO						
L0000261		0	0.36232E-03	474747.0	3825656.9	881.1	5.00	
4.65	4.65	NO						
L0000262		0	0.36232E-03	474753.0	3825664.9	880.3	5.00	
4.65	4.65	NO						
L0000263		0	0.36232E-03	474759.1	3825672.8	880.3	5.00	
4.65	4.65	NO						
L0000264		0	0.36232E-03	474765.1	3825680.8	880.1	5.00	
4.65	4.65	NO						
L0000265		0	0.36232E-03	474771.1	3825688.8	879.8	5.00	
4.65	4.65	NO						
L0000266		0	0.36232E-03	474777.2	3825696.7	880.0	5.00	
4.65	4.65	NO						
L0000267		0	0.36232E-03	474783.2	3825704.7	879.6	5.00	
4.65	4.65	NO						
L0000268		0	0.36232E-03	474789.2	3825712.7	879.4	5.00	
4.65	4.65	NO						
L0000269		0	0.36232E-03	474795.3	3825720.7	879.3	5.00	
4.65	4.65	NO						
L0000270		0	0.36232E-03	474801.3	3825728.6	879.1	5.00	
4.65	4.65	NO						
L0000271		0	0.36232E-03	474807.4	3825736.6	880.2	5.00	
4.65	4.65	NO						
L0000272		0	0.36232E-03	474813.4	3825744.6	880.1	5.00	
4.65	4.65	NO						
L0000273		0	0.36232E-03	474819.4	3825752.5	879.7	5.00	
4.65	4.65	NO						
L0000274		0	0.36232E-03	474825.5	3825760.5	879.5	5.00	
4.65	4.65	NO						
L0000275		0	0.36232E-03	474831.5	3825768.5	879.4	5.00	
4.65	4.65	NO						
L0000276		0	0.36232E-03	474837.5	3825776.5	880.0	5.00	
4.65	4.65	NO						
L0000277		0	0.36232E-03	474843.6	3825784.4	880.3	5.00	
4.65	4.65	NO						
L0000278		0	0.36232E-03	474849.6	3825792.4	880.2	5.00	
4.65	4.65	NO						
L0000279		0	0.36232E-03	474855.7	3825800.4	879.7	5.00	
4.65	4.65	NO						
L0000280		0	0.36232E-03	474861.7	3825808.3	880.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000281	0	0.36232E-03	474867.7	3825816.3	880.4	5.00	4.65	4.65	NO
L0000282	0	0.36232E-03	474873.8	3825824.3	880.1	5.00	4.65	4.65	NO
L0000283	0	0.36232E-03	474879.8	3825832.3	879.5	5.00	4.65	4.65	NO
L0000284	0	0.36232E-03	474885.8	3825840.2	879.2	5.00	4.65	4.65	NO
L0000285	0	0.36232E-03	474891.9	3825848.2	879.6	5.00	4.65	4.65	NO
L0000286	0	0.36232E-03	474897.9	3825856.2	880.1	5.00	4.65	4.65	NO
L0000287	0	0.36232E-03	474904.0	3825864.1	880.5	5.00	4.65	4.65	NO
L0000288	0	0.36232E-03	474910.0	3825872.1	880.9	5.00	4.65	4.65	NO
L0000289	0	0.36232E-03	474916.0	3825880.1	881.5	5.00	4.65	4.65	NO
L0000290	0	0.36232E-03	474922.1	3825888.1	881.9	5.00	4.65	4.65	NO
L0000291	0	0.36232E-03	474928.1	3825896.0	882.4	5.00	4.65	4.65	NO
L0000292	0	0.36232E-03	474934.1	3825904.0	882.6	5.00	4.65	4.65	NO
L0000293	0	0.36232E-03	474940.2	3825912.0	882.4	5.00	4.65	4.65	NO
L0000294	0	0.36232E-03	474946.2	3825920.0	882.0	5.00	4.65	4.65	NO
L0000295	0	0.36232E-03	474952.2	3825927.9	882.3	5.00	4.65	4.65	NO
L0000296	0	0.36232E-03	474958.3	3825935.9	883.2	5.00	4.65	4.65	NO

L0000297		0	0.36232E-03	474964.3	3825943.9	883.6	5.00	
4.65	4.65	NO						
L0000298		0	0.36232E-03	474970.4	3825951.8	884.1	5.00	
4.65	4.65	NO						
L0000299		0	0.36232E-03	474976.4	3825959.8	884.0	5.00	
4.65	4.65	NO						
L0000300		0	0.36232E-03	474982.4	3825967.8	883.1	5.00	
4.65	4.65	NO						
L0000301		0	0.36232E-03	474988.5	3825975.8	882.3	5.00	
4.65	4.65	NO						
L0000302		0	0.36232E-03	474994.5	3825983.7	882.0	5.00	
4.65	4.65	NO						
L0000303		0	0.36232E-03	475000.5	3825991.7	881.7	5.00	
4.65	4.65	NO						
L0000304		0	0.36232E-03	475006.6	3825999.7	881.6	5.00	
4.65	4.65	NO						
L0000305		0	0.36232E-03	475012.6	3826007.6	881.1	5.00	
4.65	4.65	NO						
L0000306		0	0.36232E-03	475018.7	3826015.6	880.4	5.00	
4.65	4.65	NO						
L0000307		0	0.36232E-03	475024.7	3826023.6	882.5	5.00	
4.65	4.65	NO						
L0000308		0	0.36232E-03	475030.7	3826031.6	883.1	5.00	
4.65	4.65	NO						
L0000309		0	0.36232E-03	475036.8	3826039.5	883.2	5.00	
4.65	4.65	NO						
L0000310		0	0.36232E-03	475042.8	3826047.5	883.0	5.00	
4.65	4.65	NO						
L0000311		0	0.36232E-03	475048.8	3826055.5	882.9	5.00	
4.65	4.65	NO						
L0000312		0	0.36232E-03	475054.9	3826063.4	883.0	5.00	
4.65	4.65	NO						
L0000313		0	0.36232E-03	475060.9	3826071.4	883.1	5.00	
4.65	4.65	NO						
L0000314		0	0.36232E-03	475067.0	3826079.4	883.5	5.00	
4.65	4.65	NO						
L0000315		0	0.36232E-03	475073.0	3826087.4	884.4	5.00	
4.65	4.65	NO						
L0000316		0	0.36232E-03	475079.0	3826095.3	885.3	5.00	
4.65	4.65	NO						
L0000317		0	0.36232E-03	475085.1	3826103.3	884.5	5.00	
4.65	4.65	NO						
L0000318		0	0.36232E-03	475091.6	3826110.7	884.3	5.00	
4.65	4.65	NO						
L0000319		0	0.36232E-03	475099.9	3826116.3	885.0	5.00	
4.65	4.65	NO						
L0000320		0	0.36232E-03	475108.2	3826121.9	884.8	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000321	0	0.36232E-03	475116.5	3826127.5	884.4	5.00	4.65	4.65	NO
L0000322	0	0.36232E-03	475124.8	3826133.1	884.1	5.00	4.65	4.65	NO
L0000323	0	0.36232E-03	475133.1	3826138.7	885.0	5.00	4.65	4.65	NO
L0000324	0	0.36232E-03	475141.4	3826144.3	885.1	5.00	4.65	4.65	NO
L0000325	0	0.36232E-03	475149.6	3826149.9	884.5	5.00	4.65	4.65	NO
L0000326	0	0.36232E-03	475157.9	3826155.5	884.1	5.00	4.65	4.65	NO
L0000327	0	0.36232E-03	475166.2	3826161.1	883.6	5.00	4.65	4.65	NO
L0000328	0	0.36232E-03	475174.5	3826166.7	883.8	5.00	4.65	4.65	NO
L0000329	0	0.36232E-03	475182.8	3826172.3	883.6	5.00	4.65	4.65	NO
L0000330	0	0.36232E-03	475191.1	3826177.9	883.4	5.00	4.65	4.65	NO
L0000331	0	0.36232E-03	475199.3	3826183.5	882.1	5.00	4.65	4.65	NO
L0000332	0	0.36232E-03	475207.6	3826189.1	881.1	5.00	4.65	4.65	NO
L0000333	0	0.36232E-03	475215.9	3826194.7	882.6	5.00	4.65	4.65	NO
L0000334	0	0.36232E-03	475224.2	3826200.3	882.8	5.00	4.65	4.65	NO
L0000335	0	0.36232E-03	475232.5	3826205.9	883.4	5.00	4.65	4.65	NO
L0000336	0	0.36232E-03	475240.8	3826211.5	884.6	5.00	4.65	4.65	NO

L0000337		0	0.36232E-03	475249.0	3826217.1	885.8	5.00	
4.65	4.65	NO						
L0000338		0	0.36232E-03	475257.3	3826222.7	886.3	5.00	
4.65	4.65	NO						
L0000339		0	0.36232E-03	475265.6	3826228.3	887.8	5.00	
4.65	4.65	NO						
L0000340		0	0.36232E-03	475272.6	3826235.2	886.6	5.00	
4.65	4.65	NO						
L0000341		0	0.36232E-03	475277.4	3826243.9	884.9	5.00	
4.65	4.65	NO						
L0000342		0	0.36232E-03	475282.2	3826252.7	883.4	5.00	
4.65	4.65	NO						
L0000343		0	0.36232E-03	475287.1	3826261.4	881.0	5.00	
4.65	4.65	NO						
L0000344		0	0.36232E-03	475291.9	3826270.2	880.8	5.00	
4.65	4.65	NO						
L0000345		0	0.36232E-03	475296.7	3826278.9	882.2	5.00	
4.65	4.65	NO						
L0000346		0	0.36232E-03	475301.6	3826287.7	881.7	5.00	
4.65	4.65	NO						
L0000347		0	0.36232E-03	475306.4	3826296.4	881.7	5.00	
4.65	4.65	NO						
L0000348		0	0.36232E-03	475311.3	3826305.2	880.8	5.00	
4.65	4.65	NO						
L0000349		0	0.36232E-03	475316.1	3826313.9	880.4	5.00	
4.65	4.65	NO						
L0000350		0	0.36232E-03	475320.9	3826322.7	880.9	5.00	
4.65	4.65	NO						
L0000351		0	0.36232E-03	475325.8	3826331.4	881.3	5.00	
4.65	4.65	NO						
L0000352		0	0.36232E-03	475330.6	3826340.2	881.9	5.00	
4.65	4.65	NO						
L0000353		0	0.36232E-03	475335.5	3826348.9	883.5	5.00	
4.65	4.65	NO						
L0000354		0	0.36232E-03	475343.3	3826352.4	885.4	5.00	
4.65	4.65	NO						
L0000355		0	0.36232E-03	475353.3	3826352.2	886.8	5.00	
4.65	4.65	NO						
L0000356		0	0.36232E-03	475363.3	3826352.0	886.7	5.00	
4.65	4.65	NO						
L0000357		0	0.36232E-03	475373.3	3826351.7	885.7	5.00	
4.65	4.65	NO						
L0000358		0	0.36232E-03	475383.3	3826351.5	884.9	5.00	
4.65	4.65	NO						
L0000359		0	0.36232E-03	475393.3	3826351.3	886.1	5.00	
4.65	4.65	NO						
L0000360		0	0.36232E-03	475403.3	3826351.0	887.2	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000361	0	0.36232E-03	475413.3	3826350.8	887.0	5.00	4.65	4.65	NO
L0000362	0	0.36232E-03	475423.3	3826350.5	886.3	5.00	4.65	4.65	NO
L0000363	0	0.36232E-03	475433.3	3826350.3	885.8	5.00	4.65	4.65	NO
L0000364	0	0.36232E-03	475443.3	3826350.1	886.1	5.00	4.65	4.65	NO
L0000365	0	0.36232E-03	475453.3	3826349.8	886.5	5.00	4.65	4.65	NO
L0000366	0	0.36232E-03	475463.3	3826349.6	886.3	5.00	4.65	4.65	NO
L0000367	0	0.36232E-03	475473.3	3826349.4	886.6	5.00	4.65	4.65	NO
L0000368	0	0.36232E-03	475483.3	3826349.1	887.0	5.00	4.65	4.65	NO
L0000369	0	0.36232E-03	475493.3	3826348.9	887.5	5.00	4.65	4.65	NO
L0000370	0	0.36232E-03	475503.3	3826348.7	888.1	5.00	4.65	4.65	NO
L0000371	0	0.36232E-03	475513.3	3826348.4	888.9	5.00	4.65	4.65	NO
L0000372	0	0.36232E-03	475523.3	3826348.2	889.4	5.00	4.65	4.65	NO
L0000373	0	0.36232E-03	475533.2	3826347.9	889.9	5.00	4.65	4.65	NO
L0000374	0	0.36232E-03	475543.2	3826347.7	890.6	5.00	4.65	4.65	NO
L0000375	0	0.36232E-03	475553.2	3826347.5	891.1	5.00	4.65	4.65	NO
L0000376	0	0.36232E-03	475563.2	3826347.2	891.4	5.00	4.65	4.65	NO

L0000377		0	0.36232E-03	475573.2	3826347.0	892.2	5.00	
4.65	4.65	NO						
L0000378		0	0.36232E-03	475583.2	3826346.8	892.6	5.00	
4.65	4.65	NO						
L0000379		0	0.36232E-03	475593.2	3826346.5	892.7	5.00	
4.65	4.65	NO						
L0000380		0	0.36232E-03	475603.2	3826346.3	893.2	5.00	
4.65	4.65	NO						
L0000381		0	0.36232E-03	475613.2	3826346.0	894.1	5.00	
4.65	4.65	NO						
L0000382		0	0.36232E-03	475623.2	3826345.8	894.8	5.00	
4.65	4.65	NO						
L0000383		0	0.36232E-03	475633.2	3826345.6	895.4	5.00	
4.65	4.65	NO						
L0000384		0	0.36232E-03	475643.2	3826345.3	896.1	5.00	
4.65	4.65	NO						
L0000385		0	0.36232E-03	475653.2	3826345.1	896.8	5.00	
4.65	4.65	NO						
L0000386		0	0.36232E-03	475663.2	3826344.9	897.4	5.00	
4.65	4.65	NO						
L0000387		0	0.36232E-03	475673.2	3826344.6	897.7	5.00	
4.65	4.65	NO						
L0000388		0	0.36232E-03	475683.2	3826344.4	898.3	5.00	
4.65	4.65	NO						
L0000389		0	0.36232E-03	475693.2	3826344.1	898.8	5.00	
4.65	4.65	NO						
L0000390		0	0.36232E-03	475703.2	3826343.9	899.3	5.00	
4.65	4.65	NO						
L0000391		0	0.36232E-03	475713.2	3826343.7	899.9	5.00	
4.65	4.65	NO						
L0000392		0	0.36232E-03	475723.2	3826343.4	900.6	5.00	
4.65	4.65	NO						
L0000393		0	0.36232E-03	475733.2	3826343.2	900.6	5.00	
4.65	4.65	NO						
L0000394		0	0.36232E-03	475743.2	3826343.0	900.4	5.00	
4.65	4.65	NO						
L0000395		0	0.36232E-03	475753.2	3826342.7	900.3	5.00	
4.65	4.65	NO						
L0000396		0	0.36232E-03	475763.2	3826342.5	900.7	5.00	
4.65	4.65	NO						
L0000397		0	0.36232E-03	475773.2	3826342.3	901.3	5.00	
4.65	4.65	NO						
L0000398		0	0.36232E-03	475783.2	3826342.0	901.7	5.00	
4.65	4.65	NO						
L0000399		0	0.36232E-03	475793.2	3826341.8	901.9	5.00	
4.65	4.65	NO						
L0000400		0	0.36232E-03	475803.2	3826341.5	901.7	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000401	0	0.36232E-03	475813.2	3826341.3	902.0	5.00	4.65	4.65	NO
L0000402	0	0.36232E-03	475823.2	3826341.1	902.3	5.00	4.65	4.65	NO
L0000403	0	0.36232E-03	475833.2	3826340.8	902.9	5.00	4.65	4.65	NO
L0000404	0	0.36232E-03	475843.2	3826340.6	902.8	5.00	4.65	4.65	NO
L0000405	0	0.36232E-03	475853.2	3826340.4	902.9	5.00	4.65	4.65	NO
L0000406	0	0.36232E-03	475863.2	3826340.1	903.2	5.00	4.65	4.65	NO
L0000407	0	0.36232E-03	475873.2	3826339.9	903.5	5.00	4.65	4.65	NO
L0000408	0	0.36232E-03	475876.9	3826333.7	903.8	5.00	4.65	4.65	NO
L0000409	0	0.36232E-03	475876.8	3826323.7	904.1	5.00	4.65	4.65	NO
L0000410	0	0.36232E-03	475876.7	3826313.7	904.4	5.00	4.65	4.65	NO
L0000411	0	0.36232E-03	475876.6	3826303.7	904.7	5.00	4.65	4.65	NO
L0000412	0	0.36232E-03	475876.4	3826293.7	905.1	5.00	4.65	4.65	NO
L0000413	0	0.36232E-03	475876.3	3826283.7	905.3	5.00	4.65	4.65	NO
L0000414	0	0.36232E-03	475876.2	3826273.7	905.4	5.00	4.65	4.65	NO
L0000415	0	0.36232E-03	475876.0	3826263.7	905.6	5.00	4.65	4.65	NO
L0000416	0	0.36232E-03	475875.9	3826253.7	905.7	5.00	4.65	4.65	NO

L0000417		0	0.36232E-03	475875.8	3826243.7	905.9	5.00	
4.65	4.65	NO						
L0000418		0	0.36232E-03	475875.6	3826233.7	906.3	5.00	
4.65	4.65	NO						
L0000419		0	0.36232E-03	475875.5	3826223.7	906.6	5.00	
4.65	4.65	NO						
L0000420		0	0.36232E-03	475875.4	3826213.7	906.9	5.00	
4.65	4.65	NO						
L0000421		0	0.36232E-03	475875.3	3826203.7	906.8	5.00	
4.65	4.65	NO						
L0000422		0	0.36232E-03	475875.1	3826193.7	906.9	5.00	
4.65	4.65	NO						
L0000423		0	0.36232E-03	475875.0	3826183.7	907.2	5.00	
4.65	4.65	NO						
L0000424		0	0.36232E-03	475874.9	3826173.7	907.4	5.00	
4.65	4.65	NO						
L0000425		0	0.36232E-03	475874.7	3826163.7	906.9	5.00	
4.65	4.65	NO						
L0000426		0	0.36232E-03	475874.6	3826153.7	906.3	5.00	
4.65	4.65	NO						
L0000427		0	0.36232E-03	475874.5	3826143.7	905.9	5.00	
4.65	4.65	NO						
L0000428		0	0.36232E-03	475874.3	3826133.7	906.3	5.00	
4.65	4.65	NO						
L0000429		0	0.36232E-03	475874.2	3826123.7	906.7	5.00	
4.65	4.65	NO						
L0000430		0	0.36232E-03	475874.1	3826113.7	907.2	5.00	
4.65	4.65	NO						
L0000431		0	0.36232E-03	475874.0	3826103.7	907.5	5.00	
4.65	4.65	NO						
L0000432		0	0.36232E-03	475873.8	3826093.7	907.2	5.00	
4.65	4.65	NO						
L0000433		0	0.36232E-03	475873.7	3826083.7	906.5	5.00	
4.65	4.65	NO						
L0000434		0	0.36232E-03	475873.6	3826073.7	906.1	5.00	
4.65	4.65	NO						
L0000435		0	0.36232E-03	475873.4	3826063.7	906.6	5.00	
4.65	4.65	NO						
L0000436		0	0.36232E-03	475873.3	3826053.7	907.4	5.00	
4.65	4.65	NO						
L0000437		0	0.36232E-03	475873.2	3826043.7	908.0	5.00	
4.65	4.65	NO						
L0000438		0	0.36232E-03	475873.0	3826033.7	907.7	5.00	
4.65	4.65	NO						
L0000439		0	0.36232E-03	475873.0	3826023.7	906.9	5.00	
4.65	4.65	NO						
L0000440		0	0.36232E-03	475873.0	3826013.7	905.7	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000441	0	0.36232E-03	475873.0	3826003.7	905.1	5.00	4.65	4.65	NO
L0000442	0	0.36232E-03	475873.0	3825993.7	905.5	5.00	4.65	4.65	NO
L0000443	0	0.36232E-03	475873.0	3825983.7	905.9	5.00	4.65	4.65	NO
L0000444	0	0.36232E-03	475873.0	3825973.7	908.5	5.00	4.65	4.65	NO
L0000445	0	0.36232E-03	475873.0	3825963.7	911.7	5.00	4.65	4.65	NO
L0000446	0	0.36232E-03	475873.0	3825953.7	915.0	5.00	4.65	4.65	NO
L0000447	0	0.36232E-03	475873.0	3825943.7	916.0	5.00	4.65	4.65	NO
L0000448	0	0.36232E-03	475873.0	3825933.7	915.0	5.00	4.65	4.65	NO
L0000449	0	0.36232E-03	475873.0	3825923.7	914.5	5.00	4.65	4.65	NO
L0000450	0	0.36232E-03	475873.0	3825913.7	914.7	5.00	4.65	4.65	NO
L0000451	0	0.36232E-03	475873.0	3825903.7	915.2	5.00	4.65	4.65	NO
L0000452	0	0.36232E-03	475873.0	3825893.7	915.9	5.00	4.65	4.65	NO
L0000453	0	0.36232E-03	475873.0	3825883.7	915.6	5.00	4.65	4.65	NO
L0000454	0	0.36232E-03	475873.0	3825873.7	914.8	5.00	4.65	4.65	NO
L0000455	0	0.36232E-03	475873.0	3825863.7	914.7	5.00	4.65	4.65	NO
L0000456	0	0.36232E-03	475869.8	3825857.0	914.6	5.00	4.65	4.65	NO

L0000457		0	0.36232E-03	475859.8	3825857.2	914.4	5.00	
4.65	4.65	NO						
L0000458		0	0.36232E-03	475849.8	3825857.4	914.3	5.00	
4.65	4.65	NO						
L0000459		0	0.36232E-03	475839.8	3825857.6	914.2	5.00	
4.65	4.65	NO						
L0000460		0	0.36232E-03	475829.8	3825857.8	913.6	5.00	
4.65	4.65	NO						
L0000461		0	0.36232E-03	475819.8	3825858.0	913.0	5.00	
4.65	4.65	NO						
L0000462		0	0.36232E-03	475809.8	3825858.3	912.4	5.00	
4.65	4.65	NO						
L0000463		0	0.36232E-03	475799.8	3825858.5	912.0	5.00	
4.65	4.65	NO						
L0000464		0	0.36232E-03	475789.8	3825858.7	911.6	5.00	
4.65	4.65	NO						
L0000465		0	0.36232E-03	475779.8	3825858.9	911.2	5.00	
4.65	4.65	NO						
L0000466		0	0.36232E-03	475769.8	3825859.1	911.2	5.00	
4.65	4.65	NO						
L0000467		0	0.36232E-03	475759.8	3825859.3	911.0	5.00	
4.65	4.65	NO						
L0000468		0	0.36232E-03	475749.8	3825859.5	910.8	5.00	
4.65	4.65	NO						
L0000469		0	0.36232E-03	475739.8	3825859.8	910.5	5.00	
4.65	4.65	NO						
L0000470		0	0.36232E-03	475729.8	3825860.0	910.3	5.00	
4.65	4.65	NO						
L0000471		0	0.36232E-03	475719.8	3825860.2	909.8	5.00	
4.65	4.65	NO						
L0000472		0	0.36232E-03	475709.8	3825860.4	909.4	5.00	
4.65	4.65	NO						
L0000473		0	0.36232E-03	475699.8	3825860.6	909.1	5.00	
4.65	4.65	NO						
L0000474		0	0.36232E-03	475689.8	3825860.8	908.7	5.00	
4.65	4.65	NO						
L0000475		0	0.36232E-03	475679.8	3825861.0	908.6	5.00	
4.65	4.65	NO						
L0000476		0	0.36232E-03	475678.0	3825852.8	908.6	5.00	
4.65	4.65	NO						
L0000477		0	0.36232E-03	475677.9	3825842.8	908.8	5.00	
4.65	4.65	NO						
L0000478		0	0.36232E-03	475677.7	3825832.8	908.9	5.00	
4.65	4.65	NO						
L0000479		0	0.36232E-03	475677.5	3825822.8	909.1	5.00	
4.65	4.65	NO						
L0000480		0	0.36232E-03	475677.4	3825812.8	909.5	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000481	0	0.36232E-03	475677.2	3825802.8	909.7	5.00	4.65	4.65	NO
L0000482	0	0.36232E-03	475677.1	3825792.8	909.9	5.00	4.65	4.65	NO
L0000483	0	0.36232E-03	475676.9	3825782.8	910.2	5.00	4.65	4.65	NO
L0000484	0	0.36232E-03	475676.8	3825772.8	910.5	5.00	4.65	4.65	NO
L0000485	0	0.36232E-03	475676.6	3825762.8	910.8	5.00	4.65	4.65	NO
L0000486	0	0.36232E-03	475676.4	3825752.8	911.1	5.00	4.65	4.65	NO
L0000487	0	0.36232E-03	475676.3	3825742.8	911.4	5.00	4.65	4.65	NO
L0000488	0	0.36232E-03	475676.1	3825732.8	911.9	5.00	4.65	4.65	NO
L0000489	0	0.36232E-03	475676.0	3825722.8	912.1	5.00	4.65	4.65	NO
L0000490	0	0.36232E-03	475675.8	3825712.8	912.5	5.00	4.65	4.65	NO
L0000491	0	0.36232E-03	475675.7	3825702.8	913.2	5.00	4.65	4.65	NO
L0000492	0	0.36232E-03	475675.5	3825692.8	916.4	5.00	4.65	4.65	NO
L0000493	0	0.36232E-03	475675.3	3825682.8	922.1	5.00	4.65	4.65	NO
L0000494	0	0.36232E-03	475675.2	3825672.8	921.8	5.00	4.65	4.65	NO
L0000495	0	0.36232E-03	475675.0	3825662.8	921.8	5.00	4.65	4.65	NO
L0000496	0	0.36232E-03	475674.9	3825652.8	922.2	5.00	4.65	4.65	NO

L0000497		0	0.36232E-03	475674.7	3825642.8	922.4	5.00	
4.65	4.65	NO						
L0000498		0	0.36232E-03	475674.6	3825632.8	922.5	5.00	
4.65	4.65	NO						
L0000499		0	0.36232E-03	475674.4	3825622.8	922.5	5.00	
4.65	4.65	NO						
L0000500		0	0.36232E-03	475666.5	3825620.7	922.3	5.00	
4.65	4.65	NO						
L0000501		0	0.36232E-03	475656.5	3825620.8	922.1	5.00	
4.65	4.65	NO						
L0000502		0	0.36232E-03	475646.5	3825620.8	921.1	5.00	
4.65	4.65	NO						
L0000503		0	0.36232E-03	475636.5	3825620.8	914.9	5.00	
4.65	4.65	NO						
L0000504		0	0.36232E-03	475626.5	3825620.8	913.4	5.00	
4.65	4.65	NO						
L0000505		0	0.36232E-03	475616.5	3825620.9	913.1	5.00	
4.65	4.65	NO						
L0000506		0	0.36232E-03	475606.5	3825620.9	912.6	5.00	
4.65	4.65	NO						
L0000507		0	0.36232E-03	475596.5	3825620.9	912.4	5.00	
4.65	4.65	NO						
L0000508		0	0.36232E-03	475586.5	3825620.9	912.0	5.00	
4.65	4.65	NO						
L0000509		0	0.36232E-03	475576.5	3825621.0	911.5	5.00	
4.65	4.65	NO						
L0000510		0	0.36232E-03	475566.5	3825621.0	911.1	5.00	
4.65	4.65	NO						
L0000511		0	0.36232E-03	475556.5	3825621.0	910.7	5.00	
4.65	4.65	NO						
L0000512		0	0.36232E-03	475546.5	3825621.1	910.4	5.00	
4.65	4.65	NO						
L0000513		0	0.36232E-03	475536.5	3825621.1	909.9	5.00	
4.65	4.65	NO						
L0000514		0	0.36232E-03	475526.5	3825621.1	909.5	5.00	
4.65	4.65	NO						
L0000515		0	0.36232E-03	475516.5	3825621.1	909.1	5.00	
4.65	4.65	NO						
L0000516		0	0.36232E-03	475506.5	3825621.2	908.6	5.00	
4.65	4.65	NO						
L0000517		0	0.36232E-03	475496.5	3825621.2	908.1	5.00	
4.65	4.65	NO						
L0000518		0	0.36232E-03	475486.5	3825621.2	907.8	5.00	
4.65	4.65	NO						
L0000519		0	0.36232E-03	475476.5	3825621.2	907.3	5.00	
4.65	4.65	NO						
L0000520		0	0.36232E-03	475466.5	3825621.3	906.9	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000521	0	0.36232E-03	475456.5	3825621.3	906.5	5.00	4.65	4.65	NO
L0000522	0	0.36232E-03	475446.5	3825621.3	906.2	5.00	4.65	4.65	NO
L0000523	0	0.36232E-03	475436.5	3825621.4	905.8	5.00	4.65	4.65	NO
L0000524	0	0.36232E-03	475426.5	3825621.4	905.3	5.00	4.65	4.65	NO
L0000525	0	0.36232E-03	475416.5	3825621.4	904.8	5.00	4.65	4.65	NO
L0000526	0	0.36232E-03	475406.5	3825621.4	904.4	5.00	4.65	4.65	NO
L0000527	0	0.36232E-03	475396.5	3825621.5	904.1	5.00	4.65	4.65	NO
L0000528	0	0.36232E-03	475386.5	3825621.5	903.8	5.00	4.65	4.65	NO
L0000529	0	0.36232E-03	475376.5	3825621.5	903.3	5.00	4.65	4.65	NO
L0000530	0	0.36232E-03	475366.5	3825621.5	902.8	5.00	4.65	4.65	NO
L0000531	0	0.36232E-03	475356.5	3825621.6	902.3	5.00	4.65	4.65	NO
L0000532	0	0.36232E-03	475346.5	3825621.6	902.0	5.00	4.65	4.65	NO
L0000533	0	0.36232E-03	475336.5	3825621.6	901.6	5.00	4.65	4.65	NO
L0000534	0	0.36232E-03	475326.5	3825621.6	901.0	5.00	4.65	4.65	NO
L0000535	0	0.36232E-03	475316.5	3825621.7	900.4	5.00	4.65	4.65	NO
L0000536	0	0.36232E-03	475306.5	3825621.7	900.0	5.00	4.65	4.65	NO

L0000537		0	0.36232E-03	475296.5	3825621.7	900.0	5.00	
4.65	4.65	NO						
L0000538		0	0.36232E-03	475286.5	3825621.8	899.6	5.00	
4.65	4.65	NO						
L0000539		0	0.36232E-03	475276.5	3825621.8	899.4	5.00	
4.65	4.65	NO						
L0000540		0	0.36232E-03	475266.5	3825621.8	898.8	5.00	
4.65	4.65	NO						
L0000541		0	0.36232E-03	475256.5	3825621.8	898.3	5.00	
4.65	4.65	NO						
L0000542		0	0.36232E-03	475246.5	3825621.9	897.8	5.00	
4.65	4.65	NO						
L0000543		0	0.36232E-03	475236.5	3825621.9	897.7	5.00	
4.65	4.65	NO						
L0000544		0	0.36232E-03	475226.5	3825621.9	897.3	5.00	
4.65	4.65	NO						
L0000545		0	0.36232E-03	475216.5	3825621.9	896.7	5.00	
4.65	4.65	NO						
L0000546		0	0.36232E-03	475206.5	3825622.0	896.3	5.00	
4.65	4.65	NO						
L0000547		0	0.36232E-03	475196.5	3825622.0	895.9	5.00	
4.65	4.65	NO						
L0000548		0	0.36232E-03	475186.5	3825622.0	895.4	5.00	
4.65	4.65	NO						
L0000549		0	0.36232E-03	475176.5	3825622.0	895.0	5.00	
4.65	4.65	NO						
L0000550		0	0.36232E-03	475166.5	3825622.1	894.5	5.00	
4.65	4.65	NO						
L0000551		0	0.36232E-03	475156.5	3825622.1	894.0	5.00	
4.65	4.65	NO						
L0000552		0	0.36232E-03	475146.5	3825622.1	893.5	5.00	
4.65	4.65	NO						
L0000553		0	0.36232E-03	475136.5	3825622.2	893.6	5.00	
4.65	4.65	NO						
L0000554		0	0.36232E-03	475126.5	3825622.2	893.1	5.00	
4.65	4.65	NO						
L0000555		0	0.36232E-03	475116.5	3825622.2	892.7	5.00	
4.65	4.65	NO						
L0000556		0	0.36232E-03	475106.5	3825622.2	892.5	5.00	
4.65	4.65	NO						
L0000557		0	0.36232E-03	475096.5	3825622.3	892.3	5.00	
4.65	4.65	NO						
L0000558		0	0.36232E-03	475086.5	3825622.3	892.5	5.00	
4.65	4.65	NO						
L0000559		0	0.36232E-03	475076.5	3825622.3	892.5	5.00	
4.65	4.65	NO						
L0000560		0	0.36232E-03	475066.5	3825622.3	892.1	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000561	0	0.36232E-03	475056.5	3825622.4	891.3	5.00	4.65	4.65	NO
L0000562	0	0.36232E-03	475046.5	3825622.4	890.5	5.00	4.65	4.65	NO
L0000563	0	0.36232E-03	475036.5	3825622.4	889.8	5.00	4.65	4.65	NO
L0000564	0	0.36232E-03	475026.5	3825622.5	889.4	5.00	4.65	4.65	NO
L0000565	0	0.36232E-03	475016.5	3825622.5	889.2	5.00	4.65	4.65	NO
L0000566	0	0.36232E-03	475006.5	3825622.5	889.0	5.00	4.65	4.65	NO
L0000567	0	0.36232E-03	474996.5	3825622.5	888.8	5.00	4.65	4.65	NO
L0000568	0	0.36232E-03	474986.5	3825622.6	888.6	5.00	4.65	4.65	NO
L0000569	0	0.36232E-03	474976.5	3825622.6	888.3	5.00	4.65	4.65	NO
L0000570	0	0.36232E-03	474966.5	3825622.6	887.9	5.00	4.65	4.65	NO
L0000571	0	0.36232E-03	474956.5	3825622.6	887.5	5.00	4.65	4.65	NO
L0000572	0	0.36232E-03	474946.5	3825622.7	887.1	5.00	4.65	4.65	NO
L0000573	0	0.36232E-03	474936.5	3825622.7	886.8	5.00	4.65	4.65	NO
L0000574	0	0.36232E-03	474926.5	3825622.7	886.1	5.00	4.65	4.65	NO
L0000575	0	0.36232E-03	474916.5	3825622.7	885.5	5.00	4.65	4.65	NO
L0000576	0	0.36232E-03	474906.5	3825622.8	885.0	5.00	4.65	4.65	NO

L0000577		0	0.36232E-03	474896.5	3825622.8	884.7	5.00	
4.65	4.65	NO						
L0000578		0	0.36232E-03	474886.5	3825622.8	884.3	5.00	
4.65	4.65	NO						
L0000579		0	0.36232E-03	474876.5	3825622.9	883.9	5.00	
4.65	4.65	NO						
L0000580		0	0.36232E-03	474866.5	3825622.9	883.7	5.00	
4.65	4.65	NO						
L0000581		0	0.36232E-03	474856.5	3825622.9	884.3	5.00	
4.65	4.65	NO						
L0000582		0	0.36232E-03	474846.5	3825622.9	883.8	5.00	
4.65	4.65	NO						
L0000583		0	0.36232E-03	474836.5	3825623.0	883.3	5.00	
4.65	4.65	NO						
L0000584		0	0.36232E-03	474826.5	3825623.0	883.1	5.00	
4.65	4.65	NO						
L0000585		0	0.36232E-03	474816.5	3825623.0	883.6	5.00	
4.65	4.65	NO						
L0000586		0	0.36232E-03	474806.5	3825623.0	883.4	5.00	
4.65	4.65	NO						
L0000587		0	0.36232E-03	474796.5	3825623.1	883.0	5.00	
4.65	4.65	NO						
L0000588		0	0.36232E-03	474786.5	3825623.1	883.1	5.00	
4.65	4.65	NO						
L0000589		0	0.36232E-03	474776.5	3825623.1	883.0	5.00	
4.65	4.65	NO						
L0000590		0	0.36232E-03	474766.5	3825623.2	883.0	5.00	
4.65	4.65	NO						
L0000591		0	0.36232E-03	474756.5	3825623.2	882.6	5.00	
4.65	4.65	NO						
L0000592		0	0.36232E-03	474746.5	3825623.2	881.4	5.00	
4.65	4.65	NO						
L0000593		0	0.36232E-03	474743.9	3825626.8	881.3	5.00	
4.65	4.65	NO						
L0000594		0	0.36232E-03	474750.0	3825634.7	882.3	5.00	
4.65	4.65	NO						
L0000595		0	0.36232E-03	474756.2	3825642.5	881.9	5.00	
4.65	4.65	NO						
L0000596		0	0.36232E-03	474762.4	3825650.4	881.0	5.00	
4.65	4.65	NO						
L0000597		0	0.36232E-03	474768.6	3825658.3	881.1	5.00	
4.65	4.65	NO						
L0000598		0	0.36232E-03	474774.7	3825666.1	880.8	5.00	
4.65	4.65	NO						
L0000599		0	0.36232E-03	474780.9	3825674.0	880.3	5.00	
4.65	4.65	NO						
L0000600		0	0.36232E-03	474787.1	3825681.9	880.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000601	0	0.36232E-03	474793.3	3825689.7	880.2	5.00	4.65	4.65	NO
L0000602	0	0.36232E-03	474799.5	3825697.6	880.0	5.00	4.65	4.65	NO
L0000603	0	0.36232E-03	474805.6	3825705.5	879.9	5.00	4.65	4.65	NO
L0000604	0	0.36232E-03	474811.8	3825713.3	879.7	5.00	4.65	4.65	NO
L0000605	0	0.36232E-03	474818.0	3825721.2	880.5	5.00	4.65	4.65	NO
L0000606	0	0.36232E-03	474824.2	3825729.0	880.9	5.00	4.65	4.65	NO
L0000607	0	0.36232E-03	474830.3	3825736.9	880.1	5.00	4.65	4.65	NO
L0000608	0	0.36232E-03	474836.5	3825744.8	880.1	5.00	4.65	4.65	NO
L0000609	0	0.36232E-03	474842.7	3825752.6	880.1	5.00	4.65	4.65	NO
L0000610	0	0.36232E-03	474848.9	3825760.5	880.0	5.00	4.65	4.65	NO
L0000611	0	0.36232E-03	474855.1	3825768.4	880.6	5.00	4.65	4.65	NO
L0000612	0	0.36232E-03	474861.2	3825776.2	881.2	5.00	4.65	4.65	NO
L0000613	0	0.36232E-03	474867.4	3825784.1	880.9	5.00	4.65	4.65	NO
L0000614	0	0.36232E-03	474873.6	3825792.0	880.8	5.00	4.65	4.65	NO
L0000615	0	0.36232E-03	474879.8	3825799.8	881.4	5.00	4.65	4.65	NO
L0000616	0	0.36232E-03	474885.9	3825807.7	881.1	5.00	4.65	4.65	NO

L0000617		0	0.36232E-03	474892.1	3825815.5	880.4	5.00	
4.65	4.65	NO						
L0000618		0	0.36232E-03	474898.3	3825823.4	880.3	5.00	
4.65	4.65	NO						
L0000619		0	0.36232E-03	474904.5	3825831.3	880.8	5.00	
4.65	4.65	NO						
L0000620		0	0.36232E-03	474910.7	3825839.1	880.6	5.00	
4.65	4.65	NO						
L0000621		0	0.36232E-03	474916.8	3825847.0	880.8	5.00	
4.65	4.65	NO						
L0000622		0	0.36232E-03	474923.0	3825854.9	881.0	5.00	
4.65	4.65	NO						
L0000623		0	0.36232E-03	474929.2	3825862.7	881.5	5.00	
4.65	4.65	NO						
L0000624		0	0.36232E-03	474935.4	3825870.6	881.6	5.00	
4.65	4.65	NO						
L0000625		0	0.36232E-03	474941.5	3825878.5	882.1	5.00	
4.65	4.65	NO						
L0000626		0	0.36232E-03	474947.7	3825886.3	883.0	5.00	
4.65	4.65	NO						
L0000627		0	0.36232E-03	474953.9	3825894.2	883.8	5.00	
4.65	4.65	NO						
L0000628		0	0.36232E-03	474960.1	3825902.0	883.9	5.00	
4.65	4.65	NO						
L0000629		0	0.36232E-03	474966.3	3825909.9	883.0	5.00	
4.65	4.65	NO						
L0000630		0	0.36232E-03	474972.4	3825917.8	883.2	5.00	
4.65	4.65	NO						
L0000631		0	0.36232E-03	474978.6	3825925.6	883.8	5.00	
4.65	4.65	NO						
L0000632		0	0.36232E-03	474984.8	3825933.5	884.8	5.00	
4.65	4.65	NO						
L0000633		0	0.36232E-03	474991.0	3825941.4	885.0	5.00	
4.65	4.65	NO						
L0000634		0	0.36232E-03	474997.1	3825949.2	884.3	5.00	
4.65	4.65	NO						
L0000635		0	0.36232E-03	475003.3	3825957.1	883.5	5.00	
4.65	4.65	NO						
L0000636		0	0.36232E-03	475009.5	3825965.0	883.0	5.00	
4.65	4.65	NO						
L0000637		0	0.36232E-03	475015.7	3825972.8	882.9	5.00	
4.65	4.65	NO						
L0000638		0	0.36232E-03	475021.8	3825980.7	882.5	5.00	
4.65	4.65	NO						
L0000639		0	0.36232E-03	475028.0	3825988.5	882.6	5.00	
4.65	4.65	NO						
L0000640		0	0.36232E-03	475034.2	3825996.4	882.8	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000641	0	0.36232E-03	475040.4	3826004.3	883.0	5.00	4.65	4.65	NO
L0000642	0	0.36232E-03	475046.6	3826012.1	883.4	5.00	4.65	4.65	NO
L0000643	0	0.36232E-03	475052.7	3826020.0	884.0	5.00	4.65	4.65	NO
L0000644	0	0.36232E-03	475058.9	3826027.9	884.4	5.00	4.65	4.65	NO
L0000645	0	0.36232E-03	475065.1	3826035.7	884.0	5.00	4.65	4.65	NO
L0000646	0	0.36232E-03	475071.3	3826043.6	883.9	5.00	4.65	4.65	NO
L0000647	0	0.36232E-03	475077.4	3826051.5	883.9	5.00	4.65	4.65	NO
L0000648	0	0.36232E-03	475083.6	3826059.3	884.0	5.00	4.65	4.65	NO
L0000649	0	0.36232E-03	475089.8	3826067.2	884.6	5.00	4.65	4.65	NO
L0000650	0	0.36232E-03	475096.0	3826075.0	884.8	5.00	4.65	4.65	NO
L0000651	0	0.36232E-03	475102.2	3826082.9	885.4	5.00	4.65	4.65	NO
L0000652	0	0.36232E-03	475109.3	3826089.7	886.2	5.00	4.65	4.65	NO
L0000653	0	0.36232E-03	475117.6	3826095.2	887.4	5.00	4.65	4.65	NO
L0000654	0	0.36232E-03	475126.0	3826100.7	887.3	5.00	4.65	4.65	NO
L0000655	0	0.36232E-03	475134.4	3826106.2	886.2	5.00	4.65	4.65	NO
L0000656	0	0.36232E-03	475142.7	3826111.7	886.3	5.00	4.65	4.65	NO

L0000657		0	0.36232E-03	475151.1	3826117.2	887.3	5.00	
4.65	4.65	NO						
L0000658		0	0.36232E-03	475159.4	3826122.7	886.4	5.00	
4.65	4.65	NO						
L0000659		0	0.36232E-03	475167.8	3826128.1	886.0	5.00	
4.65	4.65	NO						
L0000660		0	0.36232E-03	475176.2	3826133.6	886.3	5.00	
4.65	4.65	NO						
L0000661		0	0.36232E-03	475184.5	3826139.1	885.9	5.00	
4.65	4.65	NO						
L0000662		0	0.36232E-03	475192.9	3826144.6	885.0	5.00	
4.65	4.65	NO						
L0000663		0	0.36232E-03	475201.3	3826150.1	884.3	5.00	
4.65	4.65	NO						
L0000664		0	0.36232E-03	475209.6	3826155.6	884.6	5.00	
4.65	4.65	NO						
L0000665		0	0.36232E-03	475218.0	3826161.0	885.0	5.00	
4.65	4.65	NO						
L0000666		0	0.36232E-03	475226.3	3826166.5	884.6	5.00	
4.65	4.65	NO						
L0000667		0	0.36232E-03	475234.7	3826172.0	884.9	5.00	
4.65	4.65	NO						
L0000668		0	0.36232E-03	475243.1	3826177.5	886.1	5.00	
4.65	4.65	NO						
L0000669		0	0.36232E-03	475251.4	3826183.0	885.6	5.00	
4.65	4.65	NO						
L0000670		0	0.36232E-03	475259.8	3826188.5	885.8	5.00	
4.65	4.65	NO						
L0000671		0	0.36232E-03	475268.1	3826194.0	887.6	5.00	
4.65	4.65	NO						
L0000672		0	0.36232E-03	475276.5	3826199.4	889.0	5.00	
4.65	4.65	NO						
L0000673		0	0.36232E-03	475284.9	3826204.9	889.4	5.00	
4.65	4.65	NO						
L0000674		0	0.36232E-03	475290.6	3826212.7	888.3	5.00	
4.65	4.65	NO						
L0000675		0	0.36232E-03	475294.9	3826221.7	886.8	5.00	
4.65	4.65	NO						
L0000676		0	0.36232E-03	475299.1	3826230.8	886.5	5.00	
4.65	4.65	NO						
L0000677		0	0.36232E-03	475303.3	3826239.8	885.9	5.00	
4.65	4.65	NO						
L0000678		0	0.36232E-03	475307.6	3826248.9	882.4	5.00	
4.65	4.65	NO						
L0000679		0	0.36232E-03	475311.8	3826258.0	883.6	5.00	
4.65	4.65	NO						
L0000680		0	0.36232E-03	475316.0	3826267.0	884.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000681	0	0.36232E-03	475320.3	3826276.1	883.4	5.00	4.65	4.65	NO
L0000682	0	0.36232E-03	475324.5	3826285.1	882.1	5.00	4.65	4.65	NO
L0000683	0	0.36232E-03	475328.7	3826294.2	882.2	5.00	4.65	4.65	NO
L0000684	0	0.36232E-03	475333.0	3826303.3	882.1	5.00	4.65	4.65	NO
L0000685	0	0.36232E-03	475337.2	3826312.3	882.2	5.00	4.65	4.65	NO
L0000686	0	0.36232E-03	475341.4	3826321.4	882.7	5.00	4.65	4.65	NO
L0000687	0	0.36232E-03	475345.7	3826330.4	883.9	5.00	4.65	4.65	NO
L0000688	0	0.36232E-03	475353.3	3826334.0	885.6	5.00	4.65	4.65	NO
L0000689	0	0.36232E-03	475363.3	3826333.8	887.2	5.00	4.65	4.65	NO
L0000690	0	0.36232E-03	475373.3	3826333.7	887.3	5.00	4.65	4.65	NO
L0000691	0	0.36232E-03	475383.3	3826333.5	886.4	5.00	4.65	4.65	NO
L0000692	0	0.36232E-03	475393.3	3826333.3	885.9	5.00	4.65	4.65	NO
L0000693	0	0.36232E-03	475403.3	3826333.2	887.4	5.00	4.65	4.65	NO
L0000694	0	0.36232E-03	475413.3	3826333.0	888.2	5.00	4.65	4.65	NO
L0000695	0	0.36232E-03	475423.3	3826332.8	888.1	5.00	4.65	4.65	NO
L0000696	0	0.36232E-03	475433.3	3826332.7	888.0	5.00	4.65	4.65	NO

L0000697		0	0.36232E-03	475443.3	3826332.5	887.1	5.00	
4.65	4.65	NO						
L0000698		0	0.36232E-03	475453.3	3826332.3	888.0	5.00	
4.65	4.65	NO						
L0000699		0	0.36232E-03	475463.3	3826332.1	887.9	5.00	
4.65	4.65	NO						
L0000700		0	0.36232E-03	475473.3	3826332.0	887.3	5.00	
4.65	4.65	NO						
L0000701		0	0.36232E-03	475483.3	3826331.8	887.7	5.00	
4.65	4.65	NO						
L0000702		0	0.36232E-03	475493.3	3826331.6	887.7	5.00	
4.65	4.65	NO						
L0000703		0	0.36232E-03	475503.3	3826331.5	888.0	5.00	
4.65	4.65	NO						
L0000704		0	0.36232E-03	475513.3	3826331.3	889.5	5.00	
4.65	4.65	NO						
L0000705		0	0.36232E-03	475523.3	3826331.1	890.7	5.00	
4.65	4.65	NO						
L0000706		0	0.36232E-03	475533.3	3826331.0	891.2	5.00	
4.65	4.65	NO						
L0000707		0	0.36232E-03	475543.3	3826330.8	891.9	5.00	
4.65	4.65	NO						
L0000708		0	0.36232E-03	475553.3	3826330.6	892.7	5.00	
4.65	4.65	NO						
L0000709		0	0.36232E-03	475563.3	3826330.5	893.4	5.00	
4.65	4.65	NO						
L0000710		0	0.36232E-03	475573.3	3826330.3	894.1	5.00	
4.65	4.65	NO						
L0000711		0	0.36232E-03	475583.3	3826330.1	894.8	5.00	
4.65	4.65	NO						
L0000712		0	0.36232E-03	475593.3	3826330.0	895.3	5.00	
4.65	4.65	NO						
L0000713		0	0.36232E-03	475603.3	3826329.8	895.3	5.00	
4.65	4.65	NO						
L0000714		0	0.36232E-03	475613.3	3826329.6	895.2	5.00	
4.65	4.65	NO						
L0000715		0	0.36232E-03	475623.3	3826329.5	895.3	5.00	
4.65	4.65	NO						
L0000716		0	0.36232E-03	475633.3	3826329.3	895.2	5.00	
4.65	4.65	NO						
L0000717		0	0.36232E-03	475643.3	3826329.1	895.1	5.00	
4.65	4.65	NO						
L0000718		0	0.36232E-03	475653.3	3826329.0	895.6	5.00	
4.65	4.65	NO						
L0000719		0	0.36232E-03	475663.3	3826328.8	896.3	5.00	
4.65	4.65	NO						
L0000720		0	0.36232E-03	475673.3	3826328.6	896.9	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000721	0	0.36232E-03	475683.3	3826328.5	897.4	5.00	4.65	4.65	NO
L0000722	0	0.36232E-03	475693.3	3826328.3	898.0	5.00	4.65	4.65	NO
L0000723	0	0.36232E-03	475703.3	3826328.1	898.8	5.00	4.65	4.65	NO
L0000724	0	0.36232E-03	475713.3	3826328.0	899.6	5.00	4.65	4.65	NO
L0000725	0	0.36232E-03	475723.3	3826327.8	900.4	5.00	4.65	4.65	NO
L0000726	0	0.36232E-03	475733.3	3826327.6	901.0	5.00	4.65	4.65	NO
L0000727	0	0.36232E-03	475743.3	3826327.5	901.2	5.00	4.65	4.65	NO
L0000728	0	0.36232E-03	475753.3	3826327.3	901.2	5.00	4.65	4.65	NO
L0000729	0	0.36232E-03	475763.3	3826327.1	901.0	5.00	4.65	4.65	NO
L0000730	0	0.36232E-03	475773.3	3826327.0	901.1	5.00	4.65	4.65	NO
L0000731	0	0.36232E-03	475783.3	3826326.8	901.6	5.00	4.65	4.65	NO
L0000732	0	0.36232E-03	475793.3	3826326.6	902.4	5.00	4.65	4.65	NO
L0000733	0	0.36232E-03	475803.3	3826326.5	902.6	5.00	4.65	4.65	NO
L0000734	0	0.36232E-03	475813.3	3826326.3	902.4	5.00	4.65	4.65	NO
L0000735	0	0.36232E-03	475823.3	3826326.1	902.5	5.00	4.65	4.65	NO
L0000736	0	0.36232E-03	475833.3	3826326.0	902.8	5.00	4.65	4.65	NO

L0000737		0	0.36232E-03	475843.3	3826325.8	903.4	5.00	
4.65	4.65	NO						
L0000738		0	0.36232E-03	475846.7	3826319.1	903.6	5.00	
4.65	4.65	NO						
L0000739		0	0.36232E-03	475846.7	3826309.1	903.5	5.00	
4.65	4.65	NO						
L0000740		0	0.36232E-03	475846.7	3826299.1	903.9	5.00	
4.65	4.65	NO						
L0000741		0	0.36232E-03	475846.7	3826289.1	904.3	5.00	
4.65	4.65	NO						
L0000742		0	0.36232E-03	475846.7	3826279.1	904.7	5.00	
4.65	4.65	NO						
L0000743		0	0.36232E-03	475846.8	3826269.1	904.6	5.00	
4.65	4.65	NO						
L0000744		0	0.36232E-03	475846.8	3826259.1	904.5	5.00	
4.65	4.65	NO						
L0000745		0	0.36232E-03	475846.8	3826249.1	905.2	5.00	
4.65	4.65	NO						
L0000746		0	0.36232E-03	475846.8	3826239.1	905.7	5.00	
4.65	4.65	NO						
L0000747		0	0.36232E-03	475846.8	3826229.1	905.5	5.00	
4.65	4.65	NO						
L0000748		0	0.36232E-03	475846.8	3826219.1	905.3	5.00	
4.65	4.65	NO						
L0000749		0	0.36232E-03	475846.9	3826209.1	905.4	5.00	
4.65	4.65	NO						
L0000750		0	0.36232E-03	475846.9	3826199.1	906.1	5.00	
4.65	4.65	NO						
L0000751		0	0.36232E-03	475846.9	3826189.1	906.5	5.00	
4.65	4.65	NO						
L0000752		0	0.36232E-03	475846.9	3826179.1	906.4	5.00	
4.65	4.65	NO						
L0000753		0	0.36232E-03	475846.9	3826169.1	906.0	5.00	
4.65	4.65	NO						
L0000754		0	0.36232E-03	475847.0	3826159.1	905.0	5.00	
4.65	4.65	NO						
L0000755		0	0.36232E-03	475847.0	3826149.1	904.4	5.00	
4.65	4.65	NO						
L0000756		0	0.36232E-03	475847.0	3826139.1	905.1	5.00	
4.65	4.65	NO						
L0000757		0	0.36232E-03	475847.0	3826129.1	906.2	5.00	
4.65	4.65	NO						
L0000758		0	0.36232E-03	475847.0	3826119.1	906.9	5.00	
4.65	4.65	NO						
L0000759		0	0.36232E-03	475847.1	3826109.1	906.8	5.00	
4.65	4.65	NO						
L0000760		0	0.36232E-03	475847.1	3826099.1	906.3	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000761	0	0.36232E-03	475847.1	3826089.1	905.6	5.00	4.65	4.65	NO
L0000762	0	0.36232E-03	475847.1	3826079.1	905.5	5.00	4.65	4.65	NO
L0000763	0	0.36232E-03	475847.1	3826069.1	906.1	5.00	4.65	4.65	NO
L0000764	0	0.36232E-03	475847.1	3826059.1	906.5	5.00	4.65	4.65	NO
L0000765	0	0.36232E-03	475847.2	3826049.1	906.0	5.00	4.65	4.65	NO
L0000766	0	0.36232E-03	475847.2	3826039.1	904.9	5.00	4.65	4.65	NO
L0000767	0	0.36232E-03	475847.2	3826029.1	904.1	5.00	4.65	4.65	NO
L0000768	0	0.36232E-03	475847.2	3826019.1	903.9	5.00	4.65	4.65	NO
L0000769	0	0.36232E-03	475847.2	3826009.1	904.2	5.00	4.65	4.65	NO
L0000770	0	0.36232E-03	475847.3	3825999.1	904.9	5.00	4.65	4.65	NO
L0000771	0	0.36232E-03	475847.3	3825989.1	906.3	5.00	4.65	4.65	NO
L0000772	0	0.36232E-03	475847.3	3825979.1	907.9	5.00	4.65	4.65	NO
L0000773	0	0.36232E-03	475847.3	3825969.1	908.6	5.00	4.65	4.65	NO
L0000774	0	0.36232E-03	475847.3	3825959.1	909.2	5.00	4.65	4.65	NO
L0000775	0	0.36232E-03	475847.3	3825949.1	910.9	5.00	4.65	4.65	NO
L0000776	0	0.36232E-03	475847.4	3825939.1	914.7	5.00	4.65	4.65	NO

L0000777		0	0.36232E-03	475847.4	3825929.1	914.0	5.00	
4.65	4.65	NO						
L0000778		0	0.36232E-03	475847.4	3825919.1	913.7	5.00	
4.65	4.65	NO						
L0000779		0	0.36232E-03	475847.4	3825909.1	914.0	5.00	
4.65	4.65	NO						
L0000780		0	0.36232E-03	475847.4	3825899.1	915.1	5.00	
4.65	4.65	NO						
L0000781		0	0.36232E-03	475847.5	3825889.1	915.4	5.00	
4.65	4.65	NO						
L0000782		0	0.36232E-03	475847.5	3825879.1	915.6	5.00	
4.65	4.65	NO						
L0000783		0	0.36232E-03	475840.0	3825876.8	914.6	5.00	
4.65	4.65	NO						
L0000784		0	0.36232E-03	475830.0	3825877.0	914.3	5.00	
4.65	4.65	NO						
L0000785		0	0.36232E-03	475820.0	3825877.2	913.2	5.00	
4.65	4.65	NO						
L0000786		0	0.36232E-03	475810.0	3825877.4	912.6	5.00	
4.65	4.65	NO						
L0000787		0	0.36232E-03	475800.0	3825877.6	912.1	5.00	
4.65	4.65	NO						
L0000788		0	0.36232E-03	475790.0	3825877.8	911.3	5.00	
4.65	4.65	NO						
L0000789		0	0.36232E-03	475780.0	3825878.0	910.6	5.00	
4.65	4.65	NO						
L0000790		0	0.36232E-03	475770.0	3825878.3	910.3	5.00	
4.65	4.65	NO						
L0000791		0	0.36232E-03	475760.0	3825878.5	910.0	5.00	
4.65	4.65	NO						
L0000792		0	0.36232E-03	475750.0	3825878.7	909.7	5.00	
4.65	4.65	NO						
L0000793		0	0.36232E-03	475740.0	3825878.9	909.7	5.00	
4.65	4.65	NO						
L0000794		0	0.36232E-03	475730.0	3825879.1	910.4	5.00	
4.65	4.65	NO						
L0000795		0	0.36232E-03	475720.0	3825879.3	910.4	5.00	
4.65	4.65	NO						
L0000796		0	0.36232E-03	475710.0	3825879.5	909.6	5.00	
4.65	4.65	NO						
L0000797		0	0.36232E-03	475700.0	3825879.7	909.3	5.00	
4.65	4.65	NO						
L0000798		0	0.36232E-03	475690.0	3825879.9	908.7	5.00	
4.65	4.65	NO						
L0000799		0	0.36232E-03	475680.0	3825880.2	908.1	5.00	
4.65	4.65	NO						
L0000800		0	0.36232E-03	475670.0	3825880.4	907.8	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000801	0	0.36232E-03	475660.0	3825880.6	907.5	5.00	4.65	4.65	NO
L0000802	0	0.36232E-03	475650.0	3825880.8	907.3	5.00	4.65	4.65	NO
L0000803	0	0.36232E-03	475649.2	3825871.5	907.5	5.00	4.65	4.65	NO
L0000804	0	0.36232E-03	475649.1	3825861.5	907.3	5.00	4.65	4.65	NO
L0000805	0	0.36232E-03	475649.0	3825851.5	907.3	5.00	4.65	4.65	NO
L0000806	0	0.36232E-03	475648.9	3825841.5	907.5	5.00	4.65	4.65	NO
L0000807	0	0.36232E-03	475648.7	3825831.5	907.8	5.00	4.65	4.65	NO
L0000808	0	0.36232E-03	475648.6	3825821.5	908.2	5.00	4.65	4.65	NO
L0000809	0	0.36232E-03	475648.5	3825811.5	908.4	5.00	4.65	4.65	NO
L0000810	0	0.36232E-03	475648.4	3825801.5	908.5	5.00	4.65	4.65	NO
L0000811	0	0.36232E-03	475648.3	3825791.6	908.8	5.00	4.65	4.65	NO
L0000812	0	0.36232E-03	475648.2	3825781.6	909.2	5.00	4.65	4.65	NO
L0000813	0	0.36232E-03	475648.1	3825771.6	909.4	5.00	4.65	4.65	NO
L0000814	0	0.36232E-03	475648.0	3825761.6	909.8	5.00	4.65	4.65	NO
L0000815	0	0.36232E-03	475647.9	3825751.6	910.3	5.00	4.65	4.65	NO
L0000816	0	0.36232E-03	475647.8	3825741.6	910.5	5.00	4.65	4.65	NO

L0000817		0	0.36232E-03	475647.7	3825731.6	910.8	5.00	
4.65	4.65	NO						
L0000818		0	0.36232E-03	475647.6	3825721.6	911.2	5.00	
4.65	4.65	NO						
L0000819		0	0.36232E-03	475647.5	3825711.6	911.5	5.00	
4.65	4.65	NO						
L0000820		0	0.36232E-03	475647.3	3825701.6	911.7	5.00	
4.65	4.65	NO						
L0000821		0	0.36232E-03	475647.2	3825691.6	911.9	5.00	
4.65	4.65	NO						
L0000822		0	0.36232E-03	475647.1	3825681.6	912.4	5.00	
4.65	4.65	NO						
L0000823		0	0.36232E-03	475647.0	3825671.6	913.9	5.00	
4.65	4.65	NO						
L0000824		0	0.36232E-03	475646.9	3825661.6	916.6	5.00	
4.65	4.65	NO						
L0000825		0	0.36232E-03	475646.8	3825651.6	921.2	5.00	
4.65	4.65	NO						
L0000826		0	0.36232E-03	475645.2	3825643.1	920.1	5.00	
4.65	4.65	NO						
L0000827		0	0.36232E-03	475635.2	3825643.2	913.6	5.00	
4.65	4.65	NO						
L0000828		0	0.36232E-03	475625.2	3825643.2	912.5	5.00	
4.65	4.65	NO						
L0000829		0	0.36232E-03	475615.2	3825643.3	912.2	5.00	
4.65	4.65	NO						
L0000830		0	0.36232E-03	475605.2	3825643.3	911.9	5.00	
4.65	4.65	NO						
L0000831		0	0.36232E-03	475595.2	3825643.4	911.5	5.00	
4.65	4.65	NO						
L0000832		0	0.36232E-03	475585.2	3825643.4	911.2	5.00	
4.65	4.65	NO						
L0000833		0	0.36232E-03	475575.2	3825643.5	910.7	5.00	
4.65	4.65	NO						
L0000834		0	0.36232E-03	475565.2	3825643.6	910.3	5.00	
4.65	4.65	NO						
L0000835		0	0.36232E-03	475555.2	3825643.6	909.9	5.00	
4.65	4.65	NO						
L0000836		0	0.36232E-03	475545.2	3825643.7	909.5	5.00	
4.65	4.65	NO						
L0000837		0	0.36232E-03	475535.2	3825643.7	909.2	5.00	
4.65	4.65	NO						
L0000838		0	0.36232E-03	475525.2	3825643.8	908.8	5.00	
4.65	4.65	NO						
L0000839		0	0.36232E-03	475515.2	3825643.8	908.4	5.00	
4.65	4.65	NO						
L0000840		0	0.36232E-03	475505.2	3825643.9	908.1	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000841	0	0.36232E-03	475495.2	3825644.0	907.8	5.00	4.65	4.65	NO
L0000842	0	0.36232E-03	475485.2	3825644.0	907.3	5.00	4.65	4.65	NO
L0000843	0	0.36232E-03	475475.2	3825644.1	906.8	5.00	4.65	4.65	NO
L0000844	0	0.36232E-03	475465.2	3825644.1	906.4	5.00	4.65	4.65	NO
L0000845	0	0.36232E-03	475455.2	3825644.2	906.0	5.00	4.65	4.65	NO
L0000846	0	0.36232E-03	475445.2	3825644.3	905.6	5.00	4.65	4.65	NO
L0000847	0	0.36232E-03	475435.2	3825644.3	905.0	5.00	4.65	4.65	NO
L0000848	0	0.36232E-03	475425.2	3825644.4	904.5	5.00	4.65	4.65	NO
L0000849	0	0.36232E-03	475415.2	3825644.4	904.3	5.00	4.65	4.65	NO
L0000850	0	0.36232E-03	475405.2	3825644.5	903.9	5.00	4.65	4.65	NO
L0000851	0	0.36232E-03	475395.2	3825644.5	903.4	5.00	4.65	4.65	NO
L0000852	0	0.36232E-03	475385.2	3825644.6	902.8	5.00	4.65	4.65	NO
L0000853	0	0.36232E-03	475375.2	3825644.7	902.6	5.00	4.65	4.65	NO
L0000854	0	0.36232E-03	475365.2	3825644.7	902.3	5.00	4.65	4.65	NO
L0000855	0	0.36232E-03	475355.2	3825644.8	902.0	5.00	4.65	4.65	NO
L0000856	0	0.36232E-03	475345.2	3825644.8	901.6	5.00	4.65	4.65	NO

L0000857		0	0.36232E-03	475335.2	3825644.9	901.1	5.00	
4.65	4.65	NO						
L0000858		0	0.36232E-03	475325.2	3825644.9	900.6	5.00	
4.65	4.65	NO						
L0000859		0	0.36232E-03	475315.2	3825645.0	900.4	5.00	
4.65	4.65	NO						
L0000860		0	0.36232E-03	475305.2	3825645.1	900.1	5.00	
4.65	4.65	NO						
L0000861		0	0.36232E-03	475295.2	3825645.1	899.6	5.00	
4.65	4.65	NO						
L0000862		0	0.36232E-03	475285.2	3825645.2	898.9	5.00	
4.65	4.65	NO						
L0000863		0	0.36232E-03	475275.2	3825645.2	898.2	5.00	
4.65	4.65	NO						
L0000864		0	0.36232E-03	475265.2	3825645.3	897.8	5.00	
4.65	4.65	NO						
L0000865		0	0.36232E-03	475255.2	3825645.3	897.9	5.00	
4.65	4.65	NO						
L0000866		0	0.36232E-03	475245.2	3825645.4	897.7	5.00	
4.65	4.65	NO						
L0000867		0	0.36232E-03	475235.2	3825645.5	897.0	5.00	
4.65	4.65	NO						
L0000868		0	0.36232E-03	475225.2	3825645.5	896.4	5.00	
4.65	4.65	NO						
L0000869		0	0.36232E-03	475215.2	3825645.6	896.0	5.00	
4.65	4.65	NO						
L0000870		0	0.36232E-03	475205.2	3825645.6	895.7	5.00	
4.65	4.65	NO						
L0000871		0	0.36232E-03	475195.2	3825645.7	895.2	5.00	
4.65	4.65	NO						
L0000872		0	0.36232E-03	475185.2	3825645.7	894.8	5.00	
4.65	4.65	NO						
L0000873		0	0.36232E-03	475175.2	3825645.8	894.6	5.00	
4.65	4.65	NO						
L0000874		0	0.36232E-03	475165.2	3825645.9	894.3	5.00	
4.65	4.65	NO						
L0000875		0	0.36232E-03	475155.2	3825645.9	894.0	5.00	
4.65	4.65	NO						
L0000876		0	0.36232E-03	475145.2	3825646.0	893.5	5.00	
4.65	4.65	NO						
L0000877		0	0.36232E-03	475135.2	3825646.0	892.8	5.00	
4.65	4.65	NO						
L0000878		0	0.36232E-03	475125.2	3825646.1	892.3	5.00	
4.65	4.65	NO						
L0000879		0	0.36232E-03	475115.2	3825646.1	892.0	5.00	
4.65	4.65	NO						
L0000880		0	0.36232E-03	475105.2	3825646.2	891.7	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000881	0	0.36232E-03	475095.2	3825646.3	891.3	5.00	4.65	4.65	NO
L0000882	0	0.36232E-03	475085.2	3825646.3	890.8	5.00	4.65	4.65	NO
L0000883	0	0.36232E-03	475075.2	3825646.4	890.9	5.00	4.65	4.65	NO
L0000884	0	0.36232E-03	475065.2	3825646.4	891.2	5.00	4.65	4.65	NO
L0000885	0	0.36232E-03	475055.2	3825646.5	891.3	5.00	4.65	4.65	NO
L0000886	0	0.36232E-03	475045.2	3825646.6	890.8	5.00	4.65	4.65	NO
L0000887	0	0.36232E-03	475035.2	3825646.6	890.1	5.00	4.65	4.65	NO
L0000888	0	0.36232E-03	475025.2	3825646.7	889.5	5.00	4.65	4.65	NO
L0000889	0	0.36232E-03	475015.2	3825646.7	889.1	5.00	4.65	4.65	NO
L0000890	0	0.36232E-03	475005.2	3825646.8	888.6	5.00	4.65	4.65	NO
L0000891	0	0.36232E-03	474995.2	3825646.8	888.0	5.00	4.65	4.65	NO
L0000892	0	0.36232E-03	474985.2	3825646.9	887.5	5.00	4.65	4.65	NO
L0000893	0	0.36232E-03	474975.2	3825647.0	887.4	5.00	4.65	4.65	NO
L0000894	0	0.36232E-03	474965.2	3825647.0	887.2	5.00	4.65	4.65	NO
L0000895	0	0.36232E-03	474955.2	3825647.1	886.8	5.00	4.65	4.65	NO
L0000896	0	0.36232E-03	474945.2	3825647.1	886.6	5.00	4.65	4.65	NO

L0000897		0	0.36232E-03	474935.2	3825647.2	886.3	5.00	
4.65	4.65	NO						
L0000898		0	0.36232E-03	474925.2	3825647.2	885.8	5.00	
4.65	4.65	NO						
L0000899		0	0.36232E-03	474915.2	3825647.3	885.7	5.00	
4.65	4.65	NO						
L0000900		0	0.36232E-03	474905.2	3825647.4	885.4	5.00	
4.65	4.65	NO						
L0000901		0	0.36232E-03	474895.2	3825647.4	884.8	5.00	
4.65	4.65	NO						
L0000902		0	0.36232E-03	474885.2	3825647.5	884.2	5.00	
4.65	4.65	NO						
L0000903		0	0.36232E-03	474875.2	3825647.5	883.7	5.00	
4.65	4.65	NO						
L0000904		0	0.36232E-03	474865.2	3825647.6	883.2	5.00	
4.65	4.65	NO						
L0000905		0	0.36232E-03	474855.2	3825647.6	882.7	5.00	
4.65	4.65	NO						
L0000906		0	0.36232E-03	474845.2	3825647.7	882.6	5.00	
4.65	4.65	NO						
L0000907		0	0.36232E-03	474835.2	3825647.8	882.7	5.00	
4.65	4.65	NO						
L0000908		0	0.36232E-03	474825.2	3825647.8	882.3	5.00	
4.65	4.65	NO						
L0000909		0	0.36232E-03	474815.2	3825647.9	882.1	5.00	
4.65	4.65	NO						
L0000910		0	0.36232E-03	474805.2	3825647.9	882.4	5.00	
4.65	4.65	NO						
L0000911		0	0.36232E-03	474795.2	3825648.0	881.9	5.00	
4.65	4.65	NO						
L0000912		0	0.36232E-03	474794.1	3825652.4	881.7	5.00	
4.65	4.65	NO						
L0000913		0	0.36232E-03	474800.2	3825660.3	881.6	5.00	
4.65	4.65	NO						
L0000914		0	0.36232E-03	474806.3	3825668.2	881.1	5.00	
4.65	4.65	NO						
L0000915		0	0.36232E-03	474812.4	3825676.1	881.0	5.00	
4.65	4.65	NO						
L0000916		0	0.36232E-03	474818.5	3825684.0	880.8	5.00	
4.65	4.65	NO						
L0000917		0	0.36232E-03	474824.7	3825691.9	880.7	5.00	
4.65	4.65	NO						
L0000918		0	0.36232E-03	474830.8	3825699.9	880.7	5.00	
4.65	4.65	NO						
L0000919		0	0.36232E-03	474836.9	3825707.8	881.2	5.00	
4.65	4.65	NO						
L0000920		0	0.36232E-03	474843.0	3825715.7	881.8	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000921	0	0.36232E-03	474849.1	3825723.6	881.3	5.00	4.65	4.65	NO
L0000922	0	0.36232E-03	474855.2	3825731.5	881.3	5.00	4.65	4.65	NO
L0000923	0	0.36232E-03	474861.3	3825739.4	881.5	5.00	4.65	4.65	NO
L0000924	0	0.36232E-03	474867.5	3825747.3	880.8	5.00	4.65	4.65	NO
L0000925	0	0.36232E-03	474873.6	3825755.3	881.1	5.00	4.65	4.65	NO
L0000926	0	0.36232E-03	474879.7	3825763.2	881.8	5.00	4.65	4.65	NO
L0000927	0	0.36232E-03	474885.8	3825771.1	882.0	5.00	4.65	4.65	NO
L0000928	0	0.36232E-03	474891.9	3825779.0	881.6	5.00	4.65	4.65	NO
L0000929	0	0.36232E-03	474898.0	3825786.9	882.3	5.00	4.65	4.65	NO
L0000930	0	0.36232E-03	474904.1	3825794.8	881.8	5.00	4.65	4.65	NO
L0000931	0	0.36232E-03	474910.3	3825802.7	881.1	5.00	4.65	4.65	NO
L0000932	0	0.36232E-03	474916.4	3825810.6	881.1	5.00	4.65	4.65	NO
L0000933	0	0.36232E-03	474922.5	3825818.6	881.8	5.00	4.65	4.65	NO
L0000934	0	0.36232E-03	474928.6	3825826.5	882.1	5.00	4.65	4.65	NO
L0000935	0	0.36232E-03	474934.7	3825834.4	881.8	5.00	4.65	4.65	NO
L0000936	0	0.36232E-03	474940.8	3825842.3	881.7	5.00	4.65	4.65	NO

L0000937		0	0.36232E-03	474946.9	3825850.2	882.1	5.00	
4.65	4.65	NO						
L0000938		0	0.36232E-03	474953.1	3825858.1	882.9	5.00	
4.65	4.65	NO						
L0000939		0	0.36232E-03	474959.2	3825866.0	883.0	5.00	
4.65	4.65	NO						
L0000940		0	0.36232E-03	474965.3	3825874.0	882.9	5.00	
4.65	4.65	NO						
L0000941		0	0.36232E-03	474971.4	3825881.9	883.3	5.00	
4.65	4.65	NO						
L0000942		0	0.36232E-03	474977.5	3825889.8	883.9	5.00	
4.65	4.65	NO						
L0000943		0	0.36232E-03	474983.6	3825897.7	884.0	5.00	
4.65	4.65	NO						
L0000944		0	0.36232E-03	474989.7	3825905.6	884.3	5.00	
4.65	4.65	NO						
L0000945		0	0.36232E-03	474995.9	3825913.5	884.8	5.00	
4.65	4.65	NO						
L0000946		0	0.36232E-03	475002.0	3825921.4	885.4	5.00	
4.65	4.65	NO						
L0000947		0	0.36232E-03	475008.1	3825929.3	885.4	5.00	
4.65	4.65	NO						
L0000948		0	0.36232E-03	475014.2	3825937.3	885.0	5.00	
4.65	4.65	NO						
L0000949		0	0.36232E-03	475020.3	3825945.2	884.6	5.00	
4.65	4.65	NO						
L0000950		0	0.36232E-03	475026.4	3825953.1	884.1	5.00	
4.65	4.65	NO						
L0000951		0	0.36232E-03	475032.5	3825961.0	883.5	5.00	
4.65	4.65	NO						
L0000952		0	0.36232E-03	475038.7	3825968.9	883.3	5.00	
4.65	4.65	NO						
L0000953		0	0.36232E-03	475044.8	3825976.8	883.4	5.00	
4.65	4.65	NO						
L0000954		0	0.36232E-03	475050.9	3825984.7	883.6	5.00	
4.65	4.65	NO						
L0000955		0	0.36232E-03	475057.0	3825992.7	883.9	5.00	
4.65	4.65	NO						
L0000956		0	0.36232E-03	475063.1	3826000.6	884.1	5.00	
4.65	4.65	NO						
L0000957		0	0.36232E-03	475069.2	3826008.5	884.5	5.00	
4.65	4.65	NO						
L0000958		0	0.36232E-03	475075.3	3826016.4	885.2	5.00	
4.65	4.65	NO						
L0000959		0	0.36232E-03	475081.5	3826024.3	884.8	5.00	
4.65	4.65	NO						
L0000960		0	0.36232E-03	475087.6	3826032.2	884.5	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000961	0	0.36232E-03	475093.7	3826040.1	884.6	5.00	4.65	4.65	NO
L0000962	0	0.36232E-03	475099.8	3826048.0	884.8	5.00	4.65	4.65	NO
L0000963	0	0.36232E-03	475105.9	3826056.0	885.2	5.00	4.65	4.65	NO
L0000964	0	0.36232E-03	475112.0	3826063.9	885.8	5.00	4.65	4.65	NO
L0000965	0	0.36232E-03	475118.1	3826071.8	886.7	5.00	4.65	4.65	NO
L0000966	0	0.36232E-03	475126.6	3826077.1	887.4	5.00	4.65	4.65	NO
L0000967	0	0.36232E-03	475135.1	3826082.3	888.0	5.00	4.65	4.65	NO
L0000968	0	0.36232E-03	475143.7	3826087.4	888.3	5.00	4.65	4.65	NO
L0000969	0	0.36232E-03	475152.2	3826092.6	887.9	5.00	4.65	4.65	NO
L0000970	0	0.36232E-03	475160.8	3826097.8	888.6	5.00	4.65	4.65	NO
L0000971	0	0.36232E-03	475169.4	3826103.0	888.6	5.00	4.65	4.65	NO
L0000972	0	0.36232E-03	475177.9	3826108.2	887.8	5.00	4.65	4.65	NO
L0000973	0	0.36232E-03	475186.5	3826113.3	886.6	5.00	4.65	4.65	NO
L0000974	0	0.36232E-03	475195.0	3826118.5	885.8	5.00	4.65	4.65	NO
L0000975	0	0.36232E-03	475203.6	3826123.7	885.9	5.00	4.65	4.65	NO
L0000976	0	0.36232E-03	475212.1	3826128.9	886.4	5.00	4.65	4.65	NO

L0000977		0	0.36232E-03	475220.7	3826134.1	885.8	5.00	
4.65	4.65	NO						
L0000978		0	0.36232E-03	475229.2	3826139.3	884.8	5.00	
4.65	4.65	NO						
L0000979		0	0.36232E-03	475237.8	3826144.4	884.5	5.00	
4.65	4.65	NO						
L0000980		0	0.36232E-03	475246.3	3826149.6	885.4	5.00	
4.65	4.65	NO						
L0000981		0	0.36232E-03	475254.9	3826154.8	887.5	5.00	
4.65	4.65	NO						
L0000982		0	0.36232E-03	475263.4	3826160.0	888.3	5.00	
4.65	4.65	NO						
L0000983		0	0.36232E-03	475272.0	3826165.2	888.4	5.00	
4.65	4.65	NO						
L0000984		0	0.36232E-03	475280.5	3826170.4	888.2	5.00	
4.65	4.65	NO						
L0000985		0	0.36232E-03	475289.1	3826175.5	888.6	5.00	
4.65	4.65	NO						
L0000986		0	0.36232E-03	475297.6	3826180.7	889.8	5.00	
4.65	4.65	NO						
L0000987		0	0.36232E-03	475306.2	3826185.9	891.0	5.00	
4.65	4.65	NO						
L0000988		0	0.36232E-03	475313.8	3826191.9	890.9	5.00	
4.65	4.65	NO						
L0000989		0	0.36232E-03	475317.4	3826201.2	890.1	5.00	
4.65	4.65	NO						
L0000990		0	0.36232E-03	475321.0	3826210.5	889.0	5.00	
4.65	4.65	NO						
L0000991		0	0.36232E-03	475324.5	3826219.9	887.7	5.00	
4.65	4.65	NO						
L0000992		0	0.36232E-03	475328.1	3826229.2	884.8	5.00	
4.65	4.65	NO						
L0000993		0	0.36232E-03	475331.7	3826238.6	883.2	5.00	
4.65	4.65	NO						
L0000994		0	0.36232E-03	475335.2	3826247.9	885.9	5.00	
4.65	4.65	NO						
L0000995		0	0.36232E-03	475338.8	3826257.2	884.3	5.00	
4.65	4.65	NO						
L0000996		0	0.36232E-03	475342.4	3826266.6	882.8	5.00	
4.65	4.65	NO						
L0000997		0	0.36232E-03	475346.0	3826275.9	883.1	5.00	
4.65	4.65	NO						
L0000998		0	0.36232E-03	475349.5	3826285.3	883.2	5.00	
4.65	4.65	NO						
L0000999		0	0.36232E-03	475353.1	3826294.6	883.5	5.00	
4.65	4.65	NO						
L0001000		0	0.36232E-03	475356.7	3826303.9	884.3	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001001	0	0.36232E-03	475361.7	3826311.1	885.5	5.00	4.65	4.65	NO
L0001002	0	0.36232E-03	475371.7	3826311.0	887.4	5.00	4.65	4.65	NO
L0001003	0	0.36232E-03	475381.7	3826310.9	888.2	5.00	4.65	4.65	NO
L0001004	0	0.36232E-03	475391.7	3826310.7	888.2	5.00	4.65	4.65	NO
L0001005	0	0.36232E-03	475401.7	3826310.6	888.4	5.00	4.65	4.65	NO
L0001006	0	0.36232E-03	475411.7	3826310.5	888.6	5.00	4.65	4.65	NO
L0001007	0	0.36232E-03	475421.7	3826310.4	889.2	5.00	4.65	4.65	NO
L0001008	0	0.36232E-03	475431.7	3826310.2	889.5	5.00	4.65	4.65	NO
L0001009	0	0.36232E-03	475441.7	3826310.1	889.1	5.00	4.65	4.65	NO
L0001010	0	0.36232E-03	475451.7	3826310.0	888.7	5.00	4.65	4.65	NO
L0001011	0	0.36232E-03	475461.7	3826309.8	889.9	5.00	4.65	4.65	NO
L0001012	0	0.36232E-03	475471.7	3826309.7	889.2	5.00	4.65	4.65	NO
L0001013	0	0.36232E-03	475481.7	3826309.6	888.8	5.00	4.65	4.65	NO
L0001014	0	0.36232E-03	475491.7	3826309.4	889.6	5.00	4.65	4.65	NO
L0001015	0	0.36232E-03	475501.7	3826309.3	889.4	5.00	4.65	4.65	NO
L0001016	0	0.36232E-03	475511.7	3826309.2	888.9	5.00	4.65	4.65	NO

L0001017		0	0.36232E-03	475521.7	3826309.1	889.3	5.00	
4.65	4.65	NO						
L0001018		0	0.36232E-03	475531.7	3826308.9	891.0	5.00	
4.65	4.65	NO						
L0001019		0	0.36232E-03	475541.7	3826308.8	892.0	5.00	
4.65	4.65	NO						
L0001020		0	0.36232E-03	475551.7	3826308.7	892.6	5.00	
4.65	4.65	NO						
L0001021		0	0.36232E-03	475561.7	3826308.5	893.2	5.00	
4.65	4.65	NO						
L0001022		0	0.36232E-03	475571.7	3826308.4	893.0	5.00	
4.65	4.65	NO						
L0001023		0	0.36232E-03	475581.7	3826308.3	893.6	5.00	
4.65	4.65	NO						
L0001024		0	0.36232E-03	475591.7	3826308.1	894.3	5.00	
4.65	4.65	NO						
L0001025		0	0.36232E-03	475601.7	3826308.0	895.4	5.00	
4.65	4.65	NO						
L0001026		0	0.36232E-03	475611.7	3826307.9	896.3	5.00	
4.65	4.65	NO						
L0001027		0	0.36232E-03	475621.7	3826307.7	897.1	5.00	
4.65	4.65	NO						
L0001028		0	0.36232E-03	475631.7	3826307.6	897.8	5.00	
4.65	4.65	NO						
L0001029		0	0.36232E-03	475641.7	3826307.5	897.9	5.00	
4.65	4.65	NO						
L0001030		0	0.36232E-03	475651.7	3826307.4	898.1	5.00	
4.65	4.65	NO						
L0001031		0	0.36232E-03	475661.7	3826307.2	898.2	5.00	
4.65	4.65	NO						
L0001032		0	0.36232E-03	475671.7	3826307.1	898.4	5.00	
4.65	4.65	NO						
L0001033		0	0.36232E-03	475681.7	3826307.0	898.8	5.00	
4.65	4.65	NO						
L0001034		0	0.36232E-03	475691.7	3826306.8	898.5	5.00	
4.65	4.65	NO						
L0001035		0	0.36232E-03	475701.7	3826306.7	898.6	5.00	
4.65	4.65	NO						
L0001036		0	0.36232E-03	475711.7	3826306.6	898.5	5.00	
4.65	4.65	NO						
L0001037		0	0.36232E-03	475721.7	3826306.4	899.1	5.00	
4.65	4.65	NO						
L0001038		0	0.36232E-03	475731.7	3826306.3	899.7	5.00	
4.65	4.65	NO						
L0001039		0	0.36232E-03	475741.7	3826306.2	900.5	5.00	
4.65	4.65	NO						
L0001040		0	0.36232E-03	475751.7	3826306.1	901.2	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001041	0	0.36232E-03	475761.7	3826305.9	902.0	5.00	4.65	4.65	NO
L0001042	0	0.36232E-03	475771.7	3826305.8	902.0	5.00	4.65	4.65	NO
L0001043	0	0.36232E-03	475781.7	3826305.7	902.0	5.00	4.65	4.65	NO
L0001044	0	0.36232E-03	475791.7	3826305.5	902.1	5.00	4.65	4.65	NO
L0001045	0	0.36232E-03	475801.7	3826305.4	902.5	5.00	4.65	4.65	NO
L0001046	0	0.36232E-03	475811.7	3826305.3	903.2	5.00	4.65	4.65	NO
L0001047	0	0.36232E-03	475811.9	3826295.6	903.1	5.00	4.65	4.65	NO
L0001048	0	0.36232E-03	475811.8	3826285.6	903.1	5.00	4.65	4.65	NO
L0001049	0	0.36232E-03	475811.6	3826275.6	903.3	5.00	4.65	4.65	NO
L0001050	0	0.36232E-03	475811.5	3826265.6	903.9	5.00	4.65	4.65	NO
L0001051	0	0.36232E-03	475811.4	3826255.6	904.2	5.00	4.65	4.65	NO
L0001052	0	0.36232E-03	475811.3	3826245.6	904.1	5.00	4.65	4.65	NO
L0001053	0	0.36232E-03	475811.1	3826235.6	903.8	5.00	4.65	4.65	NO
L0001054	0	0.36232E-03	475811.0	3826225.6	903.8	5.00	4.65	4.65	NO
L0001055	0	0.36232E-03	475810.9	3826215.6	904.8	5.00	4.65	4.65	NO
L0001056	0	0.36232E-03	475810.8	3826205.6	905.0	5.00	4.65	4.65	NO

L0001057		0	0.36232E-03	475810.6	3826195.6	904.8	5.00	
4.65	4.65	NO						
L0001058		0	0.36232E-03	475810.5	3826185.6	904.8	5.00	
4.65	4.65	NO						
L0001059		0	0.36232E-03	475810.4	3826175.6	904.7	5.00	
4.65	4.65	NO						
L0001060		0	0.36232E-03	475810.3	3826165.6	903.3	5.00	
4.65	4.65	NO						
L0001061		0	0.36232E-03	475810.1	3826155.6	902.9	5.00	
4.65	4.65	NO						
L0001062		0	0.36232E-03	475810.0	3826145.6	904.1	5.00	
4.65	4.65	NO						
L0001063		0	0.36232E-03	475809.9	3826135.6	905.2	5.00	
4.65	4.65	NO						
L0001064		0	0.36232E-03	475809.8	3826125.6	905.6	5.00	
4.65	4.65	NO						
L0001065		0	0.36232E-03	475809.6	3826115.6	905.3	5.00	
4.65	4.65	NO						
L0001066		0	0.36232E-03	475809.5	3826105.6	904.6	5.00	
4.65	4.65	NO						
L0001067		0	0.36232E-03	475809.4	3826095.6	903.6	5.00	
4.65	4.65	NO						
L0001068		0	0.36232E-03	475809.3	3826085.6	904.3	5.00	
4.65	4.65	NO						
L0001069		0	0.36232E-03	475809.1	3826075.6	904.0	5.00	
4.65	4.65	NO						
L0001070		0	0.36232E-03	475809.0	3826065.6	902.1	5.00	
4.65	4.65	NO						
L0001071		0	0.36232E-03	475808.9	3826055.6	901.9	5.00	
4.65	4.65	NO						
L0001072		0	0.36232E-03	475808.8	3826045.6	903.3	5.00	
4.65	4.65	NO						
L0001073		0	0.36232E-03	475808.6	3826035.6	905.1	5.00	
4.65	4.65	NO						
L0001074		0	0.36232E-03	475808.5	3826025.7	906.3	5.00	
4.65	4.65	NO						
L0001075		0	0.36232E-03	475808.4	3826015.7	906.6	5.00	
4.65	4.65	NO						
L0001076		0	0.36232E-03	475808.3	3826005.7	906.7	5.00	
4.65	4.65	NO						
L0001077		0	0.36232E-03	475808.1	3825995.7	906.4	5.00	
4.65	4.65	NO						
L0001078		0	0.36232E-03	475808.0	3825985.7	906.2	5.00	
4.65	4.65	NO						
L0001079		0	0.36232E-03	475807.9	3825975.7	906.5	5.00	
4.65	4.65	NO						
L0001080		0	0.36232E-03	475807.8	3825965.7	907.3	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001081	0	0.36232E-03	475807.6	3825955.7	908.1	5.00	4.65	4.65	NO
L0001082	0	0.36232E-03	475807.5	3825945.7	908.9	5.00	4.65	4.65	NO
L0001083	0	0.36232E-03	475807.4	3825935.7	910.4	5.00	4.65	4.65	NO
L0001084	0	0.36232E-03	475807.3	3825925.7	911.9	5.00	4.65	4.65	NO
L0001085	0	0.36232E-03	475807.1	3825915.7	912.1	5.00	4.65	4.65	NO
L0001086	0	0.36232E-03	475800.1	3825912.8	911.8	5.00	4.65	4.65	NO
L0001087	0	0.36232E-03	475790.1	3825912.9	911.1	5.00	4.65	4.65	NO
L0001088	0	0.36232E-03	475780.1	3825913.0	910.0	5.00	4.65	4.65	NO
L0001089	0	0.36232E-03	475770.1	3825913.1	909.3	5.00	4.65	4.65	NO
L0001090	0	0.36232E-03	475760.1	3825913.2	909.1	5.00	4.65	4.65	NO
L0001091	0	0.36232E-03	475750.1	3825913.3	909.0	5.00	4.65	4.65	NO
L0001092	0	0.36232E-03	475740.1	3825913.4	908.8	5.00	4.65	4.65	NO
L0001093	0	0.36232E-03	475730.1	3825913.5	908.7	5.00	4.65	4.65	NO
L0001094	0	0.36232E-03	475720.1	3825913.6	908.5	5.00	4.65	4.65	NO
L0001095	0	0.36232E-03	475710.1	3825913.7	908.2	5.00	4.65	4.65	NO
L0001096	0	0.36232E-03	475700.1	3825913.8	908.0	5.00	4.65	4.65	NO

L0001097		0	0.36232E-03	475690.1	3825913.9	907.7	5.00	
4.65	4.65	NO						
L0001098		0	0.36232E-03	475680.1	3825914.0	907.3	5.00	
4.65	4.65	NO						
L0001099		0	0.36232E-03	475670.1	3825914.1	907.0	5.00	
4.65	4.65	NO						
L0001100		0	0.36232E-03	475660.1	3825914.2	906.9	5.00	
4.65	4.65	NO						
L0001101		0	0.36232E-03	475650.1	3825914.3	906.7	5.00	
4.65	4.65	NO						
L0001102		0	0.36232E-03	475640.1	3825914.4	906.2	5.00	
4.65	4.65	NO						
L0001103		0	0.36232E-03	475630.1	3825914.5	905.9	5.00	
4.65	4.65	NO						
L0001104		0	0.36232E-03	475620.1	3825914.6	905.4	5.00	
4.65	4.65	NO						
L0001105		0	0.36232E-03	475614.3	3825910.5	904.4	5.00	
4.65	4.65	NO						
L0001106		0	0.36232E-03	475614.4	3825900.5	905.2	5.00	
4.65	4.65	NO						
L0001107		0	0.36232E-03	475614.4	3825890.5	905.4	5.00	
4.65	4.65	NO						
L0001108		0	0.36232E-03	475614.5	3825880.5	905.6	5.00	
4.65	4.65	NO						
L0001109		0	0.36232E-03	475614.6	3825870.5	906.1	5.00	
4.65	4.65	NO						
L0001110		0	0.36232E-03	475614.7	3825860.5	906.7	5.00	
4.65	4.65	NO						
L0001111		0	0.36232E-03	475614.8	3825850.5	906.7	5.00	
4.65	4.65	NO						
L0001112		0	0.36232E-03	475614.9	3825840.5	906.8	5.00	
4.65	4.65	NO						
L0001113		0	0.36232E-03	475614.9	3825830.5	906.8	5.00	
4.65	4.65	NO						
L0001114		0	0.36232E-03	475615.0	3825820.5	906.9	5.00	
4.65	4.65	NO						
L0001115		0	0.36232E-03	475615.1	3825810.5	906.9	5.00	
4.65	4.65	NO						
L0001116		0	0.36232E-03	475615.2	3825800.5	907.2	5.00	
4.65	4.65	NO						
L0001117		0	0.36232E-03	475615.3	3825790.5	907.8	5.00	
4.65	4.65	NO						
L0001118		0	0.36232E-03	475615.3	3825780.5	908.3	5.00	
4.65	4.65	NO						
L0001119		0	0.36232E-03	475615.4	3825770.5	908.5	5.00	
4.65	4.65	NO						
L0001120		0	0.36232E-03	475615.5	3825760.5	908.7	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	URBAN SOURCE	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
L0001121	0	0.36232E-03	475615.6	3825750.5	909.0	5.00		4.65	4.65	NO
L0001122	0	0.36232E-03	475615.7	3825740.5	909.3	5.00		4.65	4.65	NO
L0001123	0	0.36232E-03	475615.7	3825730.5	909.6	5.00		4.65	4.65	NO
L0001124	0	0.36232E-03	475615.8	3825720.5	909.9	5.00		4.65	4.65	NO
L0001125	0	0.36232E-03	475615.9	3825710.5	910.2	5.00		4.65	4.65	NO
L0001126	0	0.36232E-03	475616.0	3825700.5	910.5	5.00		4.65	4.65	NO
L0001127	0	0.36232E-03	475616.1	3825690.5	910.9	5.00		4.65	4.65	NO
L0001128	0	0.36232E-03	475616.1	3825680.5	911.1	5.00		4.65	4.65	NO
L0001129	0	0.36232E-03	475615.1	3825671.6	911.3	5.00		4.65	4.65	NO
L0001130	0	0.36232E-03	475605.1	3825671.7	910.8	5.00		4.65	4.65	NO
L0001131	0	0.36232E-03	475595.1	3825671.7	910.6	5.00		4.65	4.65	NO
L0001132	0	0.36232E-03	475585.1	3825671.8	910.1	5.00		4.65	4.65	NO
L0001133	0	0.36232E-03	475575.1	3825671.8	909.8	5.00		4.65	4.65	NO
L0001134	0	0.36232E-03	475565.1	3825671.9	909.4	5.00		4.65	4.65	NO
L0001135	0	0.36232E-03	475555.1	3825671.9	908.9	5.00		4.65	4.65	NO
L0001136	0	0.36232E-03	475545.1	3825672.0	908.7	5.00		4.65	4.65	NO

L0001137		0	0.36232E-03	475535.1	3825672.0	908.1	5.00	
4.65	4.65	NO						
L0001138		0	0.36232E-03	475525.1	3825672.1	907.7	5.00	
4.65	4.65	NO						
L0001139		0	0.36232E-03	475515.1	3825672.1	907.4	5.00	
4.65	4.65	NO						
L0001140		0	0.36232E-03	475505.1	3825672.2	907.1	5.00	
4.65	4.65	NO						
L0001141		0	0.36232E-03	475495.1	3825672.2	906.8	5.00	
4.65	4.65	NO						
L0001142		0	0.36232E-03	475485.1	3825672.3	906.4	5.00	
4.65	4.65	NO						
L0001143		0	0.36232E-03	475475.1	3825672.3	906.0	5.00	
4.65	4.65	NO						
L0001144		0	0.36232E-03	475465.1	3825672.4	905.7	5.00	
4.65	4.65	NO						
L0001145		0	0.36232E-03	475455.1	3825672.4	905.4	5.00	
4.65	4.65	NO						
L0001146		0	0.36232E-03	475445.1	3825672.5	905.0	5.00	
4.65	4.65	NO						
L0001147		0	0.36232E-03	475435.1	3825672.5	904.6	5.00	
4.65	4.65	NO						
L0001148		0	0.36232E-03	475425.1	3825672.6	904.3	5.00	
4.65	4.65	NO						
L0001149		0	0.36232E-03	475415.1	3825672.7	903.9	5.00	
4.65	4.65	NO						
L0001150		0	0.36232E-03	475405.1	3825672.7	903.4	5.00	
4.65	4.65	NO						
L0001151		0	0.36232E-03	475395.1	3825672.8	902.8	5.00	
4.65	4.65	NO						
L0001152		0	0.36232E-03	475385.1	3825672.8	902.3	5.00	
4.65	4.65	NO						
L0001153		0	0.36232E-03	475375.1	3825672.9	901.8	5.00	
4.65	4.65	NO						
L0001154		0	0.36232E-03	475365.1	3825672.9	901.5	5.00	
4.65	4.65	NO						
L0001155		0	0.36232E-03	475355.1	3825673.0	901.0	5.00	
4.65	4.65	NO						
L0001156		0	0.36232E-03	475345.1	3825673.0	900.8	5.00	
4.65	4.65	NO						
L0001157		0	0.36232E-03	475335.1	3825673.1	900.6	5.00	
4.65	4.65	NO						
L0001158		0	0.36232E-03	475325.1	3825673.1	900.1	5.00	
4.65	4.65	NO						
L0001159		0	0.36232E-03	475315.1	3825673.2	899.6	5.00	
4.65	4.65	NO						
L0001160		0	0.36232E-03	475305.1	3825673.2	899.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001161	0	0.36232E-03	475295.1	3825673.3	898.9	5.00	4.65	4.65	NO
L0001162	0	0.36232E-03	475285.1	3825673.3	898.5	5.00	4.65	4.65	NO
L0001163	0	0.36232E-03	475275.1	3825673.4	898.1	5.00	4.65	4.65	NO
L0001164	0	0.36232E-03	475265.1	3825673.4	897.8	5.00	4.65	4.65	NO
L0001165	0	0.36232E-03	475255.1	3825673.5	897.4	5.00	4.65	4.65	NO
L0001166	0	0.36232E-03	475245.1	3825673.5	897.0	5.00	4.65	4.65	NO
L0001167	0	0.36232E-03	475235.1	3825673.6	896.3	5.00	4.65	4.65	NO
L0001168	0	0.36232E-03	475225.1	3825673.6	895.7	5.00	4.65	4.65	NO
L0001169	0	0.36232E-03	475215.1	3825673.7	895.3	5.00	4.65	4.65	NO
L0001170	0	0.36232E-03	475205.1	3825673.7	895.0	5.00	4.65	4.65	NO
L0001171	0	0.36232E-03	475195.1	3825673.8	894.6	5.00	4.65	4.65	NO
L0001172	0	0.36232E-03	475185.1	3825673.8	894.1	5.00	4.65	4.65	NO
L0001173	0	0.36232E-03	475175.1	3825673.9	893.9	5.00	4.65	4.65	NO
L0001174	0	0.36232E-03	475165.1	3825673.9	893.9	5.00	4.65	4.65	NO
L0001175	0	0.36232E-03	475155.1	3825674.0	893.6	5.00	4.65	4.65	NO
L0001176	0	0.36232E-03	475145.1	3825674.0	892.9	5.00	4.65	4.65	NO

L0001177		0	0.36232E-03	475135.1	3825674.1	892.3	5.00	
4.65	4.65	NO						
L0001178		0	0.36232E-03	475125.1	3825674.1	891.8	5.00	
4.65	4.65	NO						
L0001179		0	0.36232E-03	475115.1	3825674.2	891.3	5.00	
4.65	4.65	NO						
L0001180		0	0.36232E-03	475105.1	3825674.2	890.8	5.00	
4.65	4.65	NO						
L0001181		0	0.36232E-03	475095.1	3825674.3	890.4	5.00	
4.65	4.65	NO						
L0001182		0	0.36232E-03	475085.1	3825674.3	890.2	5.00	
4.65	4.65	NO						
L0001183		0	0.36232E-03	475075.1	3825674.4	890.0	5.00	
4.65	4.65	NO						
L0001184		0	0.36232E-03	475065.1	3825674.4	889.4	5.00	
4.65	4.65	NO						
L0001185		0	0.36232E-03	475055.1	3825674.5	889.3	5.00	
4.65	4.65	NO						
L0001186		0	0.36232E-03	475045.1	3825674.5	889.4	5.00	
4.65	4.65	NO						
L0001187		0	0.36232E-03	475035.1	3825674.6	889.7	5.00	
4.65	4.65	NO						
L0001188		0	0.36232E-03	475025.1	3825674.6	889.4	5.00	
4.65	4.65	NO						
L0001189		0	0.36232E-03	475015.1	3825674.7	888.6	5.00	
4.65	4.65	NO						
L0001190		0	0.36232E-03	475005.1	3825674.7	888.0	5.00	
4.65	4.65	NO						
L0001191		0	0.36232E-03	474995.1	3825674.8	887.3	5.00	
4.65	4.65	NO						
L0001192		0	0.36232E-03	474985.1	3825674.8	887.0	5.00	
4.65	4.65	NO						
L0001193		0	0.36232E-03	474975.1	3825674.9	887.1	5.00	
4.65	4.65	NO						
L0001194		0	0.36232E-03	474965.1	3825674.9	886.6	5.00	
4.65	4.65	NO						
L0001195		0	0.36232E-03	474955.1	3825675.0	885.9	5.00	
4.65	4.65	NO						
L0001196		0	0.36232E-03	474945.1	3825675.0	885.5	5.00	
4.65	4.65	NO						
L0001197		0	0.36232E-03	474935.1	3825675.1	885.1	5.00	
4.65	4.65	NO						
L0001198		0	0.36232E-03	474925.1	3825675.1	884.9	5.00	
4.65	4.65	NO						
L0001199		0	0.36232E-03	474915.1	3825675.2	884.7	5.00	
4.65	4.65	NO						
L0001200		0	0.36232E-03	474905.1	3825675.3	884.2	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001201	0	0.36232E-03	474895.1	3825675.3	884.1	5.00	4.65	4.65	NO
L0001202	0	0.36232E-03	474885.1	3825675.4	883.8	5.00	4.65	4.65	NO
L0001203	0	0.36232E-03	474875.1	3825675.4	883.1	5.00	4.65	4.65	NO
L0001204	0	0.36232E-03	474865.1	3825675.5	882.4	5.00	4.65	4.65	NO
L0001205	0	0.36232E-03	474855.1	3825675.5	882.5	5.00	4.65	4.65	NO
L0001206	0	0.36232E-03	474845.1	3825675.6	881.8	5.00	4.65	4.65	NO
L0001207	0	0.36232E-03	474849.2	3825682.5	881.8	5.00	4.65	4.65	NO
L0001208	0	0.36232E-03	474855.4	3825690.3	881.8	5.00	4.65	4.65	NO
L0001209	0	0.36232E-03	474861.6	3825698.2	882.1	5.00	4.65	4.65	NO
L0001210	0	0.36232E-03	474867.7	3825706.1	882.4	5.00	4.65	4.65	NO
L0001211	0	0.36232E-03	474873.9	3825714.0	882.3	5.00	4.65	4.65	NO
L0001212	0	0.36232E-03	474880.0	3825721.9	882.5	5.00	4.65	4.65	NO
L0001213	0	0.36232E-03	474886.2	3825729.7	882.7	5.00	4.65	4.65	NO
L0001214	0	0.36232E-03	474892.3	3825737.6	882.3	5.00	4.65	4.65	NO
L0001215	0	0.36232E-03	474898.5	3825745.5	882.1	5.00	4.65	4.65	NO
L0001216	0	0.36232E-03	474904.6	3825753.4	882.5	5.00	4.65	4.65	NO

L0001217		0	0.36232E-03	474910.8	3825761.3	882.9	5.00	
4.65	4.65	NO						
L0001218		0	0.36232E-03	474917.0	3825769.1	883.4	5.00	
4.65	4.65	NO						
L0001219		0	0.36232E-03	474923.1	3825777.0	883.1	5.00	
4.65	4.65	NO						
L0001220		0	0.36232E-03	474929.3	3825784.9	882.4	5.00	
4.65	4.65	NO						
L0001221		0	0.36232E-03	474935.4	3825792.8	882.2	5.00	
4.65	4.65	NO						
L0001222		0	0.36232E-03	474941.6	3825800.7	882.3	5.00	
4.65	4.65	NO						
L0001223		0	0.36232E-03	474947.7	3825808.5	882.8	5.00	
4.65	4.65	NO						
L0001224		0	0.36232E-03	474953.9	3825816.4	882.8	5.00	
4.65	4.65	NO						
L0001225		0	0.36232E-03	474960.1	3825824.3	882.8	5.00	
4.65	4.65	NO						
L0001226		0	0.36232E-03	474966.2	3825832.2	883.0	5.00	
4.65	4.65	NO						
L0001227		0	0.36232E-03	474972.4	3825840.1	883.4	5.00	
4.65	4.65	NO						
L0001228		0	0.36232E-03	474978.5	3825847.9	884.7	5.00	
4.65	4.65	NO						
L0001229		0	0.36232E-03	474984.7	3825855.8	884.5	5.00	
4.65	4.65	NO						
L0001230		0	0.36232E-03	474990.8	3825863.7	884.3	5.00	
4.65	4.65	NO						
L0001231		0	0.36232E-03	474997.0	3825871.6	885.0	5.00	
4.65	4.65	NO						
L0001232		0	0.36232E-03	475003.2	3825879.5	884.7	5.00	
4.65	4.65	NO						
L0001233		0	0.36232E-03	475009.3	3825887.3	884.9	5.00	
4.65	4.65	NO						
L0001234		0	0.36232E-03	475015.5	3825895.2	885.4	5.00	
4.65	4.65	NO						
L0001235		0	0.36232E-03	475021.6	3825903.1	886.0	5.00	
4.65	4.65	NO						
L0001236		0	0.36232E-03	475027.8	3825911.0	886.6	5.00	
4.65	4.65	NO						
L0001237		0	0.36232E-03	475033.9	3825918.9	886.0	5.00	
4.65	4.65	NO						
L0001238		0	0.36232E-03	475040.1	3825926.8	885.6	5.00	
4.65	4.65	NO						
L0001239		0	0.36232E-03	475046.2	3825934.6	885.6	5.00	
4.65	4.65	NO						
L0001240		0	0.36232E-03	475052.4	3825942.5	884.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001241	0	0.36232E-03	475058.6	3825950.4	884.6	5.00	4.65	4.65	NO
L0001242	0	0.36232E-03	475064.7	3825958.3	884.8	5.00	4.65	4.65	NO
L0001243	0	0.36232E-03	475070.9	3825966.2	884.8	5.00	4.65	4.65	NO
L0001244	0	0.36232E-03	475077.0	3825974.0	884.9	5.00	4.65	4.65	NO
L0001245	0	0.36232E-03	475083.2	3825981.9	885.1	5.00	4.65	4.65	NO
L0001246	0	0.36232E-03	475089.3	3825989.8	885.3	5.00	4.65	4.65	NO
L0001247	0	0.36232E-03	475095.5	3825997.7	885.8	5.00	4.65	4.65	NO
L0001248	0	0.36232E-03	475101.7	3826005.6	885.9	5.00	4.65	4.65	NO
L0001249	0	0.36232E-03	475107.8	3826013.4	885.5	5.00	4.65	4.65	NO
L0001250	0	0.36232E-03	475114.0	3826021.3	885.6	5.00	4.65	4.65	NO
L0001251	0	0.36232E-03	475120.1	3826029.2	885.6	5.00	4.65	4.65	NO
L0001252	0	0.36232E-03	475126.3	3826037.1	885.9	5.00	4.65	4.65	NO
L0001253	0	0.36232E-03	475132.4	3826045.0	887.0	5.00	4.65	4.65	NO
L0001254	0	0.36232E-03	475138.6	3826052.8	887.6	5.00	4.65	4.65	NO
L0001255	0	0.36232E-03	475146.9	3826058.3	888.1	5.00	4.65	4.65	NO
L0001256	0	0.36232E-03	475155.4	3826063.5	888.8	5.00	4.65	4.65	NO

L0001257		0	0.36232E-03	475164.0	3826068.8	889.1	5.00	
4.65	4.65	NO						
L0001258		0	0.36232E-03	475172.5	3826074.0	889.4	5.00	
4.65	4.65	NO						
L0001259		0	0.36232E-03	475181.0	3826079.3	889.4	5.00	
4.65	4.65	NO						
L0001260		0	0.36232E-03	475189.5	3826084.5	888.5	5.00	
4.65	4.65	NO						
L0001261		0	0.36232E-03	475198.0	3826089.8	887.6	5.00	
4.65	4.65	NO						
L0001262		0	0.36232E-03	475206.5	3826095.0	888.7	5.00	
4.65	4.65	NO						
L0001263		0	0.36232E-03	475215.0	3826100.3	888.7	5.00	
4.65	4.65	NO						
L0001264		0	0.36232E-03	475223.5	3826105.5	887.5	5.00	
4.65	4.65	NO						
L0001265		0	0.36232E-03	475232.0	3826110.8	886.2	5.00	
4.65	4.65	NO						
L0001266		0	0.36232E-03	475240.5	3826116.1	885.8	5.00	
4.65	4.65	NO						
L0001267		0	0.36232E-03	475249.0	3826121.3	885.9	5.00	
4.65	4.65	NO						
L0001268		0	0.36232E-03	475257.6	3826126.6	885.0	5.00	
4.65	4.65	NO						
L0001269		0	0.36232E-03	475266.1	3826131.8	886.1	5.00	
4.65	4.65	NO						
L0001270		0	0.36232E-03	475274.6	3826137.1	886.8	5.00	
4.65	4.65	NO						
L0001271		0	0.36232E-03	475283.1	3826142.3	888.5	5.00	
4.65	4.65	NO						
L0001272		0	0.36232E-03	475291.6	3826147.6	888.9	5.00	
4.65	4.65	NO						
L0001273		0	0.36232E-03	475300.1	3826152.8	890.2	5.00	
4.65	4.65	NO						
L0001274		0	0.36232E-03	475308.6	3826158.1	891.0	5.00	
4.65	4.65	NO						
L0001275		0	0.36232E-03	475317.1	3826163.3	890.8	5.00	
4.65	4.65	NO						
L0001276		0	0.36232E-03	475325.6	3826168.6	891.4	5.00	
4.65	4.65	NO						
L0001277		0	0.36232E-03	475332.7	3826175.0	891.8	5.00	
4.65	4.65	NO						
L0001278		0	0.36232E-03	475335.6	3826184.5	890.9	5.00	
4.65	4.65	NO						
L0001279		0	0.36232E-03	475338.6	3826194.1	889.6	5.00	
4.65	4.65	NO						
L0001280		0	0.36232E-03	475341.6	3826203.6	888.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	URBAN SOURCE	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
L0001281	0	0.36232E-03	475344.6	3826213.2	886.6	5.00		4.65	4.65	NO
L0001282	0	0.36232E-03	475347.5	3826222.7	884.4	5.00		4.65	4.65	NO
L0001283	0	0.36232E-03	475350.5	3826232.3	884.6	5.00		4.65	4.65	NO
L0001284	0	0.36232E-03	475353.5	3826241.8	885.0	5.00		4.65	4.65	NO
L0001285	0	0.36232E-03	475356.5	3826251.4	883.9	5.00		4.65	4.65	NO
L0001286	0	0.36232E-03	475359.4	3826260.9	883.8	5.00		4.65	4.65	NO
L0001287	0	0.36232E-03	475362.4	3826270.5	883.9	5.00		4.65	4.65	NO
L0001288	0	0.36232E-03	475365.4	3826280.0	884.2	5.00		4.65	4.65	NO
L0001289	0	0.36232E-03	475368.3	3826289.6	885.0	5.00		4.65	4.65	NO
L0001290	0	0.36232E-03	475376.2	3826292.4	886.2	5.00		4.65	4.65	NO
L0001291	0	0.36232E-03	475386.2	3826292.2	887.4	5.00		4.65	4.65	NO
L0001292	0	0.36232E-03	475396.2	3826292.1	887.9	5.00		4.65	4.65	NO
L0001293	0	0.36232E-03	475406.2	3826291.9	888.7	5.00		4.65	4.65	NO
L0001294	0	0.36232E-03	475416.2	3826291.8	889.1	5.00		4.65	4.65	NO
L0001295	0	0.36232E-03	475426.2	3826291.6	889.8	5.00		4.65	4.65	NO
L0001296	0	0.36232E-03	475436.2	3826291.5	890.3	5.00		4.65	4.65	NO

L0001297		0	0.36232E-03	475446.2	3826291.4	890.3	5.00	
4.65	4.65	NO						
L0001298		0	0.36232E-03	475456.2	3826291.2	890.3	5.00	
4.65	4.65	NO						
L0001299		0	0.36232E-03	475466.2	3826291.1	891.0	5.00	
4.65	4.65	NO						
L0001300		0	0.36232E-03	475476.2	3826290.9	890.6	5.00	
4.65	4.65	NO						
L0001301		0	0.36232E-03	475486.2	3826290.8	890.3	5.00	
4.65	4.65	NO						
L0001302		0	0.36232E-03	475496.2	3826290.6	890.3	5.00	
4.65	4.65	NO						
L0001303		0	0.36232E-03	475506.2	3826290.5	891.0	5.00	
4.65	4.65	NO						
L0001304		0	0.36232E-03	475516.2	3826290.3	890.1	5.00	
4.65	4.65	NO						
L0001305		0	0.36232E-03	475526.2	3826290.2	889.6	5.00	
4.65	4.65	NO						
L0001306		0	0.36232E-03	475536.2	3826290.0	890.4	5.00	
4.65	4.65	NO						
L0001307		0	0.36232E-03	475546.2	3826289.9	891.5	5.00	
4.65	4.65	NO						
L0001308		0	0.36232E-03	475556.2	3826289.8	893.1	5.00	
4.65	4.65	NO						
L0001309		0	0.36232E-03	475566.2	3826289.6	894.0	5.00	
4.65	4.65	NO						
L0001310		0	0.36232E-03	475576.2	3826289.5	894.9	5.00	
4.65	4.65	NO						
L0001311		0	0.36232E-03	475586.2	3826289.3	895.5	5.00	
4.65	4.65	NO						
L0001312		0	0.36232E-03	475596.2	3826289.2	896.0	5.00	
4.65	4.65	NO						
L0001313		0	0.36232E-03	475606.2	3826289.0	896.4	5.00	
4.65	4.65	NO						
L0001314		0	0.36232E-03	475616.2	3826288.9	896.8	5.00	
4.65	4.65	NO						
L0001315		0	0.36232E-03	475626.2	3826288.7	897.2	5.00	
4.65	4.65	NO						
L0001316		0	0.36232E-03	475636.2	3826288.6	897.7	5.00	
4.65	4.65	NO						
L0001317		0	0.36232E-03	475646.2	3826288.5	898.1	5.00	
4.65	4.65	NO						
L0001318		0	0.36232E-03	475656.2	3826288.3	898.5	5.00	
4.65	4.65	NO						
L0001319		0	0.36232E-03	475666.2	3826288.2	898.9	5.00	
4.65	4.65	NO						
L0001320		0	0.36232E-03	475676.2	3826288.0	899.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001321	0	0.36232E-03	475686.2	3826287.9	899.8	5.00	4.65	4.65	NO
L0001322	0	0.36232E-03	475696.2	3826287.7	900.0	5.00	4.65	4.65	NO
L0001323	0	0.36232E-03	475706.2	3826287.6	900.3	5.00	4.65	4.65	NO
L0001324	0	0.36232E-03	475716.2	3826287.4	900.1	5.00	4.65	4.65	NO
L0001325	0	0.36232E-03	475726.2	3826287.3	900.4	5.00	4.65	4.65	NO
L0001326	0	0.36232E-03	475736.2	3826287.1	899.9	5.00	4.65	4.65	NO
L0001327	0	0.36232E-03	475746.2	3826287.0	900.2	5.00	4.65	4.65	NO
L0001328	0	0.36232E-03	475756.2	3826286.9	901.0	5.00	4.65	4.65	NO
L0001329	0	0.36232E-03	475766.2	3826286.7	902.0	5.00	4.65	4.65	NO
L0001330	0	0.36232E-03	475775.6	3826286.0	902.6	5.00	4.65	4.65	NO
L0001331	0	0.36232E-03	475775.3	3826276.0	902.1	5.00	4.65	4.65	NO
L0001332	0	0.36232E-03	475775.0	3826266.0	901.6	5.00	4.65	4.65	NO
L0001333	0	0.36232E-03	475774.6	3826256.0	902.0	5.00	4.65	4.65	NO
L0001334	0	0.36232E-03	475774.3	3826246.0	903.0	5.00	4.65	4.65	NO
L0001335	0	0.36232E-03	475774.0	3826236.0	903.4	5.00	4.65	4.65	NO
L0001336	0	0.36232E-03	475773.7	3826226.1	903.7	5.00	4.65	4.65	NO

L0001337		0	0.36232E-03	475773.4	3826216.1	903.7	5.00	
4.65	4.65	NO						
L0001338		0	0.36232E-03	475773.0	3826206.1	903.5	5.00	
4.65	4.65	NO						
L0001339		0	0.36232E-03	475772.7	3826196.1	903.3	5.00	
4.65	4.65	NO						
L0001340		0	0.36232E-03	475772.4	3826186.1	902.6	5.00	
4.65	4.65	NO						
L0001341		0	0.36232E-03	475772.1	3826176.1	901.6	5.00	
4.65	4.65	NO						
L0001342		0	0.36232E-03	475771.8	3826166.1	900.9	5.00	
4.65	4.65	NO						
L0001343		0	0.36232E-03	475771.4	3826156.1	902.1	5.00	
4.65	4.65	NO						
L0001344		0	0.36232E-03	475771.1	3826146.1	903.6	5.00	
4.65	4.65	NO						
L0001345		0	0.36232E-03	475770.8	3826136.1	903.9	5.00	
4.65	4.65	NO						
L0001346		0	0.36232E-03	475770.5	3826126.1	903.4	5.00	
4.65	4.65	NO						
L0001347		0	0.36232E-03	475770.2	3826116.1	902.7	5.00	
4.65	4.65	NO						
L0001348		0	0.36232E-03	475769.8	3826106.1	902.0	5.00	
4.65	4.65	NO						
L0001349		0	0.36232E-03	475769.5	3826096.1	901.4	5.00	
4.65	4.65	NO						
L0001350		0	0.36232E-03	475769.2	3826086.1	900.2	5.00	
4.65	4.65	NO						
L0001351		0	0.36232E-03	475768.9	3826076.1	899.9	5.00	
4.65	4.65	NO						
L0001352		0	0.36232E-03	475768.6	3826066.1	901.8	5.00	
4.65	4.65	NO						
L0001353		0	0.36232E-03	475768.2	3826056.1	902.2	5.00	
4.65	4.65	NO						
L0001354		0	0.36232E-03	475767.9	3826046.1	903.0	5.00	
4.65	4.65	NO						
L0001355		0	0.36232E-03	475767.6	3826036.2	903.9	5.00	
4.65	4.65	NO						
L0001356		0	0.36232E-03	475767.3	3826026.2	904.6	5.00	
4.65	4.65	NO						
L0001357		0	0.36232E-03	475767.0	3826016.2	905.3	5.00	
4.65	4.65	NO						
L0001358		0	0.36232E-03	475766.6	3826006.2	905.8	5.00	
4.65	4.65	NO						
L0001359		0	0.36232E-03	475766.3	3825996.2	906.0	5.00	
4.65	4.65	NO						
L0001360		0	0.36232E-03	475766.0	3825986.2	906.2	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001361	0	0.36232E-03	475765.7	3825976.2	906.4	5.00	4.65	4.65	NO
L0001362	0	0.36232E-03	475765.4	3825966.2	906.8	5.00	4.65	4.65	NO
L0001363	0	0.36232E-03	475765.0	3825956.2	907.4	5.00	4.65	4.65	NO
L0001364	0	0.36232E-03	475762.9	3825948.1	907.7	5.00	4.65	4.65	NO
L0001365	0	0.36232E-03	475752.9	3825948.1	907.4	5.00	4.65	4.65	NO
L0001366	0	0.36232E-03	475742.9	3825948.1	906.8	5.00	4.65	4.65	NO
L0001367	0	0.36232E-03	475732.9	3825948.1	906.2	5.00	4.65	4.65	NO
L0001368	0	0.36232E-03	475722.9	3825948.1	906.0	5.00	4.65	4.65	NO
L0001369	0	0.36232E-03	475712.9	3825948.1	905.8	5.00	4.65	4.65	NO
L0001370	0	0.36232E-03	475702.9	3825948.1	905.5	5.00	4.65	4.65	NO
L0001371	0	0.36232E-03	475692.9	3825948.1	905.9	5.00	4.65	4.65	NO
L0001372	0	0.36232E-03	475682.9	3825948.1	905.7	5.00	4.65	4.65	NO
L0001373	0	0.36232E-03	475672.9	3825948.1	905.5	5.00	4.65	4.65	NO
L0001374	0	0.36232E-03	475662.9	3825948.1	905.2	5.00	4.65	4.65	NO
L0001375	0	0.36232E-03	475652.9	3825948.1	904.5	5.00	4.65	4.65	NO
L0001376	0	0.36232E-03	475642.9	3825948.1	905.2	5.00	4.65	4.65	NO

L0001377		0	0.36232E-03	475632.9	3825948.1	905.5	5.00	
4.65	4.65	NO						
L0001378		0	0.36232E-03	475622.9	3825948.1	905.4	5.00	
4.65	4.65	NO						
L0001379		0	0.36232E-03	475612.9	3825948.1	905.2	5.00	
4.65	4.65	NO						
L0001380		0	0.36232E-03	475602.9	3825948.1	904.7	5.00	
4.65	4.65	NO						
L0001381		0	0.36232E-03	475592.9	3825948.1	904.0	5.00	
4.65	4.65	NO						
L0001382		0	0.36232E-03	475587.6	3825943.3	902.8	5.00	
4.65	4.65	NO						
L0001383		0	0.36232E-03	475587.3	3825933.3	902.6	5.00	
4.65	4.65	NO						
L0001384		0	0.36232E-03	475587.1	3825923.3	902.9	5.00	
4.65	4.65	NO						
L0001385		0	0.36232E-03	475586.9	3825913.3	903.6	5.00	
4.65	4.65	NO						
L0001386		0	0.36232E-03	475586.6	3825903.3	904.4	5.00	
4.65	4.65	NO						
L0001387		0	0.36232E-03	475586.4	3825893.3	904.5	5.00	
4.65	4.65	NO						
L0001388		0	0.36232E-03	475586.1	3825883.3	904.5	5.00	
4.65	4.65	NO						
L0001389		0	0.36232E-03	475585.9	3825873.3	904.7	5.00	
4.65	4.65	NO						
L0001390		0	0.36232E-03	475585.7	3825863.3	904.8	5.00	
4.65	4.65	NO						
L0001391		0	0.36232E-03	475585.4	3825853.3	905.0	5.00	
4.65	4.65	NO						
L0001392		0	0.36232E-03	475585.2	3825843.3	905.3	5.00	
4.65	4.65	NO						
L0001393		0	0.36232E-03	475585.0	3825833.3	905.6	5.00	
4.65	4.65	NO						
L0001394		0	0.36232E-03	475584.7	3825823.3	905.8	5.00	
4.65	4.65	NO						
L0001395		0	0.36232E-03	475584.5	3825813.3	906.0	5.00	
4.65	4.65	NO						
L0001396		0	0.36232E-03	475584.2	3825803.3	906.3	5.00	
4.65	4.65	NO						
L0001397		0	0.36232E-03	475584.0	3825793.3	906.6	5.00	
4.65	4.65	NO						
L0001398		0	0.36232E-03	475583.8	3825783.3	906.8	5.00	
4.65	4.65	NO						
L0001399		0	0.36232E-03	475583.5	3825773.3	907.1	5.00	
4.65	4.65	NO						
L0001400		0	0.36232E-03	475583.3	3825763.4	907.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001401	0	0.36232E-03	475583.0	3825753.4	907.8	5.00	4.65	4.65	NO
L0001402	0	0.36232E-03	475582.8	3825743.4	908.1	5.00	4.65	4.65	NO
L0001403	0	0.36232E-03	475582.6	3825733.4	908.2	5.00	4.65	4.65	NO
L0001404	0	0.36232E-03	475582.3	3825723.4	908.5	5.00	4.65	4.65	NO
L0001405	0	0.36232E-03	475582.1	3825713.4	908.8	5.00	4.65	4.65	NO
L0001406	0	0.36232E-03	475581.9	3825703.4	909.0	5.00	4.65	4.65	NO
L0001407	0	0.36232E-03	475575.0	3825700.2	908.8	5.00	4.65	4.65	NO
L0001408	0	0.36232E-03	475565.0	3825700.2	908.5	5.00	4.65	4.65	NO
L0001409	0	0.36232E-03	475555.0	3825700.2	908.3	5.00	4.65	4.65	NO
L0001410	0	0.36232E-03	475545.0	3825700.2	907.9	5.00	4.65	4.65	NO
L0001411	0	0.36232E-03	475535.0	3825700.2	907.5	5.00	4.65	4.65	NO
L0001412	0	0.36232E-03	475525.0	3825700.2	907.0	5.00	4.65	4.65	NO
L0001413	0	0.36232E-03	475515.0	3825700.2	906.5	5.00	4.65	4.65	NO
L0001414	0	0.36232E-03	475505.0	3825700.2	906.2	5.00	4.65	4.65	NO
L0001415	0	0.36232E-03	475495.0	3825700.2	905.8	5.00	4.65	4.65	NO
L0001416	0	0.36232E-03	475485.0	3825700.2	905.5	5.00	4.65	4.65	NO

L0001417		0	0.36232E-03	475475.0	3825700.2	905.2	5.00	
4.65	4.65	NO						
L0001418		0	0.36232E-03	475465.0	3825700.2	904.8	5.00	
4.65	4.65	NO						
L0001419		0	0.36232E-03	475455.0	3825700.2	904.5	5.00	
4.65	4.65	NO						
L0001420		0	0.36232E-03	475445.0	3825700.2	904.2	5.00	
4.65	4.65	NO						
L0001421		0	0.36232E-03	475435.0	3825700.2	903.8	5.00	
4.65	4.65	NO						
L0001422		0	0.36232E-03	475425.0	3825700.2	903.5	5.00	
4.65	4.65	NO						
L0001423		0	0.36232E-03	475415.0	3825700.2	903.1	5.00	
4.65	4.65	NO						
L0001424		0	0.36232E-03	475405.0	3825700.2	902.9	5.00	
4.65	4.65	NO						
L0001425		0	0.36232E-03	475395.0	3825700.2	902.6	5.00	
4.65	4.65	NO						
L0001426		0	0.36232E-03	475385.0	3825700.2	902.3	5.00	
4.65	4.65	NO						
L0001427		0	0.36232E-03	475375.0	3825700.2	902.0	5.00	
4.65	4.65	NO						
L0001428		0	0.36232E-03	475365.0	3825700.2	901.3	5.00	
4.65	4.65	NO						
L0001429		0	0.36232E-03	475355.0	3825700.2	900.8	5.00	
4.65	4.65	NO						
L0001430		0	0.36232E-03	475345.0	3825700.2	900.4	5.00	
4.65	4.65	NO						
L0001431		0	0.36232E-03	475335.0	3825700.2	899.8	5.00	
4.65	4.65	NO						
L0001432		0	0.36232E-03	475325.0	3825700.2	899.3	5.00	
4.65	4.65	NO						
L0001433		0	0.36232E-03	475315.0	3825700.2	899.0	5.00	
4.65	4.65	NO						
L0001434		0	0.36232E-03	475305.0	3825700.2	898.6	5.00	
4.65	4.65	NO						
L0001435		0	0.36232E-03	475295.0	3825700.2	898.1	5.00	
4.65	4.65	NO						
L0001436		0	0.36232E-03	475285.0	3825700.2	897.8	5.00	
4.65	4.65	NO						
L0001437		0	0.36232E-03	475275.0	3825700.2	897.5	5.00	
4.65	4.65	NO						
L0001438		0	0.36232E-03	475265.0	3825700.2	897.1	5.00	
4.65	4.65	NO						
L0001439		0	0.36232E-03	475255.0	3825700.2	896.6	5.00	
4.65	4.65	NO						
L0001440		0	0.36232E-03	475245.0	3825700.2	896.2	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001441	0	0.36232E-03	475235.0	3825700.2	895.9	5.00	4.65	4.65	NO
L0001442	0	0.36232E-03	475225.0	3825700.2	895.7	5.00	4.65	4.65	NO
L0001443	0	0.36232E-03	475215.0	3825700.2	895.5	5.00	4.65	4.65	NO
L0001444	0	0.36232E-03	475205.0	3825700.2	895.0	5.00	4.65	4.65	NO
L0001445	0	0.36232E-03	475195.0	3825700.2	894.5	5.00	4.65	4.65	NO
L0001446	0	0.36232E-03	475185.0	3825700.2	893.9	5.00	4.65	4.65	NO
L0001447	0	0.36232E-03	475175.0	3825700.2	893.3	5.00	4.65	4.65	NO
L0001448	0	0.36232E-03	475165.0	3825700.2	892.9	5.00	4.65	4.65	NO
L0001449	0	0.36232E-03	475155.0	3825700.2	892.6	5.00	4.65	4.65	NO
L0001450	0	0.36232E-03	475145.0	3825700.2	892.1	5.00	4.65	4.65	NO
L0001451	0	0.36232E-03	475135.0	3825700.2	891.8	5.00	4.65	4.65	NO
L0001452	0	0.36232E-03	475125.0	3825700.2	891.4	5.00	4.65	4.65	NO
L0001453	0	0.36232E-03	475115.0	3825700.2	890.9	5.00	4.65	4.65	NO
L0001454	0	0.36232E-03	475105.0	3825700.2	890.6	5.00	4.65	4.65	NO
L0001455	0	0.36232E-03	475095.0	3825700.2	890.0	5.00	4.65	4.65	NO
L0001456	0	0.36232E-03	475085.0	3825700.2	889.6	5.00	4.65	4.65	NO

L0001457		0	0.36232E-03	475075.0	3825700.2	889.2	5.00	
4.65	4.65	NO						
L0001458		0	0.36232E-03	475065.0	3825700.2	888.8	5.00	
4.65	4.65	NO						
L0001459		0	0.36232E-03	475055.0	3825700.2	888.7	5.00	
4.65	4.65	NO						
L0001460		0	0.36232E-03	475045.0	3825700.2	888.3	5.00	
4.65	4.65	NO						
L0001461		0	0.36232E-03	475035.0	3825700.2	887.8	5.00	
4.65	4.65	NO						
L0001462		0	0.36232E-03	475025.0	3825700.2	887.9	5.00	
4.65	4.65	NO						
L0001463		0	0.36232E-03	475015.0	3825700.2	887.7	5.00	
4.65	4.65	NO						
L0001464		0	0.36232E-03	475005.0	3825700.2	887.2	5.00	
4.65	4.65	NO						
L0001465		0	0.36232E-03	474995.0	3825700.2	887.2	5.00	
4.65	4.65	NO						
L0001466		0	0.36232E-03	474985.0	3825700.2	886.9	5.00	
4.65	4.65	NO						
L0001467		0	0.36232E-03	474975.0	3825700.2	886.4	5.00	
4.65	4.65	NO						
L0001468		0	0.36232E-03	474965.0	3825700.2	885.8	5.00	
4.65	4.65	NO						
L0001469		0	0.36232E-03	474955.0	3825700.2	885.2	5.00	
4.65	4.65	NO						
L0001470		0	0.36232E-03	474945.0	3825700.2	884.8	5.00	
4.65	4.65	NO						
L0001471		0	0.36232E-03	474935.0	3825700.2	884.6	5.00	
4.65	4.65	NO						
L0001472		0	0.36232E-03	474925.0	3825700.2	884.7	5.00	
4.65	4.65	NO						
L0001473		0	0.36232E-03	474915.0	3825700.2	884.3	5.00	
4.65	4.65	NO						
L0001474		0	0.36232E-03	474905.0	3825700.2	883.6	5.00	
4.65	4.65	NO						
L0001475		0	0.36232E-03	474898.2	3825701.7	883.2	5.00	
4.65	4.65	NO						
L0001476		0	0.36232E-03	474904.5	3825709.5	883.7	5.00	
4.65	4.65	NO						
L0001477		0	0.36232E-03	474910.8	3825717.3	883.6	5.00	
4.65	4.65	NO						
L0001478		0	0.36232E-03	474917.1	3825725.1	883.1	5.00	
4.65	4.65	NO						
L0001479		0	0.36232E-03	474923.3	3825732.9	883.2	5.00	
4.65	4.65	NO						
L0001480		0	0.36232E-03	474929.6	3825740.6	883.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001481	0	0.36232E-03	474935.9	3825748.4	884.0	5.00	4.65	4.65	NO
L0001482	0	0.36232E-03	474942.2	3825756.2	884.5	5.00	4.65	4.65	NO
L0001483	0	0.36232E-03	474948.4	3825764.0	883.7	5.00	4.65	4.65	NO
L0001484	0	0.36232E-03	474954.7	3825771.8	883.5	5.00	4.65	4.65	NO
L0001485	0	0.36232E-03	474961.0	3825779.6	883.6	5.00	4.65	4.65	NO
L0001486	0	0.36232E-03	474967.3	3825787.4	883.8	5.00	4.65	4.65	NO
L0001487	0	0.36232E-03	474973.5	3825795.1	883.8	5.00	4.65	4.65	NO
L0001488	0	0.36232E-03	474979.8	3825802.9	884.0	5.00	4.65	4.65	NO
L0001489	0	0.36232E-03	474986.1	3825810.7	884.4	5.00	4.65	4.65	NO
L0001490	0	0.36232E-03	474992.4	3825818.5	884.2	5.00	4.65	4.65	NO
L0001491	0	0.36232E-03	474998.6	3825826.3	884.5	5.00	4.65	4.65	NO
L0001492	0	0.36232E-03	475004.9	3825834.1	885.4	5.00	4.65	4.65	NO
L0001493	0	0.36232E-03	475011.2	3825841.9	886.0	5.00	4.65	4.65	NO
L0001494	0	0.36232E-03	475017.5	3825849.6	885.5	5.00	4.65	4.65	NO
L0001495	0	0.36232E-03	475023.7	3825857.4	886.3	5.00	4.65	4.65	NO
L0001496	0	0.36232E-03	475030.0	3825865.2	886.6	5.00	4.65	4.65	NO

L0001497		0	0.36232E-03	475036.3	3825873.0	886.3	5.00	
4.65	4.65	NO						
L0001498		0	0.36232E-03	475042.6	3825880.8	886.3	5.00	
4.65	4.65	NO						
L0001499		0	0.36232E-03	475048.8	3825888.6	887.0	5.00	
4.65	4.65	NO						
L0001500		0	0.36232E-03	475055.1	3825896.4	887.6	5.00	
4.65	4.65	NO						
L0001501		0	0.36232E-03	475061.4	3825904.2	887.2	5.00	
4.65	4.65	NO						
L0001502		0	0.36232E-03	475067.6	3825911.9	886.4	5.00	
4.65	4.65	NO						
L0001503		0	0.36232E-03	475073.9	3825919.7	886.0	5.00	
4.65	4.65	NO						
L0001504		0	0.36232E-03	475080.2	3825927.5	885.9	5.00	
4.65	4.65	NO						
L0001505		0	0.36232E-03	475086.5	3825935.3	886.1	5.00	
4.65	4.65	NO						
L0001506		0	0.36232E-03	475092.8	3825943.1	886.7	5.00	
4.65	4.65	NO						
L0001507		0	0.36232E-03	475099.0	3825950.9	886.1	5.00	
4.65	4.65	NO						
L0001508		0	0.36232E-03	475105.3	3825958.7	886.2	5.00	
4.65	4.65	NO						
L0001509		0	0.36232E-03	475111.6	3825966.4	886.3	5.00	
4.65	4.65	NO						
L0001510		0	0.36232E-03	475117.8	3825974.2	886.4	5.00	
4.65	4.65	NO						
L0001511		0	0.36232E-03	475124.1	3825982.0	886.8	5.00	
4.65	4.65	NO						
L0001512		0	0.36232E-03	475130.4	3825989.8	886.9	5.00	
4.65	4.65	NO						
L0001513		0	0.36232E-03	475136.7	3825997.6	886.9	5.00	
4.65	4.65	NO						
L0001514		0	0.36232E-03	475142.9	3826005.4	886.8	5.00	
4.65	4.65	NO						
L0001515		0	0.36232E-03	475149.2	3826013.2	886.8	5.00	
4.65	4.65	NO						
L0001516		0	0.36232E-03	475155.5	3826020.9	887.4	5.00	
4.65	4.65	NO						
L0001517		0	0.36232E-03	475161.8	3826028.7	887.8	5.00	
4.65	4.65	NO						
L0001518		0	0.36232E-03	475168.6	3826035.9	887.7	5.00	
4.65	4.65	NO						
L0001519		0	0.36232E-03	475177.1	3826041.1	888.2	5.00	
4.65	4.65	NO						
L0001520		0	0.36232E-03	475185.6	3826046.3	888.7	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001521	0	0.36232E-03	475194.2	3826051.6	889.6	5.00	4.65	4.65	NO
L0001522	0	0.36232E-03	475202.7	3826056.8	890.3	5.00	4.65	4.65	NO
L0001523	0	0.36232E-03	475211.2	3826062.0	890.4	5.00	4.65	4.65	NO
L0001524	0	0.36232E-03	475219.8	3826067.2	889.6	5.00	4.65	4.65	NO
L0001525	0	0.36232E-03	475228.3	3826072.4	888.7	5.00	4.65	4.65	NO
L0001526	0	0.36232E-03	475236.8	3826077.6	888.9	5.00	4.65	4.65	NO
L0001527	0	0.36232E-03	475245.4	3826082.8	889.0	5.00	4.65	4.65	NO
L0001528	0	0.36232E-03	475253.9	3826088.1	888.0	5.00	4.65	4.65	NO
L0001529	0	0.36232E-03	475262.4	3826093.3	887.2	5.00	4.65	4.65	NO
L0001530	0	0.36232E-03	475271.0	3826098.5	886.8	5.00	4.65	4.65	NO
L0001531	0	0.36232E-03	475279.5	3826103.7	886.9	5.00	4.65	4.65	NO
L0001532	0	0.36232E-03	475288.0	3826108.9	887.2	5.00	4.65	4.65	NO
L0001533	0	0.36232E-03	475296.6	3826114.1	888.1	5.00	4.65	4.65	NO
L0001534	0	0.36232E-03	475305.1	3826119.3	889.5	5.00	4.65	4.65	NO
L0001535	0	0.36232E-03	475313.6	3826124.6	890.4	5.00	4.65	4.65	NO
L0001536	0	0.36232E-03	475322.2	3826129.8	890.3	5.00	4.65	4.65	NO

L0001537		0	0.36232E-03	475330.7	3826135.0	889.9	5.00	
4.65	4.65	NO						
L0001538		0	0.36232E-03	475339.2	3826140.2	891.1	5.00	
4.65	4.65	NO						
L0001539		0	0.36232E-03	475345.2	3826147.5	893.1	5.00	
4.65	4.65	NO						
L0001540		0	0.36232E-03	475348.4	3826156.9	892.5	5.00	
4.65	4.65	NO						
L0001541		0	0.36232E-03	475351.6	3826166.4	892.3	5.00	
4.65	4.65	NO						
L0001542		0	0.36232E-03	475354.8	3826175.9	891.5	5.00	
4.65	4.65	NO						
L0001543		0	0.36232E-03	475358.0	3826185.3	890.3	5.00	
4.65	4.65	NO						
L0001544		0	0.36232E-03	475361.2	3826194.8	889.2	5.00	
4.65	4.65	NO						
L0001545		0	0.36232E-03	475364.4	3826204.3	886.5	5.00	
4.65	4.65	NO						
L0001546		0	0.36232E-03	475367.7	3826213.8	885.3	5.00	
4.65	4.65	NO						
L0001547		0	0.36232E-03	475370.9	3826223.2	885.2	5.00	
4.65	4.65	NO						
L0001548		0	0.36232E-03	475374.1	3826232.7	884.9	5.00	
4.65	4.65	NO						
L0001549		0	0.36232E-03	475377.3	3826242.2	884.5	5.00	
4.65	4.65	NO						
L0001550		0	0.36232E-03	475380.5	3826251.7	884.9	5.00	
4.65	4.65	NO						
L0001551		0	0.36232E-03	475383.7	3826261.1	885.3	5.00	
4.65	4.65	NO						
L0001552		0	0.36232E-03	475386.9	3826270.6	885.3	5.00	
4.65	4.65	NO						
L0001553		0	0.36232E-03	475396.7	3826270.6	885.9	5.00	
4.65	4.65	NO						
L0001554		0	0.36232E-03	475406.7	3826270.4	886.3	5.00	
4.65	4.65	NO						
L0001555		0	0.36232E-03	475416.7	3826270.2	887.2	5.00	
4.65	4.65	NO						
L0001556		0	0.36232E-03	475426.7	3826270.0	888.2	5.00	
4.65	4.65	NO						
L0001557		0	0.36232E-03	475436.7	3826269.8	889.6	5.00	
4.65	4.65	NO						
L0001558		0	0.36232E-03	475446.7	3826269.6	890.6	5.00	
4.65	4.65	NO						
L0001559		0	0.36232E-03	475456.7	3826269.4	891.1	5.00	
4.65	4.65	NO						
L0001560		0	0.36232E-03	475466.7	3826269.2	891.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001561	0	0.36232E-03	475476.7	3826269.0	892.0	5.00	4.65	4.65	NO
L0001562	0	0.36232E-03	475486.7	3826268.8	892.2	5.00	4.65	4.65	NO
L0001563	0	0.36232E-03	475496.7	3826268.7	891.8	5.00	4.65	4.65	NO
L0001564	0	0.36232E-03	475506.7	3826268.5	892.0	5.00	4.65	4.65	NO
L0001565	0	0.36232E-03	475516.7	3826268.3	892.1	5.00	4.65	4.65	NO
L0001566	0	0.36232E-03	475526.7	3826268.1	891.9	5.00	4.65	4.65	NO
L0001567	0	0.36232E-03	475536.7	3826267.9	891.3	5.00	4.65	4.65	NO
L0001568	0	0.36232E-03	475546.7	3826267.7	891.0	5.00	4.65	4.65	NO
L0001569	0	0.36232E-03	475556.7	3826267.5	891.2	5.00	4.65	4.65	NO
L0001570	0	0.36232E-03	475566.7	3826267.3	891.9	5.00	4.65	4.65	NO
L0001571	0	0.36232E-03	475576.7	3826267.1	892.8	5.00	4.65	4.65	NO
L0001572	0	0.36232E-03	475586.7	3826266.9	893.5	5.00	4.65	4.65	NO
L0001573	0	0.36232E-03	475596.7	3826266.7	893.8	5.00	4.65	4.65	NO
L0001574	0	0.36232E-03	475606.7	3826266.5	894.1	5.00	4.65	4.65	NO
L0001575	0	0.36232E-03	475616.7	3826266.3	894.6	5.00	4.65	4.65	NO
L0001576	0	0.36232E-03	475626.7	3826266.1	895.1	5.00	4.65	4.65	NO

L0001577		0	0.36232E-03	475636.7	3826265.9	895.4	5.00	
4.65	4.65	NO						
L0001578		0	0.36232E-03	475646.7	3826265.7	896.1	5.00	
4.65	4.65	NO						
L0001579		0	0.36232E-03	475656.7	3826265.5	897.0	5.00	
4.65	4.65	NO						
L0001580		0	0.36232E-03	475666.7	3826265.3	897.6	5.00	
4.65	4.65	NO						
L0001581		0	0.36232E-03	475676.7	3826265.1	898.3	5.00	
4.65	4.65	NO						
L0001582		0	0.36232E-03	475686.7	3826264.9	899.2	5.00	
4.65	4.65	NO						
L0001583		0	0.36232E-03	475696.7	3826264.7	899.8	5.00	
4.65	4.65	NO						
L0001584		0	0.36232E-03	475706.7	3826264.5	900.5	5.00	
4.65	4.65	NO						
L0001585		0	0.36232E-03	475716.7	3826264.3	901.0	5.00	
4.65	4.65	NO						
L0001586		0	0.36232E-03	475726.7	3826264.1	901.4	5.00	
4.65	4.65	NO						
L0001587		0	0.36232E-03	475734.2	3826261.6	901.7	5.00	
4.65	4.65	NO						
L0001588		0	0.36232E-03	475733.9	3826251.6	901.5	5.00	
4.65	4.65	NO						
L0001589		0	0.36232E-03	475733.6	3826241.6	901.6	5.00	
4.65	4.65	NO						
L0001590		0	0.36232E-03	475733.3	3826231.6	902.0	5.00	
4.65	4.65	NO						
L0001591		0	0.36232E-03	475732.9	3826221.6	902.2	5.00	
4.65	4.65	NO						
L0001592		0	0.36232E-03	475732.6	3826211.6	902.0	5.00	
4.65	4.65	NO						
L0001593		0	0.36232E-03	475732.3	3826201.6	900.7	5.00	
4.65	4.65	NO						
L0001594		0	0.36232E-03	475732.0	3826191.6	899.6	5.00	
4.65	4.65	NO						
L0001595		0	0.36232E-03	475731.7	3826181.6	899.8	5.00	
4.65	4.65	NO						
L0001596		0	0.36232E-03	475731.4	3826171.6	900.8	5.00	
4.65	4.65	NO						
L0001597		0	0.36232E-03	475731.0	3826161.6	901.7	5.00	
4.65	4.65	NO						
L0001598		0	0.36232E-03	475730.7	3826151.6	901.9	5.00	
4.65	4.65	NO						
L0001599		0	0.36232E-03	475730.4	3826141.6	901.2	5.00	
4.65	4.65	NO						
L0001600		0	0.36232E-03	475730.1	3826131.6	900.1	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001601	0	0.36232E-03	475729.8	3826121.6	899.7	5.00	4.65	4.65	NO
L0001602	0	0.36232E-03	475729.5	3826111.6	899.2	5.00	4.65	4.65	NO
L0001603	0	0.36232E-03	475729.1	3826101.7	898.6	5.00	4.65	4.65	NO
L0001604	0	0.36232E-03	475728.8	3826091.7	900.0	5.00	4.65	4.65	NO
L0001605	0	0.36232E-03	475728.5	3826081.7	901.5	5.00	4.65	4.65	NO
L0001606	0	0.36232E-03	475728.2	3826071.7	902.4	5.00	4.65	4.65	NO
L0001607	0	0.36232E-03	475727.9	3826061.7	902.8	5.00	4.65	4.65	NO
L0001608	0	0.36232E-03	475727.6	3826051.7	903.0	5.00	4.65	4.65	NO
L0001609	0	0.36232E-03	475727.2	3826041.7	903.3	5.00	4.65	4.65	NO
L0001610	0	0.36232E-03	475726.9	3826031.7	903.5	5.00	4.65	4.65	NO
L0001611	0	0.36232E-03	475726.6	3826021.7	903.4	5.00	4.65	4.65	NO
L0001612	0	0.36232E-03	475726.3	3826011.7	903.4	5.00	4.65	4.65	NO
L0001613	0	0.36232E-03	475726.0	3826001.7	904.1	5.00	4.65	4.65	NO
L0001614	0	0.36232E-03	475725.7	3825991.7	904.8	5.00	4.65	4.65	NO
L0001615	0	0.36232E-03	475722.6	3825984.5	904.9	5.00	4.65	4.65	NO
L0001616	0	0.36232E-03	475712.6	3825984.4	904.0	5.00	4.65	4.65	NO

L0001617		0	0.36232E-03	475702.6	3825984.4	902.7	5.00	
4.65	4.65	NO						
L0001618		0	0.36232E-03	475692.6	3825984.3	902.7	5.00	
4.65	4.65	NO						
L0001619		0	0.36232E-03	475682.6	3825984.3	903.4	5.00	
4.65	4.65	NO						
L0001620		0	0.36232E-03	475672.6	3825984.2	903.8	5.00	
4.65	4.65	NO						
L0001621		0	0.36232E-03	475662.6	3825984.1	904.1	5.00	
4.65	4.65	NO						
L0001622		0	0.36232E-03	475652.6	3825984.1	903.6	5.00	
4.65	4.65	NO						
L0001623		0	0.36232E-03	475642.6	3825984.0	902.3	5.00	
4.65	4.65	NO						
L0001624		0	0.36232E-03	475632.6	3825984.0	901.4	5.00	
4.65	4.65	NO						
L0001625		0	0.36232E-03	475622.6	3825983.9	902.6	5.00	
4.65	4.65	NO						
L0001626		0	0.36232E-03	475612.6	3825983.9	903.3	5.00	
4.65	4.65	NO						
L0001627		0	0.36232E-03	475602.6	3825983.8	903.5	5.00	
4.65	4.65	NO						
L0001628		0	0.36232E-03	475592.6	3825983.7	903.1	5.00	
4.65	4.65	NO						
L0001629		0	0.36232E-03	475582.6	3825983.7	902.9	5.00	
4.65	4.65	NO						
L0001630		0	0.36232E-03	475572.6	3825983.6	902.2	5.00	
4.65	4.65	NO						
L0001631		0	0.36232E-03	475562.6	3825983.6	901.6	5.00	
4.65	4.65	NO						
L0001632		0	0.36232E-03	475554.2	3825981.9	902.3	5.00	
4.65	4.65	NO						
L0001633		0	0.36232E-03	475554.0	3825971.9	901.8	5.00	
4.65	4.65	NO						
L0001634		0	0.36232E-03	475553.8	3825961.9	900.8	5.00	
4.65	4.65	NO						
L0001635		0	0.36232E-03	475553.6	3825951.9	901.0	5.00	
4.65	4.65	NO						
L0001636		0	0.36232E-03	475553.4	3825941.9	902.1	5.00	
4.65	4.65	NO						
L0001637		0	0.36232E-03	475553.2	3825931.9	902.6	5.00	
4.65	4.65	NO						
L0001638		0	0.36232E-03	475553.0	3825921.9	903.1	5.00	
4.65	4.65	NO						
L0001639		0	0.36232E-03	475552.8	3825911.9	903.2	5.00	
4.65	4.65	NO						
L0001640		0	0.36232E-03	475552.6	3825901.9	903.4	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001641	0	0.36232E-03	475552.4	3825891.9	903.3	5.00	4.65	4.65	NO
L0001642	0	0.36232E-03	475552.2	3825881.9	903.1	5.00	4.65	4.65	NO
L0001643	0	0.36232E-03	475552.0	3825871.9	903.5	5.00	4.65	4.65	NO
L0001644	0	0.36232E-03	475551.8	3825862.0	903.9	5.00	4.65	4.65	NO
L0001645	0	0.36232E-03	475551.7	3825852.0	904.1	5.00	4.65	4.65	NO
L0001646	0	0.36232E-03	475551.5	3825842.0	904.2	5.00	4.65	4.65	NO
L0001647	0	0.36232E-03	475551.3	3825832.0	904.3	5.00	4.65	4.65	NO
L0001648	0	0.36232E-03	475551.1	3825822.0	904.7	5.00	4.65	4.65	NO
L0001649	0	0.36232E-03	475550.9	3825812.0	904.9	5.00	4.65	4.65	NO
L0001650	0	0.36232E-03	475550.7	3825802.0	905.1	5.00	4.65	4.65	NO
L0001651	0	0.36232E-03	475550.5	3825792.0	905.5	5.00	4.65	4.65	NO
L0001652	0	0.36232E-03	475550.3	3825782.0	905.8	5.00	4.65	4.65	NO
L0001653	0	0.36232E-03	475550.1	3825772.0	906.0	5.00	4.65	4.65	NO
L0001654	0	0.36232E-03	475549.9	3825762.0	906.2	5.00	4.65	4.65	NO
L0001655	0	0.36232E-03	475549.7	3825752.0	906.5	5.00	4.65	4.65	NO
L0001656	0	0.36232E-03	475549.5	3825742.0	906.7	5.00	4.65	4.65	NO

L0001657		0	0.36232E-03	475548.7	3825732.6	906.9	5.00	
4.65	4.65	NO						
L0001658		0	0.36232E-03	475538.7	3825732.5	906.6	5.00	
4.65	4.65	NO						
L0001659		0	0.36232E-03	475528.7	3825732.5	906.3	5.00	
4.65	4.65	NO						
L0001660		0	0.36232E-03	475518.7	3825732.4	905.9	5.00	
4.65	4.65	NO						
L0001661		0	0.36232E-03	475508.7	3825732.3	905.5	5.00	
4.65	4.65	NO						
L0001662		0	0.36232E-03	475498.7	3825732.2	905.1	5.00	
4.65	4.65	NO						
L0001663		0	0.36232E-03	475488.7	3825732.1	904.8	5.00	
4.65	4.65	NO						
L0001664		0	0.36232E-03	475478.7	3825732.0	904.4	5.00	
4.65	4.65	NO						
L0001665		0	0.36232E-03	475468.7	3825732.0	904.0	5.00	
4.65	4.65	NO						
L0001666		0	0.36232E-03	475458.7	3825731.9	903.7	5.00	
4.65	4.65	NO						
L0001667		0	0.36232E-03	475448.7	3825731.8	903.3	5.00	
4.65	4.65	NO						
L0001668		0	0.36232E-03	475438.7	3825731.7	902.9	5.00	
4.65	4.65	NO						
L0001669		0	0.36232E-03	475428.7	3825731.6	902.6	5.00	
4.65	4.65	NO						
L0001670		0	0.36232E-03	475418.7	3825731.5	902.4	5.00	
4.65	4.65	NO						
L0001671		0	0.36232E-03	475408.7	3825731.5	902.1	5.00	
4.65	4.65	NO						
L0001672		0	0.36232E-03	475398.7	3825731.4	901.8	5.00	
4.65	4.65	NO						
L0001673		0	0.36232E-03	475388.7	3825731.3	901.4	5.00	
4.65	4.65	NO						
L0001674		0	0.36232E-03	475378.7	3825731.2	901.1	5.00	
4.65	4.65	NO						
L0001675		0	0.36232E-03	475368.7	3825731.1	900.9	5.00	
4.65	4.65	NO						
L0001676		0	0.36232E-03	475358.7	3825731.1	900.5	5.00	
4.65	4.65	NO						
L0001677		0	0.36232E-03	475348.7	3825731.0	900.1	5.00	
4.65	4.65	NO						
L0001678		0	0.36232E-03	475338.7	3825730.9	899.7	5.00	
4.65	4.65	NO						
L0001679		0	0.36232E-03	475328.7	3825730.8	899.4	5.00	
4.65	4.65	NO						
L0001680		0	0.36232E-03	475318.7	3825730.7	899.2	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001681	0	0.36232E-03	475308.7	3825730.6	898.9	5.00	4.65	4.65	NO
L0001682	0	0.36232E-03	475298.7	3825730.6	898.3	5.00	4.65	4.65	NO
L0001683	0	0.36232E-03	475288.7	3825730.5	898.3	5.00	4.65	4.65	NO
L0001684	0	0.36232E-03	475278.7	3825730.4	898.1	5.00	4.65	4.65	NO
L0001685	0	0.36232E-03	475268.7	3825730.3	897.8	5.00	4.65	4.65	NO
L0001686	0	0.36232E-03	475258.7	3825730.2	897.2	5.00	4.65	4.65	NO
L0001687	0	0.36232E-03	475248.7	3825730.1	896.6	5.00	4.65	4.65	NO
L0001688	0	0.36232E-03	475238.7	3825730.1	895.9	5.00	4.65	4.65	NO
L0001689	0	0.36232E-03	475228.7	3825730.0	895.4	5.00	4.65	4.65	NO
L0001690	0	0.36232E-03	475218.7	3825729.9	894.9	5.00	4.65	4.65	NO
L0001691	0	0.36232E-03	475208.7	3825729.8	894.4	5.00	4.65	4.65	NO
L0001692	0	0.36232E-03	475198.7	3825729.7	893.9	5.00	4.65	4.65	NO
L0001693	0	0.36232E-03	475188.7	3825729.6	893.4	5.00	4.65	4.65	NO
L0001694	0	0.36232E-03	475178.7	3825729.6	893.0	5.00	4.65	4.65	NO
L0001695	0	0.36232E-03	475168.7	3825729.5	892.7	5.00	4.65	4.65	NO
L0001696	0	0.36232E-03	475158.7	3825729.4	892.5	5.00	4.65	4.65	NO

L0001697		0	0.36232E-03	475148.7	3825729.3	892.0	5.00	
4.65	4.65	NO						
L0001698		0	0.36232E-03	475138.7	3825729.2	891.3	5.00	
4.65	4.65	NO						
L0001699		0	0.36232E-03	475128.7	3825729.2	890.8	5.00	
4.65	4.65	NO						
L0001700		0	0.36232E-03	475118.7	3825729.1	890.4	5.00	
4.65	4.65	NO						
L0001701		0	0.36232E-03	475108.7	3825729.0	890.3	5.00	
4.65	4.65	NO						
L0001702		0	0.36232E-03	475098.7	3825728.9	890.3	5.00	
4.65	4.65	NO						
L0001703		0	0.36232E-03	475088.7	3825728.8	889.8	5.00	
4.65	4.65	NO						
L0001704		0	0.36232E-03	475078.7	3825728.7	889.1	5.00	
4.65	4.65	NO						
L0001705		0	0.36232E-03	475068.7	3825728.7	888.6	5.00	
4.65	4.65	NO						
L0001706		0	0.36232E-03	475058.7	3825728.6	888.1	5.00	
4.65	4.65	NO						
L0001707		0	0.36232E-03	475048.7	3825728.5	887.6	5.00	
4.65	4.65	NO						
L0001708		0	0.36232E-03	475038.7	3825728.4	887.2	5.00	
4.65	4.65	NO						
L0001709		0	0.36232E-03	475028.7	3825728.3	886.8	5.00	
4.65	4.65	NO						
L0001710		0	0.36232E-03	475018.7	3825728.2	886.4	5.00	
4.65	4.65	NO						
L0001711		0	0.36232E-03	475008.7	3825728.2	886.4	5.00	
4.65	4.65	NO						
L0001712		0	0.36232E-03	474998.7	3825728.1	886.3	5.00	
4.65	4.65	NO						
L0001713		0	0.36232E-03	474988.7	3825728.0	886.1	5.00	
4.65	4.65	NO						
L0001714		0	0.36232E-03	474978.7	3825727.9	885.6	5.00	
4.65	4.65	NO						
L0001715		0	0.36232E-03	474968.7	3825727.8	885.2	5.00	
4.65	4.65	NO						
L0001716		0	0.36232E-03	474958.7	3825727.7	884.6	5.00	
4.65	4.65	NO						
L0001717		0	0.36232E-03	474957.4	3825731.9	884.8	5.00	
4.65	4.65	NO						
L0001718		0	0.36232E-03	474963.6	3825739.7	885.3	5.00	
4.65	4.65	NO						
L0001719		0	0.36232E-03	474969.9	3825747.5	884.6	5.00	
4.65	4.65	NO						
L0001720		0	0.36232E-03	474976.1	3825755.3	884.5	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001721	0	0.36232E-03	474982.4	3825763.1	884.7	5.00	4.65	4.65	NO
L0001722	0	0.36232E-03	474988.6	3825770.9	885.2	5.00	4.65	4.65	NO
L0001723	0	0.36232E-03	474994.9	3825778.8	885.1	5.00	4.65	4.65	NO
L0001724	0	0.36232E-03	475001.1	3825786.6	884.9	5.00	4.65	4.65	NO
L0001725	0	0.36232E-03	475007.4	3825794.4	885.5	5.00	4.65	4.65	NO
L0001726	0	0.36232E-03	475013.6	3825802.2	885.8	5.00	4.65	4.65	NO
L0001727	0	0.36232E-03	475019.9	3825810.0	885.6	5.00	4.65	4.65	NO
L0001728	0	0.36232E-03	475026.1	3825817.8	885.6	5.00	4.65	4.65	NO
L0001729	0	0.36232E-03	475032.4	3825825.6	886.4	5.00	4.65	4.65	NO
L0001730	0	0.36232E-03	475038.6	3825833.4	886.9	5.00	4.65	4.65	NO
L0001731	0	0.36232E-03	475044.9	3825841.2	887.6	5.00	4.65	4.65	NO
L0001732	0	0.36232E-03	475051.1	3825849.0	887.9	5.00	4.65	4.65	NO
L0001733	0	0.36232E-03	475057.4	3825856.8	887.9	5.00	4.65	4.65	NO
L0001734	0	0.36232E-03	475063.6	3825864.6	887.7	5.00	4.65	4.65	NO
L0001735	0	0.36232E-03	475069.8	3825872.5	887.9	5.00	4.65	4.65	NO
L0001736	0	0.36232E-03	475076.1	3825880.3	888.5	5.00	4.65	4.65	NO

L0001737		0	0.36232E-03	475082.3	3825888.1	888.0	5.00	
4.65	4.65	NO						
L0001738		0	0.36232E-03	475088.6	3825895.9	887.8	5.00	
4.65	4.65	NO						
L0001739		0	0.36232E-03	475094.8	3825903.7	887.2	5.00	
4.65	4.65	NO						
L0001740		0	0.36232E-03	475101.1	3825911.5	887.1	5.00	
4.65	4.65	NO						
L0001741		0	0.36232E-03	475107.3	3825919.3	887.1	5.00	
4.65	4.65	NO						
L0001742		0	0.36232E-03	475113.6	3825927.1	887.7	5.00	
4.65	4.65	NO						
L0001743		0	0.36232E-03	475119.8	3825934.9	888.2	5.00	
4.65	4.65	NO						
L0001744		0	0.36232E-03	475126.1	3825942.7	887.6	5.00	
4.65	4.65	NO						
L0001745		0	0.36232E-03	475132.3	3825950.5	887.3	5.00	
4.65	4.65	NO						
L0001746		0	0.36232E-03	475138.6	3825958.4	887.5	5.00	
4.65	4.65	NO						
L0001747		0	0.36232E-03	475144.8	3825966.2	887.8	5.00	
4.65	4.65	NO						
L0001748		0	0.36232E-03	475151.1	3825974.0	888.1	5.00	
4.65	4.65	NO						
L0001749		0	0.36232E-03	475157.3	3825981.8	887.8	5.00	
4.65	4.65	NO						
L0001750		0	0.36232E-03	475163.5	3825989.6	887.8	5.00	
4.65	4.65	NO						
L0001751		0	0.36232E-03	475169.8	3825997.4	887.8	5.00	
4.65	4.65	NO						
L0001752		0	0.36232E-03	475176.6	3826004.5	887.9	5.00	
4.65	4.65	NO						
L0001753		0	0.36232E-03	475185.2	3826009.7	888.7	5.00	
4.65	4.65	NO						
L0001754		0	0.36232E-03	475193.8	3826014.8	889.4	5.00	
4.65	4.65	NO						
L0001755		0	0.36232E-03	475202.4	3826020.0	890.1	5.00	
4.65	4.65	NO						
L0001756		0	0.36232E-03	475210.9	3826025.1	890.6	5.00	
4.65	4.65	NO						
L0001757		0	0.36232E-03	475219.5	3826030.3	891.1	5.00	
4.65	4.65	NO						
L0001758		0	0.36232E-03	475228.1	3826035.4	891.4	5.00	
4.65	4.65	NO						
L0001759		0	0.36232E-03	475236.6	3826040.6	891.7	5.00	
4.65	4.65	NO						
L0001760		0	0.36232E-03	475245.2	3826045.7	891.4	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001761	0	0.36232E-03	475253.8	3826050.9	890.5	5.00	4.65	4.65	NO
L0001762	0	0.36232E-03	475262.3	3826056.0	889.5	5.00	4.65	4.65	NO
L0001763	0	0.36232E-03	475270.9	3826061.2	889.7	5.00	4.65	4.65	NO
L0001764	0	0.36232E-03	475279.5	3826066.3	889.9	5.00	4.65	4.65	NO
L0001765	0	0.36232E-03	475288.1	3826071.5	888.7	5.00	4.65	4.65	NO
L0001766	0	0.36232E-03	475296.6	3826076.7	888.1	5.00	4.65	4.65	NO
L0001767	0	0.36232E-03	475305.2	3826081.8	889.1	5.00	4.65	4.65	NO
L0001768	0	0.36232E-03	475313.8	3826087.0	889.5	5.00	4.65	4.65	NO
L0001769	0	0.36232E-03	475322.3	3826092.1	889.5	5.00	4.65	4.65	NO
L0001770	0	0.36232E-03	475330.9	3826097.3	890.6	5.00	4.65	4.65	NO
L0001771	0	0.36232E-03	475339.5	3826102.4	892.1	5.00	4.65	4.65	NO
L0001772	0	0.36232E-03	475348.1	3826107.6	892.6	5.00	4.65	4.65	NO
L0001773	0	0.36232E-03	475352.5	3826116.2	891.2	5.00	4.65	4.65	NO
L0001774	0	0.36232E-03	475356.0	3826125.5	890.6	5.00	4.65	4.65	NO
L0001775	0	0.36232E-03	475359.5	3826134.9	891.9	5.00	4.65	4.65	NO
L0001776	0	0.36232E-03	475363.0	3826144.3	893.2	5.00	4.65	4.65	NO

L0001777		0	0.36232E-03	475366.5	3826153.6	892.9	5.00	
4.65	4.65	NO						
L0001778		0	0.36232E-03	475370.0	3826163.0	892.0	5.00	
4.65	4.65	NO						
L0001779		0	0.36232E-03	475373.5	3826172.4	891.2	5.00	
4.65	4.65	NO						
L0001780		0	0.36232E-03	475377.0	3826181.7	890.6	5.00	
4.65	4.65	NO						
L0001781		0	0.36232E-03	475380.5	3826191.1	888.1	5.00	
4.65	4.65	NO						
L0001782		0	0.36232E-03	475384.0	3826200.5	886.3	5.00	
4.65	4.65	NO						
L0001783		0	0.36232E-03	475387.5	3826209.8	885.9	5.00	
4.65	4.65	NO						
L0001784		0	0.36232E-03	475391.0	3826219.2	885.3	5.00	
4.65	4.65	NO						
L0001785		0	0.36232E-03	475394.5	3826228.6	885.7	5.00	
4.65	4.65	NO						
L0001786		0	0.36232E-03	475398.0	3826237.9	886.5	5.00	
4.65	4.65	NO						
L0001787		0	0.36232E-03	475402.9	3826245.2	887.6	5.00	
4.65	4.65	NO						
L0001788		0	0.36232E-03	475412.9	3826245.1	889.0	5.00	
4.65	4.65	NO						
L0001789		0	0.36232E-03	475422.9	3826245.0	889.2	5.00	
4.65	4.65	NO						
L0001790		0	0.36232E-03	475432.9	3826244.9	888.9	5.00	
4.65	4.65	NO						
L0001791		0	0.36232E-03	475442.9	3826244.8	888.9	5.00	
4.65	4.65	NO						
L0001792		0	0.36232E-03	475452.9	3826244.7	889.9	5.00	
4.65	4.65	NO						
L0001793		0	0.36232E-03	475462.9	3826244.6	891.3	5.00	
4.65	4.65	NO						
L0001794		0	0.36232E-03	475472.9	3826244.5	891.9	5.00	
4.65	4.65	NO						
L0001795		0	0.36232E-03	475482.9	3826244.4	892.3	5.00	
4.65	4.65	NO						
L0001796		0	0.36232E-03	475492.9	3826244.3	892.9	5.00	
4.65	4.65	NO						
L0001797		0	0.36232E-03	475502.9	3826244.2	893.4	5.00	
4.65	4.65	NO						
L0001798		0	0.36232E-03	475512.9	3826244.1	893.7	5.00	
4.65	4.65	NO						
L0001799		0	0.36232E-03	475522.9	3826244.0	893.9	5.00	
4.65	4.65	NO						
L0001800		0	0.36232E-03	475532.9	3826243.9	893.9	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001801	0	0.36232E-03	475542.9	3826243.8	893.5	5.00	4.65	4.65	NO
L0001802	0	0.36232E-03	475552.9	3826243.7	892.9	5.00	4.65	4.65	NO
L0001803	0	0.36232E-03	475562.9	3826243.7	892.5	5.00	4.65	4.65	NO
L0001804	0	0.36232E-03	475572.9	3826243.6	892.8	5.00	4.65	4.65	NO
L0001805	0	0.36232E-03	475582.9	3826243.5	893.6	5.00	4.65	4.65	NO
L0001806	0	0.36232E-03	475592.9	3826243.4	894.8	5.00	4.65	4.65	NO
L0001807	0	0.36232E-03	475602.9	3826243.3	895.7	5.00	4.65	4.65	NO
L0001808	0	0.36232E-03	475612.9	3826243.2	896.1	5.00	4.65	4.65	NO
L0001809	0	0.36232E-03	475622.9	3826243.1	896.8	5.00	4.65	4.65	NO
L0001810	0	0.36232E-03	475632.9	3826243.0	897.4	5.00	4.65	4.65	NO
L0001811	0	0.36232E-03	475642.9	3826242.9	898.0	5.00	4.65	4.65	NO
L0001812	0	0.36232E-03	475652.9	3826242.8	898.5	5.00	4.65	4.65	NO
L0001813	0	0.36232E-03	475662.9	3826242.7	899.0	5.00	4.65	4.65	NO
L0001814	0	0.36232E-03	475672.9	3826242.6	899.4	5.00	4.65	4.65	NO
L0001815	0	0.36232E-03	475682.9	3826242.5	899.5	5.00	4.65	4.65	NO
L0001816	0	0.36232E-03	475692.9	3826242.4	899.8	5.00	4.65	4.65	NO

L0001817		0	0.36232E-03	475700.7	3826240.2	900.3	5.00	
4.65	4.65	NO						
L0001818		0	0.36232E-03	475700.0	3826230.2	901.0	5.00	
4.65	4.65	NO						
L0001819		0	0.36232E-03	475699.4	3826220.2	900.9	5.00	
4.65	4.65	NO						
L0001820		0	0.36232E-03	475698.7	3826210.3	900.3	5.00	
4.65	4.65	NO						
L0001821		0	0.36232E-03	475698.1	3826200.3	899.1	5.00	
4.65	4.65	NO						
L0001822		0	0.36232E-03	475697.4	3826190.3	897.7	5.00	
4.65	4.65	NO						
L0001823		0	0.36232E-03	475696.8	3826180.3	898.9	5.00	
4.65	4.65	NO						
L0001824		0	0.36232E-03	475696.1	3826170.4	900.2	5.00	
4.65	4.65	NO						
L0001825		0	0.36232E-03	475695.4	3826160.4	900.8	5.00	
4.65	4.65	NO						
L0001826		0	0.36232E-03	475694.8	3826150.4	901.4	5.00	
4.65	4.65	NO						
L0001827		0	0.36232E-03	475694.1	3826140.4	901.0	5.00	
4.65	4.65	NO						
L0001828		0	0.36232E-03	475693.5	3826130.4	899.6	5.00	
4.65	4.65	NO						
L0001829		0	0.36232E-03	475692.8	3826120.5	897.9	5.00	
4.65	4.65	NO						
L0001830		0	0.36232E-03	475692.2	3826110.5	897.4	5.00	
4.65	4.65	NO						
L0001831		0	0.36232E-03	475691.5	3826100.5	898.3	5.00	
4.65	4.65	NO						
L0001832		0	0.36232E-03	475690.9	3826090.5	899.4	5.00	
4.65	4.65	NO						
L0001833		0	0.36232E-03	475690.2	3826080.6	900.5	5.00	
4.65	4.65	NO						
L0001834		0	0.36232E-03	475689.5	3826070.6	901.0	5.00	
4.65	4.65	NO						
L0001835		0	0.36232E-03	475688.9	3826060.6	900.8	5.00	
4.65	4.65	NO						
L0001836		0	0.36232E-03	475688.2	3826050.6	900.4	5.00	
4.65	4.65	NO						
L0001837		0	0.36232E-03	475687.6	3826040.6	901.1	5.00	
4.65	4.65	NO						
L0001838		0	0.36232E-03	475686.9	3826030.7	901.7	5.00	
4.65	4.65	NO						
L0001839		0	0.36232E-03	475686.3	3826020.7	901.1	5.00	
4.65	4.65	NO						
L0001840		0	0.36232E-03	475678.8	3826017.9	900.5	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001841	0	0.36232E-03	475668.8	3826017.8	900.8	5.00	4.65	4.65	NO
L0001842	0	0.36232E-03	475658.8	3826017.6	901.3	5.00	4.65	4.65	NO
L0001843	0	0.36232E-03	475648.8	3826017.5	902.0	5.00	4.65	4.65	NO
L0001844	0	0.36232E-03	475638.8	3826017.4	902.2	5.00	4.65	4.65	NO
L0001845	0	0.36232E-03	475628.8	3826017.3	900.6	5.00	4.65	4.65	NO
L0001846	0	0.36232E-03	475618.8	3826017.1	899.2	5.00	4.65	4.65	NO
L0001847	0	0.36232E-03	475608.8	3826017.0	900.4	5.00	4.65	4.65	NO
L0001848	0	0.36232E-03	475598.8	3826016.9	901.6	5.00	4.65	4.65	NO
L0001849	0	0.36232E-03	475588.8	3826016.8	902.3	5.00	4.65	4.65	NO
L0001850	0	0.36232E-03	475578.8	3826016.6	902.1	5.00	4.65	4.65	NO
L0001851	0	0.36232E-03	475568.8	3826016.5	901.6	5.00	4.65	4.65	NO
L0001852	0	0.36232E-03	475558.8	3826016.4	900.8	5.00	4.65	4.65	NO
L0001853	0	0.36232E-03	475548.8	3826016.3	900.4	5.00	4.65	4.65	NO
L0001854	0	0.36232E-03	475538.8	3826016.2	900.4	5.00	4.65	4.65	NO
L0001855	0	0.36232E-03	475528.8	3826016.0	900.5	5.00	4.65	4.65	NO
L0001856	0	0.36232E-03	475525.5	3826009.1	900.5	5.00	4.65	4.65	NO

L0001857		0	0.36232E-03	475525.2	3825999.1	900.7	5.00	
4.65	4.65	NO						
L0001858		0	0.36232E-03	475524.9	3825989.1	900.8	5.00	
4.65	4.65	NO						
L0001859		0	0.36232E-03	475524.6	3825979.1	899.8	5.00	
4.65	4.65	NO						
L0001860		0	0.36232E-03	475524.3	3825969.1	899.1	5.00	
4.65	4.65	NO						
L0001861		0	0.36232E-03	475524.0	3825959.1	900.2	5.00	
4.65	4.65	NO						
L0001862		0	0.36232E-03	475523.7	3825949.1	900.6	5.00	
4.65	4.65	NO						
L0001863		0	0.36232E-03	475523.4	3825939.1	901.1	5.00	
4.65	4.65	NO						
L0001864		0	0.36232E-03	475523.1	3825929.1	901.0	5.00	
4.65	4.65	NO						
L0001865		0	0.36232E-03	475522.8	3825919.2	901.7	5.00	
4.65	4.65	NO						
L0001866		0	0.36232E-03	475522.5	3825909.2	902.2	5.00	
4.65	4.65	NO						
L0001867		0	0.36232E-03	475522.2	3825899.2	902.0	5.00	
4.65	4.65	NO						
L0001868		0	0.36232E-03	475521.9	3825889.2	902.1	5.00	
4.65	4.65	NO						
L0001869		0	0.36232E-03	475521.6	3825879.2	902.3	5.00	
4.65	4.65	NO						
L0001870		0	0.36232E-03	475521.3	3825869.2	902.7	5.00	
4.65	4.65	NO						
L0001871		0	0.36232E-03	475521.0	3825859.2	902.7	5.00	
4.65	4.65	NO						
L0001872		0	0.36232E-03	475520.7	3825849.2	902.9	5.00	
4.65	4.65	NO						
L0001873		0	0.36232E-03	475520.4	3825839.2	903.1	5.00	
4.65	4.65	NO						
L0001874		0	0.36232E-03	475520.1	3825829.2	903.5	5.00	
4.65	4.65	NO						
L0001875		0	0.36232E-03	475519.8	3825819.2	903.7	5.00	
4.65	4.65	NO						
L0001876		0	0.36232E-03	475519.5	3825809.2	903.9	5.00	
4.65	4.65	NO						
L0001877		0	0.36232E-03	475519.2	3825799.2	904.2	5.00	
4.65	4.65	NO						
L0001878		0	0.36232E-03	475518.9	3825789.2	904.4	5.00	
4.65	4.65	NO						
L0001879		0	0.36232E-03	475518.6	3825779.2	904.7	5.00	
4.65	4.65	NO						
L0001880		0	0.36232E-03	475518.3	3825769.2	904.8	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001881	0	0.36232E-03	475518.0	3825759.2	905.1	5.00	4.65	4.65	NO
L0001882	0	0.36232E-03	475513.8	3825753.3	905.3	5.00	4.65	4.65	NO
L0001883	0	0.36232E-03	475503.8	3825753.3	904.8	5.00	4.65	4.65	NO
L0001884	0	0.36232E-03	475493.8	3825753.3	904.5	5.00	4.65	4.65	NO
L0001885	0	0.36232E-03	475483.8	3825753.4	904.0	5.00	4.65	4.65	NO
L0001886	0	0.36232E-03	475473.8	3825753.4	903.7	5.00	4.65	4.65	NO
L0001887	0	0.36232E-03	475463.8	3825753.4	903.4	5.00	4.65	4.65	NO
L0001888	0	0.36232E-03	475453.8	3825753.4	903.0	5.00	4.65	4.65	NO
L0001889	0	0.36232E-03	475443.8	3825753.4	902.6	5.00	4.65	4.65	NO
L0001890	0	0.36232E-03	475433.8	3825753.5	902.2	5.00	4.65	4.65	NO
L0001891	0	0.36232E-03	475423.8	3825753.5	901.9	5.00	4.65	4.65	NO
L0001892	0	0.36232E-03	475413.8	3825753.5	901.6	5.00	4.65	4.65	NO
L0001893	0	0.36232E-03	475403.8	3825753.5	901.3	5.00	4.65	4.65	NO
L0001894	0	0.36232E-03	475393.8	3825753.5	901.0	5.00	4.65	4.65	NO
L0001895	0	0.36232E-03	475383.8	3825753.6	900.6	5.00	4.65	4.65	NO
L0001896	0	0.36232E-03	475373.8	3825753.6	900.3	5.00	4.65	4.65	NO

L0001897		0	0.36232E-03	475363.8	3825753.6	900.0	5.00	
4.65	4.65	NO						
L0001898		0	0.36232E-03	475353.8	3825753.6	899.7	5.00	
4.65	4.65	NO						
L0001899		0	0.36232E-03	475343.8	3825753.6	899.5	5.00	
4.65	4.65	NO						
L0001900		0	0.36232E-03	475333.8	3825753.7	899.1	5.00	
4.65	4.65	NO						
L0001901		0	0.36232E-03	475323.8	3825753.7	898.7	5.00	
4.65	4.65	NO						
L0001902		0	0.36232E-03	475313.8	3825753.7	898.3	5.00	
4.65	4.65	NO						
L0001903		0	0.36232E-03	475303.8	3825753.7	898.0	5.00	
4.65	4.65	NO						
L0001904		0	0.36232E-03	475293.8	3825753.7	897.7	5.00	
4.65	4.65	NO						
L0001905		0	0.36232E-03	475283.8	3825753.7	897.2	5.00	
4.65	4.65	NO						
L0001906		0	0.36232E-03	475273.8	3825753.8	897.0	5.00	
4.65	4.65	NO						
L0001907		0	0.36232E-03	475263.8	3825753.8	897.0	5.00	
4.65	4.65	NO						
L0001908		0	0.36232E-03	475253.8	3825753.8	896.8	5.00	
4.65	4.65	NO						
L0001909		0	0.36232E-03	475243.8	3825753.8	896.2	5.00	
4.65	4.65	NO						
L0001910		0	0.36232E-03	475233.8	3825753.8	895.6	5.00	
4.65	4.65	NO						
L0001911		0	0.36232E-03	475223.8	3825753.9	895.1	5.00	
4.65	4.65	NO						
L0001912		0	0.36232E-03	475213.8	3825753.9	894.6	5.00	
4.65	4.65	NO						
L0001913		0	0.36232E-03	475203.8	3825753.9	894.2	5.00	
4.65	4.65	NO						
L0001914		0	0.36232E-03	475193.8	3825753.9	893.8	5.00	
4.65	4.65	NO						
L0001915		0	0.36232E-03	475183.8	3825753.9	893.3	5.00	
4.65	4.65	NO						
L0001916		0	0.36232E-03	475173.8	3825754.0	892.7	5.00	
4.65	4.65	NO						
L0001917		0	0.36232E-03	475163.8	3825754.0	892.1	5.00	
4.65	4.65	NO						
L0001918		0	0.36232E-03	475153.8	3825754.0	891.7	5.00	
4.65	4.65	NO						
L0001919		0	0.36232E-03	475143.8	3825754.0	891.2	5.00	
4.65	4.65	NO						
L0001920		0	0.36232E-03	475133.8	3825754.0	890.8	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001921	0	0.36232E-03	475123.8	3825754.1	890.3	5.00	4.65	4.65	NO	
L0001922	0	0.36232E-03	475113.8	3825754.1	889.9	5.00	4.65	4.65	NO	
L0001923	0	0.36232E-03	475103.8	3825754.1	889.6	5.00	4.65	4.65	NO	
L0001924	0	0.36232E-03	475093.8	3825754.1	889.0	5.00	4.65	4.65	NO	
L0001925	0	0.36232E-03	475083.8	3825754.1	888.7	5.00	4.65	4.65	NO	
L0001926	0	0.36232E-03	475073.8	3825754.2	888.3	5.00	4.65	4.65	NO	
L0001927	0	0.36232E-03	475063.8	3825754.2	887.9	5.00	4.65	4.65	NO	
L0001928	0	0.36232E-03	475053.8	3825754.2	887.4	5.00	4.65	4.65	NO	
L0001929	0	0.36232E-03	475043.8	3825754.2	887.1	5.00	4.65	4.65	NO	
L0001930	0	0.36232E-03	475033.8	3825754.2	886.9	5.00	4.65	4.65	NO	
L0001931	0	0.36232E-03	475023.8	3825754.3	886.9	5.00	4.65	4.65	NO	
L0001932	0	0.36232E-03	475014.3	3825754.5	886.6	5.00	4.65	4.65	NO	
L0001933	0	0.36232E-03	475020.6	3825762.2	886.5	5.00	4.65	4.65	NO	
L0001934	0	0.36232E-03	475027.0	3825769.9	886.0	5.00	4.65	4.65	NO	
L0001935	0	0.36232E-03	475033.3	3825777.7	886.3	5.00	4.65	4.65	NO	
L0001936	0	0.36232E-03	475039.7	3825785.4	886.7	5.00	4.65	4.65	NO	

L0001937		0	0.36232E-03	475046.1	3825793.1	887.1	5.00	
4.65	4.65	NO						
L0001938		0	0.36232E-03	475052.4	3825800.8	887.0	5.00	
4.65	4.65	NO						
L0001939		0	0.36232E-03	475058.8	3825808.5	887.1	5.00	
4.65	4.65	NO						
L0001940		0	0.36232E-03	475065.2	3825816.2	887.5	5.00	
4.65	4.65	NO						
L0001941		0	0.36232E-03	475071.5	3825823.9	888.2	5.00	
4.65	4.65	NO						
L0001942		0	0.36232E-03	475077.9	3825831.7	888.7	5.00	
4.65	4.65	NO						
L0001943		0	0.36232E-03	475084.2	3825839.4	889.2	5.00	
4.65	4.65	NO						
L0001944		0	0.36232E-03	475090.6	3825847.1	889.2	5.00	
4.65	4.65	NO						
L0001945		0	0.36232E-03	475097.0	3825854.8	889.3	5.00	
4.65	4.65	NO						
L0001946		0	0.36232E-03	475103.3	3825862.5	889.9	5.00	
4.65	4.65	NO						
L0001947		0	0.36232E-03	475109.7	3825870.2	889.6	5.00	
4.65	4.65	NO						
L0001948		0	0.36232E-03	475116.0	3825878.0	889.2	5.00	
4.65	4.65	NO						
L0001949		0	0.36232E-03	475122.4	3825885.7	888.8	5.00	
4.65	4.65	NO						
L0001950		0	0.36232E-03	475128.8	3825893.4	888.4	5.00	
4.65	4.65	NO						
L0001951		0	0.36232E-03	475135.1	3825901.1	888.5	5.00	
4.65	4.65	NO						
L0001952		0	0.36232E-03	475141.5	3825908.8	889.2	5.00	
4.65	4.65	NO						
L0001953		0	0.36232E-03	475147.9	3825916.5	889.5	5.00	
4.65	4.65	NO						
L0001954		0	0.36232E-03	475154.2	3825924.2	889.1	5.00	
4.65	4.65	NO						
L0001955		0	0.36232E-03	475160.6	3825932.0	888.8	5.00	
4.65	4.65	NO						
L0001956		0	0.36232E-03	475166.9	3825939.7	888.9	5.00	
4.65	4.65	NO						
L0001957		0	0.36232E-03	475173.3	3825947.4	889.4	5.00	
4.65	4.65	NO						
L0001958		0	0.36232E-03	475179.7	3825955.1	889.3	5.00	
4.65	4.65	NO						
L0001959		0	0.36232E-03	475186.0	3825962.8	889.0	5.00	
4.65	4.65	NO						
L0001960		0	0.36232E-03	475192.4	3825970.5	889.1	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	URBAN SOURCE	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
L0001961	0	0.36232E-03	475198.8	3825978.3	889.4	5.00		4.65	4.65	NO
L0001962	0	0.36232E-03	475207.0	3825983.8	889.6	5.00		4.65	4.65	NO
L0001963	0	0.36232E-03	475215.4	3825989.3	889.7	5.00		4.65	4.65	NO
L0001964	0	0.36232E-03	475223.8	3825994.7	890.5	5.00		4.65	4.65	NO
L0001965	0	0.36232E-03	475232.2	3826000.1	890.9	5.00		4.65	4.65	NO
L0001966	0	0.36232E-03	475240.6	3826005.6	891.6	5.00		4.65	4.65	NO
L0001967	0	0.36232E-03	475249.0	3826011.0	892.3	5.00		4.65	4.65	NO
L0001968	0	0.36232E-03	475257.4	3826016.5	892.7	5.00		4.65	4.65	NO
L0001969	0	0.36232E-03	475265.7	3826021.9	892.5	5.00		4.65	4.65	NO
L0001970	0	0.36232E-03	475274.1	3826027.4	892.0	5.00		4.65	4.65	NO
L0001971	0	0.36232E-03	475282.5	3826032.8	892.2	5.00		4.65	4.65	NO
L0001972	0	0.36232E-03	475290.9	3826038.3	891.2	5.00		4.65	4.65	NO
L0001973	0	0.36232E-03	475299.3	3826043.7	889.8	5.00		4.65	4.65	NO
L0001974	0	0.36232E-03	475307.7	3826049.2	889.4	5.00		4.65	4.65	NO
L0001975	0	0.36232E-03	475316.1	3826054.6	888.8	5.00		4.65	4.65	NO
L0001976	0	0.36232E-03	475324.4	3826060.1	890.1	5.00		4.65	4.65	NO

L0001977		0	0.36232E-03	475332.8	3826065.5	891.3	5.00	
4.65	4.65	NO						
L0001978		0	0.36232E-03	475341.2	3826071.0	890.9	5.00	
4.65	4.65	NO						
L0001979		0	0.36232E-03	475349.6	3826076.4	890.9	5.00	
4.65	4.65	NO						
L0001980		0	0.36232E-03	475355.7	3826083.8	892.0	5.00	
4.65	4.65	NO						
L0001981		0	0.36232E-03	475359.7	3826093.0	893.3	5.00	
4.65	4.65	NO						
L0001982		0	0.36232E-03	475363.8	3826102.1	892.8	5.00	
4.65	4.65	NO						
L0001983		0	0.36232E-03	475367.8	3826111.3	891.2	5.00	
4.65	4.65	NO						
L0001984		0	0.36232E-03	475371.9	3826120.4	891.4	5.00	
4.65	4.65	NO						
L0001985		0	0.36232E-03	475375.9	3826129.6	893.0	5.00	
4.65	4.65	NO						
L0001986		0	0.36232E-03	475380.0	3826138.7	893.8	5.00	
4.65	4.65	NO						
L0001987		0	0.36232E-03	475384.0	3826147.8	893.0	5.00	
4.65	4.65	NO						
L0001988		0	0.36232E-03	475388.1	3826157.0	891.2	5.00	
4.65	4.65	NO						
L0001989		0	0.36232E-03	475392.1	3826166.1	889.0	5.00	
4.65	4.65	NO						
L0001990		0	0.36232E-03	475396.2	3826175.3	888.1	5.00	
4.65	4.65	NO						
L0001991		0	0.36232E-03	475400.2	3826184.4	887.7	5.00	
4.65	4.65	NO						
L0001992		0	0.36232E-03	475404.3	3826193.6	887.2	5.00	
4.65	4.65	NO						
L0001993		0	0.36232E-03	475408.3	3826202.7	886.3	5.00	
4.65	4.65	NO						
L0001994		0	0.36232E-03	475412.4	3826211.8	886.4	5.00	
4.65	4.65	NO						
L0001995		0	0.36232E-03	475416.4	3826221.0	887.4	5.00	
4.65	4.65	NO						
L0001996		0	0.36232E-03	475423.4	3826225.4	888.9	5.00	
4.65	4.65	NO						
L0001997		0	0.36232E-03	475433.4	3826225.2	890.0	5.00	
4.65	4.65	NO						
L0001998		0	0.36232E-03	475443.4	3826225.0	890.9	5.00	
4.65	4.65	NO						
L0001999		0	0.36232E-03	475453.4	3826224.7	890.5	5.00	
4.65	4.65	NO						
L0002000		0	0.36232E-03	475463.4	3826224.5	890.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002001	0	0.36232E-03	475473.4	3826224.3	890.9	5.00	4.65	4.65	NO
L0002002	0	0.36232E-03	475483.4	3826224.0	891.3	5.00	4.65	4.65	NO
L0002003	0	0.36232E-03	475493.4	3826223.8	891.9	5.00	4.65	4.65	NO
L0002004	0	0.36232E-03	475503.4	3826223.6	892.7	5.00	4.65	4.65	NO
L0002005	0	0.36232E-03	475513.4	3826223.3	892.9	5.00	4.65	4.65	NO
L0002006	0	0.36232E-03	475523.4	3826223.1	893.7	5.00	4.65	4.65	NO
L0002007	0	0.36232E-03	475533.4	3826222.8	894.5	5.00	4.65	4.65	NO
L0002008	0	0.36232E-03	475543.4	3826222.6	894.9	5.00	4.65	4.65	NO
L0002009	0	0.36232E-03	475553.4	3826222.4	895.2	5.00	4.65	4.65	NO
L0002010	0	0.36232E-03	475563.4	3826222.1	895.3	5.00	4.65	4.65	NO
L0002011	0	0.36232E-03	475573.4	3826221.9	894.8	5.00	4.65	4.65	NO
L0002012	0	0.36232E-03	475583.4	3826221.7	893.9	5.00	4.65	4.65	NO
L0002013	0	0.36232E-03	475593.4	3826221.4	893.8	5.00	4.65	4.65	NO
L0002014	0	0.36232E-03	475603.4	3826221.2	894.7	5.00	4.65	4.65	NO
L0002015	0	0.36232E-03	475613.4	3826220.9	896.0	5.00	4.65	4.65	NO
L0002016	0	0.36232E-03	475623.4	3826220.7	896.9	5.00	4.65	4.65	NO

L0002017		0	0.36232E-03	475633.4	3826220.5	897.6	5.00	
4.65	4.65	NO						
L0002018		0	0.36232E-03	475643.4	3826220.2	898.2	5.00	
4.65	4.65	NO						
L0002019		0	0.36232E-03	475653.4	3826220.0	898.8	5.00	
4.65	4.65	NO						
L0002020		0	0.36232E-03	475663.4	3826219.8	899.3	5.00	
4.65	4.65	NO						
L0002021		0	0.36232E-03	475667.0	3826213.7	899.1	5.00	
4.65	4.65	NO						
L0002022		0	0.36232E-03	475666.4	3826203.7	897.6	5.00	
4.65	4.65	NO						
L0002023		0	0.36232E-03	475665.7	3826193.7	896.7	5.00	
4.65	4.65	NO						
L0002024		0	0.36232E-03	475665.1	3826183.7	897.8	5.00	
4.65	4.65	NO						
L0002025		0	0.36232E-03	475664.5	3826173.8	898.7	5.00	
4.65	4.65	NO						
L0002026		0	0.36232E-03	475663.8	3826163.8	899.2	5.00	
4.65	4.65	NO						
L0002027		0	0.36232E-03	475663.2	3826153.8	899.9	5.00	
4.65	4.65	NO						
L0002028		0	0.36232E-03	475662.6	3826143.8	900.0	5.00	
4.65	4.65	NO						
L0002029		0	0.36232E-03	475662.0	3826133.8	899.2	5.00	
4.65	4.65	NO						
L0002030		0	0.36232E-03	475661.3	3826123.9	897.6	5.00	
4.65	4.65	NO						
L0002031		0	0.36232E-03	475660.7	3826113.9	896.2	5.00	
4.65	4.65	NO						
L0002032		0	0.36232E-03	475660.1	3826103.9	895.6	5.00	
4.65	4.65	NO						
L0002033		0	0.36232E-03	475659.4	3826093.9	897.2	5.00	
4.65	4.65	NO						
L0002034		0	0.36232E-03	475658.8	3826083.9	898.3	5.00	
4.65	4.65	NO						
L0002035		0	0.36232E-03	475658.2	3826074.0	899.2	5.00	
4.65	4.65	NO						
L0002036		0	0.36232E-03	475657.5	3826064.0	899.8	5.00	
4.65	4.65	NO						
L0002037		0	0.36232E-03	475656.9	3826054.0	899.5	5.00	
4.65	4.65	NO						
L0002038		0	0.36232E-03	475652.1	3826048.3	898.4	5.00	
4.65	4.65	NO						
L0002039		0	0.36232E-03	475642.1	3826047.9	898.2	5.00	
4.65	4.65	NO						
L0002040		0	0.36232E-03	475632.1	3826047.5	898.8	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002041	0	0.36232E-03	475622.1	3826047.2	898.4	5.00	4.65	4.65	NO
L0002042	0	0.36232E-03	475612.1	3826046.8	897.0	5.00	4.65	4.65	NO
L0002043	0	0.36232E-03	475602.1	3826046.4	898.8	5.00	4.65	4.65	NO
L0002044	0	0.36232E-03	475592.2	3826046.0	899.9	5.00	4.65	4.65	NO
L0002045	0	0.36232E-03	475582.2	3826045.6	899.9	5.00	4.65	4.65	NO
L0002046	0	0.36232E-03	475572.2	3826045.3	899.4	5.00	4.65	4.65	NO
L0002047	0	0.36232E-03	475562.2	3826044.9	899.9	5.00	4.65	4.65	NO
L0002048	0	0.36232E-03	475552.2	3826044.5	899.6	5.00	4.65	4.65	NO
L0002049	0	0.36232E-03	475542.2	3826044.1	899.2	5.00	4.65	4.65	NO
L0002050	0	0.36232E-03	475532.2	3826043.7	898.9	5.00	4.65	4.65	NO
L0002051	0	0.36232E-03	475522.2	3826043.4	898.8	5.00	4.65	4.65	NO
L0002052	0	0.36232E-03	475512.2	3826043.0	898.7	5.00	4.65	4.65	NO
L0002053	0	0.36232E-03	475502.2	3826042.6	898.5	5.00	4.65	4.65	NO
L0002054	0	0.36232E-03	475500.4	3826033.7	899.5	5.00	4.65	4.65	NO
L0002055	0	0.36232E-03	475499.7	3826023.7	899.4	5.00	4.65	4.65	NO
L0002056	0	0.36232E-03	475498.9	3826013.8	898.8	5.00	4.65	4.65	NO

L0002057		0	0.36232E-03	475498.2	3826003.8	899.2	5.00	
4.65	4.65	NO						
L0002058		0	0.36232E-03	475497.4	3825993.8	899.3	5.00	
4.65	4.65	NO						
L0002059		0	0.36232E-03	475496.7	3825983.8	898.2	5.00	
4.65	4.65	NO						
L0002060		0	0.36232E-03	475495.9	3825973.9	898.1	5.00	
4.65	4.65	NO						
L0002061		0	0.36232E-03	475495.2	3825963.9	898.4	5.00	
4.65	4.65	NO						
L0002062		0	0.36232E-03	475494.4	3825953.9	899.1	5.00	
4.65	4.65	NO						
L0002063		0	0.36232E-03	475493.7	3825944.0	900.2	5.00	
4.65	4.65	NO						
L0002064		0	0.36232E-03	475492.9	3825934.0	900.8	5.00	
4.65	4.65	NO						
L0002065		0	0.36232E-03	475492.2	3825924.0	901.0	5.00	
4.65	4.65	NO						
L0002066		0	0.36232E-03	475491.4	3825914.0	901.0	5.00	
4.65	4.65	NO						
L0002067		0	0.36232E-03	475490.6	3825904.1	900.8	5.00	
4.65	4.65	NO						
L0002068		0	0.36232E-03	475489.9	3825894.1	900.8	5.00	
4.65	4.65	NO						
L0002069		0	0.36232E-03	475489.1	3825884.1	901.0	5.00	
4.65	4.65	NO						
L0002070		0	0.36232E-03	475488.4	3825874.2	901.3	5.00	
4.65	4.65	NO						
L0002071		0	0.36232E-03	475487.6	3825864.2	901.4	5.00	
4.65	4.65	NO						
L0002072		0	0.36232E-03	475486.9	3825854.2	901.6	5.00	
4.65	4.65	NO						
L0002073		0	0.36232E-03	475486.1	3825844.2	901.8	5.00	
4.65	4.65	NO						
L0002074		0	0.36232E-03	475485.4	3825834.3	902.1	5.00	
4.65	4.65	NO						
L0002075		0	0.36232E-03	475484.6	3825824.3	902.3	5.00	
4.65	4.65	NO						
L0002076		0	0.36232E-03	475483.9	3825814.3	902.5	5.00	
4.65	4.65	NO						
L0002077		0	0.36232E-03	475483.1	3825804.4	902.7	5.00	
4.65	4.65	NO						
L0002078		0	0.36232E-03	475482.4	3825794.4	902.9	5.00	
4.65	4.65	NO						
L0002079		0	0.36232E-03	475481.6	3825784.4	903.2	5.00	
4.65	4.65	NO						
L0002080		0	0.36232E-03	475474.0	3825781.8	902.9	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002081	0	0.36232E-03	475464.0	3825781.7	902.6	5.00	4.65	4.65	NO
L0002082	0	0.36232E-03	475454.0	3825781.6	902.2	5.00	4.65	4.65	NO
L0002083	0	0.36232E-03	475444.0	3825781.6	901.9	5.00	4.65	4.65	NO
L0002084	0	0.36232E-03	475434.0	3825781.5	901.5	5.00	4.65	4.65	NO
L0002085	0	0.36232E-03	475424.0	3825781.4	901.3	5.00	4.65	4.65	NO
L0002086	0	0.36232E-03	475414.0	3825781.4	900.9	5.00	4.65	4.65	NO
L0002087	0	0.36232E-03	475404.0	3825781.3	900.6	5.00	4.65	4.65	NO
L0002088	0	0.36232E-03	475394.0	3825781.2	900.3	5.00	4.65	4.65	NO
L0002089	0	0.36232E-03	475384.0	3825781.1	899.9	5.00	4.65	4.65	NO
L0002090	0	0.36232E-03	475374.0	3825781.1	899.6	5.00	4.65	4.65	NO
L0002091	0	0.36232E-03	475364.0	3825781.0	899.2	5.00	4.65	4.65	NO
L0002092	0	0.36232E-03	475354.0	3825780.9	898.9	5.00	4.65	4.65	NO
L0002093	0	0.36232E-03	475344.0	3825780.9	898.6	5.00	4.65	4.65	NO
L0002094	0	0.36232E-03	475334.0	3825780.8	898.3	5.00	4.65	4.65	NO
L0002095	0	0.36232E-03	475324.0	3825780.7	898.1	5.00	4.65	4.65	NO
L0002096	0	0.36232E-03	475314.0	3825780.7	897.8	5.00	4.65	4.65	NO

L0002097		0	0.36232E-03	475304.0	3825780.6	897.6	5.00	
4.65	4.65	NO						
L0002098		0	0.36232E-03	475294.0	3825780.5	897.1	5.00	
4.65	4.65	NO						
L0002099		0	0.36232E-03	475284.0	3825780.4	896.7	5.00	
4.65	4.65	NO						
L0002100		0	0.36232E-03	475274.0	3825780.4	896.4	5.00	
4.65	4.65	NO						
L0002101		0	0.36232E-03	475264.0	3825780.3	895.9	5.00	
4.65	4.65	NO						
L0002102		0	0.36232E-03	475254.0	3825780.2	895.8	5.00	
4.65	4.65	NO						
L0002103		0	0.36232E-03	475244.0	3825780.2	895.8	5.00	
4.65	4.65	NO						
L0002104		0	0.36232E-03	475234.0	3825780.1	895.8	5.00	
4.65	4.65	NO						
L0002105		0	0.36232E-03	475224.0	3825780.0	895.6	5.00	
4.65	4.65	NO						
L0002106		0	0.36232E-03	475214.0	3825780.0	895.1	5.00	
4.65	4.65	NO						
L0002107		0	0.36232E-03	475204.0	3825779.9	894.6	5.00	
4.65	4.65	NO						
L0002108		0	0.36232E-03	475194.0	3825779.8	894.1	5.00	
4.65	4.65	NO						
L0002109		0	0.36232E-03	475184.0	3825779.8	893.8	5.00	
4.65	4.65	NO						
L0002110		0	0.36232E-03	475174.0	3825779.7	893.4	5.00	
4.65	4.65	NO						
L0002111		0	0.36232E-03	475164.0	3825779.6	893.1	5.00	
4.65	4.65	NO						
L0002112		0	0.36232E-03	475154.0	3825779.5	892.5	5.00	
4.65	4.65	NO						
L0002113		0	0.36232E-03	475144.0	3825779.5	891.8	5.00	
4.65	4.65	NO						
L0002114		0	0.36232E-03	475134.0	3825779.4	891.5	5.00	
4.65	4.65	NO						
L0002115		0	0.36232E-03	475124.0	3825779.3	891.0	5.00	
4.65	4.65	NO						
L0002116		0	0.36232E-03	475114.0	3825779.3	890.8	5.00	
4.65	4.65	NO						
L0002117		0	0.36232E-03	475104.0	3825779.2	890.3	5.00	
4.65	4.65	NO						
L0002118		0	0.36232E-03	475094.0	3825779.1	889.8	5.00	
4.65	4.65	NO						
L0002119		0	0.36232E-03	475084.0	3825779.1	888.8	5.00	
4.65	4.65	NO						
L0002120		0	0.36232E-03	475074.0	3825779.0	888.2	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002121	0	0.36232E-03	475064.0	3825778.9	887.6	5.00	4.65	4.65	NO
L0002122	0	0.36232E-03	475061.1	3825782.2	887.7	5.00	4.65	4.65	NO
L0002123	0	0.36232E-03	475067.6	3825789.8	888.5	5.00	4.65	4.65	NO
L0002124	0	0.36232E-03	475074.1	3825797.4	888.8	5.00	4.65	4.65	NO
L0002125	0	0.36232E-03	475080.5	3825805.0	888.3	5.00	4.65	4.65	NO
L0002126	0	0.36232E-03	475087.0	3825812.7	888.4	5.00	4.65	4.65	NO
L0002127	0	0.36232E-03	475093.5	3825820.3	889.0	5.00	4.65	4.65	NO
L0002128	0	0.36232E-03	475100.0	3825827.9	889.4	5.00	4.65	4.65	NO
L0002129	0	0.36232E-03	475106.4	3825835.5	890.2	5.00	4.65	4.65	NO
L0002130	0	0.36232E-03	475112.9	3825843.1	890.6	5.00	4.65	4.65	NO
L0002131	0	0.36232E-03	475119.4	3825850.8	890.8	5.00	4.65	4.65	NO
L0002132	0	0.36232E-03	475125.9	3825858.4	890.6	5.00	4.65	4.65	NO
L0002133	0	0.36232E-03	475132.3	3825866.0	890.0	5.00	4.65	4.65	NO
L0002134	0	0.36232E-03	475138.8	3825873.6	889.5	5.00	4.65	4.65	NO
L0002135	0	0.36232E-03	475145.3	3825881.3	889.2	5.00	4.65	4.65	NO
L0002136	0	0.36232E-03	475151.7	3825888.9	889.6	5.00	4.65	4.65	NO

L0002137		0	0.36232E-03	475158.2	3825896.5	890.0	5.00	
4.65	4.65	NO						
L0002138		0	0.36232E-03	475164.7	3825904.1	890.1	5.00	
4.65	4.65	NO						
L0002139		0	0.36232E-03	475171.2	3825911.8	889.8	5.00	
4.65	4.65	NO						
L0002140		0	0.36232E-03	475177.6	3825919.4	889.7	5.00	
4.65	4.65	NO						
L0002141		0	0.36232E-03	475184.1	3825927.0	889.8	5.00	
4.65	4.65	NO						
L0002142		0	0.36232E-03	475190.6	3825934.6	890.1	5.00	
4.65	4.65	NO						
L0002143		0	0.36232E-03	475197.0	3825942.2	889.9	5.00	
4.65	4.65	NO						
L0002144		0	0.36232E-03	475203.5	3825949.9	889.8	5.00	
4.65	4.65	NO						
L0002145		0	0.36232E-03	475210.0	3825957.5	889.9	5.00	
4.65	4.65	NO						
L0002146		0	0.36232E-03	475216.5	3825965.1	890.1	5.00	
4.65	4.65	NO						
L0002147		0	0.36232E-03	475224.3	3825971.1	890.5	5.00	
4.65	4.65	NO						
L0002148		0	0.36232E-03	475232.9	3825976.2	890.5	5.00	
4.65	4.65	NO						
L0002149		0	0.36232E-03	475241.5	3825981.4	890.9	5.00	
4.65	4.65	NO						
L0002150		0	0.36232E-03	475250.1	3825986.5	891.5	5.00	
4.65	4.65	NO						
L0002151		0	0.36232E-03	475258.7	3825991.6	892.2	5.00	
4.65	4.65	NO						
L0002152		0	0.36232E-03	475267.3	3825996.7	892.9	5.00	
4.65	4.65	NO						
L0002153		0	0.36232E-03	475275.8	3826001.8	893.5	5.00	
4.65	4.65	NO						
L0002154		0	0.36232E-03	475284.4	3826007.0	893.6	5.00	
4.65	4.65	NO						
L0002155		0	0.36232E-03	475293.0	3826012.1	892.8	5.00	
4.65	4.65	NO						
L0002156		0	0.36232E-03	475301.6	3826017.2	892.1	5.00	
4.65	4.65	NO						
L0002157		0	0.36232E-03	475310.2	3826022.3	892.6	5.00	
4.65	4.65	NO						
L0002158		0	0.36232E-03	475318.8	3826027.4	891.8	5.00	
4.65	4.65	NO						
L0002159		0	0.36232E-03	475327.4	3826032.6	890.9	5.00	
4.65	4.65	NO						
L0002160		0	0.36232E-03	475336.0	3826037.7	890.8	5.00	
4.65	4.65	NO						

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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002161	0	0.36232E-03	475344.6	3826042.8	890.5	5.00	4.65	4.65	NO
L0002162	0	0.36232E-03	475353.2	3826047.9	891.2	5.00	4.65	4.65	NO
L0002163	0	0.36232E-03	475361.7	3826053.0	892.6	5.00	4.65	4.65	NO
L0002164	0	0.36232E-03	475368.7	3826059.6	892.4	5.00	4.65	4.65	NO
L0002165	0	0.36232E-03	475372.6	3826068.8	892.3	5.00	4.65	4.65	NO
L0002166	0	0.36232E-03	475376.6	3826078.0	893.4	5.00	4.65	4.65	NO
L0002167	0	0.36232E-03	475380.6	3826087.1	894.1	5.00	4.65	4.65	NO
L0002168	0	0.36232E-03	475384.5	3826096.3	893.0	5.00	4.65	4.65	NO
L0002169	0	0.36232E-03	475388.5	3826105.5	891.8	5.00	4.65	4.65	NO
L0002170	0	0.36232E-03	475392.4	3826114.7	893.7	5.00	4.65	4.65	NO
L0002171	0	0.36232E-03	475396.4	3826123.9	894.2	5.00	4.65	4.65	NO
L0002172	0	0.36232E-03	475400.3	3826133.1	893.4	5.00	4.65	4.65	NO
L0002173	0	0.36232E-03	475404.3	3826142.3	891.5	5.00	4.65	4.65	NO
L0002174	0	0.36232E-03	475408.2	3826151.4	890.2	5.00	4.65	4.65	NO
L0002175	0	0.36232E-03	475412.2	3826160.6	890.4	5.00	4.65	4.65	NO
L0002176	0	0.36232E-03	475416.1	3826169.8	889.4	5.00	4.65	4.65	NO

L0002177		0	0.36232E-03	475420.1	3826179.0	888.6	5.00	
4.65	4.65	NO						
L0002178		0	0.36232E-03	475424.0	3826188.2	887.0	5.00	
4.65	4.65	NO						
L0002179		0	0.36232E-03	475428.0	3826197.4	887.0	5.00	
4.65	4.65	NO						
L0002180		0	0.36232E-03	475433.0	3826204.8	887.4	5.00	
4.65	4.65	NO						
L0002181		0	0.36232E-03	475443.0	3826204.5	888.6	5.00	
4.65	4.65	NO						
L0002182		0	0.36232E-03	475453.0	3826204.1	889.9	5.00	
4.65	4.65	NO						
L0002183		0	0.36232E-03	475463.0	3826203.7	890.7	5.00	
4.65	4.65	NO						
L0002184		0	0.36232E-03	475473.0	3826203.4	891.3	5.00	
4.65	4.65	NO						
L0002185		0	0.36232E-03	475483.0	3826203.0	891.6	5.00	
4.65	4.65	NO						
L0002186		0	0.36232E-03	475493.0	3826202.6	892.5	5.00	
4.65	4.65	NO						
L0002187		0	0.36232E-03	475503.0	3826202.2	893.2	5.00	
4.65	4.65	NO						
L0002188		0	0.36232E-03	475513.0	3826201.9	893.9	5.00	
4.65	4.65	NO						
L0002189		0	0.36232E-03	475523.0	3826201.5	894.1	5.00	
4.65	4.65	NO						
L0002190		0	0.36232E-03	475533.0	3826201.1	894.4	5.00	
4.65	4.65	NO						
L0002191		0	0.36232E-03	475543.0	3826200.7	894.7	5.00	
4.65	4.65	NO						
L0002192		0	0.36232E-03	475553.0	3826200.4	894.9	5.00	
4.65	4.65	NO						
L0002193		0	0.36232E-03	475563.0	3826200.0	895.5	5.00	
4.65	4.65	NO						
L0002194		0	0.36232E-03	475572.9	3826199.6	896.1	5.00	
4.65	4.65	NO						
L0002195		0	0.36232E-03	475582.9	3826199.3	896.5	5.00	
4.65	4.65	NO						
L0002196		0	0.36232E-03	475592.9	3826198.9	896.3	5.00	
4.65	4.65	NO						
L0002197		0	0.36232E-03	475602.9	3826198.5	895.4	5.00	
4.65	4.65	NO						
L0002198		0	0.36232E-03	475612.9	3826198.1	894.7	5.00	
4.65	4.65	NO						
L0002199		0	0.36232E-03	475622.9	3826197.8	894.9	5.00	
4.65	4.65	NO						
L0002200		0	0.36232E-03	475632.9	3826197.4	895.0	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	URBAN SOURCE	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
L0002201	0	0.36232E-03	475642.8	3826196.9	895.3	5.00		4.65	4.65	NO
L0002202	0	0.36232E-03	475641.6	3826187.0	896.4	5.00		4.65	4.65	NO
L0002203	0	0.36232E-03	475640.3	3826177.1	897.5	5.00		4.65	4.65	NO
L0002204	0	0.36232E-03	475639.1	3826167.1	898.5	5.00		4.65	4.65	NO
L0002205	0	0.36232E-03	475637.9	3826157.2	898.9	5.00		4.65	4.65	NO
L0002206	0	0.36232E-03	475636.7	3826147.3	898.9	5.00		4.65	4.65	NO
L0002207	0	0.36232E-03	475635.5	3826137.4	898.3	5.00		4.65	4.65	NO
L0002208	0	0.36232E-03	475634.3	3826127.4	897.5	5.00		4.65	4.65	NO
L0002209	0	0.36232E-03	475633.1	3826117.5	896.1	5.00		4.65	4.65	NO
L0002210	0	0.36232E-03	475631.9	3826107.6	894.9	5.00		4.65	4.65	NO
L0002211	0	0.36232E-03	475630.6	3826097.7	896.3	5.00		4.65	4.65	NO
L0002212	0	0.36232E-03	475629.4	3826087.7	897.5	5.00		4.65	4.65	NO
L0002213	0	0.36232E-03	475628.2	3826077.8	897.2	5.00		4.65	4.65	NO
L0002214	0	0.36232E-03	475626.8	3826068.1	896.4	5.00		4.65	4.65	NO
L0002215	0	0.36232E-03	475616.8	3826068.1	895.7	5.00		4.65	4.65	NO
L0002216	0	0.36232E-03	475606.8	3826068.0	896.5	5.00		4.65	4.65	NO

L0002217		0	0.36232E-03	475596.8	3826067.9	898.3	5.00	
4.65	4.65	NO						
L0002218		0	0.36232E-03	475586.8	3826067.9	899.0	5.00	
4.65	4.65	NO						
L0002219		0	0.36232E-03	475576.8	3826067.8	898.5	5.00	
4.65	4.65	NO						
L0002220		0	0.36232E-03	475566.8	3826067.8	897.1	5.00	
4.65	4.65	NO						
L0002221		0	0.36232E-03	475556.8	3826067.7	896.8	5.00	
4.65	4.65	NO						
L0002222		0	0.36232E-03	475546.8	3826067.6	898.3	5.00	
4.65	4.65	NO						
L0002223		0	0.36232E-03	475536.8	3826067.6	898.8	5.00	
4.65	4.65	NO						
L0002224		0	0.36232E-03	475526.8	3826067.5	897.6	5.00	
4.65	4.65	NO						
L0002225		0	0.36232E-03	475516.8	3826067.4	897.2	5.00	
4.65	4.65	NO						
L0002226		0	0.36232E-03	475506.8	3826067.4	897.0	5.00	
4.65	4.65	NO						
L0002227		0	0.36232E-03	475496.8	3826067.3	897.1	5.00	
4.65	4.65	NO						
L0002228		0	0.36232E-03	475486.8	3826067.2	897.3	5.00	
4.65	4.65	NO						
L0002229		0	0.36232E-03	475476.8	3826067.2	897.0	5.00	
4.65	4.65	NO						
L0002230		0	0.36232E-03	475473.8	3826059.4	897.4	5.00	
4.65	4.65	NO						
L0002231		0	0.36232E-03	475472.9	3826049.5	898.2	5.00	
4.65	4.65	NO						
L0002232		0	0.36232E-03	475472.0	3826039.5	898.5	5.00	
4.65	4.65	NO						
L0002233		0	0.36232E-03	475471.1	3826029.6	897.7	5.00	
4.65	4.65	NO						
L0002234		0	0.36232E-03	475470.1	3826019.6	897.3	5.00	
4.65	4.65	NO						
L0002235		0	0.36232E-03	475469.2	3826009.7	897.8	5.00	
4.65	4.65	NO						
L0002236		0	0.36232E-03	475468.3	3825999.7	897.2	5.00	
4.65	4.65	NO						
L0002237		0	0.36232E-03	475467.4	3825989.7	896.5	5.00	
4.65	4.65	NO						
L0002238		0	0.36232E-03	475466.5	3825979.8	896.8	5.00	
4.65	4.65	NO						
L0002239		0	0.36232E-03	475465.6	3825969.8	898.2	5.00	
4.65	4.65	NO						
L0002240		0	0.36232E-03	475464.6	3825959.9	899.4	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002241	0	0.36232E-03	475463.7	3825949.9	899.4	5.00	4.65	4.65	NO
L0002242	0	0.36232E-03	475462.8	3825939.9	898.9	5.00	4.65	4.65	NO
L0002243	0	0.36232E-03	475461.9	3825930.0	899.1	5.00	4.65	4.65	NO
L0002244	0	0.36232E-03	475461.0	3825920.0	899.8	5.00	4.65	4.65	NO
L0002245	0	0.36232E-03	475460.0	3825910.1	899.4	5.00	4.65	4.65	NO
L0002246	0	0.36232E-03	475459.1	3825900.1	899.6	5.00	4.65	4.65	NO
L0002247	0	0.36232E-03	475458.2	3825890.2	900.0	5.00	4.65	4.65	NO
L0002248	0	0.36232E-03	475457.3	3825880.2	900.0	5.00	4.65	4.65	NO
L0002249	0	0.36232E-03	475456.4	3825870.2	900.2	5.00	4.65	4.65	NO
L0002250	0	0.36232E-03	475455.4	3825860.3	900.4	5.00	4.65	4.65	NO
L0002251	0	0.36232E-03	475454.5	3825850.3	900.6	5.00	4.65	4.65	NO
L0002252	0	0.36232E-03	475453.6	3825840.4	900.7	5.00	4.65	4.65	NO
L0002253	0	0.36232E-03	475452.7	3825830.4	900.9	5.00	4.65	4.65	NO
L0002254	0	0.36232E-03	475451.8	3825820.5	901.1	5.00	4.65	4.65	NO
L0002255	0	0.36232E-03	475450.1	3825811.3	901.3	5.00	4.65	4.65	NO
L0002256	0	0.36232E-03	475440.1	3825811.2	901.0	5.00	4.65	4.65	NO

L0002257		0	0.36232E-03	475430.1	3825811.1	900.6	5.00	
4.65	4.65	NO						
L0002258		0	0.36232E-03	475420.1	3825811.0	900.3	5.00	
4.65	4.65	NO						
L0002259		0	0.36232E-03	475410.1	3825810.9	900.0	5.00	
4.65	4.65	NO						
L0002260		0	0.36232E-03	475400.1	3825810.7	899.6	5.00	
4.65	4.65	NO						
L0002261		0	0.36232E-03	475390.1	3825810.6	899.2	5.00	
4.65	4.65	NO						
L0002262		0	0.36232E-03	475380.1	3825810.5	898.9	5.00	
4.65	4.65	NO						
L0002263		0	0.36232E-03	475370.1	3825810.4	898.6	5.00	
4.65	4.65	NO						
L0002264		0	0.36232E-03	475360.1	3825810.3	898.3	5.00	
4.65	4.65	NO						
L0002265		0	0.36232E-03	475350.1	3825810.2	898.0	5.00	
4.65	4.65	NO						
L0002266		0	0.36232E-03	475340.1	3825810.0	897.7	5.00	
4.65	4.65	NO						
L0002267		0	0.36232E-03	475330.1	3825809.9	897.4	5.00	
4.65	4.65	NO						
L0002268		0	0.36232E-03	475320.1	3825809.8	897.0	5.00	
4.65	4.65	NO						
L0002269		0	0.36232E-03	475310.1	3825809.7	896.7	5.00	
4.65	4.65	NO						
L0002270		0	0.36232E-03	475300.1	3825809.6	896.5	5.00	
4.65	4.65	NO						
L0002271		0	0.36232E-03	475290.1	3825809.5	896.3	5.00	
4.65	4.65	NO						
L0002272		0	0.36232E-03	475280.1	3825809.3	896.1	5.00	
4.65	4.65	NO						
L0002273		0	0.36232E-03	475270.1	3825809.2	895.5	5.00	
4.65	4.65	NO						
L0002274		0	0.36232E-03	475260.1	3825809.1	895.1	5.00	
4.65	4.65	NO						
L0002275		0	0.36232E-03	475250.1	3825809.0	894.8	5.00	
4.65	4.65	NO						
L0002276		0	0.36232E-03	475240.1	3825808.9	894.6	5.00	
4.65	4.65	NO						
L0002277		0	0.36232E-03	475230.1	3825808.8	894.4	5.00	
4.65	4.65	NO						
L0002278		0	0.36232E-03	475220.1	3825808.6	894.2	5.00	
4.65	4.65	NO						
L0002279		0	0.36232E-03	475210.1	3825808.5	894.0	5.00	
4.65	4.65	NO						
L0002280		0	0.36232E-03	475200.1	3825808.4	893.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002281	0	0.36232E-03	475190.1	3825808.3	893.5	5.00	4.65	4.65	NO
L0002282	0	0.36232E-03	475180.1	3825808.2	893.2	5.00	4.65	4.65	NO
L0002283	0	0.36232E-03	475170.1	3825808.1	892.7	5.00	4.65	4.65	NO
L0002284	0	0.36232E-03	475160.1	3825808.0	891.9	5.00	4.65	4.65	NO
L0002285	0	0.36232E-03	475150.1	3825807.8	891.4	5.00	4.65	4.65	NO
L0002286	0	0.36232E-03	475140.1	3825807.7	890.9	5.00	4.65	4.65	NO
L0002287	0	0.36232E-03	475130.1	3825807.6	890.3	5.00	4.65	4.65	NO
L0002288	0	0.36232E-03	475120.1	3825807.5	889.9	5.00	4.65	4.65	NO
L0002289	0	0.36232E-03	475115.6	3825810.0	889.7	5.00	4.65	4.65	NO
L0002290	0	0.36232E-03	475122.0	3825817.6	890.2	5.00	4.65	4.65	NO
L0002291	0	0.36232E-03	475128.4	3825825.3	890.9	5.00	4.65	4.65	NO
L0002292	0	0.36232E-03	475134.8	3825833.0	891.5	5.00	4.65	4.65	NO
L0002293	0	0.36232E-03	475141.2	3825840.7	891.4	5.00	4.65	4.65	NO
L0002294	0	0.36232E-03	475147.6	3825848.3	891.0	5.00	4.65	4.65	NO
L0002295	0	0.36232E-03	475154.1	3825856.0	890.7	5.00	4.65	4.65	NO
L0002296	0	0.36232E-03	475160.5	3825863.7	890.4	5.00	4.65	4.65	NO

L0002297		0	0.36232E-03	475166.9	3825871.4	890.7	5.00	
4.65	4.65	NO						
L0002298		0	0.36232E-03	475173.3	3825879.0	891.2	5.00	
4.65	4.65	NO						
L0002299		0	0.36232E-03	475179.7	3825886.7	890.9	5.00	
4.65	4.65	NO						
L0002300		0	0.36232E-03	475186.1	3825894.4	890.7	5.00	
4.65	4.65	NO						
L0002301		0	0.36232E-03	475192.5	3825902.1	890.5	5.00	
4.65	4.65	NO						
L0002302		0	0.36232E-03	475198.9	3825909.7	890.6	5.00	
4.65	4.65	NO						
L0002303		0	0.36232E-03	475205.4	3825917.4	891.0	5.00	
4.65	4.65	NO						
L0002304		0	0.36232E-03	475211.8	3825925.1	891.2	5.00	
4.65	4.65	NO						
L0002305		0	0.36232E-03	475218.2	3825932.8	890.8	5.00	
4.65	4.65	NO						
L0002306		0	0.36232E-03	475224.6	3825940.4	890.6	5.00	
4.65	4.65	NO						
L0002307		0	0.36232E-03	475231.0	3825948.1	890.8	5.00	
4.65	4.65	NO						
L0002308		0	0.36232E-03	475238.8	3825954.1	891.1	5.00	
4.65	4.65	NO						
L0002309		0	0.36232E-03	475247.4	3825959.2	891.7	5.00	
4.65	4.65	NO						
L0002310		0	0.36232E-03	475256.1	3825964.2	891.9	5.00	
4.65	4.65	NO						
L0002311		0	0.36232E-03	475264.7	3825969.3	891.8	5.00	
4.65	4.65	NO						
L0002312		0	0.36232E-03	475273.3	3825974.3	892.6	5.00	
4.65	4.65	NO						
L0002313		0	0.36232E-03	475282.0	3825979.3	893.2	5.00	
4.65	4.65	NO						
L0002314		0	0.36232E-03	475290.6	3825984.4	893.9	5.00	
4.65	4.65	NO						
L0002315		0	0.36232E-03	475299.3	3825989.4	894.2	5.00	
4.65	4.65	NO						
L0002316		0	0.36232E-03	475307.9	3825994.4	894.5	5.00	
4.65	4.65	NO						
L0002317		0	0.36232E-03	475316.5	3825999.5	894.1	5.00	
4.65	4.65	NO						
L0002318		0	0.36232E-03	475325.2	3826004.5	893.2	5.00	
4.65	4.65	NO						
L0002319		0	0.36232E-03	475333.8	3826009.5	893.0	5.00	
4.65	4.65	NO						
L0002320		0	0.36232E-03	475342.5	3826014.6	892.8	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002321	0	0.36232E-03	475351.1	3826019.6	892.0	5.00	4.65	4.65	NO
L0002322	0	0.36232E-03	475359.7	3826024.6	891.9	5.00	4.65	4.65	NO
L0002323	0	0.36232E-03	475368.4	3826029.7	892.2	5.00	4.65	4.65	NO
L0002324	0	0.36232E-03	475373.5	3826037.9	892.0	5.00	4.65	4.65	NO
L0002325	0	0.36232E-03	475377.7	3826047.0	892.9	5.00	4.65	4.65	NO
L0002326	0	0.36232E-03	475381.9	3826056.1	893.3	5.00	4.65	4.65	NO
L0002327	0	0.36232E-03	475386.0	3826065.2	892.8	5.00	4.65	4.65	NO
L0002328	0	0.36232E-03	475390.2	3826074.2	894.3	5.00	4.65	4.65	NO
L0002329	0	0.36232E-03	475394.4	3826083.3	894.4	5.00	4.65	4.65	NO
L0002330	0	0.36232E-03	475398.5	3826092.4	892.7	5.00	4.65	4.65	NO
L0002331	0	0.36232E-03	475402.7	3826101.5	892.9	5.00	4.65	4.65	NO
L0002332	0	0.36232E-03	475406.9	3826110.6	894.1	5.00	4.65	4.65	NO
L0002333	0	0.36232E-03	475411.0	3826119.7	894.4	5.00	4.65	4.65	NO
L0002334	0	0.36232E-03	475415.2	3826128.8	893.4	5.00	4.65	4.65	NO
L0002335	0	0.36232E-03	475419.4	3826137.9	891.7	5.00	4.65	4.65	NO
L0002336	0	0.36232E-03	475423.5	3826147.0	892.3	5.00	4.65	4.65	NO

L0002337		0	0.36232E-03	475427.7	3826156.1	890.4	5.00	
4.65	4.65	NO						
L0002338		0	0.36232E-03	475431.9	3826165.1	890.2	5.00	
4.65	4.65	NO						
L0002339		0	0.36232E-03	475436.0	3826174.2	888.5	5.00	
4.65	4.65	NO						
L0002340		0	0.36232E-03	475440.2	3826183.3	887.8	5.00	
4.65	4.65	NO						
L0002341		0	0.36232E-03	475449.0	3826184.8	887.9	5.00	
4.65	4.65	NO						
L0002342		0	0.36232E-03	475459.0	3826184.3	888.2	5.00	
4.65	4.65	NO						
L0002343		0	0.36232E-03	475469.0	3826183.8	888.6	5.00	
4.65	4.65	NO						
L0002344		0	0.36232E-03	475478.9	3826183.3	889.1	5.00	
4.65	4.65	NO						
L0002345		0	0.36232E-03	475488.9	3826182.8	889.3	5.00	
4.65	4.65	NO						
L0002346		0	0.36232E-03	475498.9	3826182.3	889.9	5.00	
4.65	4.65	NO						
L0002347		0	0.36232E-03	475508.9	3826181.8	890.9	5.00	
4.65	4.65	NO						
L0002348		0	0.36232E-03	475518.9	3826181.3	891.8	5.00	
4.65	4.65	NO						
L0002349		0	0.36232E-03	475528.9	3826180.8	893.2	5.00	
4.65	4.65	NO						
L0002350		0	0.36232E-03	475538.9	3826180.3	893.8	5.00	
4.65	4.65	NO						
L0002351		0	0.36232E-03	475548.9	3826179.8	894.9	5.00	
4.65	4.65	NO						
L0002352		0	0.36232E-03	475558.8	3826179.3	895.6	5.00	
4.65	4.65	NO						
L0002353		0	0.36232E-03	475568.8	3826178.8	896.2	5.00	
4.65	4.65	NO						
L0002354		0	0.36232E-03	475578.8	3826178.3	896.6	5.00	
4.65	4.65	NO						
L0002355		0	0.36232E-03	475588.8	3826177.8	896.9	5.00	
4.65	4.65	NO						
L0002356		0	0.36232E-03	475598.8	3826177.3	897.3	5.00	
4.65	4.65	NO						
L0002357		0	0.36232E-03	475608.8	3826176.7	897.5	5.00	
4.65	4.65	NO						
L0002358		0	0.36232E-03	475615.8	3826173.9	897.6	5.00	
4.65	4.65	NO						
L0002359		0	0.36232E-03	475614.2	3826164.0	898.0	5.00	
4.65	4.65	NO						
L0002360		0	0.36232E-03	475612.6	3826154.1	897.8	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002361	0	0.36232E-03	475610.9	3826144.3	897.1	5.00	4.65	4.65	NO
L0002362	0	0.36232E-03	475609.3	3826134.4	896.4	5.00	4.65	4.65	NO
L0002363	0	0.36232E-03	475607.7	3826124.5	895.0	5.00	4.65	4.65	NO
L0002364	0	0.36232E-03	475606.1	3826114.7	894.2	5.00	4.65	4.65	NO
L0002365	0	0.36232E-03	475604.4	3826104.8	893.8	5.00	4.65	4.65	NO
L0002366	0	0.36232E-03	475602.8	3826094.9	894.5	5.00	4.65	4.65	NO
L0002367	0	0.36232E-03	475594.7	3826092.7	895.4	5.00	4.65	4.65	NO
L0002368	0	0.36232E-03	475584.7	3826092.6	896.5	5.00	4.65	4.65	NO
L0002369	0	0.36232E-03	475574.7	3826092.5	896.9	5.00	4.65	4.65	NO
L0002370	0	0.36232E-03	475564.7	3826092.5	896.8	5.00	4.65	4.65	NO
L0002371	0	0.36232E-03	475554.7	3826092.4	895.3	5.00	4.65	4.65	NO
L0002372	0	0.36232E-03	475544.7	3826092.3	894.6	5.00	4.65	4.65	NO
L0002373	0	0.36232E-03	475534.7	3826092.3	895.6	5.00	4.65	4.65	NO
L0002374	0	0.36232E-03	475524.7	3826092.2	896.9	5.00	4.65	4.65	NO
L0002375	0	0.36232E-03	475514.7	3826092.1	897.2	5.00	4.65	4.65	NO
L0002376	0	0.36232E-03	475504.7	3826092.1	896.7	5.00	4.65	4.65	NO

L0002377		0	0.36232E-03	475494.7	3826092.0	895.3	5.00	
4.65	4.65	NO						
L0002378		0	0.36232E-03	475484.7	3826091.9	895.3	5.00	
4.65	4.65	NO						
L0002379		0	0.36232E-03	475474.7	3826091.9	896.3	5.00	
4.65	4.65	NO						
L0002380		0	0.36232E-03	475464.7	3826091.8	897.0	5.00	
4.65	4.65	NO						
L0002381		0	0.36232E-03	475459.2	3826086.7	896.5	5.00	
4.65	4.65	NO						
L0002382		0	0.36232E-03	475457.9	3826076.7	895.9	5.00	
4.65	4.65	NO						
L0002383		0	0.36232E-03	475456.7	3826066.8	896.6	5.00	
4.65	4.65	NO						
L0002384		0	0.36232E-03	475455.5	3826056.9	897.5	5.00	
4.65	4.65	NO						
L0002385		0	0.36232E-03	475454.3	3826047.0	897.8	5.00	
4.65	4.65	NO						
L0002386		0	0.36232E-03	475453.1	3826037.0	897.3	5.00	
4.65	4.65	NO						
L0002387		0	0.36232E-03	475451.9	3826027.1	896.1	5.00	
4.65	4.65	NO						
L0002388		0	0.36232E-03	475450.7	3826017.2	896.1	5.00	
4.65	4.65	NO						
L0002389		0	0.36232E-03	475449.5	3826007.3	895.8	5.00	
4.65	4.65	NO						
L0002390		0	0.36232E-03	475448.2	3825997.3	895.7	5.00	
4.65	4.65	NO						
L0002391		0	0.36232E-03	475447.0	3825987.4	896.8	5.00	
4.65	4.65	NO						
L0002392		0	0.36232E-03	475445.8	3825977.5	898.1	5.00	
4.65	4.65	NO						
L0002393		0	0.36232E-03	475444.6	3825967.6	898.2	5.00	
4.65	4.65	NO						
L0002394		0	0.36232E-03	475443.4	3825957.6	897.7	5.00	
4.65	4.65	NO						
L0002395		0	0.36232E-03	475442.2	3825947.7	897.9	5.00	
4.65	4.65	NO						
L0002396		0	0.36232E-03	475441.0	3825937.8	898.7	5.00	
4.65	4.65	NO						
L0002397		0	0.36232E-03	475439.8	3825927.9	899.1	5.00	
4.65	4.65	NO						
L0002398		0	0.36232E-03	475438.5	3825917.9	898.8	5.00	
4.65	4.65	NO						
L0002399		0	0.36232E-03	475437.3	3825908.0	898.7	5.00	
4.65	4.65	NO						
L0002400		0	0.36232E-03	475436.1	3825898.1	898.8	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002401	0	0.36232E-03	475434.9	3825888.1	899.1	5.00	4.65	4.65	NO
L0002402	0	0.36232E-03	475433.7	3825878.2	899.2	5.00	4.65	4.65	NO
L0002403	0	0.36232E-03	475432.5	3825868.3	899.4	5.00	4.65	4.65	NO
L0002404	0	0.36232E-03	475431.3	3825858.4	899.4	5.00	4.65	4.65	NO
L0002405	0	0.36232E-03	475430.1	3825848.4	899.6	5.00	4.65	4.65	NO
L0002406	0	0.36232E-03	475428.8	3825838.5	899.8	5.00	4.65	4.65	NO
L0002407	0	0.36232E-03	475422.9	3825833.9	899.8	5.00	4.65	4.65	NO
L0002408	0	0.36232E-03	475412.9	3825833.8	899.4	5.00	4.65	4.65	NO
L0002409	0	0.36232E-03	475402.9	3825833.7	899.1	5.00	4.65	4.65	NO
L0002410	0	0.36232E-03	475392.9	3825833.6	898.8	5.00	4.65	4.65	NO
L0002411	0	0.36232E-03	475382.9	3825833.5	898.5	5.00	4.65	4.65	NO
L0002412	0	0.36232E-03	475372.9	3825833.4	898.1	5.00	4.65	4.65	NO
L0002413	0	0.36232E-03	475362.9	3825833.3	897.7	5.00	4.65	4.65	NO
L0002414	0	0.36232E-03	475352.9	3825833.2	897.4	5.00	4.65	4.65	NO
L0002415	0	0.36232E-03	475342.9	3825833.1	897.1	5.00	4.65	4.65	NO
L0002416	0	0.36232E-03	475332.9	3825832.9	896.8	5.00	4.65	4.65	NO

L0002417		0	0.36232E-03	475322.9	3825832.8	896.5	5.00	
4.65	4.65	NO						
L0002418		0	0.36232E-03	475312.9	3825832.7	896.4	5.00	
4.65	4.65	NO						
L0002419		0	0.36232E-03	475302.9	3825832.6	896.0	5.00	
4.65	4.65	NO						
L0002420		0	0.36232E-03	475292.9	3825832.5	895.6	5.00	
4.65	4.65	NO						
L0002421		0	0.36232E-03	475282.9	3825832.4	895.3	5.00	
4.65	4.65	NO						
L0002422		0	0.36232E-03	475272.9	3825832.3	895.1	5.00	
4.65	4.65	NO						
L0002423		0	0.36232E-03	475262.9	3825832.2	894.8	5.00	
4.65	4.65	NO						
L0002424		0	0.36232E-03	475252.9	3825832.1	894.4	5.00	
4.65	4.65	NO						
L0002425		0	0.36232E-03	475242.9	3825832.0	894.0	5.00	
4.65	4.65	NO						
L0002426		0	0.36232E-03	475232.9	3825831.9	893.7	5.00	
4.65	4.65	NO						
L0002427		0	0.36232E-03	475222.9	3825831.8	893.5	5.00	
4.65	4.65	NO						
L0002428		0	0.36232E-03	475212.9	3825831.7	893.3	5.00	
4.65	4.65	NO						
L0002429		0	0.36232E-03	475202.9	3825831.5	893.2	5.00	
4.65	4.65	NO						
L0002430		0	0.36232E-03	475192.9	3825831.4	892.8	5.00	
4.65	4.65	NO						
L0002431		0	0.36232E-03	475182.9	3825831.3	892.1	5.00	
4.65	4.65	NO						
L0002432		0	0.36232E-03	475172.9	3825831.2	892.1	5.00	
4.65	4.65	NO						
L0002433		0	0.36232E-03	475162.9	3825831.1	892.3	5.00	
4.65	4.65	NO						
L0002434		0	0.36232E-03	475154.3	3825831.7	892.2	5.00	
4.65	4.65	NO						
L0002435		0	0.36232E-03	475160.7	3825839.5	891.6	5.00	
4.65	4.65	NO						
L0002436		0	0.36232E-03	475167.0	3825847.2	891.1	5.00	
4.65	4.65	NO						
L0002437		0	0.36232E-03	475173.3	3825854.9	891.2	5.00	
4.65	4.65	NO						
L0002438		0	0.36232E-03	475179.7	3825862.7	891.6	5.00	
4.65	4.65	NO						
L0002439		0	0.36232E-03	475186.0	3825870.4	891.8	5.00	
4.65	4.65	NO						
L0002440		0	0.36232E-03	475192.3	3825878.2	891.4	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002441	0	0.36232E-03	475198.6	3825885.9	891.2	5.00	4.65	4.65	NO
L0002442	0	0.36232E-03	475205.0	3825893.7	891.2	5.00	4.65	4.65	NO
L0002443	0	0.36232E-03	475211.3	3825901.4	891.2	5.00	4.65	4.65	NO
L0002444	0	0.36232E-03	475217.6	3825909.1	891.4	5.00	4.65	4.65	NO
L0002445	0	0.36232E-03	475224.0	3825916.9	891.7	5.00	4.65	4.65	NO
L0002446	0	0.36232E-03	475230.3	3825924.6	891.5	5.00	4.65	4.65	NO
L0002447	0	0.36232E-03	475236.6	3825932.4	891.2	5.00	4.65	4.65	NO
L0002448	0	0.36232E-03	475242.9	3825940.1	891.2	5.00	4.65	4.65	NO
L0002449	0	0.36232E-03	475250.5	3825946.3	891.5	5.00	4.65	4.65	NO
L0002450	0	0.36232E-03	475259.5	3825950.7	892.3	5.00	4.65	4.65	NO
L0002451	0	0.36232E-03	475268.5	3825955.1	892.4	5.00	4.65	4.65	NO
L0002452	0	0.36232E-03	475277.4	3825959.5	892.5	5.00	4.65	4.65	NO
L0002453	0	0.36232E-03	475286.4	3825963.9	892.8	5.00	4.65	4.65	NO
L0002454	0	0.36232E-03	475295.4	3825968.4	893.4	5.00	4.65	4.65	NO
L0002455	0	0.36232E-03	475304.4	3825972.8	894.2	5.00	4.65	4.65	NO
L0002456	0	0.36232E-03	475313.3	3825977.2	894.7	5.00	4.65	4.65	NO

L0002457		0	0.36232E-03	475322.3	3825981.6	895.1	5.00	
4.65	4.65	NO						
L0002458		0	0.36232E-03	475331.3	3825986.0	895.1	5.00	
4.65	4.65	NO						
L0002459		0	0.36232E-03	475340.2	3825990.5	895.0	5.00	
4.65	4.65	NO						
L0002460		0	0.36232E-03	475349.2	3825994.9	894.2	5.00	
4.65	4.65	NO						
L0002461		0	0.36232E-03	475358.2	3825999.3	893.4	5.00	
4.65	4.65	NO						
L0002462		0	0.36232E-03	475367.2	3826003.7	893.3	5.00	
4.65	4.65	NO						
L0002463		0	0.36232E-03	475376.1	3826008.1	893.5	5.00	
4.65	4.65	NO						
L0002464		0	0.36232E-03	475381.4	3826016.1	894.1	5.00	
4.65	4.65	NO						
L0002465		0	0.36232E-03	475385.7	3826025.2	893.1	5.00	
4.65	4.65	NO						
L0002466		0	0.36232E-03	475390.0	3826034.2	892.3	5.00	
4.65	4.65	NO						
L0002467		0	0.36232E-03	475394.2	3826043.3	894.1	5.00	
4.65	4.65	NO						
L0002468		0	0.36232E-03	475398.5	3826052.3	893.8	5.00	
4.65	4.65	NO						
L0002469		0	0.36232E-03	475402.8	3826061.4	894.3	5.00	
4.65	4.65	NO						
L0002470		0	0.36232E-03	475407.0	3826070.4	895.3	5.00	
4.65	4.65	NO						
L0002471		0	0.36232E-03	475411.3	3826079.4	895.2	5.00	
4.65	4.65	NO						
L0002472		0	0.36232E-03	475415.6	3826088.5	894.1	5.00	
4.65	4.65	NO						
L0002473		0	0.36232E-03	475419.9	3826097.5	893.6	5.00	
4.65	4.65	NO						
L0002474		0	0.36232E-03	475424.1	3826106.6	894.8	5.00	
4.65	4.65	NO						
L0002475		0	0.36232E-03	475428.4	3826115.6	894.8	5.00	
4.65	4.65	NO						
L0002476		0	0.36232E-03	475432.7	3826124.7	893.9	5.00	
4.65	4.65	NO						
L0002477		0	0.36232E-03	475436.9	3826133.7	893.9	5.00	
4.65	4.65	NO						
L0002478		0	0.36232E-03	475441.2	3826142.8	891.8	5.00	
4.65	4.65	NO						
L0002479		0	0.36232E-03	475445.5	3826151.8	891.4	5.00	
4.65	4.65	NO						
L0002480		0	0.36232E-03	475449.7	3826160.8	889.8	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002481	0	0.36232E-03	475455.5	3826167.4	888.7	5.00	4.65	4.65	NO
L0002482	0	0.36232E-03	475465.5	3826166.9	888.9	5.00	4.65	4.65	NO
L0002483	0	0.36232E-03	475475.5	3826166.4	889.1	5.00	4.65	4.65	NO
L0002484	0	0.36232E-03	475485.5	3826165.9	889.2	5.00	4.65	4.65	NO
L0002485	0	0.36232E-03	475495.5	3826165.4	889.7	5.00	4.65	4.65	NO
L0002486	0	0.36232E-03	475505.4	3826165.0	890.1	5.00	4.65	4.65	NO
L0002487	0	0.36232E-03	475515.4	3826164.5	890.4	5.00	4.65	4.65	NO
L0002488	0	0.36232E-03	475525.4	3826164.0	890.7	5.00	4.65	4.65	NO
L0002489	0	0.36232E-03	475535.4	3826163.5	891.8	5.00	4.65	4.65	NO
L0002490	0	0.36232E-03	475545.4	3826163.0	892.6	5.00	4.65	4.65	NO
L0002491	0	0.36232E-03	475555.4	3826162.5	893.4	5.00	4.65	4.65	NO
L0002492	0	0.36232E-03	475565.4	3826162.0	895.0	5.00	4.65	4.65	NO
L0002493	0	0.36232E-03	475575.4	3826161.6	895.7	5.00	4.65	4.65	NO
L0002494	0	0.36232E-03	475585.3	3826161.1	896.4	5.00	4.65	4.65	NO
L0002495	0	0.36232E-03	475594.4	3826159.9	897.0	5.00	4.65	4.65	NO
L0002496	0	0.36232E-03	475591.7	3826150.2	896.3	5.00	4.65	4.65	NO

L0002497		0	0.36232E-03	475589.1	3826140.6	895.1	5.00	
4.65	4.65	NO						
L0002498		0	0.36232E-03	475586.4	3826131.0	893.7	5.00	
4.65	4.65	NO						
L0002499		0	0.36232E-03	475583.8	3826121.3	892.9	5.00	
4.65	4.65	NO						
L0002500		0	0.36232E-03	475581.1	3826111.7	893.3	5.00	
4.65	4.65	NO						
L0002501		0	0.36232E-03	475572.1	3826110.5	894.1	5.00	
4.65	4.65	NO						
L0002502		0	0.36232E-03	475562.1	3826110.6	894.7	5.00	
4.65	4.65	NO						
L0002503		0	0.36232E-03	475552.1	3826110.7	894.5	5.00	
4.65	4.65	NO						
L0002504		0	0.36232E-03	475542.1	3826110.7	893.5	5.00	
4.65	4.65	NO						
L0002505		0	0.36232E-03	475532.1	3826110.8	893.9	5.00	
4.65	4.65	NO						
L0002506		0	0.36232E-03	475522.1	3826110.9	894.8	5.00	
4.65	4.65	NO						
L0002507		0	0.36232E-03	475512.1	3826111.0	894.9	5.00	
4.65	4.65	NO						
L0002508		0	0.36232E-03	475502.1	3826111.1	894.0	5.00	
4.65	4.65	NO						
L0002509		0	0.36232E-03	475492.1	3826111.1	894.4	5.00	
4.65	4.65	NO						
L0002510		0	0.36232E-03	475482.1	3826111.2	894.4	5.00	
4.65	4.65	NO						
L0002511		0	0.36232E-03	475472.1	3826111.3	893.9	5.00	
4.65	4.65	NO						
L0002512		0	0.36232E-03	475462.1	3826111.4	894.7	5.00	
4.65	4.65	NO						
L0002513		0	0.36232E-03	475452.1	3826111.4	896.2	5.00	
4.65	4.65	NO						
L0002514		0	0.36232E-03	475450.1	3826101.8	896.4	5.00	
4.65	4.65	NO						
L0002515		0	0.36232E-03	475448.3	3826091.9	895.9	5.00	
4.65	4.65	NO						
L0002516		0	0.36232E-03	475446.4	3826082.1	895.6	5.00	
4.65	4.65	NO						
L0002517		0	0.36232E-03	475444.6	3826072.3	896.2	5.00	
4.65	4.65	NO						
L0002518		0	0.36232E-03	475442.8	3826062.4	897.2	5.00	
4.65	4.65	NO						
L0002519		0	0.36232E-03	475440.9	3826052.6	897.2	5.00	
4.65	4.65	NO						
L0002520		0	0.36232E-03	475439.1	3826042.8	896.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	URBAN SOURCE	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
L0002521	0	0.36232E-03	475437.3	3826033.0	896.4	5.00		4.65	4.65	NO
L0002522	0	0.36232E-03	475435.5	3826023.1	895.0	5.00		4.65	4.65	NO
L0002523	0	0.36232E-03	475433.6	3826013.3	894.2	5.00		4.65	4.65	NO
L0002524	0	0.36232E-03	475431.8	3826003.5	894.8	5.00		4.65	4.65	NO
L0002525	0	0.36232E-03	475430.0	3825993.6	896.6	5.00		4.65	4.65	NO
L0002526	0	0.36232E-03	475428.1	3825983.8	897.6	5.00		4.65	4.65	NO
L0002527	0	0.36232E-03	475426.3	3825974.0	897.2	5.00		4.65	4.65	NO
L0002528	0	0.36232E-03	475424.5	3825964.1	896.4	5.00		4.65	4.65	NO
L0002529	0	0.36232E-03	475422.6	3825954.3	897.2	5.00		4.65	4.65	NO
L0002530	0	0.36232E-03	475420.8	3825944.5	898.1	5.00		4.65	4.65	NO
L0002531	0	0.36232E-03	475419.0	3825934.6	898.4	5.00		4.65	4.65	NO
L0002532	0	0.36232E-03	475417.1	3825924.8	898.0	5.00		4.65	4.65	NO
L0002533	0	0.36232E-03	475415.3	3825915.0	897.8	5.00		4.65	4.65	NO
L0002534	0	0.36232E-03	475413.5	3825905.2	897.9	5.00		4.65	4.65	NO
L0002535	0	0.36232E-03	475411.6	3825895.3	898.1	5.00		4.65	4.65	NO
L0002536	0	0.36232E-03	475409.8	3825885.5	898.2	5.00		4.65	4.65	NO

L0002537		0	0.36232E-03	475408.0	3825875.7	898.3	5.00	
4.65	4.65	NO						
L0002538		0	0.36232E-03	475406.1	3825865.8	898.4	5.00	
4.65	4.65	NO						
L0002539		0	0.36232E-03	475404.3	3825856.0	898.5	5.00	
4.65	4.65	NO						
L0002540		0	0.36232E-03	475397.1	3825852.5	898.3	5.00	
4.65	4.65	NO						
L0002541		0	0.36232E-03	475387.1	3825852.4	898.1	5.00	
4.65	4.65	NO						
L0002542		0	0.36232E-03	475377.1	3825852.2	897.8	5.00	
4.65	4.65	NO						
L0002543		0	0.36232E-03	475367.1	3825852.0	897.4	5.00	
4.65	4.65	NO						
L0002544		0	0.36232E-03	475357.1	3825851.8	897.0	5.00	
4.65	4.65	NO						
L0002545		0	0.36232E-03	475347.1	3825851.6	896.6	5.00	
4.65	4.65	NO						
L0002546		0	0.36232E-03	475337.1	3825851.4	896.4	5.00	
4.65	4.65	NO						
L0002547		0	0.36232E-03	475327.1	3825851.3	896.2	5.00	
4.65	4.65	NO						
L0002548		0	0.36232E-03	475317.1	3825851.1	895.9	5.00	
4.65	4.65	NO						
L0002549		0	0.36232E-03	475307.1	3825850.9	895.7	5.00	
4.65	4.65	NO						
L0002550		0	0.36232E-03	475297.1	3825850.7	895.3	5.00	
4.65	4.65	NO						
L0002551		0	0.36232E-03	475287.1	3825850.5	895.0	5.00	
4.65	4.65	NO						
L0002552		0	0.36232E-03	475277.1	3825850.4	894.7	5.00	
4.65	4.65	NO						
L0002553		0	0.36232E-03	475267.1	3825850.2	894.4	5.00	
4.65	4.65	NO						
L0002554		0	0.36232E-03	475257.1	3825850.0	894.2	5.00	
4.65	4.65	NO						
L0002555		0	0.36232E-03	475247.1	3825849.8	893.8	5.00	
4.65	4.65	NO						
L0002556		0	0.36232E-03	475237.1	3825849.6	893.4	5.00	
4.65	4.65	NO						
L0002557		0	0.36232E-03	475227.1	3825849.4	893.2	5.00	
4.65	4.65	NO						
L0002558		0	0.36232E-03	475217.1	3825849.3	892.9	5.00	
4.65	4.65	NO						
L0002559		0	0.36232E-03	475207.1	3825849.1	892.6	5.00	
4.65	4.65	NO						
L0002560		0	0.36232E-03	475197.1	3825848.9	892.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002561	0	0.36232E-03	475188.9	3825849.6	892.3	5.00	4.65	4.65	NO
L0002562	0	0.36232E-03	475195.1	3825857.4	892.3	5.00	4.65	4.65	NO
L0002563	0	0.36232E-03	475201.3	3825865.3	892.0	5.00	4.65	4.65	NO
L0002564	0	0.36232E-03	475207.5	3825873.1	891.9	5.00	4.65	4.65	NO
L0002565	0	0.36232E-03	475213.7	3825880.9	891.9	5.00	4.65	4.65	NO
L0002566	0	0.36232E-03	475220.0	3825888.8	891.8	5.00	4.65	4.65	NO
L0002567	0	0.36232E-03	475226.2	3825896.6	891.9	5.00	4.65	4.65	NO
L0002568	0	0.36232E-03	475232.4	3825904.4	892.1	5.00	4.65	4.65	NO
L0002569	0	0.36232E-03	475238.6	3825912.3	892.2	5.00	4.65	4.65	NO
L0002570	0	0.36232E-03	475244.8	3825920.1	891.8	5.00	4.65	4.65	NO
L0002571	0	0.36232E-03	475251.0	3825928.0	891.6	5.00	4.65	4.65	NO
L0002572	0	0.36232E-03	475259.7	3825932.5	891.8	5.00	4.65	4.65	NO
L0002573	0	0.36232E-03	475268.9	3825936.3	892.2	5.00	4.65	4.65	NO
L0002574	0	0.36232E-03	475278.2	3825940.2	892.7	5.00	4.65	4.65	NO
L0002575	0	0.36232E-03	475287.4	3825944.0	893.1	5.00	4.65	4.65	NO
L0002576	0	0.36232E-03	475296.7	3825947.8	893.4	5.00	4.65	4.65	NO

L0002577		0	0.36232E-03	475305.9	3825951.6	894.0	5.00	
4.65	4.65	NO						
L0002578		0	0.36232E-03	475315.1	3825955.5	894.2	5.00	
4.65	4.65	NO						
L0002579		0	0.36232E-03	475324.4	3825959.3	894.6	5.00	
4.65	4.65	NO						
L0002580		0	0.36232E-03	475333.6	3825963.1	895.2	5.00	
4.65	4.65	NO						
L0002581		0	0.36232E-03	475342.9	3825966.9	895.7	5.00	
4.65	4.65	NO						
L0002582		0	0.36232E-03	475352.1	3825970.7	895.9	5.00	
4.65	4.65	NO						
L0002583		0	0.36232E-03	475361.4	3825974.6	895.8	5.00	
4.65	4.65	NO						
L0002584		0	0.36232E-03	475370.6	3825978.4	895.5	5.00	
4.65	4.65	NO						
L0002585		0	0.36232E-03	475379.8	3825982.2	894.5	5.00	
4.65	4.65	NO						
L0002586		0	0.36232E-03	475385.8	3825989.5	894.2	5.00	
4.65	4.65	NO						
L0002587		0	0.36232E-03	475389.9	3825998.6	894.9	5.00	
4.65	4.65	NO						
L0002588		0	0.36232E-03	475394.1	3826007.6	895.2	5.00	
4.65	4.65	NO						
L0002589		0	0.36232E-03	475398.3	3826016.7	893.9	5.00	
4.65	4.65	NO						
L0002590		0	0.36232E-03	475402.5	3826025.8	893.0	5.00	
4.65	4.65	NO						
L0002591		0	0.36232E-03	475406.6	3826034.9	894.1	5.00	
4.65	4.65	NO						
L0002592		0	0.36232E-03	475410.8	3826044.0	894.8	5.00	
4.65	4.65	NO						
L0002593		0	0.36232E-03	475415.0	3826053.1	895.0	5.00	
4.65	4.65	NO						
L0002594		0	0.36232E-03	475419.2	3826062.2	895.8	5.00	
4.65	4.65	NO						
L0002595		0	0.36232E-03	475423.4	3826071.2	896.2	5.00	
4.65	4.65	NO						
L0002596		0	0.36232E-03	475427.5	3826080.3	895.5	5.00	
4.65	4.65	NO						
L0002597		0	0.36232E-03	475431.7	3826089.4	894.7	5.00	
4.65	4.65	NO						
L0002598		0	0.36232E-03	475435.9	3826098.5	895.3	5.00	
4.65	4.65	NO						
L0002599		0	0.36232E-03	475440.1	3826107.6	895.8	5.00	
4.65	4.65	NO						
L0002600		0	0.36232E-03	475444.2	3826116.7	895.6	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002601	0	0.36232E-03	475448.4	3826125.8	894.3	5.00	4.65	4.65	NO
L0002602	0	0.36232E-03	475452.6	3826134.8	892.3	5.00	4.65	4.65	NO
L0002603	0	0.36232E-03	475456.8	3826143.9	892.0	5.00	4.65	4.65	NO
L0002604	0	0.36232E-03	475461.0	3826153.0	890.8	5.00	4.65	4.65	NO
L0002605	0	0.36232E-03	475469.8	3826154.4	890.5	5.00	4.65	4.65	NO
L0002606	0	0.36232E-03	475479.8	3826154.1	890.0	5.00	4.65	4.65	NO
L0002607	0	0.36232E-03	475489.8	3826153.7	890.0	5.00	4.65	4.65	NO
L0002608	0	0.36232E-03	475499.8	3826153.3	890.3	5.00	4.65	4.65	NO
L0002609	0	0.36232E-03	475509.8	3826153.0	890.4	5.00	4.65	4.65	NO
L0002610	0	0.36232E-03	475519.8	3826152.6	890.7	5.00	4.65	4.65	NO
L0002611	0	0.36232E-03	475529.8	3826152.3	890.9	5.00	4.65	4.65	NO
L0002612	0	0.36232E-03	475539.8	3826151.9	891.2	5.00	4.65	4.65	NO
L0002613	0	0.36232E-03	475549.8	3826151.5	892.0	5.00	4.65	4.65	NO
L0002614	0	0.36232E-03	475559.8	3826151.2	892.9	5.00	4.65	4.65	NO
L0002615	0	0.36232E-03	475569.8	3826150.8	894.0	5.00	4.65	4.65	NO
L0002616	0	0.36232E-03	475567.1	3826141.4	892.8	5.00	4.65	4.65	NO

L0002617		0	0.36232E-03	475564.1	3826131.9	892.2	5.00	
4.65	4.65	NO						
L0002618		0	0.36232E-03	475559.1	3826125.5	892.1	5.00	
4.65	4.65	NO						
L0002619		0	0.36232E-03	475549.1	3826126.6	892.6	5.00	
4.65	4.65	NO						
L0002620		0	0.36232E-03	475545.8	3826132.2	891.9	5.00	
4.65	4.65	NO						
L0002621		0	0.36232E-03	475547.4	3826141.0	891.6	5.00	
4.65	4.65	NO						
L0002622		0	0.36232E-03	475537.5	3826141.9	891.2	5.00	
4.65	4.65	NO						
L0002623		0	0.36232E-03	475527.5	3826142.7	891.3	5.00	
4.65	4.65	NO						
L0002624		0	0.36232E-03	475522.4	3826136.1	891.6	5.00	
4.65	4.65	NO						
L0002625		0	0.36232E-03	475518.2	3826128.4	892.8	5.00	
4.65	4.65	NO						
L0002626		0	0.36232E-03	475508.2	3826129.7	892.6	5.00	
4.65	4.65	NO						
L0002627		0	0.36232E-03	475498.3	3826131.0	892.0	5.00	
4.65	4.65	NO						
L0002628		0	0.36232E-03	475497.8	3826139.9	891.2	5.00	
4.65	4.65	NO						
L0002629		0	0.36232E-03	475492.2	3826143.7	890.8	5.00	
4.65	4.65	NO						
L0002630		0	0.36232E-03	475482.2	3826143.3	890.9	5.00	
4.65	4.65	NO						
L0002631		0	0.36232E-03	475472.2	3826143.0	891.6	5.00	
4.65	4.65	NO						
L0002632		0	0.36232E-03	475470.1	3826134.5	892.6	5.00	
4.65	4.65	NO						
L0002633		0	0.36232E-03	475468.3	3826125.1	893.3	5.00	
4.65	4.65	NO						
L0002634		0	0.36232E-03	475460.6	3826118.8	893.7	5.00	
4.65	4.65	NO						
L0002635		0	0.36232E-03	475452.9	3826112.4	896.1	5.00	
4.65	4.65	NO						
L0002636		0	0.36232E-03	475445.1	3826106.1	896.3	5.00	
4.65	4.65	NO						
L0002637		0	0.36232E-03	475440.7	3826097.7	895.5	5.00	
4.65	4.65	NO						
L0002638		0	0.36232E-03	475438.4	3826088.0	894.9	5.00	
4.65	4.65	NO						
L0002639		0	0.36232E-03	475436.1	3826078.2	895.6	5.00	
4.65	4.65	NO						
L0002640		0	0.36232E-03	475433.7	3826068.5	896.6	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002641	0	0.36232E-03	475431.4	3826058.8	896.7	5.00	4.65	4.65	NO
L0002642	0	0.36232E-03	475429.1	3826049.1	896.1	5.00	4.65	4.65	NO
L0002643	0	0.36232E-03	475426.8	3826039.3	895.6	5.00	4.65	4.65	NO
L0002644	0	0.36232E-03	475424.5	3826029.6	895.2	5.00	4.65	4.65	NO
L0002645	0	0.36232E-03	475422.2	3826019.9	894.1	5.00	4.65	4.65	NO
L0002646	0	0.36232E-03	475419.9	3826010.1	894.3	5.00	4.65	4.65	NO
L0002647	0	0.36232E-03	475417.6	3826000.4	895.5	5.00	4.65	4.65	NO
L0002648	0	0.36232E-03	475415.3	3825990.7	896.8	5.00	4.65	4.65	NO
L0002649	0	0.36232E-03	475412.9	3825981.0	896.0	5.00	4.65	4.65	NO
L0002650	0	0.36232E-03	475410.6	3825971.2	895.6	5.00	4.65	4.65	NO
L0002651	0	0.36232E-03	475408.3	3825961.5	896.5	5.00	4.65	4.65	NO
L0002652	0	0.36232E-03	475406.0	3825951.8	897.6	5.00	4.65	4.65	NO
L0002653	0	0.36232E-03	475403.7	3825942.0	898.0	5.00	4.65	4.65	NO
L0002654	0	0.36232E-03	475401.4	3825932.3	897.6	5.00	4.65	4.65	NO
L0002655	0	0.36232E-03	475399.1	3825922.6	896.9	5.00	4.65	4.65	NO
L0002656	0	0.36232E-03	475396.8	3825912.8	897.1	5.00	4.65	4.65	NO

L0002657		0	0.36232E-03	475394.5	3825903.1	897.3	5.00	
4.65	4.65	NO						
L0002658		0	0.36232E-03	475392.2	3825893.4	897.4	5.00	
4.65	4.65	NO						
L0002659		0	0.36232E-03	475389.8	3825883.7	897.5	5.00	
4.65	4.65	NO						
L0002660		0	0.36232E-03	475387.5	3825873.9	897.5	5.00	
4.65	4.65	NO						
L0002661		0	0.36232E-03	475382.7	3825867.3	897.6	5.00	
4.65	4.65	NO						
L0002662		0	0.36232E-03	475372.7	3825867.1	897.1	5.00	
4.65	4.65	NO						
L0002663		0	0.36232E-03	475362.7	3825866.9	896.8	5.00	
4.65	4.65	NO						
L0002664		0	0.36232E-03	475352.7	3825866.6	896.4	5.00	
4.65	4.65	NO						
L0002665		0	0.36232E-03	475342.7	3825866.4	896.0	5.00	
4.65	4.65	NO						
L0002666		0	0.36232E-03	475332.7	3825866.2	896.0	5.00	
4.65	4.65	NO						
L0002667		0	0.36232E-03	475322.7	3825866.0	895.7	5.00	
4.65	4.65	NO						
L0002668		0	0.36232E-03	475312.7	3825865.7	895.3	5.00	
4.65	4.65	NO						
L0002669		0	0.36232E-03	475302.7	3825865.5	895.0	5.00	
4.65	4.65	NO						
L0002670		0	0.36232E-03	475292.7	3825865.3	894.8	5.00	
4.65	4.65	NO						
L0002671		0	0.36232E-03	475282.7	3825865.0	894.6	5.00	
4.65	4.65	NO						
L0002672		0	0.36232E-03	475272.7	3825864.8	894.2	5.00	
4.65	4.65	NO						
L0002673		0	0.36232E-03	475262.7	3825864.6	893.9	5.00	
4.65	4.65	NO						
L0002674		0	0.36232E-03	475252.7	3825864.3	893.7	5.00	
4.65	4.65	NO						
L0002675		0	0.36232E-03	475242.7	3825864.1	893.3	5.00	
4.65	4.65	NO						
L0002676		0	0.36232E-03	475232.7	3825863.9	893.0	5.00	
4.65	4.65	NO						
L0002677		0	0.36232E-03	475222.7	3825863.6	892.6	5.00	
4.65	4.65	NO						
L0002678		0	0.36232E-03	475219.3	3825866.6	892.4	5.00	
4.65	4.65	NO						
L0002679		0	0.36232E-03	475225.6	3825874.4	892.4	5.00	
4.65	4.65	NO						
L0002680		0	0.36232E-03	475232.0	3825882.1	892.5	5.00	
4.65	4.65	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002681	0	0.36232E-03	475238.3	3825889.8	892.6	5.00	4.65	4.65	NO
L0002682	0	0.36232E-03	475244.6	3825897.6	892.6	5.00	4.65	4.65	NO
L0002683	0	0.36232E-03	475251.0	3825905.3	892.6	5.00	4.65	4.65	NO
L0002684	0	0.36232E-03	475257.3	3825913.0	892.3	5.00	4.65	4.65	NO
L0002685	0	0.36232E-03	475264.8	3825919.1	892.2	5.00	4.65	4.65	NO
L0002686	0	0.36232E-03	475274.1	3825922.8	892.4	5.00	4.65	4.65	NO
L0002687	0	0.36232E-03	475283.4	3825926.6	892.6	5.00	4.65	4.65	NO
L0002688	0	0.36232E-03	475292.7	3825930.3	893.0	5.00	4.65	4.65	NO
L0002689	0	0.36232E-03	475302.0	3825934.0	893.4	5.00	4.65	4.65	NO
L0002690	0	0.36232E-03	475311.3	3825937.7	893.7	5.00	4.65	4.65	NO
L0002691	0	0.36232E-03	475320.6	3825941.4	894.0	5.00	4.65	4.65	NO
L0002692	0	0.36232E-03	475329.8	3825945.1	894.5	5.00	4.65	4.65	NO
L0002693	0	0.36232E-03	475339.1	3825948.8	895.0	5.00	4.65	4.65	NO
L0002694	0	0.36232E-03	475348.4	3825952.6	895.4	5.00	4.65	4.65	NO
L0002695	0	0.36232E-03	475357.7	3825956.3	896.1	5.00	4.65	4.65	NO
L0002696	0	0.36232E-03	475367.0	3825960.0	896.5	5.00	4.65	4.65	NO

L0002697		0	0.36232E-03	475376.7	3825959.7	896.7	5.00	
4.65	4.65	NO						
L0002698		0	0.36232E-03	475386.6	3825958.1	896.5	5.00	
4.65	4.65	NO						
L0002699		0	0.36232E-03	475392.9	3825954.5	896.8	5.00	
4.65	4.65	NO						
L0002700		0	0.36232E-03	475389.4	3825945.1	897.3	5.00	
4.65	4.65	NO						
L0002701		0	0.36232E-03	475385.9	3825935.8	896.9	5.00	
4.65	4.65	NO						
L0002702		0	0.36232E-03	475382.4	3825926.4	896.6	5.00	
4.65	4.65	NO						
L0002703		0	0.36232E-03	475378.9	3825917.0	896.5	5.00	
4.65	4.65	NO						
L0002704		0	0.36232E-03	475375.4	3825907.7	896.4	5.00	
4.65	4.65	NO						
L0002705		0	0.36232E-03	475371.9	3825898.3	896.5	5.00	
4.65	4.65	NO						
L0002706		0	0.36232E-03	475368.4	3825888.9	896.6	5.00	
4.65	4.65	NO						
L0002707		0	0.36232E-03	475364.8	3825879.6	896.6	5.00	
4.65	4.65	NO						
L0002708		0	0.36232E-03	475355.8	3825878.1	896.3	5.00	
4.65	4.65	NO						
L0002709		0	0.36232E-03	475345.8	3825877.9	895.8	5.00	
4.65	4.65	NO						
L0002710		0	0.36232E-03	475335.8	3825877.8	895.5	5.00	
4.65	4.65	NO						
L0002711		0	0.36232E-03	475325.8	3825877.6	895.2	5.00	
4.65	4.65	NO						
L0002712		0	0.36232E-03	475315.8	3825877.4	895.1	5.00	
4.65	4.65	NO						
L0002713		0	0.36232E-03	475305.8	3825877.3	894.7	5.00	
4.65	4.65	NO						
L0002714		0	0.36232E-03	475295.8	3825877.1	894.5	5.00	
4.65	4.65	NO						
L0002715		0	0.36232E-03	475285.8	3825876.9	894.2	5.00	
4.65	4.65	NO						
L0002716		0	0.36232E-03	475275.8	3825876.8	894.0	5.00	
4.65	4.65	NO						
L0002717		0	0.36232E-03	475265.8	3825876.6	893.7	5.00	
4.65	4.65	NO						
L0002718		0	0.36232E-03	475255.8	3825876.4	893.4	5.00	
4.65	4.65	NO						
L0002719		0	0.36232E-03	475246.6	3825876.6	893.1	5.00	
4.65	4.65	NO						
L0002720		0	0.36232E-03	475253.5	3825883.8	893.2	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002721	0	0.36232E-03	475260.5	3825891.0	893.3	5.00	4.65	4.65	NO
L0002722	0	0.36232E-03	475267.4	3825898.2	893.1	5.00	4.65	4.65	NO
L0002723	0	0.36232E-03	475275.1	3825904.4	893.0	5.00	4.65	4.65	NO
L0002724	0	0.36232E-03	475284.1	3825908.7	893.0	5.00	4.65	4.65	NO
L0002725	0	0.36232E-03	475293.2	3825912.9	893.2	5.00	4.65	4.65	NO
L0002726	0	0.36232E-03	475302.2	3825917.2	893.5	5.00	4.65	4.65	NO
L0002727	0	0.36232E-03	475311.3	3825921.5	893.7	5.00	4.65	4.65	NO
L0002728	0	0.36232E-03	475320.3	3825925.8	894.1	5.00	4.65	4.65	NO
L0002729	0	0.36232E-03	475329.3	3825930.0	894.3	5.00	4.65	4.65	NO
L0002730	0	0.36232E-03	475338.4	3825934.3	894.8	5.00	4.65	4.65	NO
L0002731	0	0.36232E-03	475347.4	3825938.6	895.3	5.00	4.65	4.65	NO
L0002732	0	0.36232E-03	475356.5	3825942.9	895.8	5.00	4.65	4.65	NO
L0002733	0	0.36232E-03	475365.7	3825945.7	896.3	5.00	4.65	4.65	NO
L0002734	0	0.36232E-03	475373.6	3825942.9	896.7	5.00	4.65	4.65	NO
L0002735	0	0.36232E-03	475369.6	3825933.8	896.1	5.00	4.65	4.65	NO
L0002736	0	0.36232E-03	475365.5	3825924.6	895.9	5.00	4.65	4.65	NO

L0002737		0	0.36232E-03	475361.4	3825915.5	895.8	5.00	
4.65	4.65	NO						
L0002738		0	0.36232E-03	475357.4	3825906.4	895.8	5.00	
4.65	4.65	NO						
L0002739		0	0.36232E-03	475353.3	3825897.2	895.9	5.00	
4.65	4.65	NO						
L0002740		0	0.36232E-03	475347.3	3825891.0	895.7	5.00	
4.65	4.65	NO						
L0002741		0	0.36232E-03	475337.3	3825890.9	895.3	5.00	
4.65	4.65	NO						
L0002742		0	0.36232E-03	475327.3	3825890.7	894.9	5.00	
4.65	4.65	NO						
L0002743		0	0.36232E-03	475317.3	3825890.6	894.6	5.00	
4.65	4.65	NO						
L0002744		0	0.36232E-03	475307.3	3825890.5	894.3	5.00	
4.65	4.65	NO						
L0002745		0	0.36232E-03	475297.3	3825890.3	894.1	5.00	
4.65	4.65	NO						
L0002746		0	0.36232E-03	475287.3	3825890.2	893.8	5.00	
4.65	4.65	NO						
L0002747		0	0.36232E-03	475278.1	3825890.2	893.5	5.00	
4.65	4.65	NO						
L0002748		0	0.36232E-03	475287.0	3825894.9	893.6	5.00	
4.65	4.65	NO						
L0002749		0	0.36232E-03	475295.9	3825899.5	893.7	5.00	
4.65	4.65	NO						
L0002750		0	0.36232E-03	475304.7	3825904.1	893.9	5.00	
4.65	4.65	NO						
L0002751		0	0.36232E-03	475313.6	3825908.7	894.3	5.00	
4.65	4.65	NO						
L0002752		0	0.36232E-03	475322.5	3825913.3	894.5	5.00	
4.65	4.65	NO						
L0002753		0	0.36232E-03	475331.4	3825917.9	894.6	5.00	
4.65	4.65	NO						
L0002754		0	0.36232E-03	475340.2	3825922.5	894.7	5.00	
4.65	4.65	NO						
L0002755		0	0.36232E-03	475349.1	3825927.2	895.2	5.00	
4.65	4.65	NO						
L0002756		0	0.36232E-03	475348.6	3825921.8	895.2	5.00	
4.65	4.65	NO						
L0002757		0	0.36232E-03	475344.5	3825912.7	895.1	5.00	
4.65	4.65	NO						
L0002758		0	0.36232E-03	475340.4	3825903.6	895.5	5.00	
4.65	4.65	NO						
L0002759		0	0.36232E-03	475332.8	3825899.9	895.3	5.00	
4.65	4.65	NO						
L0002760		0	0.36232E-03	475322.8	3825899.9	894.7	5.00	
4.65	4.65	NO						

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 ,
	L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 ,
	L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 ,
	L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 ,
	L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 ,
	L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,
	L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 , L0000056 ,
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L0000141    , L0000142    , L0000143    , L0000144    ,

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L0000149    , L0000150    , L0000151    , L0000152    ,

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0000329 , L0000330 , L0000331 , L0000332 , L0000333 , L0000334 , L0000335 , L0000336 ,
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	L0000345 , L0000346 , L0000347 , L0000348 , L0000349 , L0000350 , L0000351 , L0000352 ,
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	L0000401 , L0000402 , L0000403 , L0000404 , L0000405 , L0000406 , L0000407 , L0000408 ,
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L0000473 , L0000474 , L0000475 , L0000476 ,
L0000477 , L0000478 , L0000479 , L0000480 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0000505 , L0000506 , L0000507 , L0000508 , L0000509 , L0000510 , L0000511 , L0000512 ,
	L0000513 , L0000514 , L0000515 , L0000516 , L0000517 , L0000518 , L0000519 , L0000520 ,
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0000673 , L0000674 , L0000675 , L0000676 , L0000677 , L0000678 , L0000679 , L0000680 ,
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	L0000721 , L0000722 , L0000723 , L0000724 , L0000725 , L0000726 , L0000727 , L0000728 ,
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L0000741 , L0000742 , L0000743 , L0000744 ,

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0000817 , L0000818 , L0000819 , L0000820 , L0000821 , L0000822 , L0000823 , L0000824 ,
	L0000825 , L0000826 , L0000827 , L0000828 , L0000829 , L0000830 , L0000831 , L0000832 ,
	L0000833 , L0000834 , L0000835 , L0000836 , L0000837 , L0000838 , L0000839 , L0000840 ,
	L0000841 , L0000842 , L0000843 , L0000844 , L0000845 , L0000846 , L0000847 , L0000848 ,
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L0000957 , L0000958 , L0000959 , L0000960 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0001041 , L0001042 , L0001043 , L0001044 , L0001045 , L0001046 , L0001047 , L0001048 ,
	L0001049 , L0001050 , L0001051 , L0001052 , L0001053 , L0001054 , L0001055 , L0001056 ,

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L0001093    , L0001094    , L0001095    , L0001096    ,

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L0001101    , L0001102    , L0001103    , L0001104    ,

             L0001105    , L0001106    , L0001107    , L0001108    ,
L0001109    , L0001110    , L0001111    , L0001112    ,

             L0001113    , L0001114    , L0001115    , L0001116    ,
L0001117    , L0001118    , L0001119    , L0001120    ,
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0001153 , L0001154 , L0001155 , L0001156 , L0001157 , L0001158 , L0001159 , L0001160 ,
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	L0001169 , L0001170 , L0001171 , L0001172 , L0001173 , L0001174 , L0001175 , L0001176 ,
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	L0001185 , L0001186 , L0001187 , L0001188 , L0001189 , L0001190 , L0001191 , L0001192 ,
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0001305 , L0001306 , L0001307 , L0001308 , L0001309 , L0001310 , L0001311 , L0001312 ,
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0001625 , L0001626 , L0001627 , L0001628 , L0001629 , L0001630 , L0001631 , L0001632 ,
	L0001633 , L0001634 , L0001635 , L0001636 , L0001637 , L0001638 , L0001639 , L0001640 ,
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0001817 , L0001818 , L0001819 , L0001820 , L0001821 , L0001822 , L0001823 , L0001824 ,
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0002161 , L0002162 , L0002163 , L0002164 , L0002165 , L0002166 , L0002167 , L0002168 ,
	L0002169 , L0002170 , L0002171 , L0002172 , L0002173 , L0002174 , L0002175 , L0002176 ,

L0002177 , L0002178 , L0002179 , L0002180 ,
L0002181 , L0002182 , L0002183 , L0002184 ,

L0002185 , L0002186 , L0002187 , L0002188 ,
L0002189 , L0002190 , L0002191 , L0002192 ,

L0002193 , L0002194 , L0002195 , L0002196 ,
L0002197 , L0002198 , L0002199 , L0002200 ,

L0002201 , L0002202 , L0002203 , L0002204 ,
L0002205 , L0002206 , L0002207 , L0002208 ,

L0002209 , L0002210 , L0002211 , L0002212 ,
L0002213 , L0002214 , L0002215 , L0002216 ,

L0002217 , L0002218 , L0002219 , L0002220 ,
L0002221 , L0002222 , L0002223 , L0002224 ,

L0002225 , L0002226 , L0002227 , L0002228 ,
L0002229 , L0002230 , L0002231 , L0002232 ,

L0002233 , L0002234 , L0002235 , L0002236 ,
L0002237 , L0002238 , L0002239 , L0002240 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002241 , L0002242 , L0002243 , L0002244 , L0002245 , L0002246 , L0002247 , L0002248 ,
	L0002249 , L0002250 , L0002251 , L0002252 , L0002253 , L0002254 , L0002255 , L0002256 ,
	L0002257 , L0002258 , L0002259 , L0002260 , L0002261 , L0002262 , L0002263 , L0002264 ,
	L0002265 , L0002266 , L0002267 , L0002268 , L0002269 , L0002270 , L0002271 , L0002272 ,
	L0002273 , L0002274 , L0002275 , L0002276 , L0002277 , L0002278 , L0002279 , L0002280 ,
	L0002281 , L0002282 , L0002283 , L0002284 , L0002285 , L0002286 , L0002287 , L0002288 ,
	L0002289 , L0002290 , L0002291 , L0002292 , L0002293 , L0002294 , L0002295 , L0002296 ,
	L0002297 , L0002298 , L0002299 , L0002300 , L0002301 , L0002302 , L0002303 , L0002304 ,
	L0002305 , L0002306 , L0002307 , L0002308 , L0002309 , L0002310 , L0002311 , L0002312 ,
	L0002313 , L0002314 , L0002315 , L0002316 , L0002317 , L0002318 , L0002319 , L0002320 ,
	L0002321 , L0002322 , L0002323 , L0002324 , L0002325 , L0002326 , L0002327 , L0002328 ,
	L0002329 , L0002330 , L0002331 , L0002332 , L0002333 , L0002334 , L0002335 , L0002336 ,

L0002337 , L0002338 , L0002339 , L0002340 ,
L0002341 , L0002342 , L0002343 , L0002344 ,

L0002345 , L0002346 , L0002347 , L0002348 ,
L0002349 , L0002350 , L0002351 , L0002352 ,

L0002353 , L0002354 , L0002355 , L0002356 ,
L0002357 , L0002358 , L0002359 , L0002360 ,

L0002361 , L0002362 , L0002363 , L0002364 ,
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L0002369 , L0002370 , L0002371 , L0002372 ,
L0002373 , L0002374 , L0002375 , L0002376 ,

L0002377 , L0002378 , L0002379 , L0002380 ,
L0002381 , L0002382 , L0002383 , L0002384 ,

L0002385 , L0002386 , L0002387 , L0002388 ,
L0002389 , L0002390 , L0002391 , L0002392 ,

L0002393 , L0002394 , L0002395 , L0002396 ,
L0002397 , L0002398 , L0002399 , L0002400 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002401 , L0002402 , L0002403 , L0002404 , L0002405 , L0002406 , L0002407 , L0002408 ,
	L0002409 , L0002410 , L0002411 , L0002412 , L0002413 , L0002414 , L0002415 , L0002416 ,
	L0002417 , L0002418 , L0002419 , L0002420 , L0002421 , L0002422 , L0002423 , L0002424 ,
	L0002425 , L0002426 , L0002427 , L0002428 , L0002429 , L0002430 , L0002431 , L0002432 ,
	L0002433 , L0002434 , L0002435 , L0002436 , L0002437 , L0002438 , L0002439 , L0002440 ,
	L0002441 , L0002442 , L0002443 , L0002444 , L0002445 , L0002446 , L0002447 , L0002448 ,
	L0002449 , L0002450 , L0002451 , L0002452 , L0002453 , L0002454 , L0002455 , L0002456 ,
	L0002457 , L0002458 , L0002459 , L0002460 , L0002461 , L0002462 , L0002463 , L0002464 ,
	L0002465 , L0002466 , L0002467 , L0002468 , L0002469 , L0002470 , L0002471 , L0002472 ,
	L0002473 , L0002474 , L0002475 , L0002476 , L0002477 , L0002478 , L0002479 , L0002480 ,
	L0002481 , L0002482 , L0002483 , L0002484 , L0002485 , L0002486 , L0002487 , L0002488 ,
	L0002489 , L0002490 , L0002491 , L0002492 , L0002493 , L0002494 , L0002495 , L0002496 ,

L0002497 , L0002498 , L0002499 , L0002500 ,
L0002501 , L0002502 , L0002503 , L0002504 ,

L0002505 , L0002506 , L0002507 , L0002508 ,
L0002509 , L0002510 , L0002511 , L0002512 ,

L0002513 , L0002514 , L0002515 , L0002516 ,
L0002517 , L0002518 , L0002519 , L0002520 ,

L0002521 , L0002522 , L0002523 , L0002524 ,
L0002525 , L0002526 , L0002527 , L0002528 ,

L0002529 , L0002530 , L0002531 , L0002532 ,
L0002533 , L0002534 , L0002535 , L0002536 ,

L0002537 , L0002538 , L0002539 , L0002540 ,
L0002541 , L0002542 , L0002543 , L0002544 ,

L0002545 , L0002546 , L0002547 , L0002548 ,
L0002549 , L0002550 , L0002551 , L0002552 ,

L0002553 , L0002554 , L0002555 , L0002556 ,
L0002557 , L0002558 , L0002559 , L0002560 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002561 , L0002562 , L0002563 , L0002564 , L0002565 , L0002566 , L0002567 , L0002568 ,
	L0002569 , L0002570 , L0002571 , L0002572 , L0002573 , L0002574 , L0002575 , L0002576 ,
	L0002577 , L0002578 , L0002579 , L0002580 , L0002581 , L0002582 , L0002583 , L0002584 ,
	L0002585 , L0002586 , L0002587 , L0002588 , L0002589 , L0002590 , L0002591 , L0002592 ,
	L0002593 , L0002594 , L0002595 , L0002596 , L0002597 , L0002598 , L0002599 , L0002600 ,
	L0002601 , L0002602 , L0002603 , L0002604 , L0002605 , L0002606 , L0002607 , L0002608 ,
	L0002609 , L0002610 , L0002611 , L0002612 , L0002613 , L0002614 , L0002615 , L0002616 ,
	L0002617 , L0002618 , L0002619 , L0002620 , L0002621 , L0002622 , L0002623 , L0002624 ,
	L0002625 , L0002626 , L0002627 , L0002628 , L0002629 , L0002630 , L0002631 , L0002632 ,
	L0002633 , L0002634 , L0002635 , L0002636 , L0002637 , L0002638 , L0002639 , L0002640 ,
	L0002641 , L0002642 , L0002643 , L0002644 , L0002645 , L0002646 , L0002647 , L0002648 ,
	L0002649 , L0002650 , L0002651 , L0002652 , L0002653 , L0002654 , L0002655 , L0002656 ,

L0002657 , L0002658 , L0002659 , L0002660 ,
L0002661 , L0002662 , L0002663 , L0002664 ,

L0002665 , L0002666 , L0002667 , L0002668 ,
L0002669 , L0002670 , L0002671 , L0002672 ,

L0002673 , L0002674 , L0002675 , L0002676 ,
L0002677 , L0002678 , L0002679 , L0002680 ,

L0002681 , L0002682 , L0002683 , L0002684 ,
L0002685 , L0002686 , L0002687 , L0002688 ,

L0002689 , L0002690 , L0002691 , L0002692 ,
L0002693 , L0002694 , L0002695 , L0002696 ,

L0002697 , L0002698 , L0002699 , L0002700 ,
L0002701 , L0002702 , L0002703 , L0002704 ,

L0002705 , L0002706 , L0002707 , L0002708 ,
L0002709 , L0002710 , L0002711 , L0002712 ,

L0002713 , L0002714 , L0002715 , L0002716 ,
L0002717 , L0002718 , L0002719 , L0002720 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002721 , L0002722 , L0002723 , L0002724 , L0002725 , L0002726 , L0002727 , L0002728 ,
	L0002729 , L0002730 , L0002731 , L0002732 , L0002733 , L0002734 , L0002735 , L0002736 ,
	L0002737 , L0002738 , L0002739 , L0002740 , L0002741 , L0002742 , L0002743 , L0002744 ,
	L0002745 , L0002746 , L0002747 , L0002748 , L0002749 , L0002750 , L0002751 , L0002752 ,
	L0002753 , L0002754 , L0002755 , L0002756 , L0002757 , L0002758 , L0002759 , L0002760 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(473454.8, 3825060.1, 853.0, 1379.8, 0.0); (473496.2, 3825039.1, 852.7, 1379.8, 0.0);
(473472.2, 3825010.8, 851.8, 1379.8, 0.0); (473515.8, 3824987.5, 851.8, 1379.8, 0.0);
(473547.0, 3824962.9, 852.4, 1379.8, 0.0); (473593.4, 3824860.5, 849.5, 1379.8, 0.0);
(473626.8, 3824854.0, 850.2, 1379.8, 0.0); (473652.2, 3824861.3, 851.2, 1379.8, 0.0);
(473691.4, 3824863.4, 852.4, 1379.8, 0.0); (473710.2, 3824860.5, 853.5, 1379.8, 0.0);
(473711.0, 3824814.1, 852.6, 1379.8, 0.0); (473703.0, 3824830.8, 852.7, 1379.8, 0.0);
(473734.2, 3824759.7, 851.8, 1379.8, 0.0); (473731.3, 3824716.9, 852.1, 1379.8, 0.0);
(473730.5, 3824672.6, 851.5, 1379.8, 0.0); (473695.0, 3824608.8, 850.3, 1378.9, 0.0);
(473660.2, 3824617.5, 849.3, 1379.8, 0.0); (473651.5, 3824664.6, 849.2, 1379.8, 0.0);
(473660.2, 3824722.7, 850.3, 1379.8, 0.0); (473648.5, 3824756.1, 850.5, 1379.8, 0.0);
(473460.6, 3824880.9, 847.8, 1379.8, 0.0); (473502.7, 3824916.4, 849.9, 1379.8, 0.0);
(473523.0, 3824933.8, 851.2, 1379.8, 0.0); (473507.8, 3824861.3, 848.0, 1379.8, 0.0);
(473535.3, 3824865.6, 847.9, 1379.8, 0.0); (473537.5, 3824812.7, 847.2, 1379.8, 0.0);
(473435.9, 3825035.4, 852.0, 1379.8, 0.0); (473489.6, 3824967.2, 850.4, 1379.8, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

```
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
Met Version: 19191
Profile file: KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 23161 Upper air station no.:
3120
Name: DAGGETT/FAA_AIRPORT Name:
UNKNOWN
Year: 2015 Year:
2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-24.9	0.256	-9.000	-9.000	-999.	311.	72.1	0.02	4.18	1.00	4.27	251.	10.0	272.5	2.0
15	01	01	1	02	-24.3	0.250	-9.000	-9.000	-999.	300.	68.6	0.02	4.18	1.00	4.17	240.	10.0	272.5	2.0
15	01	01	1	03	-28.4	0.292	-9.000	-9.000	-999.	379.	94.0	0.02	4.18	1.00	4.85	255.	10.0	273.1	2.0
15	01	01	1	04	-26.1	0.266	-9.000	-9.000	-999.	329.	77.8	0.02	4.18	1.00	4.51	274.	10.0	270.4	2.0
15	01	01	1	05	-32.2	0.328	-9.000	-9.000	-999.	450.	118.0	0.02	4.18	1.00	5.51	275.	10.0	270.4	2.0
15	01	01	1	06	-34.9	0.355	-9.000	-9.000	-999.	507.	138.4	0.02	4.18	1.00	5.84	252.	10.0	270.4	2.0
15	01	01	1	07	-34.8	0.355	-9.000	-9.000	-999.	508.	138.9	0.02	4.18	1.00	5.85	251.	10.0	271.4	2.0
15	01	01	1	08	-19.3	0.250	-9.000	-9.000	-999.	306.	68.6	0.02	4.18	0.57	4.15	266.	10.0	270.9	2.0
15	01	01	1	09	31.4	0.236	0.499	0.005	134.	276.	-35.7	0.02	4.18	0.36	3.40	255.	10.0	273.1	2.0
15	01	01	1	10	103.0	0.183	1.101	0.005	441.	188.	-5.0	0.02	4.18	0.29	2.15	300.	10.0	277.0	2.0
15	01	01	1	11	152.0	0.131	1.445	0.005	675.	114.	-1.3	0.04	4.18	0.26	1.08	230.	10.0	278.8	2.0
15	01	01	1	12	175.1	0.131	2.058	0.006	1692.	114.	-1.1	0.02	4.18	0.25	1.31	109.	10.0	280.4	2.0

```
 15 01 01   1 13  171.2  0.143  2.108  0.011 1860.  130.     -1.4  0.01
4.18   0.26    1.55   35.   10.0  281.4    2.0
 15 01 01   1 14  140.5  0.177  1.982  0.011 1882.  179.     -3.4  0.01
4.18   0.27    2.16   55.   10.0  282.0    2.0
 15 01 01   1 15   84.4  0.150  1.677  0.011 1895.  139.     -3.4  0.02
4.18   0.30    1.77   64.   10.0  282.5    2.0
 15 01 01   1 16    8.8  0.148  0.789  0.010 1896.  136.    -31.1  0.02
4.18   0.40    2.15   70.   10.0  282.5    2.0
 15 01 01   1 17   -7.9  0.117 -9.000 -9.000 -999.   96.     17.3  0.02
4.18   0.70    2.08   75.   10.0  279.9    2.0
 15 01 01   1 18   -3.9  0.085 -9.000 -9.000 -999.   60.     13.5  0.05
4.18   1.00    1.24  196.   10.0  277.0    2.0
 15 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 21  -10.8  0.137 -9.000 -9.000 -999.  121.     20.5  0.02
4.18   1.00    2.36  260.   10.0  274.2    2.0
 15 01 01   1 22  -19.5  0.199 -9.000 -9.000 -999.  214.     43.7  0.02
4.18   1.00    3.36  262.   10.0  272.0    2.0
 15 01 01   1 23  -18.8  0.192 -9.000 -9.000 -999.  202.     40.5  0.04
4.18   1.00    2.86  230.   10.0  272.0    2.0
 15 01 01   1 24  -28.1  0.287 -9.000 -9.000 -999.  370.     90.9  0.02
4.18   1.00    4.86  270.   10.0  272.0    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 15 01 01 01   10.0 1  251.    4.27   272.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 ,
L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 ,
L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 ,
L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 ,
L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473454.80	3825060.10	0.16251	473496.16	3825039.06	0.16355
473472.22	3825010.76	0.15763	473515.75	3824987.54	0.15864
473546.96	3824962.86	0.15855	473593.40	3824860.55	0.14887
473626.78	3824854.02	0.15065	473652.17	3824861.27	0.15369
473691.36	3824863.45	0.15732	473710.22	3824860.55	0.15881
473710.95	3824814.11	0.15271	473702.97	3824830.80	0.15416
473734.17	3824759.69	0.14805	473731.27	3824716.87	0.14348
473730.54	3824672.61	0.13900	473694.99	3824608.75	0.13052
473660.16	3824617.46	0.12856	473651.45	3824664.63	0.13193
473660.16	3824722.68	0.13827	473648.55	3824756.06	0.14097
473460.61	3824880.87	0.14144	473502.69	3824916.42	0.14883
473523.01	3824933.84	0.15275	473507.77	3824861.27	0.14265

```
         473535.35    3824865.63        0.14501
473537.52    3824812.66        0.13917
         473435.93    3825035.43        0.15750
473489.63    3824967.22        0.15364
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL *** INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473454.80	3825060.10	37.76891	(16011621)	473496.16	3825039.06	39.50031	(16022324)
473472.22	3825010.76	39.41838	(16022324)	473515.75	3824987.54	40.87269	(16022324)
473546.96	3824962.86	40.91597	(16022324)	473593.40	3824860.55	41.73912	(15010817)
473626.78	3824854.02	41.73476	(15010817)	473652.17	3824861.27	42.12239	(18120322)
473691.36	3824863.45	42.58142	(18120322)	473710.22	3824860.55	42.55662	(18120322)
473710.95	3824814.11	41.82598	(16010222)	473702.97	3824830.80	42.11553	(16010222)
473734.17	3824759.69	39.56259	(15021705)	473731.27	3824716.87	40.84456	(15021705)
473730.54	3824672.61	41.28824	(15021705)	473694.99	3824608.75	40.12910	(15021705)
473660.16	3824617.46	39.43125	(15021705)	473651.45	3824664.63	38.32944	(15021705)
473660.16	3824722.68	38.41631	(16010222)	473648.55	3824756.06	39.88593	(16010222)
473460.61	3824880.87	37.74911	(16031818)	473502.69	3824916.42	39.08959	(16022324)
473523.01	3824933.84	39.80693	(16022324)	473507.77	3824861.27	39.88014	(15010817)

```
        473535.35   3824865.63       40.63817  (15010817)
473537.52   3824812.66       40.14412  (15010817)
        473435.93   3825035.43       37.21639  (16011621)
473489.63   3824967.22       40.21207  (16022324)
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.16355 AT (473496.16, 3825039.06, 852.73, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.16251 AT (473454.80, 3825060.10, 852.97, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.15881 AT (473710.22, 3824860.55, 853.47, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.15864 AT (473515.75, 3824987.54, 851.78, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.15855 AT (473546.96, 3824962.86, 852.42, 1379.79, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.15763 AT (473472.22, 3825010.76, 851.75, 1379.79, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.15750 AT (473435.93, 3825035.43, 852.04, 1379.79, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.15732 AT (473691.36, 3824863.45, 852.36, 1379.79, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.15416 AT (473702.97, 3824830.80, 852.66, 1379.79, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.15369 AT (473652.17, 3824861.27, 851.19, 1379.79, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	42.58142	ON 18120322:	AT (473691.36, 3824863.45, 852.36, 1379.79, 0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 637 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 191 Calm Hours Identified

A Total of 446 Missing Hours Identified (1.02 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 5712 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 5712 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 18010101
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 1 year gap

****
*** AERMOD Finishes Successfully ***
****

HARP2 - HRACalc (dated 22118) 10/12/2023 9:53:58 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1.69

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1.69
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: RMP

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Warm

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-Warehouse-Construction-DefaultCancerRisk.csv
Cancer risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-Warehouse-Construction-DefaultCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-Warehouse-Construction-DefaultNCChronicRisk.csv
Chronic risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-Warehouse-Construction-DefaultNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-Warehouse-Construction-DefaultNCAcuteRisk.csv
Acute risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-Warehouse-Construction-DefaultNCAcuteRiskSumByRec.csv
HRA ran successfully

Inland Empire North Logistics Center Apple Valley Project - Construction HRA - Cancer Risk

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK	DERMAL_F	MMILK_RI	WATER_RI	FISH_RISK	CROP_RISI	BEEF_RISK	DAIRY_RIS	PIG_RISK	CHICKEN_I	EGG_RISK
1	ALL		473454.8	3825060	1.43E-07	1.69YrCan	1.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	ALL		473496.2	3825039	1.44E-07	1.69YrCan	1.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	ALL		473472.2	3825011	1.39E-07	1.69YrCan	1.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4	ALL		473515.8	3824988	1.40E-07	1.69YrCan	1.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5	ALL		473547	3824963	1.40E-07	1.69YrCan	1.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	ALL		473593.4	3824861	1.31E-07	1.69YrCan	1.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7	ALL		473626.8	3824854	1.33E-07	1.69YrCan	1.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8	ALL		473652.2	3824861	1.36E-07	1.69YrCan	1.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9	ALL		473691.4	3824863	1.39E-07	1.69YrCan	1.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	ALL		473710.2	3824861	1.40E-07	1.69YrCan	1.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	ALL		473711	3824814	1.35E-07	1.69YrCan	1.35E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12	ALL		473703	3824831	1.36E-07	1.69YrCan	1.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13	ALL		473734.2	3824760	1.31E-07	1.69YrCan	1.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
14	ALL		473731.3	3824717	1.27E-07	1.69YrCan	1.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15	ALL		473730.5	3824673	1.23E-07	1.69YrCan	1.23E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	ALL		473695	3824609	1.15E-07	1.69YrCan	1.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17	ALL		473660.2	3824617	1.13E-07	1.69YrCan	1.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
18	ALL		473651.5	3824665	1.16E-07	1.69YrCan	1.16E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
19	ALL		473660.2	3824723	1.22E-07	1.69YrCan	1.22E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	ALL		473648.6	3824756	1.24E-07	1.69YrCan	1.24E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21	ALL		473460.6	3824881	1.25E-07	1.69YrCan	1.25E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22	ALL		473502.7	3824916	1.31E-07	1.69YrCan	1.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
23	ALL		473523	3824934	1.35E-07	1.69YrCan	1.35E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24	ALL		473507.8	3824861	1.26E-07	1.69YrCan	1.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25	ALL		473535.4	3824866	1.28E-07	1.69YrCan	1.28E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	ALL		473537.5	3824813	1.23E-07	1.69YrCan	1.23E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27	ALL		473435.9	3825035	1.39E-07	1.69YrCan	1.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	ALL		473489.6	3824967	1.36E-07	1.69YrCan	1.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Inland Empire North Logistics Center Apple Valley Project - Construction HRA - Chronic Risk

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE	RESP	SKIN	EYE	BONE/TEE	ENDO	BLOOD	ODOR	GENERAL	MAXHI
1	ALL		473454.8	3825060	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.85E-05
2	ALL		473496.2	3825039	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.91E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.91E-05
3	ALL		473472.2	3825011	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-05
4	ALL		473515.8	3824988	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-05
5	ALL		473547	3824963	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.61E-05
6	ALL		473593.4	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-05
7	ALL		473626.8	3824854	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E-05
8	ALL		473652.2	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.32E-05
9	ALL		473691.4	3824863	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.54E-05
10	ALL		473710.2	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.63E-05
11	ALL		473711	3824814	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E-05
12	ALL		473703	3824831	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.34E-05
13	ALL		473734.2	3824760	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.97E-05
14	ALL		473731.3	3824717	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-05
15	ALL		473730.5	3824673	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.43E-05
16	ALL		473695	3824609	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E-05
17	ALL		473660.2	3824617	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E-05
18	ALL		473651.5	3824665	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05
19	ALL		473660.2	3824723	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.38E-05
20	ALL		473648.6	3824756	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.55E-05
21	ALL		473460.6	3824881	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E-05
22	ALL		473502.7	3824916	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-05
23	ALL		473523	3824934	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E-05
24	ALL		473507.8	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.65E-05
25	ALL		473535.4	3824866	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.79E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.79E-05
26	ALL		473537.5	3824813	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.44E-05
27	ALL		473435.9	3825035	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-05
28	ALL		473489.6	3824967	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.31E-05

```
 *** AERMOD - VERSION 22112  ***   ***
C:\Users\tlenihan\Documents\AERMOD\HARP II\IENL AV Op HRA\IENL AV Op ***
11/09/23
 *** AERMET - VERSION  19191 ***   *** Inland Empire North Logistics
Apple Valley Warehouse                ***        16:19:40

PAGE   1
 *** MODELOPTs:    CONC  ELEV  RURAL  ADJ_U*

                                            ***     MODEL SETUP OPTIONS
SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Allows User-Specified Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM_10

 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:   2410 Source(s);       6 Source Group(s); and
85 Receptor(s)

                 with:      0 POINT(s), including
                            0 POINTCAP(s) and      0 POINTHOR(s)
                  and:   2410 VOLUME source(s)
                  and:      0 AREA type source(s)
                  and:      0 LINE source(s)
                  and:      0 RLINE/RLINEXT source(s)
                  and:      0 OPENPIT source(s)
                  and:      0 BUOYANT LINE source(s) with a total of     0
line(s)
                  and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  19191
```

```
 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor
(RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting
(PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked Values
(SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for
Calm Hours
                                                                 m for
Missing Hours
                                                                 b for
Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   584.30 ;
Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC
;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      4.6 MB of RAM.

 **Input Runstream File:          aermod.inp
 **Output Print File:             aermod.out

 **Detailed Error/Message File:   IENL AV Op HRA.err
 **File for Summary of Results:   IENL AV Op HRA.sum
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\Apple Valley IENL Con HRA\construction HRA files\KDAG_723815_23161\KDAG_2015_ Met Version: 19191
Profile file: ..\Apple Valley IENL Con HRA\construction HRA files\KDAG_723815_23161\KDAG_2015_
Surface format: FREE
Profile format: FREE
Surface station no.: 23161 Upper air station no.: 3120
Name: BARSTOW-DAGGETT_AIRPORT Name: UNKNOWN
Year: 2015 Year: 2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-24.9	0.256	-9.000	-9.000	-999.	311.	72.1	0.02	4.18	1.00	4.27	251.	10.0	272.5	2.0
15	01	01	1	02	-24.3	0.250	-9.000	-9.000	-999.	300.	68.6	0.02	4.18	1.00	4.17	240.	10.0	272.5	2.0
15	01	01	1	03	-28.4	0.292	-9.000	-9.000	-999.	379.	94.0	0.02	4.18	1.00	4.85	255.	10.0	273.1	2.0
15	01	01	1	04	-26.1	0.266	-9.000	-9.000	-999.	329.	77.8	0.02	4.18	1.00	4.51	274.	10.0	270.4	2.0
15	01	01	1	05	-32.2	0.328	-9.000	-9.000	-999.	450.	118.0	0.02	4.18	1.00	5.51	275.	10.0	270.4	2.0
15	01	01	1	06	-34.9	0.355	-9.000	-9.000	-999.	507.	138.4	0.02	4.18	1.00	5.84	252.	10.0	270.4	2.0
15	01	01	1	07	-34.8	0.355	-9.000	-9.000	-999.	508.	138.9	0.02	4.18	1.00	5.85	251.	10.0	271.4	2.0
15	01	01	1	08	-19.3	0.250	-9.000	-9.000	-999.	306.	68.6	0.02	4.18	0.57	4.15	266.	10.0	270.9	2.0
15	01	01	1	09	31.4	0.236	0.499	0.005	134.	276.	-35.7	0.02	4.18	0.36	3.40	255.	10.0	273.1	2.0
15	01	01	1	10	103.0	0.183	1.101	0.005	441.	188.	-5.0	0.02	4.18	0.29	2.15	300.	10.0	277.0	2.0
15	01	01	1	11	152.0	0.131	1.445	0.005	675.	114.	-1.3	0.04	4.18	0.26	1.08	230.	10.0	278.8	2.0
15	01	01	1	12	175.1	0.131	2.058	0.006	1692.	114.	-1.1	0.02	4.18	0.25	1.31	109.	10.0	280.4	2.0

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 15 01 01   1 13  171.2  0.143  2.108  0.011 1860.  130.     -1.4  0.01
4.18   0.26    1.55   35.   10.0  281.4    2.0
 15 01 01   1 14  140.5  0.177  1.982  0.011 1882.  179.     -3.4  0.01
4.18   0.27    2.16   55.   10.0  282.0    2.0
 15 01 01   1 15   84.4  0.150  1.677  0.011 1895.  139.     -3.4  0.02
4.18   0.30    1.77   64.   10.0  282.5    2.0
 15 01 01   1 16    8.8  0.148  0.789  0.010 1896.  136.    -31.1  0.02
4.18   0.40    2.15   70.   10.0  282.5    2.0
 15 01 01   1 17   -7.9  0.117 -9.000 -9.000 -999.   96.     17.3  0.02
4.18   0.70    2.08   75.   10.0  279.9    2.0
 15 01 01   1 18   -3.9  0.085 -9.000 -9.000 -999.   60.     13.5  0.05
4.18   1.00    1.24  196.   10.0  277.0    2.0
 15 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 21  -10.8  0.137 -9.000 -9.000 -999.  121.     20.5  0.02
4.18   1.00    2.36  260.   10.0  274.2    2.0
 15 01 01   1 22  -19.5  0.199 -9.000 -9.000 -999.  214.     43.7  0.02
4.18   1.00    3.36  262.   10.0  272.0    2.0
 15 01 01   1 23  -18.8  0.192 -9.000 -9.000 -999.  202.     40.5  0.04
4.18   1.00    2.86  230.   10.0  272.0    2.0
 15 01 01   1 24  -28.1  0.287 -9.000 -9.000 -999.  370.     90.9  0.02
4.18   1.00    4.86  270.   10.0  272.0    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 15 01 01 01   10.0 1  251.    4.27   272.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD
(43848 HRS) RESULTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

NETWORK GROUP ID		AVERAGE CONC					RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALLIFT	1ST HIGHEST VALUE IS	0.17261	AT	(	477772.95,	3827982.32,	892.64, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.14099	AT	(	473496.05,	3825038.54,	852.49, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.14049	AT	(	473458.08,	3825062.70,	852.03, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.13777	AT	(	473514.46,	3824993.66,	851.87, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.13752	AT	(	473710.07,	3824861.33,	853.10, 1379.79, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.13739	AT	(	473545.53,	3824967.19,	852.20, 1379.79, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.13604	AT	(	473427.01,	3825039.69,	851.60, 1379.79, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.13509	AT	(	473670.95,	3824865.94,	851.44, 1379.79, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.12940	AT	(	473728.48,	3824763.53,	851.69, 1379.79, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.12681	AT	(	473619.93,	3824814.43,	849.08, 1379.79, 0.00)	DC	
IDLE	1ST HIGHEST VALUE IS	0.16522	AT	(	477772.95,	3827982.32,	892.64, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.14680	AT	(	473496.05,	3825038.54,	852.49, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.14630	AT	(	473458.08,	3825062.70,	852.03, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.14395	AT	(	473710.07,	3824861.33,	853.10, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.14345	AT	(	473514.46,	3824993.66,	851.87, 1379.79, 0.00)	DC	

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          6TH HIGHEST VALUE IS      0.14320 AT (  473545.53,
3824967.19,   852.20,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS      0.14153 AT (  473427.01,
3825039.69,   851.60,  1379.79,    0.00)  DC
          8TH HIGHEST VALUE IS      0.14137 AT (  473670.95,
3824865.94,   851.44,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS      0.13511 AT (  473728.48,
3824763.53,   851.69,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS      0.13370 AT (  477971.34,
3824675.82,   954.10,  1120.73,    0.00)  DC

TRUCK1    1ST HIGHEST VALUE IS      2.28422 AT (  471900.77,
3822140.93,   875.73,   875.73,    0.00)  DC
          2ND HIGHEST VALUE IS      1.94470 AT (  472613.60,
3822601.57,   823.82,   823.82,    0.00)  DC
          3RD HIGHEST VALUE IS      1.37624 AT (  472613.13,
3822484.42,   824.54,   864.04,    0.00)  DC
          4TH HIGHEST VALUE IS      0.82192 AT (  473722.73,
3824662.27,   851.18,  1379.79,    0.00)  DC
          5TH HIGHEST VALUE IS      0.81374 AT (  471795.39,
3822394.93,   867.61,   875.97,    0.00)  DC
          6TH HIGHEST VALUE IS      0.79246 AT (  473726.18,
3824684.13,   851.48,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS      0.78967 AT (  473674.40,
3824609.33,   849.45,  1377.67,    0.00)  DC
          8TH HIGHEST VALUE IS      0.75510 AT (  473730.79,
3824714.05,   851.74,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS      0.72229 AT (  473676.70,
3824657.66,   850.15,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS      0.68646 AT (  473626.07,
3824610.49,   848.14,  1379.79,    0.00)  DC

TRUCK2    1ST HIGHEST VALUE IS      0.62150 AT (  477772.95,
3827982.32,   892.64,  1379.79,    0.00)  DC
          2ND HIGHEST VALUE IS      0.50264 AT (  478912.91,
3829110.80,   914.30,  1182.67,    0.00)  DC
          3RD HIGHEST VALUE IS      0.49808 AT (  479067.84,
3829326.94,   917.26,   917.26,    0.00)  DC
          4TH HIGHEST VALUE IS      0.03810 AT (  473496.05,
3825038.54,   852.49,  1379.79,    0.00)  DC
          5TH HIGHEST VALUE IS      0.03792 AT (  473458.08,
3825062.70,   852.03,  1379.79,    0.00)  DC
          6TH HIGHEST VALUE IS      0.03780 AT (  473545.53,
3824967.19,   852.20,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS      0.03775 AT (  473710.07,
3824861.33,   853.10,  1379.79,    0.00)  DC
          8TH HIGHEST VALUE IS      0.03770 AT (  473514.46,
3824993.66,   851.87,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS      0.03744 AT (  473670.95,
3824865.94,   851.44,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS      0.03728 AT (  473427.01,
3825039.69,   851.60,  1379.79,    0.00)  DC
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD
(43848 HRS) RESULTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC				RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
YTRK	1ST HIGHEST VALUE IS	0.16158	AT	(477772.95, 3827982.32, 892.64, 1379.79, 0.00)	DC		
	2ND HIGHEST VALUE IS	0.16149	AT	(473496.05, 3825038.54, 852.49, 1379.79, 0.00)	DC		
	3RD HIGHEST VALUE IS	0.16132	AT	(473458.08, 3825062.70, 852.03, 1379.79, 0.00)	DC		
	4TH HIGHEST VALUE IS	0.15744	AT	(473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC		
	5TH HIGHEST VALUE IS	0.15700	AT	(473514.46, 3824993.66, 851.87, 1379.79, 0.00)	DC		
	6TH HIGHEST VALUE IS	0.15634	AT	(473545.53, 3824967.19, 852.20, 1379.79, 0.00)	DC		
	7TH HIGHEST VALUE IS	0.15565	AT	(473427.01, 3825039.69, 851.60, 1379.79, 0.00)	DC		
	8TH HIGHEST VALUE IS	0.15415	AT	(473670.95, 3824865.94, 851.44, 1379.79, 0.00)	DC		
	9TH HIGHEST VALUE IS	0.14888	AT	(477971.34, 3824675.82, 954.10, 1120.73, 0.00)	DC		
	10TH HIGHEST VALUE IS	0.14788	AT	(473728.48, 3824763.53, 851.69, 1379.79, 0.00)	DC		
ALL	1ST HIGHEST VALUE IS	2.40581	AT	(471900.77, 3822140.93, 875.73, 875.73, 0.00)	DC		
	2ND HIGHEST VALUE IS	2.06766	AT	(472613.60, 3822601.57, 823.82, 823.82, 0.00)	DC		
	3RD HIGHEST VALUE IS	1.49233	AT	(472613.13, 3822484.42, 824.54, 864.04, 0.00)	DC		
	4TH HIGHEST VALUE IS	1.23920	AT	(473722.73, 3824662.27, 851.18, 1379.79, 0.00)	DC		
	5TH HIGHEST VALUE IS	1.21672	AT	(473726.18, 3824684.13, 851.48, 1379.79, 0.00)	DC		

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          6TH HIGHEST VALUE IS       1.18898 AT (  473730.79,
3824714.05,   851.74,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS       1.18299 AT (  473674.40,
3824609.33,   849.45,  1377.67,    0.00)  DC
          8TH HIGHEST VALUE IS       1.17208 AT (  477772.95,
3827982.32,   892.64,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS       1.12989 AT (  473728.48,
3824763.53,   851.69,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS       1.12899 AT (  473676.70,
3824657.66,   850.15,  1379.79,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALLIFT	1ST HIGH VALUE IS	41.44898	ON 20040918: AT (475464.27, 3823404.45, 916.37, 1019.52, 0.00)	DC	
IDLE	1ST HIGH VALUE IS	41.77799	ON 15010817: AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC	
TRUCK1	1ST HIGH VALUE IS	52.81264	ON 19012817: AT (472613.60, 3822601.57, 823.82, 823.82, 0.00)	DC	
TRUCK2	1ST HIGH VALUE IS	17.38919	ON 16120921: AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC	
YTRK	1ST HIGH VALUE IS	40.35560	ON 15010817: AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC	
ALL	1ST HIGH VALUE IS	137.88172	ON 15010817: AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 637 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 191 Calm Hours Identified

A Total of 446 Missing Hours Identified (1.02 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 5483 MEOPEN: THRESH_1MIN 1-min ASOS wind speed
threshold used 0.50
ME W187 5483 MEOPEN: ADJ_U* Option for Stable Low Winds used in
AERMET
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological
File at: 18010101
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological
File at: 1 year gap

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 11/9/2023
** File: C:\Users\tlenihan\Documents\AERMOD\HARP II\IENL AV Op HRA\IENL
AV Op HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\tlenihan\Documents\AERMOD\HARP II\IENL AV Op
HRA\IENL AV Op
   TITLETWO Inland Empire North Logistics Apple Valley Warehouse
   MODELOPT CONC
   AVERTIME 1 PERIOD
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "IENL AV Op HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = TRUCK1
** DESCRSRC Southbound/Westbound truck trips
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 12
** 475267.695, 3826339.242, 878.60, 3.40, 4.51
** 474341.258, 3825203.350, 877.25, 3.40, 4.51
** 474126.213, 3824940.390, 871.05, 3.40, 4.51
** 473737.047, 3824358.827, 852.90, 3.40, 4.51
** 473509.669, 3823794.755, 831.12, 3.40, 4.51
** 473264.801, 3823296.273, 825.13, 3.40, 4.51
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** 472420.879, 3822692.847, 824.07, 3.40, 4.51
** 471611.938, 3822085.048, 874.58, 3.40, 4.51
** 471506.995, 3821949.496, 881.44, 3.40, 4.51
** 471371.442, 3821665.274, 883.88, 3.40, 4.51
** 471126.574, 3821096.829, 885.09, 3.40, 4.51
** 470680.564, 3819977.430, 895.72, 3.40, 4.51
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   LOCATION L0002411     VOLUME   475264.630 3826335.484 878.59
   LOCATION L0002412     VOLUME   475258.499 3826327.967 878.30
   LOCATION L0002413     VOLUME   475252.368 3826320.450 877.77
   LOCATION L0002414     VOLUME   475246.238 3826312.933 877.37
   LOCATION L0002415     VOLUME   475240.107 3826305.416 877.47
   LOCATION L0002416     VOLUME   475233.976 3826297.899 878.03
   LOCATION L0002417     VOLUME   475227.845 3826290.382 878.84
   LOCATION L0002418     VOLUME   475221.715 3826282.865 879.36
   LOCATION L0002419     VOLUME   475215.584 3826275.349 879.64
   LOCATION L0002420     VOLUME   475209.453 3826267.832 879.78
   LOCATION L0002421     VOLUME   475203.322 3826260.315 879.88
   LOCATION L0002422     VOLUME   475197.191 3826252.798 879.98
   LOCATION L0002423     VOLUME   475191.061 3826245.281 880.04
   LOCATION L0002424     VOLUME   475184.930 3826237.764 880.05
   LOCATION L0002425     VOLUME   475178.799 3826230.247 879.99
   LOCATION L0002426     VOLUME   475172.668 3826222.730 879.80
   LOCATION L0002427     VOLUME   475166.537 3826215.214 879.65
   LOCATION L0002428     VOLUME   475160.407 3826207.697 879.56
   LOCATION L0002429     VOLUME   475154.276 3826200.180 880.07
   LOCATION L0002430     VOLUME   475148.145 3826192.663 880.59
   LOCATION L0002431     VOLUME   475142.014 3826185.146 880.94
   LOCATION L0002432     VOLUME   475135.883 3826177.629 880.98
   LOCATION L0002433     VOLUME   475129.753 3826170.112 881.17
   LOCATION L0002434     VOLUME   475123.622 3826162.595 881.17
   LOCATION L0002435     VOLUME   475117.491 3826155.079 881.42
   LOCATION L0002436     VOLUME   475111.360 3826147.562 881.87
   LOCATION L0002437     VOLUME   475105.230 3826140.045 882.36
   LOCATION L0002438     VOLUME   475099.099 3826132.528 882.67
   LOCATION L0002439     VOLUME   475092.968 3826125.011 882.82
   LOCATION L0002440     VOLUME   475086.837 3826117.494 883.00
   LOCATION L0002441     VOLUME   475080.706 3826109.977 883.20
   LOCATION L0002442     VOLUME   475074.576 3826102.460 883.38
   LOCATION L0002443     VOLUME   475068.445 3826094.943 883.45
   LOCATION L0002444     VOLUME   475062.314 3826087.427 883.35
   LOCATION L0002445     VOLUME   475056.183 3826079.910 882.99
   LOCATION L0002446     VOLUME   475050.052 3826072.393 882.70
   LOCATION L0002447     VOLUME   475043.922 3826064.876 882.55
   LOCATION L0002448     VOLUME   475037.791 3826057.359 882.49
   LOCATION L0002449     VOLUME   475031.660 3826049.842 882.41
   LOCATION L0002450     VOLUME   475025.529 3826042.325 882.29
   LOCATION L0002451     VOLUME   475019.399 3826034.808 882.12
   LOCATION L0002452     VOLUME   475013.268 3826027.292 882.02
   LOCATION L0002453     VOLUME   475007.137 3826019.775 881.88
   LOCATION L0002454     VOLUME   475001.006 3826012.258 881.74
   LOCATION L0002455     VOLUME   474994.875 3826004.741 881.66
   LOCATION L0002456     VOLUME   474988.745 3825997.224 881.54
   LOCATION L0002457     VOLUME   474982.614 3825989.707 881.52
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LOCATION L0002459 VOLUME 474970.352 3825974.673 881.59
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LOCATION L0002461 VOLUME 474958.091 3825959.640 881.43
LOCATION L0002462 VOLUME 474951.960 3825952.123 881.24
LOCATION L0002463 VOLUME 474945.829 3825944.606 880.96
LOCATION L0002464 VOLUME 474939.698 3825937.089 880.73
LOCATION L0002465 VOLUME 474933.568 3825929.572 880.78
LOCATION L0002466 VOLUME 474927.437 3825922.055 880.86
LOCATION L0002467 VOLUME 474921.306 3825914.538 880.66
LOCATION L0002468 VOLUME 474915.175 3825907.022 880.30
LOCATION L0002469 VOLUME 474909.044 3825899.505 880.18
LOCATION L0002470 VOLUME 474902.914 3825891.988 880.14
LOCATION L0002471 VOLUME 474896.783 3825884.471 880.13
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LOCATION L0002478 VOLUME 474853.867 3825831.853 880.17
LOCATION L0002479 VOLUME 474847.737 3825824.336 880.16
LOCATION L0002480 VOLUME 474841.606 3825816.819 880.10
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LOCATION L0002502 VOLUME 474706.728 3825651.448 879.57
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LOCATION L0002514 VOLUME 474633.159 3825561.245 878.86
LOCATION L0002515 VOLUME 474627.028 3825553.728 878.96
LOCATION L0002516 VOLUME 474620.897 3825546.211 878.99
LOCATION L0002517 VOLUME 474614.767 3825538.695 878.93
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LOCATION L0002534 VOLUME 474510.543 3825410.908 878.63
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LOCATION L0002541 VOLUME 474467.628 3825358.289 878.48
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LOCATION L0002544 VOLUME 474449.235 3825335.739 878.34
LOCATION L0002545 VOLUME 474443.105 3825328.222 878.31
LOCATION L0002546 VOLUME 474436.974 3825320.705 878.34
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LOCATION L0002548 VOLUME 474424.712 3825305.671 878.18
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LOCATION L0002557 VOLUME 474369.535 3825238.019 877.70
LOCATION L0002558 VOLUME 474363.404 3825230.503 877.67
LOCATION L0002559 VOLUME 474357.274 3825222.986 877.67
LOCATION L0002560 VOLUME 474351.143 3825215.469 877.52
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LOCATION L0002562 VOLUME 474338.877 3825200.438 877.27
LOCATION L0002563 VOLUME 474332.737 3825192.929 877.22
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LOCATION L0002565 VOLUME 474320.455 3825177.912 876.87

LOCATION L0002566 VOLUME 474314.315 3825170.403 876.72
LOCATION L0002567 VOLUME 474308.174 3825162.894 876.63
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LOCATION L0002574 VOLUME 474265.190 3825110.332 875.40
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LOCATION L0002580 VOLUME 474228.346 3825065.279 874.42
LOCATION L0002581 VOLUME 474222.205 3825057.770 874.22
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LOCATION L0002587 VOLUME 474185.362 3825012.717 873.14
LOCATION L0002588 VOLUME 474179.221 3825005.208 872.93
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LOCATION L0002590 VOLUME 474166.940 3824990.191 872.48
LOCATION L0002591 VOLUME 474160.799 3824982.682 872.27
LOCATION L0002592 VOLUME 474154.658 3824975.173 872.04
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LOCATION L0002594 VOLUME 474142.377 3824960.155 871.53
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LOCATION L0002596 VOLUME 474130.096 3824945.138 871.09
LOCATION L0002597 VOLUME 474124.230 3824937.426 870.87
LOCATION L0002598 VOLUME 474118.835 3824929.364 870.52
LOCATION L0002599 VOLUME 474113.440 3824921.303 870.28
LOCATION L0002600 VOLUME 474108.046 3824913.241 870.04
LOCATION L0002601 VOLUME 474102.651 3824905.179 869.82
LOCATION L0002602 VOLUME 474097.257 3824897.118 869.63
LOCATION L0002603 VOLUME 474091.862 3824889.056 869.29
LOCATION L0002604 VOLUME 474086.468 3824880.995 868.89
LOCATION L0002605 VOLUME 474081.073 3824872.933 868.63
LOCATION L0002606 VOLUME 474075.678 3824864.872 868.54
LOCATION L0002607 VOLUME 474070.284 3824856.810 868.37
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LOCATION L0002611 VOLUME 474048.706 3824824.564 867.60
LOCATION L0002612 VOLUME 474043.311 3824816.502 867.04
LOCATION L0002613 VOLUME 474037.916 3824808.441 866.66
LOCATION L0002614 VOLUME 474032.522 3824800.379 866.59
LOCATION L0002615 VOLUME 474027.127 3824792.318 866.63
LOCATION L0002616 VOLUME 474021.733 3824784.256 866.41
LOCATION L0002617 VOLUME 474016.338 3824776.195 865.80
LOCATION L0002618 VOLUME 474010.944 3824768.133 865.70
LOCATION L0002619 VOLUME 474005.549 3824760.072 865.67

LOCATION L0002620 VOLUME 474000.154 3824752.010 865.44
LOCATION L0002621 VOLUME 473994.760 3824743.948 865.18
LOCATION L0002622 VOLUME 473989.365 3824735.887 864.94
LOCATION L0002623 VOLUME 473983.971 3824727.825 864.71
LOCATION L0002624 VOLUME 473978.576 3824719.764 864.46
LOCATION L0002625 VOLUME 473973.182 3824711.702 864.27
LOCATION L0002626 VOLUME 473967.787 3824703.641 864.08
LOCATION L0002627 VOLUME 473962.392 3824695.579 863.78
LOCATION L0002628 VOLUME 473956.998 3824687.518 863.51
LOCATION L0002629 VOLUME 473951.603 3824679.456 863.30
LOCATION L0002630 VOLUME 473946.209 3824671.395 863.14
LOCATION L0002631 VOLUME 473940.814 3824663.333 862.82
LOCATION L0002632 VOLUME 473935.420 3824655.271 862.52
LOCATION L0002633 VOLUME 473930.025 3824647.210 862.27
LOCATION L0002634 VOLUME 473924.630 3824639.148 862.01
LOCATION L0002635 VOLUME 473919.236 3824631.087 861.77
LOCATION L0002636 VOLUME 473913.841 3824623.025 861.49
LOCATION L0002637 VOLUME 473908.447 3824614.964 861.25
LOCATION L0002638 VOLUME 473903.052 3824606.902 860.97
LOCATION L0002639 VOLUME 473897.658 3824598.841 860.67
LOCATION L0002640 VOLUME 473892.263 3824590.779 860.36
LOCATION L0002641 VOLUME 473886.868 3824582.717 860.01
LOCATION L0002642 VOLUME 473881.474 3824574.656 859.75
LOCATION L0002643 VOLUME 473876.079 3824566.594 859.53
LOCATION L0002644 VOLUME 473870.685 3824558.533 859.37
LOCATION L0002645 VOLUME 473865.290 3824550.471 859.18
LOCATION L0002646 VOLUME 473859.896 3824542.410 858.94
LOCATION L0002647 VOLUME 473854.501 3824534.348 858.70
LOCATION L0002648 VOLUME 473849.106 3824526.287 858.50
LOCATION L0002649 VOLUME 473843.712 3824518.225 858.33
LOCATION L0002650 VOLUME 473838.317 3824510.163 858.00
LOCATION L0002651 VOLUME 473832.923 3824502.102 857.72
LOCATION L0002652 VOLUME 473827.528 3824494.040 857.49
LOCATION L0002653 VOLUME 473822.134 3824485.979 857.28
LOCATION L0002654 VOLUME 473816.739 3824477.917 857.02
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** End of LINE VOLUME Source ID = TRUCK1
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** DESCRSRC Northbound/Eastbound trucks
** PREFIX
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** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 6
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** End of LINE VOLUME Source ID = TRUCK2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = ALLLIFT
** DESCRSRC diesel cargo handling equipment
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 1.0
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LOCATION L0001800 VOLUME 475366.571 3826280.420 884.82
LOCATION L0001801 VOLUME 475360.519 3826272.839 883.95
LOCATION L0001802 VOLUME 475354.467 3826265.259 883.82
LOCATION L0001803 VOLUME 475348.415 3826257.679 884.22
LOCATION L0001804 VOLUME 475342.362 3826250.099 884.37
LOCATION L0001805 VOLUME 475336.310 3826242.518 884.17
LOCATION L0001806 VOLUME 475330.258 3826234.938 884.37
LOCATION L0001807 VOLUME 475324.206 3826227.358 885.53
LOCATION L0001808 VOLUME 475318.154 3826219.777 887.19
LOCATION L0001809 VOLUME 475312.101 3826212.197 888.32
LOCATION L0001810 VOLUME 475306.049 3826204.617 888.77
LOCATION L0001811 VOLUME 475299.997 3826197.037 888.84
LOCATION L0001812 VOLUME 475293.945 3826189.456 888.81
LOCATION L0001813 VOLUME 475287.892 3826181.876 888.32
LOCATION L0001814 VOLUME 475281.840 3826174.296 887.64
LOCATION L0001815 VOLUME 475275.788 3826166.716 887.35
LOCATION L0001816 VOLUME 475269.736 3826159.135 887.26
LOCATION L0001817 VOLUME 475263.683 3826151.555 886.85
LOCATION L0001818 VOLUME 475257.631 3826143.975 886.14
LOCATION L0001819 VOLUME 475251.579 3826136.394 885.74
LOCATION L0001820 VOLUME 475245.527 3826128.814 885.96
LOCATION L0001821 VOLUME 475239.475 3826121.234 886.56
LOCATION L0001822 VOLUME 475233.422 3826113.654 887.21
LOCATION L0001823 VOLUME 475227.370 3826106.073 887.67
LOCATION L0001824 VOLUME 475221.318 3826098.493 887.93
LOCATION L0001825 VOLUME 475215.266 3826090.913 887.99
LOCATION L0001826 VOLUME 475209.213 3826083.333 888.21
LOCATION L0001827 VOLUME 475203.161 3826075.752 888.63
LOCATION L0001828 VOLUME 475197.109 3826068.172 889.07
LOCATION L0001829 VOLUME 475191.057 3826060.592 889.49
LOCATION L0001830 VOLUME 475185.004 3826053.012 889.49
LOCATION L0001831 VOLUME 475178.952 3826045.431 889.18
LOCATION L0001832 VOLUME 475172.900 3826037.851 888.90
LOCATION L0001833 VOLUME 475166.848 3826030.271 888.49
LOCATION L0001834 VOLUME 475160.795 3826022.690 887.91
LOCATION L0001835 VOLUME 475154.743 3826015.110 887.40
LOCATION L0001836 VOLUME 475148.691 3826007.530 887.08
LOCATION L0001837 VOLUME 475142.639 3825999.950 887.00

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   LOCATION L0001838     VOLUME   475136.587 3825992.369 887.03
   LOCATION L0001839     VOLUME   475130.534 3825984.789 886.96
   LOCATION L0001840     VOLUME   475124.482 3825977.209 886.83
   LOCATION L0001841     VOLUME   475118.430 3825969.629 886.64
   LOCATION L0001842     VOLUME   475112.378 3825962.048 886.44
   LOCATION L0001843     VOLUME   475106.325 3825954.468 886.49
   LOCATION L0001844     VOLUME   475100.273 3825946.888 886.43
   LOCATION L0001845     VOLUME   475094.221 3825939.307 886.28
   LOCATION L0001846     VOLUME   475088.169 3825931.727 886.21
   LOCATION L0001847     VOLUME   475082.116 3825924.147 886.32
   LOCATION L0001848     VOLUME   475076.064 3825916.567 886.54
   LOCATION L0001849     VOLUME   475070.012 3825908.986 886.89
   LOCATION L0001850     VOLUME   475063.960 3825901.406 887.36
   LOCATION L0001851     VOLUME   475057.908 3825893.826 887.33
   LOCATION L0001852     VOLUME   475051.855 3825886.246 887.15
   LOCATION L0001853     VOLUME   475045.803 3825878.665 886.82
   LOCATION L0001854     VOLUME   475039.751 3825871.085 886.46
   LOCATION L0001855     VOLUME   475033.699 3825863.505 886.49
** End of LINE VOLUME Source ID = ALLLIFT
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = IDLE1
** DESCRSRC Truck idling in loading docks
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 0.274509804
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 2
** 475397.973, 3826289.765, 886.44, 3.40, 4.51
** 475059.209, 3825867.102, 887.54, 3.40, 4.51
** ----------------------------------------------------------------------
   LOCATION L0004430     VOLUME   475394.940 3826285.981 887.19
   LOCATION L0004431     VOLUME   475388.873 3826278.412 886.22
   LOCATION L0004432     VOLUME   475382.807 3826270.843 885.26
   LOCATION L0004433     VOLUME   475376.741 3826263.274 884.80
   LOCATION L0004434     VOLUME   475370.674 3826255.705 884.61
   LOCATION L0004435     VOLUME   475364.608 3826248.136 884.81
   LOCATION L0004436     VOLUME   475358.541 3826240.567 885.40
   LOCATION L0004437     VOLUME   475352.475 3826232.999 886.36
   LOCATION L0004438     VOLUME   475346.408 3826225.430 886.89
   LOCATION L0004439     VOLUME   475340.342 3826217.861 887.59
   LOCATION L0004440     VOLUME   475334.275 3826210.292 888.75
   LOCATION L0004441     VOLUME   475328.209 3826202.723 889.75
   LOCATION L0004442     VOLUME   475322.142 3826195.154 890.29
   LOCATION L0004443     VOLUME   475316.076 3826187.585 890.46
   LOCATION L0004444     VOLUME   475310.010 3826180.016 890.49
   LOCATION L0004445     VOLUME   475303.943 3826172.447 890.06
   LOCATION L0004446     VOLUME   475297.877 3826164.879 889.43
   LOCATION L0004447     VOLUME   475291.810 3826157.310 888.95
   LOCATION L0004448     VOLUME   475285.744 3826149.741 888.73
   LOCATION L0004449     VOLUME   475279.677 3826142.172 888.26
   LOCATION L0004450     VOLUME   475273.611 3826134.603 887.44
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   LOCATION L0004451     VOLUME   475267.544 3826127.034 886.72
   LOCATION L0004452     VOLUME   475261.478 3826119.465 886.45
   LOCATION L0004453     VOLUME   475255.411 3826111.896 886.84
   LOCATION L0004454     VOLUME   475249.345 3826104.327 887.51
   LOCATION L0004455     VOLUME   475243.279 3826096.758 888.08
   LOCATION L0004456     VOLUME   475237.212 3826089.190 888.51
   LOCATION L0004457     VOLUME   475231.146 3826081.621 888.90
   LOCATION L0004458     VOLUME   475225.079 3826074.052 889.41
   LOCATION L0004459     VOLUME   475219.013 3826066.483 889.87
   LOCATION L0004460     VOLUME   475212.946 3826058.914 890.29
   LOCATION L0004461     VOLUME   475206.880 3826051.345 890.45
   LOCATION L0004462     VOLUME   475200.813 3826043.776 890.21
   LOCATION L0004463     VOLUME   475194.747 3826036.207 889.90
   LOCATION L0004464     VOLUME   475188.681 3826028.638 889.60
   LOCATION L0004465     VOLUME   475182.614 3826021.070 889.23
   LOCATION L0004466     VOLUME   475176.548 3826013.501 888.74
   LOCATION L0004467     VOLUME   475170.481 3826005.932 888.25
   LOCATION L0004468     VOLUME   475164.415 3825998.363 887.80
   LOCATION L0004469     VOLUME   475158.348 3825990.794 887.59
   LOCATION L0004470     VOLUME   475152.282 3825983.225 887.56
   LOCATION L0004471     VOLUME   475146.215 3825975.656 887.49
   LOCATION L0004472     VOLUME   475140.149 3825968.087 887.40
   LOCATION L0004473     VOLUME   475134.082 3825960.518 887.32
   LOCATION L0004474     VOLUME   475128.016 3825952.950 887.44
   LOCATION L0004475     VOLUME   475121.950 3825945.381 887.67
   LOCATION L0004476     VOLUME   475115.883 3825937.812 887.74
   LOCATION L0004477     VOLUME   475109.817 3825930.243 887.58
   LOCATION L0004478     VOLUME   475103.750 3825922.674 887.25
   LOCATION L0004479     VOLUME   475097.684 3825915.105 887.09
   LOCATION L0004480     VOLUME   475091.617 3825907.536 887.16
   LOCATION L0004481     VOLUME   475085.551 3825899.967 887.43
   LOCATION L0004482     VOLUME   475079.484 3825892.398 887.68
   LOCATION L0004483     VOLUME   475073.418 3825884.829 887.73
   LOCATION L0004484     VOLUME   475067.351 3825877.261 887.61
   LOCATION L0004485     VOLUME   475061.285 3825869.692 887.39
** End of LINE VOLUME Source ID = IDLE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = IDLE2
** DESCRSRC truck idling near loading docks
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 0.284313725
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 2
** 475587.934, 3826152.044, 894.62, 3.40, 4.51
** 475238.089, 3825708.801, 895.96, 3.40, 4.51
** ----------------------------------------------------------------------
   LOCATION L0004372     VOLUME   475584.929 3826148.237 895.01
   LOCATION L0004373     VOLUME   475578.920 3826140.622 894.00
   LOCATION L0004374     VOLUME   475572.910 3826133.008 893.40
   LOCATION L0004375     VOLUME   475566.900 3826125.394 893.31
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LOCATION L0004376 VOLUME 475560.891 3826117.780 893.72
LOCATION L0004377 VOLUME 475554.881 3826110.166 894.43
LOCATION L0004378 VOLUME 475548.871 3826102.552 894.96
LOCATION L0004379 VOLUME 475542.862 3826094.938 895.98
LOCATION L0004380 VOLUME 475536.852 3826087.324 897.51
LOCATION L0004381 VOLUME 475530.842 3826079.710 898.66
LOCATION L0004382 VOLUME 475524.833 3826072.096 898.41
LOCATION L0004383 VOLUME 475518.823 3826064.482 898.04
LOCATION L0004384 VOLUME 475512.813 3826056.868 898.02
LOCATION L0004385 VOLUME 475506.804 3826049.254 898.35
LOCATION L0004386 VOLUME 475500.794 3826041.640 898.63
LOCATION L0004387 VOLUME 475494.784 3826034.026 898.60
LOCATION L0004388 VOLUME 475488.775 3826026.412 898.31
LOCATION L0004389 VOLUME 475482.765 3826018.798 897.83
LOCATION L0004390 VOLUME 475476.755 3826011.183 897.39
LOCATION L0004391 VOLUME 475470.746 3826003.569 897.05
LOCATION L0004392 VOLUME 475464.736 3825995.955 896.68
LOCATION L0004393 VOLUME 475458.726 3825988.341 896.60
LOCATION L0004394 VOLUME 475452.717 3825980.727 896.91
LOCATION L0004395 VOLUME 475446.707 3825973.113 897.40
LOCATION L0004396 VOLUME 475440.697 3825965.499 897.50
LOCATION L0004397 VOLUME 475434.688 3825957.885 897.36
LOCATION L0004398 VOLUME 475428.678 3825950.271 897.42
LOCATION L0004399 VOLUME 475422.668 3825942.657 897.78
LOCATION L0004400 VOLUME 475416.659 3825935.043 898.07
LOCATION L0004401 VOLUME 475410.649 3825927.429 897.99
LOCATION L0004402 VOLUME 475404.639 3825919.815 897.72
LOCATION L0004403 VOLUME 475398.630 3825912.201 897.49
LOCATION L0004404 VOLUME 475392.620 3825904.587 897.28
LOCATION L0004405 VOLUME 475386.610 3825896.973 897.11
LOCATION L0004406 VOLUME 475380.601 3825889.359 896.99
LOCATION L0004407 VOLUME 475374.591 3825881.744 896.90
LOCATION L0004408 VOLUME 475368.581 3825874.130 896.82
LOCATION L0004409 VOLUME 475362.572 3825866.516 896.76
LOCATION L0004410 VOLUME 475356.562 3825858.902 896.79
LOCATION L0004411 VOLUME 475350.552 3825851.288 896.84
LOCATION L0004412 VOLUME 475344.543 3825843.674 896.90
LOCATION L0004413 VOLUME 475338.533 3825836.060 896.93
LOCATION L0004414 VOLUME 475332.523 3825828.446 896.93
LOCATION L0004415 VOLUME 475326.514 3825820.832 896.93
LOCATION L0004416 VOLUME 475320.504 3825813.218 896.95
LOCATION L0004417 VOLUME 475314.494 3825805.604 897.00
LOCATION L0004418 VOLUME 475308.485 3825797.990 897.05
LOCATION L0004419 VOLUME 475302.475 3825790.376 897.07
LOCATION L0004420 VOLUME 475296.465 3825782.762 897.06
LOCATION L0004421 VOLUME 475290.456 3825775.148 897.07
LOCATION L0004422 VOLUME 475284.446 3825767.534 897.09
LOCATION L0004423 VOLUME 475278.436 3825759.920 897.11
LOCATION L0004424 VOLUME 475272.427 3825752.305 897.14
LOCATION L0004425 VOLUME 475266.417 3825744.691 897.09
LOCATION L0004426 VOLUME 475260.407 3825737.077 896.83
LOCATION L0004427 VOLUME 475254.398 3825729.463 896.54
LOCATION L0004428 VOLUME 475248.388 3825721.849 896.20
LOCATION L0004429 VOLUME 475242.378 3825714.235 895.89

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** End of LINE VOLUME Source ID = IDLE2
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = IDLE3
** DESCRSRC truck idling near loading docks
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 0.225490196
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 2
** 475733.571, 3826180.538, 900.28, 3.40, 4.51
** 475461.293, 3825825.944, 901.02, 3.40, 4.51
** ----------------------------------------------------------------------
   LOCATION L0004326     VOLUME   475730.617 3826176.691 900.22
   LOCATION L0004327     VOLUME   475724.710 3826168.997 900.55
   LOCATION L0004328     VOLUME   475718.802 3826161.304 900.90
   LOCATION L0004329     VOLUME   475712.894 3826153.610 901.28
   LOCATION L0004330     VOLUME   475706.987 3826145.917 901.69
   LOCATION L0004331     VOLUME   475701.079 3826138.223 900.41
   LOCATION L0004332     VOLUME   475695.172 3826130.530 899.06
   LOCATION L0004333     VOLUME   475689.264 3826122.836 897.64
   LOCATION L0004334     VOLUME   475683.357 3826115.142 896.15
   LOCATION L0004335     VOLUME   475677.449 3826107.449 897.05
   LOCATION L0004336     VOLUME   475671.542 3826099.755 897.85
   LOCATION L0004337     VOLUME   475665.634 3826092.062 898.44
   LOCATION L0004338     VOLUME   475659.726 3826084.368 898.82
   LOCATION L0004339     VOLUME   475653.819 3826076.675 898.72
   LOCATION L0004340     VOLUME   475647.911 3826068.981 898.66
   LOCATION L0004341     VOLUME   475642.004 3826061.288 898.50
   LOCATION L0004342     VOLUME   475636.096 3826053.594 898.26
   LOCATION L0004343     VOLUME   475630.189 3826045.900 898.71
   LOCATION L0004344     VOLUME   475624.281 3826038.207 899.41
   LOCATION L0004345     VOLUME   475618.374 3826030.513 900.08
   LOCATION L0004346     VOLUME   475612.466 3826022.820 900.72
   LOCATION L0004347     VOLUME   475606.558 3826015.126 901.20
   LOCATION L0004348     VOLUME   475600.651 3826007.433 901.86
   LOCATION L0004349     VOLUME   475594.743 3825999.739 902.31
   LOCATION L0004350     VOLUME   475588.836 3825992.046 902.52
   LOCATION L0004351     VOLUME   475582.928 3825984.352 902.64
   LOCATION L0004352     VOLUME   475577.021 3825976.658 902.62
   LOCATION L0004353     VOLUME   475571.113 3825968.965 902.37
   LOCATION L0004354     VOLUME   475565.206 3825961.271 901.91
   LOCATION L0004355     VOLUME   475559.298 3825953.578 901.70
   LOCATION L0004356     VOLUME   475553.390 3825945.884 901.75
   LOCATION L0004357     VOLUME   475547.483 3825938.191 902.02
   LOCATION L0004358     VOLUME   475541.575 3825930.497 902.18
   LOCATION L0004359     VOLUME   475535.668 3825922.804 902.11
   LOCATION L0004360     VOLUME   475529.760 3825915.110 902.04
   LOCATION L0004361     VOLUME   475523.853 3825907.416 902.03
   LOCATION L0004362     VOLUME   475517.945 3825899.723 901.97
   LOCATION L0004363     VOLUME   475512.038 3825892.029 901.86
   LOCATION L0004364     VOLUME   475506.130 3825884.336 901.74
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   LOCATION L0004365     VOLUME   475500.223 3825876.642 901.63
   LOCATION L0004366     VOLUME   475494.315 3825868.949 901.55
   LOCATION L0004367     VOLUME   475488.407 3825861.255 901.52
   LOCATION L0004368     VOLUME   475482.500 3825853.562 901.48
   LOCATION L0004369     VOLUME   475476.592 3825845.868 901.43
   LOCATION L0004370     VOLUME   475470.685 3825838.174 901.37
   LOCATION L0004371     VOLUME   475464.777 3825830.481 901.35
** End of LINE VOLUME Source ID = IDLE3
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = IDLE4
** DESCRSRC truck idling near loading docks
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 0.215686275
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 2
** 475893.455, 3826028.569, 907.74, 3.40, 4.51
** 475638.590, 3825691.388, 911.81, 3.40, 4.51
** ----------------------------------------------------------------------
   LOCATION L0004282     VOLUME   475890.530 3826024.700 908.15
   LOCATION L0004283     VOLUME   475884.681 3826016.962 907.58
   LOCATION L0004284     VOLUME   475878.832 3826009.224 906.65
   LOCATION L0004285     VOLUME   475872.983 3826001.485 905.94
   LOCATION L0004286     VOLUME   475867.134 3825993.747 905.47
   LOCATION L0004287     VOLUME   475861.285 3825986.009 905.80
   LOCATION L0004288     VOLUME   475855.436 3825978.271 906.70
   LOCATION L0004289     VOLUME   475849.587 3825970.533 907.58
   LOCATION L0004290     VOLUME   475843.738 3825962.795 908.12
   LOCATION L0004291     VOLUME   475837.889 3825955.057 909.31
   LOCATION L0004292     VOLUME   475832.040 3825947.318 910.63
   LOCATION L0004293     VOLUME   475826.191 3825939.580 911.65
   LOCATION L0004294     VOLUME   475820.342 3825931.842 912.52
   LOCATION L0004295     VOLUME   475814.493 3825924.104 912.38
   LOCATION L0004296     VOLUME   475808.644 3825916.366 912.11
   LOCATION L0004297     VOLUME   475802.795 3825908.628 911.69
   LOCATION L0004298     VOLUME   475796.946 3825900.890 911.27
   LOCATION L0004299     VOLUME   475791.097 3825893.151 910.91
   LOCATION L0004300     VOLUME   475785.248 3825885.413 910.64
   LOCATION L0004301     VOLUME   475779.399 3825877.675 910.60
   LOCATION L0004302     VOLUME   475773.550 3825869.937 910.73
   LOCATION L0004303     VOLUME   475767.701 3825862.199 910.77
   LOCATION L0004304     VOLUME   475761.852 3825854.461 910.75
   LOCATION L0004305     VOLUME   475756.003 3825846.722 910.70
   LOCATION L0004306     VOLUME   475750.154 3825838.984 910.60
   LOCATION L0004307     VOLUME   475744.305 3825831.246 910.50
   LOCATION L0004308     VOLUME   475738.456 3825823.508 910.38
   LOCATION L0004309     VOLUME   475732.607 3825815.770 910.23
   LOCATION L0004310     VOLUME   475726.758 3825808.032 910.26
   LOCATION L0004311     VOLUME   475720.908 3825800.294 910.66
   LOCATION L0004312     VOLUME   475715.059 3825792.555 911.05
   LOCATION L0004313     VOLUME   475709.210 3825784.817 911.40
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   LOCATION L0004314     VOLUME   475703.361 3825777.079 911.63
   LOCATION L0004315     VOLUME   475697.512 3825769.341 911.60
   LOCATION L0004316     VOLUME   475691.663 3825761.603 911.51
   LOCATION L0004317     VOLUME   475685.814 3825753.865 911.36
   LOCATION L0004318     VOLUME   475679.965 3825746.127 911.19
   LOCATION L0004319     VOLUME   475674.116 3825738.388 911.39
   LOCATION L0004320     VOLUME   475668.267 3825730.650 911.56
   LOCATION L0004321     VOLUME   475662.418 3825722.912 911.69
   LOCATION L0004322     VOLUME   475656.569 3825715.174 911.78
   LOCATION L0004323     VOLUME   475650.720 3825707.436 911.78
   LOCATION L0004324     VOLUME   475644.871 3825699.698 911.75
   LOCATION L0004325     VOLUME   475639.022 3825691.960 911.71
** End of LINE VOLUME Source ID = IDLE4
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = YTRK1
** DESCRSRC yard trucks around buildings
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 0.592593
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 14
** 475017.731, 3825852.314, 886.10, 3.40, 4.51
** 474934.923, 3825732.879, 884.22, 3.40, 4.51
** 475047.988, 3825659.626, 890.46, 3.40, 4.51
** 475194.494, 3825654.849, 895.21, 3.40, 4.51
** 475229.528, 3825697.845, 896.25, 3.40, 4.51
** 475255.008, 3825701.030, 896.85, 3.40, 4.51
** 475605.349, 3826151.696, 896.69, 3.40, 4.51
** 475611.719, 3826201.063, 894.88, 3.40, 4.51
** 475608.534, 3826239.282, 896.07, 3.40, 4.51
** 475500.247, 3826309.350, 890.00, 3.40, 4.51
** 475444.511, 3826349.161, 888.10, 3.40, 4.51
** 475376.035, 3826315.720, 887.19, 3.40, 4.51
** 475318.706, 3826275.908, 883.03, 3.40, 4.51
** 474998.622, 3825877.793, 884.84, 3.40, 4.51
** ----------------------------------------------------------------------
   LOCATION L0004074     VOLUME   475014.968 3825848.328 886.06
   LOCATION L0004075     VOLUME   475009.441 3825840.357 885.92
   LOCATION L0004076     VOLUME   475003.914 3825832.385 885.58
   LOCATION L0004077     VOLUME   474998.387 3825824.414 885.27
   LOCATION L0004078     VOLUME   474992.860 3825816.442 884.99
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** End of LINE VOLUME Source ID = YTRK1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = YTRK2
** DESCRSRC yard trucks around buildings
** PREFIX
** Length of Side = 9.70
** Configuration = Adjacent
** Emission Rate = 0.407407
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 11
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LOCATION L0004031 VOLUME 475650.009 3825686.400 912.43
LOCATION L0004032 VOLUME 475657.448 3825692.624 913.15
LOCATION L0004033 VOLUME 475664.888 3825698.849 914.33
LOCATION L0004034 VOLUME 475672.327 3825705.074 914.48
LOCATION L0004035 VOLUME 475679.120 3825711.901 913.36
LOCATION L0004036 VOLUME 475684.816 3825719.753 912.49
LOCATION L0004037 VOLUME 475690.511 3825727.605 912.43

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   LOCATION L0004044     VOLUME   475730.380 3825782.567 911.76
   LOCATION L0004045     VOLUME   475736.076 3825790.419 911.47
   LOCATION L0004046     VOLUME   475741.772 3825798.271 911.24
   LOCATION L0004047     VOLUME   475747.467 3825806.123 911.06
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   LOCATION L0004067     VOLUME   475861.379 3825963.158 908.18
   LOCATION L0004068     VOLUME   475867.074 3825971.010 908.38
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   LOCATION L0004070     VOLUME   475878.466 3825986.713 906.89
   LOCATION L0004071     VOLUME   475884.161 3825994.565 906.21
   LOCATION L0004072     VOLUME   475889.857 3826002.417 906.87
   LOCATION L0004073     VOLUME   475895.552 3826010.269 907.59
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** Source Parameters **
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   SRCPARAM L0004433     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004434     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004435     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004436     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004437     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004438     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004439     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004440     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004441     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004442     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004443     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004444     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004445     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004447     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004448     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004451     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004462     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004463     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004477     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004484     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004485     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004374     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004375     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004376     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004377     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004378     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004379     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004380     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004381     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004382     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004383     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004384     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004385     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004386     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004387     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004388     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004389     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004390     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004391     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004392     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004393     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004394     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004395     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004396     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004397     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004398     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004399     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004400     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004401     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004402     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004403     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004404     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004405     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004406     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004407     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004408     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004409     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004410     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004411     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004412     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004413     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004414     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004415     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004416     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004417     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004418     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004419     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004420     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004421     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004422     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004423     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004424     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004425     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004426     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004427     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004428     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004429     0.0049019608      3.40      4.51      3.16
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** LINE VOLUME Source ID = IDLE3
   SRCPARAM L0004326     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004327     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004328     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004329     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004330     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004331     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004332     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004333     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004334     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004335     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004336     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004337     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004338     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004339     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004340     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004341     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004342     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004343     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004344     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004345     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004346     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004347     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004348     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004349     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004350     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004351     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004352     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004353     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004354     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004355     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004356     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004357     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004358     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004359     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004360     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004361     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004362     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004363     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004364     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004365     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004366     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004367     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004368     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004369     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004370     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004371     0.0049019608      3.40      4.51      3.16
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** LINE VOLUME Source ID = IDLE4
   SRCPARAM L0004282     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004283     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004284     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004285     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004286     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004287     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004288     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004289     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004290     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004291     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004292     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004293     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004294     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004295     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004296     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004297     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004298     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004299     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004300     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004301     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004302     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004303     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004304     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004305     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004306     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004307     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004308     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004309     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004310     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004311     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004312     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004313     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004314     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004315     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004316     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004317     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004318     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004319     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004320     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004321     0.0049019608      3.40      4.51      3.16
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   SRCPARAM L0004322     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004323     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004324     0.0049019608      3.40      4.51      3.16
   SRCPARAM L0004325     0.0049019608      3.40      4.51      3.16
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** LINE VOLUME Source ID = YTRK1
   SRCPARAM L0004074     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004075     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004076     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004077     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004078     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004079     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004080     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004081     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004082     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004083     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004084     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004085     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004086     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004087     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004088     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004089     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004090     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004091     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004092     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004093     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004094     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004095     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004096     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004097     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004098     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004099     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004100     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004101     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004102     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004103     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004104     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004105     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004106     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004107     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004108     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004109     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004110     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004111     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004112     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004113     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004114     0.0028490048      3.40      4.51      3.16
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   SRCPARAM L0004117     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004118     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004119     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004120     0.0028490048      3.40      4.51      3.16
   SRCPARAM L0004121     0.0028490048      3.40      4.51      3.16
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   SRCGROUP TRUCK2   L0003755 L0003756 L0003757 L0003758 L0003759
L0003760
   SRCGROUP TRUCK2   L0003761 L0003762 L0003763 L0003764 L0003765
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   SRCGROUP TRUCK2   L0003767 L0003768 L0003769 L0003770 L0003771
L0003772
   SRCGROUP TRUCK2   L0003773 L0003774 L0003775 L0003776 L0003777
L0003778
   SRCGROUP TRUCK2   L0003779 L0003780 L0003781 L0003782 L0003783
L0003784
   SRCGROUP TRUCK2   L0003785 L0003786 L0003787 L0003788 L0003789
L0003790
   SRCGROUP TRUCK2   L0003791 L0003792 L0003793 L0003794 L0003795
L0003796
   SRCGROUP TRUCK2   L0003797 L0003798 L0003799 L0003800 L0003801
L0003802
   SRCGROUP TRUCK2   L0003803 L0003804 L0003805 L0003806 L0003807
L0003808
   SRCGROUP TRUCK2   L0003809 L0003810 L0003811 L0003812 L0003813
L0003814
   SRCGROUP TRUCK2   L0003815 L0003816 L0003817 L0003818 L0003819
L0003820
   SRCGROUP TRUCK2   L0003821 L0003822 L0003823 L0003824 L0003825
L0003826
   SRCGROUP TRUCK2   L0003827 L0003828 L0003829 L0003830 L0003831
L0003832
   SRCGROUP TRUCK2   L0003833 L0003834 L0003835 L0003836 L0003837
L0003838
   SRCGROUP TRUCK2   L0003839 L0003840 L0003841 L0003842 L0003843
L0003844
   SRCGROUP TRUCK2   L0003845 L0003846 L0003847 L0003848 L0003849
L0003850
   SRCGROUP TRUCK2   L0003851 L0003852 L0003853 L0003854 L0003855
L0003856
   SRCGROUP TRUCK2   L0003857 L0003858 L0003859 L0003860 L0003861
L0003862
   SRCGROUP TRUCK2   L0003863 L0003864 L0003865 L0003866 L0003867
L0003868
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   SRCGROUP TRUCK2   L0003869 L0003870 L0003871 L0003872 L0003873
L0003874
   SRCGROUP TRUCK2   L0003875 L0003876 L0003877 L0003878 L0003879
L0003880
   SRCGROUP TRUCK2   L0003881 L0003882 L0003883 L0003884 L0003885
L0003886
   SRCGROUP TRUCK2   L0003887 L0003888 L0003889 L0003890 L0003891
L0003892
   SRCGROUP TRUCK2   L0003893 L0003894 L0003895 L0003896 L0003897
L0003898
   SRCGROUP TRUCK2   L0003899 L0003900 L0003901 L0003902 L0003903
L0003904
   SRCGROUP TRUCK2   L0003905 L0003906 L0003907 L0003908 L0003909
L0003910
   SRCGROUP TRUCK2   L0003911 L0003912 L0003913 L0003914 L0003915
L0003916
   SRCGROUP TRUCK2   L0003917 L0003918 L0003919 L0003920 L0003921
L0003922
   SRCGROUP TRUCK2   L0003923 L0003924 L0003925 L0003926 L0003927
L0003928
   SRCGROUP TRUCK2   L0003929 L0003930
   SRCGROUP YTRK     L0004074 L0004075 L0004076 L0004077 L0004078
L0004079
   SRCGROUP YTRK     L0004080 L0004081 L0004082 L0004083 L0004084
L0004085
   SRCGROUP YTRK     L0004086 L0004087 L0004088 L0004089 L0004090
L0004091
   SRCGROUP YTRK     L0004092 L0004093 L0004094 L0004095 L0004096
L0004097
   SRCGROUP YTRK     L0004098 L0004099 L0004100 L0004101 L0004102
L0004103
   SRCGROUP YTRK     L0004104 L0004105 L0004106 L0004107 L0004108
L0004109
   SRCGROUP YTRK     L0004110 L0004111 L0004112 L0004113 L0004114
L0004115
   SRCGROUP YTRK     L0004116 L0004117 L0004118 L0004119 L0004120
L0004121
   SRCGROUP YTRK     L0004122 L0004123 L0004124 L0004125 L0004126
L0004127
   SRCGROUP YTRK     L0004128 L0004129 L0004130 L0004131 L0004132
L0004133
   SRCGROUP YTRK     L0004134 L0004135 L0004136 L0004137 L0004138
L0004139
   SRCGROUP YTRK     L0004140 L0004141 L0004142 L0004143 L0004144
L0004145
   SRCGROUP YTRK     L0004146 L0004147 L0004148 L0004149 L0004150
L0004151
   SRCGROUP YTRK     L0004152 L0004153 L0004154 L0004155 L0004156
L0004157
   SRCGROUP YTRK     L0004158 L0004159 L0004160 L0004161 L0004162
L0004163
   SRCGROUP YTRK     L0004164 L0004165 L0004166 L0004167 L0004168
L0004169
```

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   SRCGROUP YTRK     L0004170 L0004171 L0004172 L0004173 L0004174
L0004175
   SRCGROUP YTRK     L0004176 L0004177 L0004178 L0004179 L0004180
L0004181
   SRCGROUP YTRK     L0004182 L0004183 L0004184 L0004185 L0004186
L0004187
   SRCGROUP YTRK     L0004188 L0004189 L0004190 L0004191 L0004192
L0004193
   SRCGROUP YTRK     L0004194 L0004195 L0004196 L0004197 L0004198
L0004199
   SRCGROUP YTRK     L0004200 L0004201 L0004202 L0004203 L0004204
L0004205
   SRCGROUP YTRK     L0004206 L0004207 L0004208 L0004209 L0004210
L0004211
   SRCGROUP YTRK     L0004212 L0004213 L0004214 L0004215 L0004216
L0004217
   SRCGROUP YTRK     L0004218 L0004219 L0004220 L0004221 L0004222
L0004223
   SRCGROUP YTRK     L0004224 L0004225 L0004226 L0004227 L0004228
L0004229
   SRCGROUP YTRK     L0004230 L0004231 L0004232 L0004233 L0004234
L0004235
   SRCGROUP YTRK     L0004236 L0004237 L0004238 L0004239 L0004240
L0004241
   SRCGROUP YTRK     L0004242 L0004243 L0004244 L0004245 L0004246
L0004247
   SRCGROUP YTRK     L0004248 L0004249 L0004250 L0004251 L0004252
L0004253
   SRCGROUP YTRK     L0004254 L0004255 L0004256 L0004257 L0004258
L0004259
   SRCGROUP YTRK     L0004260 L0004261 L0004262 L0004263 L0004264
L0004265
   SRCGROUP YTRK     L0004266 L0004267 L0004268 L0004269 L0004270
L0004271
   SRCGROUP YTRK     L0004272 L0004273 L0004274 L0004275 L0004276
L0004277
   SRCGROUP YTRK     L0004278 L0004279 L0004280 L0004281 L0003931
L0003932
   SRCGROUP YTRK     L0003933 L0003934 L0003935 L0003936 L0003937
L0003938
   SRCGROUP YTRK     L0003939 L0003940 L0003941 L0003942 L0003943
L0003944
   SRCGROUP YTRK     L0003945 L0003946 L0003947 L0003948 L0003949
L0003950
   SRCGROUP YTRK     L0003951 L0003952 L0003953 L0003954 L0003955
L0003956
   SRCGROUP YTRK     L0003957 L0003958 L0003959 L0003960 L0003961
L0003962
   SRCGROUP YTRK     L0003963 L0003964 L0003965 L0003966 L0003967
L0003968
   SRCGROUP YTRK     L0003969 L0003970 L0003971 L0003972 L0003973
L0003974
   SRCGROUP YTRK     L0003975 L0003976 L0003977 L0003978 L0003979
L0003980
```

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   SRCGROUP YTRK     L0003981 L0003982 L0003983 L0003984 L0003985
L0003986
   SRCGROUP YTRK     L0003987 L0003988 L0003989 L0003990 L0003991
L0003992
   SRCGROUP YTRK     L0003993 L0003994 L0003995 L0003996 L0003997
L0003998
   SRCGROUP YTRK     L0003999 L0004000 L0004001 L0004002 L0004003
L0004004
   SRCGROUP YTRK     L0004005 L0004006 L0004007 L0004008 L0004009
L0004010
   SRCGROUP YTRK     L0004011 L0004012 L0004013 L0004014 L0004015
L0004016
   SRCGROUP YTRK     L0004017 L0004018 L0004019 L0004020 L0004021
L0004022
   SRCGROUP YTRK     L0004023 L0004024 L0004025 L0004026 L0004027
L0004028
   SRCGROUP YTRK     L0004029 L0004030 L0004031 L0004032 L0004033
L0004034
   SRCGROUP YTRK     L0004035 L0004036 L0004037 L0004038 L0004039
L0004040
   SRCGROUP YTRK     L0004041 L0004042 L0004043 L0004044 L0004045
L0004046
   SRCGROUP YTRK     L0004047 L0004048 L0004049 L0004050 L0004051
L0004052
   SRCGROUP YTRK     L0004053 L0004054 L0004055 L0004056 L0004057
L0004058
   SRCGROUP YTRK     L0004059 L0004060 L0004061 L0004062 L0004063
L0004064
   SRCGROUP YTRK     L0004065 L0004066 L0004067 L0004068 L0004069
L0004070
   SRCGROUP YTRK     L0004071 L0004072 L0004073
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "IENL AV Op HRA.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE "..\Apple Valley IENL Con HRA\construction HRA
files\KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC"
   PROFFILE "..\Apple Valley IENL Con HRA\construction HRA
files\KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL"
   SURFDATA 23161 2015 Barstow-Daggett_Airport
```

```
   UAIRDATA 3120 2015
   PROFBASE 584.3 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "IENL AV Op HRA.AD\01H1GALL.PLT" 31
   PLOTFILE 1 ALLIFT 1ST "IENL AV Op HRA.AD\01H1G001.PLT" 32
   PLOTFILE 1 IDLE 1ST "IENL AV Op HRA.AD\01H1G002.PLT" 33
   PLOTFILE 1 TRUCK1 1ST "IENL AV Op HRA.AD\01H1G003.PLT" 34
   PLOTFILE 1 TRUCK2 1ST "IENL AV Op HRA.AD\01H1G004.PLT" 35
   PLOTFILE 1 YTRK 1ST "IENL AV Op HRA.AD\01H1G005.PLT" 36
   PLOTFILE PERIOD ALL "IENL AV Op HRA.AD\PE00GALL.PLT" 37
   PLOTFILE PERIOD ALLIFT "IENL AV Op HRA.AD\PE00G001.PLT" 38
   PLOTFILE PERIOD IDLE "IENL AV Op HRA.AD\PE00G002.PLT" 39
   PLOTFILE PERIOD TRUCK1 "IENL AV Op HRA.AD\PE00G003.PLT" 40
   PLOTFILE PERIOD TRUCK2 "IENL AV Op HRA.AD\PE00G004.PLT" 41
   PLOTFILE PERIOD YTRK "IENL AV Op HRA.AD\PE00G005.PLT" 42
   SUMMFILE "IENL AV Op HRA.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    5483       MEOPEN: THRESH_1MIN 1-min ASOS wind speed
threshold used          0.50
 ME W187    5483       MEOPEN: ADJ_U* Option for Stable Low Winds used in
AERMET

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************
```

```
 *** AERMOD - VERSION 22112  ***   ***
C:\Users\tlenihan\Documents\AERMOD\HARP II\IENL AV Op HRA\IENL AV Op ***
11/09/23
 *** AERMET - VERSION  19191 ***   *** Inland Empire North Logistics
Apple Valley Warehouse                ***        16:19:40

PAGE   1
 *** MODELOPTs:    CONC  ELEV  RURAL  ADJ_U*

                                            ***     MODEL SETUP OPTIONS
SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Allows User-Specified Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM_10

 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:   2410 Source(s);       6 Source Group(s); and
85 Receptor(s)

                 with:      0 POINT(s), including
                            0 POINTCAP(s) and      0 POINTHOR(s)
                  and:   2410 VOLUME source(s)
                  and:      0 AREA type source(s)
                  and:      0 LINE source(s)
                  and:      0 RLINE/RLINEXT source(s)
                  and:      0 OPENPIT source(s)
                  and:      0 BUOYANT LINE source(s) with a total of     0
line(s)
                  and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  19191
```

```
 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor
(RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting
(PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked Values
(SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for
Calm Hours
                                                                 m for
Missing Hours
                                                                 b for
Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   584.30 ;
Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC
;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      4.6 MB of RAM.

 **Input Runstream File:          aermod.inp
 **Output Print File:             aermod.out

 **Detailed Error/Message File:   IENL AV Op HRA.err
 **File for Summary of Results:   IENL AV Op HRA.sum
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002411	0	0.12077E-02	475264.6	3826335.5	878.6	3.40	4.51	3.16	NO
L0002412	0	0.12077E-02	475258.5	3826328.0	878.3	3.40	4.51	3.16	NO
L0002413	0	0.12077E-02	475252.4	3826320.4	877.8	3.40	4.51	3.16	NO
L0002414	0	0.12077E-02	475246.2	3826312.9	877.4	3.40	4.51	3.16	NO
L0002415	0	0.12077E-02	475240.1	3826305.4	877.5	3.40	4.51	3.16	NO
L0002416	0	0.12077E-02	475234.0	3826297.9	878.0	3.40	4.51	3.16	NO
L0002417	0	0.12077E-02	475227.8	3826290.4	878.8	3.40	4.51	3.16	NO
L0002418	0	0.12077E-02	475221.7	3826282.9	879.4	3.40	4.51	3.16	NO
L0002419	0	0.12077E-02	475215.6	3826275.3	879.6	3.40	4.51	3.16	NO
L0002420	0	0.12077E-02	475209.5	3826267.8	879.8	3.40	4.51	3.16	NO
L0002421	0	0.12077E-02	475203.3	3826260.3	879.9	3.40	4.51	3.16	NO
L0002422	0	0.12077E-02	475197.2	3826252.8	880.0	3.40	4.51	3.16	NO
L0002423	0	0.12077E-02	475191.1	3826245.3	880.0	3.40	4.51	3.16	NO
L0002424	0	0.12077E-02	475184.9	3826237.8	880.0	3.40	4.51	3.16	NO
L0002425	0	0.12077E-02	475178.8	3826230.2	880.0	3.40	4.51	3.16	NO
L0002426	0	0.12077E-02	475172.7	3826222.7	879.8	3.40	4.51	3.16	NO

L0002427		0	0.12077E-02	475166.5	3826215.2	879.6	3.40	
4.51	3.16	NO						
L0002428		0	0.12077E-02	475160.4	3826207.7	879.6	3.40	
4.51	3.16	NO						
L0002429		0	0.12077E-02	475154.3	3826200.2	880.1	3.40	
4.51	3.16	NO						
L0002430		0	0.12077E-02	475148.1	3826192.7	880.6	3.40	
4.51	3.16	NO						
L0002431		0	0.12077E-02	475142.0	3826185.1	880.9	3.40	
4.51	3.16	NO						
L0002432		0	0.12077E-02	475135.9	3826177.6	881.0	3.40	
4.51	3.16	NO						
L0002433		0	0.12077E-02	475129.8	3826170.1	881.2	3.40	
4.51	3.16	NO						
L0002434		0	0.12077E-02	475123.6	3826162.6	881.2	3.40	
4.51	3.16	NO						
L0002435		0	0.12077E-02	475117.5	3826155.1	881.4	3.40	
4.51	3.16	NO						
L0002436		0	0.12077E-02	475111.4	3826147.6	881.9	3.40	
4.51	3.16	NO						
L0002437		0	0.12077E-02	475105.2	3826140.0	882.4	3.40	
4.51	3.16	NO						
L0002438		0	0.12077E-02	475099.1	3826132.5	882.7	3.40	
4.51	3.16	NO						
L0002439		0	0.12077E-02	475093.0	3826125.0	882.8	3.40	
4.51	3.16	NO						
L0002440		0	0.12077E-02	475086.8	3826117.5	883.0	3.40	
4.51	3.16	NO						
L0002441		0	0.12077E-02	475080.7	3826110.0	883.2	3.40	
4.51	3.16	NO						
L0002442		0	0.12077E-02	475074.6	3826102.5	883.4	3.40	
4.51	3.16	NO						
L0002443		0	0.12077E-02	475068.4	3826094.9	883.4	3.40	
4.51	3.16	NO						
L0002444		0	0.12077E-02	475062.3	3826087.4	883.3	3.40	
4.51	3.16	NO						
L0002445		0	0.12077E-02	475056.2	3826079.9	883.0	3.40	
4.51	3.16	NO						
L0002446		0	0.12077E-02	475050.1	3826072.4	882.7	3.40	
4.51	3.16	NO						
L0002447		0	0.12077E-02	475043.9	3826064.9	882.5	3.40	
4.51	3.16	NO						
L0002448		0	0.12077E-02	475037.8	3826057.4	882.5	3.40	
4.51	3.16	NO						
L0002449		0	0.12077E-02	475031.7	3826049.8	882.4	3.40	
4.51	3.16	NO						
L0002450		0	0.12077E-02	475025.5	3826042.3	882.3	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002451	0	0.12077E-02	475019.4	3826034.8	882.1	3.40	4.51	3.16	NO
L0002452	0	0.12077E-02	475013.3	3826027.3	882.0	3.40	4.51	3.16	NO
L0002453	0	0.12077E-02	475007.1	3826019.8	881.9	3.40	4.51	3.16	NO
L0002454	0	0.12077E-02	475001.0	3826012.3	881.7	3.40	4.51	3.16	NO
L0002455	0	0.12077E-02	474994.9	3826004.7	881.7	3.40	4.51	3.16	NO
L0002456	0	0.12077E-02	474988.7	3825997.2	881.5	3.40	4.51	3.16	NO
L0002457	0	0.12077E-02	474982.6	3825989.7	881.5	3.40	4.51	3.16	NO
L0002458	0	0.12077E-02	474976.5	3825982.2	881.6	3.40	4.51	3.16	NO
L0002459	0	0.12077E-02	474970.4	3825974.7	881.6	3.40	4.51	3.16	NO
L0002460	0	0.12077E-02	474964.2	3825967.2	881.6	3.40	4.51	3.16	NO
L0002461	0	0.12077E-02	474958.1	3825959.6	881.4	3.40	4.51	3.16	NO
L0002462	0	0.12077E-02	474952.0	3825952.1	881.2	3.40	4.51	3.16	NO
L0002463	0	0.12077E-02	474945.8	3825944.6	881.0	3.40	4.51	3.16	NO
L0002464	0	0.12077E-02	474939.7	3825937.1	880.7	3.40	4.51	3.16	NO
L0002465	0	0.12077E-02	474933.6	3825929.6	880.8	3.40	4.51	3.16	NO
L0002466	0	0.12077E-02	474927.4	3825922.1	880.9	3.40	4.51	3.16	NO

L0002467		0	0.12077E-02	474921.3	3825914.5	880.7	3.40	
4.51	3.16	NO						
L0002468		0	0.12077E-02	474915.2	3825907.0	880.3	3.40	
4.51	3.16	NO						
L0002469		0	0.12077E-02	474909.0	3825899.5	880.2	3.40	
4.51	3.16	NO						
L0002470		0	0.12077E-02	474902.9	3825892.0	880.1	3.40	
4.51	3.16	NO						
L0002471		0	0.12077E-02	474896.8	3825884.5	880.1	3.40	
4.51	3.16	NO						
L0002472		0	0.12077E-02	474890.7	3825877.0	880.1	3.40	
4.51	3.16	NO						
L0002473		0	0.12077E-02	474884.5	3825869.4	880.2	3.40	
4.51	3.16	NO						
L0002474		0	0.12077E-02	474878.4	3825861.9	880.0	3.40	
4.51	3.16	NO						
L0002475		0	0.12077E-02	474872.3	3825854.4	880.0	3.40	
4.51	3.16	NO						
L0002476		0	0.12077E-02	474866.1	3825846.9	880.1	3.40	
4.51	3.16	NO						
L0002477		0	0.12077E-02	474860.0	3825839.4	880.1	3.40	
4.51	3.16	NO						
L0002478		0	0.12077E-02	474853.9	3825831.9	880.2	3.40	
4.51	3.16	NO						
L0002479		0	0.12077E-02	474847.7	3825824.3	880.2	3.40	
4.51	3.16	NO						
L0002480		0	0.12077E-02	474841.6	3825816.8	880.1	3.40	
4.51	3.16	NO						
L0002481		0	0.12077E-02	474835.5	3825809.3	880.1	3.40	
4.51	3.16	NO						
L0002482		0	0.12077E-02	474829.3	3825801.8	880.0	3.40	
4.51	3.16	NO						
L0002483		0	0.12077E-02	474823.2	3825794.3	880.0	3.40	
4.51	3.16	NO						
L0002484		0	0.12077E-02	474817.1	3825786.8	880.0	3.40	
4.51	3.16	NO						
L0002485		0	0.12077E-02	474811.0	3825779.2	880.0	3.40	
4.51	3.16	NO						
L0002486		0	0.12077E-02	474804.8	3825771.7	879.9	3.40	
4.51	3.16	NO						
L0002487		0	0.12077E-02	474798.7	3825764.2	879.9	3.40	
4.51	3.16	NO						
L0002488		0	0.12077E-02	474792.6	3825756.7	879.9	3.40	
4.51	3.16	NO						
L0002489		0	0.12077E-02	474786.4	3825749.2	880.0	3.40	
4.51	3.16	NO						
L0002490		0	0.12077E-02	474780.3	3825741.6	879.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002491	0	0.12077E-02	474774.2	3825734.1	879.8	3.40	4.51	3.16	NO
L0002492	0	0.12077E-02	474768.0	3825726.6	879.8	3.40	4.51	3.16	NO
L0002493	0	0.12077E-02	474761.9	3825719.1	879.9	3.40	4.51	3.16	NO
L0002494	0	0.12077E-02	474755.8	3825711.6	879.8	3.40	4.51	3.16	NO
L0002495	0	0.12077E-02	474749.6	3825704.1	879.8	3.40	4.51	3.16	NO
L0002496	0	0.12077E-02	474743.5	3825696.5	879.8	3.40	4.51	3.16	NO
L0002497	0	0.12077E-02	474737.4	3825689.0	879.7	3.40	4.51	3.16	NO
L0002498	0	0.12077E-02	474731.3	3825681.5	879.8	3.40	4.51	3.16	NO
L0002499	0	0.12077E-02	474725.1	3825674.0	879.9	3.40	4.51	3.16	NO
L0002500	0	0.12077E-02	474719.0	3825666.5	879.8	3.40	4.51	3.16	NO
L0002501	0	0.12077E-02	474712.9	3825659.0	879.6	3.40	4.51	3.16	NO
L0002502	0	0.12077E-02	474706.7	3825651.4	879.6	3.40	4.51	3.16	NO
L0002503	0	0.12077E-02	474700.6	3825643.9	879.5	3.40	4.51	3.16	NO
L0002504	0	0.12077E-02	474694.5	3825636.4	879.4	3.40	4.51	3.16	NO
L0002505	0	0.12077E-02	474688.3	3825628.9	879.2	3.40	4.51	3.16	NO
L0002506	0	0.12077E-02	474682.2	3825621.4	879.2	3.40	4.51	3.16	NO

L0002507		0	0.12077E-02	474676.1	3825613.9	879.3	3.40	
4.51	3.16	NO						
L0002508		0	0.12077E-02	474669.9	3825606.3	879.2	3.40	
4.51	3.16	NO						
L0002509		0	0.12077E-02	474663.8	3825598.8	879.1	3.40	
4.51	3.16	NO						
L0002510		0	0.12077E-02	474657.7	3825591.3	879.0	3.40	
4.51	3.16	NO						
L0002511		0	0.12077E-02	474651.6	3825583.8	879.0	3.40	
4.51	3.16	NO						
L0002512		0	0.12077E-02	474645.4	3825576.3	879.0	3.40	
4.51	3.16	NO						
L0002513		0	0.12077E-02	474639.3	3825568.8	878.9	3.40	
4.51	3.16	NO						
L0002514		0	0.12077E-02	474633.2	3825561.2	878.9	3.40	
4.51	3.16	NO						
L0002515		0	0.12077E-02	474627.0	3825553.7	879.0	3.40	
4.51	3.16	NO						
L0002516		0	0.12077E-02	474620.9	3825546.2	879.0	3.40	
4.51	3.16	NO						
L0002517		0	0.12077E-02	474614.8	3825538.7	878.9	3.40	
4.51	3.16	NO						
L0002518		0	0.12077E-02	474608.6	3825531.2	878.8	3.40	
4.51	3.16	NO						
L0002519		0	0.12077E-02	474602.5	3825523.7	878.9	3.40	
4.51	3.16	NO						
L0002520		0	0.12077E-02	474596.4	3825516.1	878.9	3.40	
4.51	3.16	NO						
L0002521		0	0.12077E-02	474590.2	3825508.6	878.9	3.40	
4.51	3.16	NO						
L0002522		0	0.12077E-02	474584.1	3825501.1	878.8	3.40	
4.51	3.16	NO						
L0002523		0	0.12077E-02	474578.0	3825493.6	878.8	3.40	
4.51	3.16	NO						
L0002524		0	0.12077E-02	474571.9	3825486.1	878.8	3.40	
4.51	3.16	NO						
L0002525		0	0.12077E-02	474565.7	3825478.6	878.8	3.40	
4.51	3.16	NO						
L0002526		0	0.12077E-02	474559.6	3825471.0	878.7	3.40	
4.51	3.16	NO						
L0002527		0	0.12077E-02	474553.5	3825463.5	878.7	3.40	
4.51	3.16	NO						
L0002528		0	0.12077E-02	474547.3	3825456.0	878.7	3.40	
4.51	3.16	NO						
L0002529		0	0.12077E-02	474541.2	3825448.5	878.7	3.40	
4.51	3.16	NO						
L0002530		0	0.12077E-02	474535.1	3825441.0	878.6	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0002531	0	0.12077E-02	474528.9	3825433.5	878.6	3.40	4.51	3.16	NO
L0002532	0	0.12077E-02	474522.8	3825425.9	878.7	3.40	4.51	3.16	NO
L0002533	0	0.12077E-02	474516.7	3825418.4	878.6	3.40	4.51	3.16	NO
L0002534	0	0.12077E-02	474510.5	3825410.9	878.6	3.40	4.51	3.16	NO
L0002535	0	0.12077E-02	474504.4	3825403.4	878.6	3.40	4.51	3.16	NO
L0002536	0	0.12077E-02	474498.3	3825395.9	878.6	3.40	4.51	3.16	NO
L0002537	0	0.12077E-02	474492.2	3825388.4	878.6	3.40	4.51	3.16	NO
L0002538	0	0.12077E-02	474486.0	3825380.8	878.6	3.40	4.51	3.16	NO
L0002539	0	0.12077E-02	474479.9	3825373.3	878.5	3.40	4.51	3.16	NO
L0002540	0	0.12077E-02	474473.8	3825365.8	878.5	3.40	4.51	3.16	NO
L0002541	0	0.12077E-02	474467.6	3825358.3	878.5	3.40	4.51	3.16	NO
L0002542	0	0.12077E-02	474461.5	3825350.8	878.5	3.40	4.51	3.16	NO
L0002543	0	0.12077E-02	474455.4	3825343.3	878.4	3.40	4.51	3.16	NO
L0002544	0	0.12077E-02	474449.2	3825335.7	878.3	3.40	4.51	3.16	NO
L0002545	0	0.12077E-02	474443.1	3825328.2	878.3	3.40	4.51	3.16	NO
L0002546	0	0.12077E-02	474437.0	3825320.7	878.3	3.40	4.51	3.16	NO

L0002547		0	0.12077E-02	474430.8	3825313.2	878.3	3.40	
4.51	3.16	NO						
L0002548		0	0.12077E-02	474424.7	3825305.7	878.2	3.40	
4.51	3.16	NO						
L0002549		0	0.12077E-02	474418.6	3825298.2	878.1	3.40	
4.51	3.16	NO						
L0002550		0	0.12077E-02	474412.5	3825290.6	878.1	3.40	
4.51	3.16	NO						
L0002551		0	0.12077E-02	474406.3	3825283.1	878.1	3.40	
4.51	3.16	NO						
L0002552		0	0.12077E-02	474400.2	3825275.6	878.0	3.40	
4.51	3.16	NO						
L0002553		0	0.12077E-02	474394.1	3825268.1	877.9	3.40	
4.51	3.16	NO						
L0002554		0	0.12077E-02	474387.9	3825260.6	877.9	3.40	
4.51	3.16	NO						
L0002555		0	0.12077E-02	474381.8	3825253.1	878.0	3.40	
4.51	3.16	NO						
L0002556		0	0.12077E-02	474375.7	3825245.5	877.8	3.40	
4.51	3.16	NO						
L0002557		0	0.12077E-02	474369.5	3825238.0	877.7	3.40	
4.51	3.16	NO						
L0002558		0	0.12077E-02	474363.4	3825230.5	877.7	3.40	
4.51	3.16	NO						
L0002559		0	0.12077E-02	474357.3	3825223.0	877.7	3.40	
4.51	3.16	NO						
L0002560		0	0.12077E-02	474351.1	3825215.5	877.5	3.40	
4.51	3.16	NO						
L0002561		0	0.12077E-02	474345.0	3825208.0	877.4	3.40	
4.51	3.16	NO						
L0002562		0	0.12077E-02	474338.9	3825200.4	877.3	3.40	
4.51	3.16	NO						
L0002563		0	0.12077E-02	474332.7	3825192.9	877.2	3.40	
4.51	3.16	NO						
L0002564		0	0.12077E-02	474326.6	3825185.4	877.1	3.40	
4.51	3.16	NO						
L0002565		0	0.12077E-02	474320.5	3825177.9	876.9	3.40	
4.51	3.16	NO						
L0002566		0	0.12077E-02	474314.3	3825170.4	876.7	3.40	
4.51	3.16	NO						
L0002567		0	0.12077E-02	474308.2	3825162.9	876.6	3.40	
4.51	3.16	NO						
L0002568		0	0.12077E-02	474302.0	3825155.4	876.5	3.40	
4.51	3.16	NO						
L0002569		0	0.12077E-02	474295.9	3825147.9	876.2	3.40	
4.51	3.16	NO						
L0002570		0	0.12077E-02	474289.8	3825140.4	876.1	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0002571	0	0.12077E-02	474283.6	3825132.9	876.0	3.40	4.51	3.16	NO
L0002572	0	0.12077E-02	474277.5	3825125.3	875.8	3.40	4.51	3.16	NO
L0002573	0	0.12077E-02	474271.3	3825117.8	875.6	3.40	4.51	3.16	NO
L0002574	0	0.12077E-02	474265.2	3825110.3	875.4	3.40	4.51	3.16	NO
L0002575	0	0.12077E-02	474259.0	3825102.8	875.3	3.40	4.51	3.16	NO
L0002576	0	0.12077E-02	474252.9	3825095.3	875.1	3.40	4.51	3.16	NO
L0002577	0	0.12077E-02	474246.8	3825087.8	874.9	3.40	4.51	3.16	NO
L0002578	0	0.12077E-02	474240.6	3825080.3	874.7	3.40	4.51	3.16	NO
L0002579	0	0.12077E-02	474234.5	3825072.8	874.6	3.40	4.51	3.16	NO
L0002580	0	0.12077E-02	474228.3	3825065.3	874.4	3.40	4.51	3.16	NO
L0002581	0	0.12077E-02	474222.2	3825057.8	874.2	3.40	4.51	3.16	NO
L0002582	0	0.12077E-02	474216.1	3825050.3	874.0	3.40	4.51	3.16	NO
L0002583	0	0.12077E-02	474209.9	3825042.8	873.9	3.40	4.51	3.16	NO
L0002584	0	0.12077E-02	474203.8	3825035.2	873.7	3.40	4.51	3.16	NO
L0002585	0	0.12077E-02	474197.6	3825027.7	873.5	3.40	4.51	3.16	NO
L0002586	0	0.12077E-02	474191.5	3825020.2	873.3	3.40	4.51	3.16	NO

L0002587		0	0.12077E-02	474185.4	3825012.7	873.1	3.40	
4.51	3.16	NO						
L0002588		0	0.12077E-02	474179.2	3825005.2	872.9	3.40	
4.51	3.16	NO						
L0002589		0	0.12077E-02	474173.1	3824997.7	872.7	3.40	
4.51	3.16	NO						
L0002590		0	0.12077E-02	474166.9	3824990.2	872.5	3.40	
4.51	3.16	NO						
L0002591		0	0.12077E-02	474160.8	3824982.7	872.3	3.40	
4.51	3.16	NO						
L0002592		0	0.12077E-02	474154.7	3824975.2	872.0	3.40	
4.51	3.16	NO						
L0002593		0	0.12077E-02	474148.5	3824967.7	871.8	3.40	
4.51	3.16	NO						
L0002594		0	0.12077E-02	474142.4	3824960.2	871.5	3.40	
4.51	3.16	NO						
L0002595		0	0.12077E-02	474136.2	3824952.6	871.3	3.40	
4.51	3.16	NO						
L0002596		0	0.12077E-02	474130.1	3824945.1	871.1	3.40	
4.51	3.16	NO						
L0002597		0	0.12077E-02	474124.2	3824937.4	870.9	3.40	
4.51	3.16	NO						
L0002598		0	0.12077E-02	474118.8	3824929.4	870.5	3.40	
4.51	3.16	NO						
L0002599		0	0.12077E-02	474113.4	3824921.3	870.3	3.40	
4.51	3.16	NO						
L0002600		0	0.12077E-02	474108.0	3824913.2	870.0	3.40	
4.51	3.16	NO						
L0002601		0	0.12077E-02	474102.7	3824905.2	869.8	3.40	
4.51	3.16	NO						
L0002602		0	0.12077E-02	474097.3	3824897.1	869.6	3.40	
4.51	3.16	NO						
L0002603		0	0.12077E-02	474091.9	3824889.1	869.3	3.40	
4.51	3.16	NO						
L0002604		0	0.12077E-02	474086.5	3824881.0	868.9	3.40	
4.51	3.16	NO						
L0002605		0	0.12077E-02	474081.1	3824872.9	868.6	3.40	
4.51	3.16	NO						
L0002606		0	0.12077E-02	474075.7	3824864.9	868.5	3.40	
4.51	3.16	NO						
L0002607		0	0.12077E-02	474070.3	3824856.8	868.4	3.40	
4.51	3.16	NO						
L0002608		0	0.12077E-02	474064.9	3824848.7	867.8	3.40	
4.51	3.16	NO						
L0002609		0	0.12077E-02	474059.5	3824840.7	867.6	3.40	
4.51	3.16	NO						
L0002610		0	0.12077E-02	474054.1	3824832.6	867.5	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0002611	0	0.12077E-02	474048.7	3824824.6	867.6	3.40	4.51	3.16	NO
L0002612	0	0.12077E-02	474043.3	3824816.5	867.0	3.40	4.51	3.16	NO
L0002613	0	0.12077E-02	474037.9	3824808.4	866.7	3.40	4.51	3.16	NO
L0002614	0	0.12077E-02	474032.5	3824800.4	866.6	3.40	4.51	3.16	NO
L0002615	0	0.12077E-02	474027.1	3824792.3	866.6	3.40	4.51	3.16	NO
L0002616	0	0.12077E-02	474021.7	3824784.3	866.4	3.40	4.51	3.16	NO
L0002617	0	0.12077E-02	474016.3	3824776.2	865.8	3.40	4.51	3.16	NO
L0002618	0	0.12077E-02	474010.9	3824768.1	865.7	3.40	4.51	3.16	NO
L0002619	0	0.12077E-02	474005.5	3824760.1	865.7	3.40	4.51	3.16	NO
L0002620	0	0.12077E-02	474000.2	3824752.0	865.4	3.40	4.51	3.16	NO
L0002621	0	0.12077E-02	473994.8	3824743.9	865.2	3.40	4.51	3.16	NO
L0002622	0	0.12077E-02	473989.4	3824735.9	864.9	3.40	4.51	3.16	NO
L0002623	0	0.12077E-02	473984.0	3824727.8	864.7	3.40	4.51	3.16	NO
L0002624	0	0.12077E-02	473978.6	3824719.8	864.5	3.40	4.51	3.16	NO
L0002625	0	0.12077E-02	473973.2	3824711.7	864.3	3.40	4.51	3.16	NO
L0002626	0	0.12077E-02	473967.8	3824703.6	864.1	3.40	4.51	3.16	NO

L0002627		0	0.12077E-02	473962.4	3824695.6	863.8	3.40	
4.51	3.16	NO						
L0002628		0	0.12077E-02	473957.0	3824687.5	863.5	3.40	
4.51	3.16	NO						
L0002629		0	0.12077E-02	473951.6	3824679.5	863.3	3.40	
4.51	3.16	NO						
L0002630		0	0.12077E-02	473946.2	3824671.4	863.1	3.40	
4.51	3.16	NO						
L0002631		0	0.12077E-02	473940.8	3824663.3	862.8	3.40	
4.51	3.16	NO						
L0002632		0	0.12077E-02	473935.4	3824655.3	862.5	3.40	
4.51	3.16	NO						
L0002633		0	0.12077E-02	473930.0	3824647.2	862.3	3.40	
4.51	3.16	NO						
L0002634		0	0.12077E-02	473924.6	3824639.1	862.0	3.40	
4.51	3.16	NO						
L0002635		0	0.12077E-02	473919.2	3824631.1	861.8	3.40	
4.51	3.16	NO						
L0002636		0	0.12077E-02	473913.8	3824623.0	861.5	3.40	
4.51	3.16	NO						
L0002637		0	0.12077E-02	473908.4	3824615.0	861.2	3.40	
4.51	3.16	NO						
L0002638		0	0.12077E-02	473903.1	3824606.9	861.0	3.40	
4.51	3.16	NO						
L0002639		0	0.12077E-02	473897.7	3824598.8	860.7	3.40	
4.51	3.16	NO						
L0002640		0	0.12077E-02	473892.3	3824590.8	860.4	3.40	
4.51	3.16	NO						
L0002641		0	0.12077E-02	473886.9	3824582.7	860.0	3.40	
4.51	3.16	NO						
L0002642		0	0.12077E-02	473881.5	3824574.7	859.8	3.40	
4.51	3.16	NO						
L0002643		0	0.12077E-02	473876.1	3824566.6	859.5	3.40	
4.51	3.16	NO						
L0002644		0	0.12077E-02	473870.7	3824558.5	859.4	3.40	
4.51	3.16	NO						
L0002645		0	0.12077E-02	473865.3	3824550.5	859.2	3.40	
4.51	3.16	NO						
L0002646		0	0.12077E-02	473859.9	3824542.4	858.9	3.40	
4.51	3.16	NO						
L0002647		0	0.12077E-02	473854.5	3824534.3	858.7	3.40	
4.51	3.16	NO						
L0002648		0	0.12077E-02	473849.1	3824526.3	858.5	3.40	
4.51	3.16	NO						
L0002649		0	0.12077E-02	473843.7	3824518.2	858.3	3.40	
4.51	3.16	NO						
L0002650		0	0.12077E-02	473838.3	3824510.2	858.0	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002651	0	0.12077E-02	473832.9	3824502.1	857.7	3.40	4.51	3.16	NO
L0002652	0	0.12077E-02	473827.5	3824494.0	857.5	3.40	4.51	3.16	NO
L0002653	0	0.12077E-02	473822.1	3824486.0	857.3	3.40	4.51	3.16	NO
L0002654	0	0.12077E-02	473816.7	3824477.9	857.0	3.40	4.51	3.16	NO
L0002655	0	0.12077E-02	473811.3	3824469.9	856.5	3.40	4.51	3.16	NO
L0002656	0	0.12077E-02	473806.0	3824461.8	856.2	3.40	4.51	3.16	NO
L0002657	0	0.12077E-02	473800.6	3824453.7	856.1	3.40	4.51	3.16	NO
L0002658	0	0.12077E-02	473795.2	3824445.7	855.9	3.40	4.51	3.16	NO
L0002659	0	0.12077E-02	473789.8	3824437.6	855.7	3.40	4.51	3.16	NO
L0002660	0	0.12077E-02	473784.4	3824429.5	855.4	3.40	4.51	3.16	NO
L0002661	0	0.12077E-02	473779.0	3824421.5	855.2	3.40	4.51	3.16	NO
L0002662	0	0.12077E-02	473773.6	3824413.4	854.8	3.40	4.51	3.16	NO
L0002663	0	0.12077E-02	473768.2	3824405.4	854.6	3.40	4.51	3.16	NO
L0002664	0	0.12077E-02	473762.8	3824397.3	853.8	3.40	4.51	3.16	NO
L0002665	0	0.12077E-02	473757.4	3824389.2	853.0	3.40	4.51	3.16	NO
L0002666	0	0.12077E-02	473752.0	3824381.2	852.6	3.40	4.51	3.16	NO

L0002667		0	0.12077E-02	473746.6	3824373.1	852.7	3.40	
4.51	3.16	NO						
L0002668		0	0.12077E-02	473741.2	3824365.1	853.2	3.40	
4.51	3.16	NO						
L0002669		0	0.12077E-02	473736.2	3824356.8	852.3	3.40	
4.51	3.16	NO						
L0002670		0	0.12077E-02	473732.6	3824347.8	851.6	3.40	
4.51	3.16	NO						
L0002671		0	0.12077E-02	473729.0	3824338.8	850.9	3.40	
4.51	3.16	NO						
L0002672		0	0.12077E-02	473725.3	3824329.8	850.4	3.40	
4.51	3.16	NO						
L0002673		0	0.12077E-02	473721.7	3824320.8	850.4	3.40	
4.51	3.16	NO						
L0002674		0	0.12077E-02	473718.1	3824311.8	850.5	3.40	
4.51	3.16	NO						
L0002675		0	0.12077E-02	473714.5	3824302.8	850.8	3.40	
4.51	3.16	NO						
L0002676		0	0.12077E-02	473710.8	3824293.8	850.1	3.40	
4.51	3.16	NO						
L0002677		0	0.12077E-02	473707.2	3824284.8	849.5	3.40	
4.51	3.16	NO						
L0002678		0	0.12077E-02	473703.6	3824275.8	849.0	3.40	
4.51	3.16	NO						
L0002679		0	0.12077E-02	473700.0	3824266.8	848.6	3.40	
4.51	3.16	NO						
L0002680		0	0.12077E-02	473696.3	3824257.8	848.4	3.40	
4.51	3.16	NO						
L0002681		0	0.12077E-02	473692.7	3824248.8	848.4	3.40	
4.51	3.16	NO						
L0002682		0	0.12077E-02	473689.1	3824239.8	848.4	3.40	
4.51	3.16	NO						
L0002683		0	0.12077E-02	473685.5	3824230.8	847.9	3.40	
4.51	3.16	NO						
L0002684		0	0.12077E-02	473681.8	3824221.8	847.4	3.40	
4.51	3.16	NO						
L0002685		0	0.12077E-02	473678.2	3824212.8	847.0	3.40	
4.51	3.16	NO						
L0002686		0	0.12077E-02	473674.6	3824203.8	846.6	3.40	
4.51	3.16	NO						
L0002687		0	0.12077E-02	473670.9	3824194.8	846.4	3.40	
4.51	3.16	NO						
L0002688		0	0.12077E-02	473667.3	3824185.8	846.2	3.40	
4.51	3.16	NO						
L0002689		0	0.12077E-02	473663.7	3824176.8	846.1	3.40	
4.51	3.16	NO						
L0002690		0	0.12077E-02	473660.1	3824167.9	845.6	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002691	0	0.12077E-02	473656.4	3824158.9	845.0	3.40	4.51	3.16	NO
L0002692	0	0.12077E-02	473652.8	3824149.9	844.4	3.40	4.51	3.16	NO
L0002693	0	0.12077E-02	473649.2	3824140.9	844.0	3.40	4.51	3.16	NO
L0002694	0	0.12077E-02	473645.6	3824131.9	843.8	3.40	4.51	3.16	NO
L0002695	0	0.12077E-02	473641.9	3824122.9	843.8	3.40	4.51	3.16	NO
L0002696	0	0.12077E-02	473638.3	3824113.9	843.7	3.40	4.51	3.16	NO
L0002697	0	0.12077E-02	473634.7	3824104.9	843.2	3.40	4.51	3.16	NO
L0002698	0	0.12077E-02	473631.1	3824095.9	842.8	3.40	4.51	3.16	NO
L0002699	0	0.12077E-02	473627.4	3824086.9	842.5	3.40	4.51	3.16	NO
L0002700	0	0.12077E-02	473623.8	3824077.9	842.2	3.40	4.51	3.16	NO
L0002701	0	0.12077E-02	473620.2	3824068.9	841.9	3.40	4.51	3.16	NO
L0002702	0	0.12077E-02	473616.5	3824059.9	841.6	3.40	4.51	3.16	NO
L0002703	0	0.12077E-02	473612.9	3824050.9	841.3	3.40	4.51	3.16	NO
L0002704	0	0.12077E-02	473609.3	3824041.9	840.9	3.40	4.51	3.16	NO
L0002705	0	0.12077E-02	473605.7	3824032.9	840.5	3.40	4.51	3.16	NO
L0002706	0	0.12077E-02	473602.0	3824023.9	840.2	3.40	4.51	3.16	NO

L0002707		0	0.12077E-02	473598.4	3824014.9	839.8	3.40	
4.51	3.16	NO						
L0002708		0	0.12077E-02	473594.8	3824005.9	839.5	3.40	
4.51	3.16	NO						
L0002709		0	0.12077E-02	473591.2	3823996.9	839.2	3.40	
4.51	3.16	NO						
L0002710		0	0.12077E-02	473587.5	3823987.9	838.9	3.40	
4.51	3.16	NO						
L0002711		0	0.12077E-02	473583.9	3823978.9	838.5	3.40	
4.51	3.16	NO						
L0002712		0	0.12077E-02	473580.3	3823969.9	838.2	3.40	
4.51	3.16	NO						
L0002713		0	0.12077E-02	473576.7	3823960.9	837.8	3.40	
4.51	3.16	NO						
L0002714		0	0.12077E-02	473573.0	3823951.9	837.5	3.40	
4.51	3.16	NO						
L0002715		0	0.12077E-02	473569.4	3823942.9	837.1	3.40	
4.51	3.16	NO						
L0002716		0	0.12077E-02	473565.8	3823933.9	836.9	3.40	
4.51	3.16	NO						
L0002717		0	0.12077E-02	473562.1	3823924.9	836.5	3.40	
4.51	3.16	NO						
L0002718		0	0.12077E-02	473558.5	3823915.9	836.2	3.40	
4.51	3.16	NO						
L0002719		0	0.12077E-02	473554.9	3823907.0	835.8	3.40	
4.51	3.16	NO						
L0002720		0	0.12077E-02	473551.3	3823898.0	835.4	3.40	
4.51	3.16	NO						
L0002721		0	0.12077E-02	473547.6	3823889.0	835.0	3.40	
4.51	3.16	NO						
L0002722		0	0.12077E-02	473544.0	3823880.0	834.7	3.40	
4.51	3.16	NO						
L0002723		0	0.12077E-02	473540.4	3823871.0	834.5	3.40	
4.51	3.16	NO						
L0002724		0	0.12077E-02	473536.8	3823862.0	834.1	3.40	
4.51	3.16	NO						
L0002725		0	0.12077E-02	473533.1	3823853.0	833.8	3.40	
4.51	3.16	NO						
L0002726		0	0.12077E-02	473529.5	3823844.0	833.3	3.40	
4.51	3.16	NO						
L0002727		0	0.12077E-02	473525.9	3823835.0	832.9	3.40	
4.51	3.16	NO						
L0002728		0	0.12077E-02	473522.3	3823826.0	832.5	3.40	
4.51	3.16	NO						
L0002729		0	0.12077E-02	473518.6	3823817.0	832.1	3.40	
4.51	3.16	NO						
L0002730		0	0.12077E-02	473515.0	3823808.0	831.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002731	0	0.12077E-02	473511.4	3823799.0	831.5	3.40	4.51	3.16	NO
L0002732	0	0.12077E-02	473507.4	3823790.2	831.2	3.40	4.51	3.16	NO
L0002733	0	0.12077E-02	473503.1	3823781.4	830.7	3.40	4.51	3.16	NO
L0002734	0	0.12077E-02	473498.9	3823772.7	830.2	3.40	4.51	3.16	NO
L0002735	0	0.12077E-02	473494.6	3823764.0	829.8	3.40	4.51	3.16	NO
L0002736	0	0.12077E-02	473490.3	3823755.3	829.5	3.40	4.51	3.16	NO
L0002737	0	0.12077E-02	473486.0	3823746.6	829.3	3.40	4.51	3.16	NO
L0002738	0	0.12077E-02	473481.7	3823737.9	829.1	3.40	4.51	3.16	NO
L0002739	0	0.12077E-02	473477.5	3823729.2	828.8	3.40	4.51	3.16	NO
L0002740	0	0.12077E-02	473473.2	3823720.5	828.2	3.40	4.51	3.16	NO
L0002741	0	0.12077E-02	473468.9	3823711.8	827.7	3.40	4.51	3.16	NO
L0002742	0	0.12077E-02	473464.6	3823703.1	827.4	3.40	4.51	3.16	NO
L0002743	0	0.12077E-02	473460.4	3823694.4	827.3	3.40	4.51	3.16	NO
L0002744	0	0.12077E-02	473456.1	3823685.7	827.5	3.40	4.51	3.16	NO
L0002745	0	0.12077E-02	473451.8	3823677.0	827.8	3.40	4.51	3.16	NO
L0002746	0	0.12077E-02	473447.5	3823668.3	827.4	3.40	4.51	3.16	NO

L0002747		0	0.12077E-02	473443.3	3823659.6	826.4	3.40	
4.51	3.16	NO						
L0002748		0	0.12077E-02	473439.0	3823650.8	826.0	3.40	
4.51	3.16	NO						
L0002749		0	0.12077E-02	473434.7	3823642.1	825.9	3.40	
4.51	3.16	NO						
L0002750		0	0.12077E-02	473430.4	3823633.4	826.1	3.40	
4.51	3.16	NO						
L0002751		0	0.12077E-02	473426.1	3823624.7	826.3	3.40	
4.51	3.16	NO						
L0002752		0	0.12077E-02	473421.9	3823616.0	826.2	3.40	
4.51	3.16	NO						
L0002753		0	0.12077E-02	473417.6	3823607.3	825.9	3.40	
4.51	3.16	NO						
L0002754		0	0.12077E-02	473413.3	3823598.6	825.3	3.40	
4.51	3.16	NO						
L0002755		0	0.12077E-02	473409.0	3823589.9	825.1	3.40	
4.51	3.16	NO						
L0002756		0	0.12077E-02	473404.8	3823581.2	825.1	3.40	
4.51	3.16	NO						
L0002757		0	0.12077E-02	473400.5	3823572.5	825.2	3.40	
4.51	3.16	NO						
L0002758		0	0.12077E-02	473396.2	3823563.8	825.3	3.40	
4.51	3.16	NO						
L0002759		0	0.12077E-02	473391.9	3823555.1	825.3	3.40	
4.51	3.16	NO						
L0002760		0	0.12077E-02	473387.7	3823546.4	825.2	3.40	
4.51	3.16	NO						
L0002761		0	0.12077E-02	473383.4	3823537.7	825.0	3.40	
4.51	3.16	NO						
L0002762		0	0.12077E-02	473379.1	3823529.0	824.7	3.40	
4.51	3.16	NO						
L0002763		0	0.12077E-02	473374.8	3823520.3	824.5	3.40	
4.51	3.16	NO						
L0002764		0	0.12077E-02	473370.6	3823511.5	824.6	3.40	
4.51	3.16	NO						
L0002765		0	0.12077E-02	473366.3	3823502.8	824.9	3.40	
4.51	3.16	NO						
L0002766		0	0.12077E-02	473362.0	3823494.1	825.0	3.40	
4.51	3.16	NO						
L0002767		0	0.12077E-02	473357.7	3823485.4	825.1	3.40	
4.51	3.16	NO						
L0002768		0	0.12077E-02	473353.4	3823476.7	825.1	3.40	
4.51	3.16	NO						
L0002769		0	0.12077E-02	473349.2	3823468.0	825.0	3.40	
4.51	3.16	NO						
L0002770		0	0.12077E-02	473344.9	3823459.3	825.0	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002771	0	0.12077E-02	473340.6	3823450.6	825.2	3.40	4.51	3.16	NO
L0002772	0	0.12077E-02	473336.3	3823441.9	825.5	3.40	4.51	3.16	NO
L0002773	0	0.12077E-02	473332.1	3823433.2	825.5	3.40	4.51	3.16	NO
L0002774	0	0.12077E-02	473327.8	3823424.5	825.5	3.40	4.51	3.16	NO
L0002775	0	0.12077E-02	473323.5	3823415.8	825.6	3.40	4.51	3.16	NO
L0002776	0	0.12077E-02	473319.2	3823407.1	825.7	3.40	4.51	3.16	NO
L0002777	0	0.12077E-02	473315.0	3823398.4	825.7	3.40	4.51	3.16	NO
L0002778	0	0.12077E-02	473310.7	3823389.7	825.9	3.40	4.51	3.16	NO
L0002779	0	0.12077E-02	473306.4	3823381.0	826.1	3.40	4.51	3.16	NO
L0002780	0	0.12077E-02	473302.1	3823372.2	826.2	3.40	4.51	3.16	NO
L0002781	0	0.12077E-02	473297.8	3823363.5	826.2	3.40	4.51	3.16	NO
L0002782	0	0.12077E-02	473293.6	3823354.8	826.4	3.40	4.51	3.16	NO
L0002783	0	0.12077E-02	473289.3	3823346.1	826.4	3.40	4.51	3.16	NO
L0002784	0	0.12077E-02	473285.0	3823337.4	826.3	3.40	4.51	3.16	NO
L0002785	0	0.12077E-02	473280.7	3823328.7	826.6	3.40	4.51	3.16	NO
L0002786	0	0.12077E-02	473276.5	3823320.0	826.9	3.40	4.51	3.16	NO

L0002787		0	0.12077E-02	473272.2	3823311.3	826.1	3.40	
4.51	3.16	NO						
L0002788		0	0.12077E-02	473267.9	3823302.6	825.6	3.40	
4.51	3.16	NO						
L0002789		0	0.12077E-02	473262.6	3823294.7	825.8	3.40	
4.51	3.16	NO						
L0002790		0	0.12077E-02	473254.8	3823289.1	826.9	3.40	
4.51	3.16	NO						
L0002791		0	0.12077E-02	473246.9	3823283.4	826.6	3.40	
4.51	3.16	NO						
L0002792		0	0.12077E-02	473239.0	3823277.8	826.2	3.40	
4.51	3.16	NO						
L0002793		0	0.12077E-02	473231.1	3823272.2	826.3	3.40	
4.51	3.16	NO						
L0002794		0	0.12077E-02	473223.2	3823266.5	826.3	3.40	
4.51	3.16	NO						
L0002795		0	0.12077E-02	473215.3	3823260.9	826.5	3.40	
4.51	3.16	NO						
L0002796		0	0.12077E-02	473207.4	3823255.2	826.7	3.40	
4.51	3.16	NO						
L0002797		0	0.12077E-02	473199.5	3823249.6	826.3	3.40	
4.51	3.16	NO						
L0002798		0	0.12077E-02	473191.6	3823244.0	826.0	3.40	
4.51	3.16	NO						
L0002799		0	0.12077E-02	473183.7	3823238.3	826.3	3.40	
4.51	3.16	NO						
L0002800		0	0.12077E-02	473175.8	3823232.7	827.1	3.40	
4.51	3.16	NO						
L0002801		0	0.12077E-02	473168.0	3823227.0	827.3	3.40	
4.51	3.16	NO						
L0002802		0	0.12077E-02	473160.1	3823221.4	827.0	3.40	
4.51	3.16	NO						
L0002803		0	0.12077E-02	473152.2	3823215.7	827.3	3.40	
4.51	3.16	NO						
L0002804		0	0.12077E-02	473144.3	3823210.1	826.9	3.40	
4.51	3.16	NO						
L0002805		0	0.12077E-02	473136.4	3823204.5	826.8	3.40	
4.51	3.16	NO						
L0002806		0	0.12077E-02	473128.5	3823198.8	827.3	3.40	
4.51	3.16	NO						
L0002807		0	0.12077E-02	473120.6	3823193.2	827.0	3.40	
4.51	3.16	NO						
L0002808		0	0.12077E-02	473112.7	3823187.5	826.2	3.40	
4.51	3.16	NO						
L0002809		0	0.12077E-02	473104.8	3823181.9	826.1	3.40	
4.51	3.16	NO						
L0002810		0	0.12077E-02	473096.9	3823176.3	826.6	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0002811	0	0.12077E-02	473089.1	3823170.6	827.2	3.40	4.51	3.16	NO
L0002812	0	0.12077E-02	473081.2	3823165.0	827.9	3.40	4.51	3.16	NO
L0002813	0	0.12077E-02	473073.3	3823159.3	827.8	3.40	4.51	3.16	NO
L0002814	0	0.12077E-02	473065.4	3823153.7	826.9	3.40	4.51	3.16	NO
L0002815	0	0.12077E-02	473057.5	3823148.0	826.7	3.40	4.51	3.16	NO
L0002816	0	0.12077E-02	473049.6	3823142.4	827.0	3.40	4.51	3.16	NO
L0002817	0	0.12077E-02	473041.7	3823136.8	827.0	3.40	4.51	3.16	NO
L0002818	0	0.12077E-02	473033.8	3823131.1	825.9	3.40	4.51	3.16	NO
L0002819	0	0.12077E-02	473025.9	3823125.5	824.4	3.40	4.51	3.16	NO
L0002820	0	0.12077E-02	473018.0	3823119.8	823.5	3.40	4.51	3.16	NO
L0002821	0	0.12077E-02	473010.1	3823114.2	823.0	3.40	4.51	3.16	NO
L0002822	0	0.12077E-02	473002.3	3823108.5	822.8	3.40	4.51	3.16	NO
L0002823	0	0.12077E-02	472994.4	3823102.9	822.6	3.40	4.51	3.16	NO
L0002824	0	0.12077E-02	472986.5	3823097.3	822.1	3.40	4.51	3.16	NO
L0002825	0	0.12077E-02	472978.6	3823091.6	821.6	3.40	4.51	3.16	NO
L0002826	0	0.12077E-02	472970.7	3823086.0	821.2	3.40	4.51	3.16	NO

L0002827		0	0.12077E-02	472962.8	3823080.3	821.1	3.40	
4.51	3.16	NO						
L0002828		0	0.12077E-02	472954.9	3823074.7	821.1	3.40	
4.51	3.16	NO						
L0002829		0	0.12077E-02	472947.0	3823069.1	821.1	3.40	
4.51	3.16	NO						
L0002830		0	0.12077E-02	472939.1	3823063.4	821.1	3.40	
4.51	3.16	NO						
L0002831		0	0.12077E-02	472931.2	3823057.8	821.3	3.40	
4.51	3.16	NO						
L0002832		0	0.12077E-02	472923.4	3823052.1	821.5	3.40	
4.51	3.16	NO						
L0002833		0	0.12077E-02	472915.5	3823046.5	822.3	3.40	
4.51	3.16	NO						
L0002834		0	0.12077E-02	472907.6	3823040.8	823.6	3.40	
4.51	3.16	NO						
L0002835		0	0.12077E-02	472899.7	3823035.2	825.1	3.40	
4.51	3.16	NO						
L0002836		0	0.12077E-02	472891.8	3823029.6	826.2	3.40	
4.51	3.16	NO						
L0002837		0	0.12077E-02	472883.9	3823023.9	826.8	3.40	
4.51	3.16	NO						
L0002838		0	0.12077E-02	472876.0	3823018.3	827.9	3.40	
4.51	3.16	NO						
L0002839		0	0.12077E-02	472868.1	3823012.6	829.0	3.40	
4.51	3.16	NO						
L0002840		0	0.12077E-02	472860.2	3823007.0	828.1	3.40	
4.51	3.16	NO						
L0002841		0	0.12077E-02	472852.3	3823001.4	827.6	3.40	
4.51	3.16	NO						
L0002842		0	0.12077E-02	472844.5	3822995.7	827.8	3.40	
4.51	3.16	NO						
L0002843		0	0.12077E-02	472836.6	3822990.1	828.3	3.40	
4.51	3.16	NO						
L0002844		0	0.12077E-02	472828.7	3822984.4	829.2	3.40	
4.51	3.16	NO						
L0002845		0	0.12077E-02	472820.8	3822978.8	829.8	3.40	
4.51	3.16	NO						
L0002846		0	0.12077E-02	472812.9	3822973.1	829.1	3.40	
4.51	3.16	NO						
L0002847		0	0.12077E-02	472805.0	3822967.5	828.6	3.40	
4.51	3.16	NO						
L0002848		0	0.12077E-02	472797.1	3822961.9	828.7	3.40	
4.51	3.16	NO						
L0002849		0	0.12077E-02	472789.2	3822956.2	829.3	3.40	
4.51	3.16	NO						
L0002850		0	0.12077E-02	472781.3	3822950.6	830.1	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002851	0	0.12077E-02	472773.4	3822944.9	830.0	3.40	4.51	3.16	NO
L0002852	0	0.12077E-02	472765.5	3822939.3	829.9	3.40	4.51	3.16	NO
L0002853	0	0.12077E-02	472757.7	3822933.7	829.4	3.40	4.51	3.16	NO
L0002854	0	0.12077E-02	472749.8	3822928.0	829.5	3.40	4.51	3.16	NO
L0002855	0	0.12077E-02	472741.9	3822922.4	830.2	3.40	4.51	3.16	NO
L0002856	0	0.12077E-02	472734.0	3822916.7	830.5	3.40	4.51	3.16	NO
L0002857	0	0.12077E-02	472726.1	3822911.1	830.6	3.40	4.51	3.16	NO
L0002858	0	0.12077E-02	472718.2	3822905.4	830.7	3.40	4.51	3.16	NO
L0002859	0	0.12077E-02	472710.3	3822899.8	830.9	3.40	4.51	3.16	NO
L0002860	0	0.12077E-02	472702.4	3822894.2	830.9	3.40	4.51	3.16	NO
L0002861	0	0.12077E-02	472694.5	3822888.5	831.0	3.40	4.51	3.16	NO
L0002862	0	0.12077E-02	472686.6	3822882.9	830.3	3.40	4.51	3.16	NO
L0002863	0	0.12077E-02	472678.8	3822877.2	829.6	3.40	4.51	3.16	NO
L0002864	0	0.12077E-02	472670.9	3822871.6	829.5	3.40	4.51	3.16	NO
L0002865	0	0.12077E-02	472663.0	3822865.9	830.1	3.40	4.51	3.16	NO
L0002866	0	0.12077E-02	472655.1	3822860.3	831.0	3.40	4.51	3.16	NO

L0002867		0	0.12077E-02	472647.2	3822854.7	831.3	3.40	
4.51	3.16	NO						
L0002868		0	0.12077E-02	472639.3	3822849.0	831.3	3.40	
4.51	3.16	NO						
L0002869		0	0.12077E-02	472631.4	3822843.4	830.4	3.40	
4.51	3.16	NO						
L0002870		0	0.12077E-02	472623.5	3822837.7	830.4	3.40	
4.51	3.16	NO						
L0002871		0	0.12077E-02	472615.6	3822832.1	831.1	3.40	
4.51	3.16	NO						
L0002872		0	0.12077E-02	472607.7	3822826.5	831.3	3.40	
4.51	3.16	NO						
L0002873		0	0.12077E-02	472599.8	3822820.8	830.7	3.40	
4.51	3.16	NO						
L0002874		0	0.12077E-02	472592.0	3822815.2	830.6	3.40	
4.51	3.16	NO						
L0002875		0	0.12077E-02	472584.1	3822809.5	830.8	3.40	
4.51	3.16	NO						
L0002876		0	0.12077E-02	472576.2	3822803.9	831.3	3.40	
4.51	3.16	NO						
L0002877		0	0.12077E-02	472568.3	3822798.2	832.3	3.40	
4.51	3.16	NO						
L0002878		0	0.12077E-02	472560.4	3822792.6	832.0	3.40	
4.51	3.16	NO						
L0002879		0	0.12077E-02	472552.5	3822787.0	830.9	3.40	
4.51	3.16	NO						
L0002880		0	0.12077E-02	472544.6	3822781.3	830.6	3.40	
4.51	3.16	NO						
L0002881		0	0.12077E-02	472536.7	3822775.7	831.0	3.40	
4.51	3.16	NO						
L0002882		0	0.12077E-02	472528.8	3822770.0	831.6	3.40	
4.51	3.16	NO						
L0002883		0	0.12077E-02	472520.9	3822764.4	831.8	3.40	
4.51	3.16	NO						
L0002884		0	0.12077E-02	472513.1	3822758.8	831.6	3.40	
4.51	3.16	NO						
L0002885		0	0.12077E-02	472505.2	3822753.1	831.0	3.40	
4.51	3.16	NO						
L0002886		0	0.12077E-02	472497.3	3822747.5	831.1	3.40	
4.51	3.16	NO						
L0002887		0	0.12077E-02	472489.4	3822741.8	831.9	3.40	
4.51	3.16	NO						
L0002888		0	0.12077E-02	472481.5	3822736.2	832.1	3.40	
4.51	3.16	NO						
L0002889		0	0.12077E-02	472473.6	3822730.5	829.8	3.40	
4.51	3.16	NO						
L0002890		0	0.12077E-02	472465.7	3822724.9	827.0	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002891	0	0.12077E-02	472457.8	3822719.3	824.9	3.40	4.51	3.16	NO
L0002892	0	0.12077E-02	472449.9	3822713.6	824.5	3.40	4.51	3.16	NO
L0002893	0	0.12077E-02	472442.0	3822708.0	824.7	3.40	4.51	3.16	NO
L0002894	0	0.12077E-02	472434.1	3822702.3	824.9	3.40	4.51	3.16	NO
L0002895	0	0.12077E-02	472426.3	3822696.7	824.6	3.40	4.51	3.16	NO
L0002896	0	0.12077E-02	472418.4	3822691.0	824.3	3.40	4.51	3.16	NO
L0002897	0	0.12077E-02	472410.7	3822685.2	824.1	3.40	4.51	3.16	NO
L0002898	0	0.12077E-02	472402.9	3822679.3	824.6	3.40	4.51	3.16	NO
L0002899	0	0.12077E-02	472395.1	3822673.5	825.4	3.40	4.51	3.16	NO
L0002900	0	0.12077E-02	472387.4	3822667.7	827.6	3.40	4.51	3.16	NO
L0002901	0	0.12077E-02	472379.6	3822661.9	830.3	3.40	4.51	3.16	NO
L0002902	0	0.12077E-02	472371.9	3822656.0	832.4	3.40	4.51	3.16	NO
L0002903	0	0.12077E-02	472364.1	3822650.2	834.1	3.40	4.51	3.16	NO
L0002904	0	0.12077E-02	472356.4	3822644.4	835.2	3.40	4.51	3.16	NO
L0002905	0	0.12077E-02	472348.6	3822638.6	835.3	3.40	4.51	3.16	NO
L0002906	0	0.12077E-02	472340.9	3822632.7	835.5	3.40	4.51	3.16	NO

L0002907		0	0.12077E-02	472333.1	3822626.9	835.7	3.40	
4.51	3.16	NO						
L0002908		0	0.12077E-02	472325.3	3822621.1	835.7	3.40	
4.51	3.16	NO						
L0002909		0	0.12077E-02	472317.6	3822615.2	835.9	3.40	
4.51	3.16	NO						
L0002910		0	0.12077E-02	472309.8	3822609.4	836.0	3.40	
4.51	3.16	NO						
L0002911		0	0.12077E-02	472302.1	3822603.6	836.1	3.40	
4.51	3.16	NO						
L0002912		0	0.12077E-02	472294.3	3822597.8	836.3	3.40	
4.51	3.16	NO						
L0002913		0	0.12077E-02	472286.6	3822591.9	836.6	3.40	
4.51	3.16	NO						
L0002914		0	0.12077E-02	472278.8	3822586.1	837.0	3.40	
4.51	3.16	NO						
L0002915		0	0.12077E-02	472271.1	3822580.3	837.2	3.40	
4.51	3.16	NO						
L0002916		0	0.12077E-02	472263.3	3822574.5	837.3	3.40	
4.51	3.16	NO						
L0002917		0	0.12077E-02	472255.6	3822568.6	837.7	3.40	
4.51	3.16	NO						
L0002918		0	0.12077E-02	472247.8	3822562.8	838.1	3.40	
4.51	3.16	NO						
L0002919		0	0.12077E-02	472240.0	3822557.0	838.6	3.40	
4.51	3.16	NO						
L0002920		0	0.12077E-02	472232.3	3822551.1	839.1	3.40	
4.51	3.16	NO						
L0002921		0	0.12077E-02	472224.5	3822545.3	839.3	3.40	
4.51	3.16	NO						
L0002922		0	0.12077E-02	472216.8	3822539.5	839.7	3.40	
4.51	3.16	NO						
L0002923		0	0.12077E-02	472209.0	3822533.7	840.2	3.40	
4.51	3.16	NO						
L0002924		0	0.12077E-02	472201.3	3822527.8	840.7	3.40	
4.51	3.16	NO						
L0002925		0	0.12077E-02	472193.5	3822522.0	841.2	3.40	
4.51	3.16	NO						
L0002926		0	0.12077E-02	472185.8	3822516.2	841.5	3.40	
4.51	3.16	NO						
L0002927		0	0.12077E-02	472178.0	3822510.4	841.9	3.40	
4.51	3.16	NO						
L0002928		0	0.12077E-02	472170.2	3822504.5	842.4	3.40	
4.51	3.16	NO						
L0002929		0	0.12077E-02	472162.5	3822498.7	842.9	3.40	
4.51	3.16	NO						
L0002930		0	0.12077E-02	472154.7	3822492.9	843.5	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002931	0	0.12077E-02	472147.0	3822487.1	843.7	3.40	4.51	3.16	NO
L0002932	0	0.12077E-02	472139.2	3822481.2	844.0	3.40	4.51	3.16	NO
L0002933	0	0.12077E-02	472131.5	3822475.4	844.5	3.40	4.51	3.16	NO
L0002934	0	0.12077E-02	472123.7	3822469.6	845.1	3.40	4.51	3.16	NO
L0002935	0	0.12077E-02	472116.0	3822463.7	845.7	3.40	4.51	3.16	NO
L0002936	0	0.12077E-02	472108.2	3822457.9	846.1	3.40	4.51	3.16	NO
L0002937	0	0.12077E-02	472100.5	3822452.1	846.4	3.40	4.51	3.16	NO
L0002938	0	0.12077E-02	472092.7	3822446.3	846.9	3.40	4.51	3.16	NO
L0002939	0	0.12077E-02	472084.9	3822440.4	847.4	3.40	4.51	3.16	NO
L0002940	0	0.12077E-02	472077.2	3822434.6	847.9	3.40	4.51	3.16	NO
L0002941	0	0.12077E-02	472069.4	3822428.8	848.3	3.40	4.51	3.16	NO
L0002942	0	0.12077E-02	472061.7	3822423.0	848.6	3.40	4.51	3.16	NO
L0002943	0	0.12077E-02	472053.9	3822417.1	849.0	3.40	4.51	3.16	NO
L0002944	0	0.12077E-02	472046.2	3822411.3	849.5	3.40	4.51	3.16	NO
L0002945	0	0.12077E-02	472038.4	3822405.5	850.0	3.40	4.51	3.16	NO
L0002946	0	0.12077E-02	472030.7	3822399.7	850.6	3.40	4.51	3.16	NO

L0002947		0	0.12077E-02	472022.9	3822393.8	850.9	3.40	
4.51	3.16	NO						
L0002948		0	0.12077E-02	472015.2	3822388.0	851.3	3.40	
4.51	3.16	NO						
L0002949		0	0.12077E-02	472007.4	3822382.2	851.8	3.40	
4.51	3.16	NO						
L0002950		0	0.12077E-02	471999.6	3822376.3	852.3	3.40	
4.51	3.16	NO						
L0002951		0	0.12077E-02	471991.9	3822370.5	852.7	3.40	
4.51	3.16	NO						
L0002952		0	0.12077E-02	471984.1	3822364.7	853.1	3.40	
4.51	3.16	NO						
L0002953		0	0.12077E-02	471976.4	3822358.9	853.5	3.40	
4.51	3.16	NO						
L0002954		0	0.12077E-02	471968.6	3822353.0	853.9	3.40	
4.51	3.16	NO						
L0002955		0	0.12077E-02	471960.9	3822347.2	854.4	3.40	
4.51	3.16	NO						
L0002956		0	0.12077E-02	471953.1	3822341.4	854.9	3.40	
4.51	3.16	NO						
L0002957		0	0.12077E-02	471945.4	3822335.6	855.4	3.40	
4.51	3.16	NO						
L0002958		0	0.12077E-02	471937.6	3822329.7	855.7	3.40	
4.51	3.16	NO						
L0002959		0	0.12077E-02	471929.8	3822323.9	856.2	3.40	
4.51	3.16	NO						
L0002960		0	0.12077E-02	471922.1	3822318.1	856.6	3.40	
4.51	3.16	NO						
L0002961		0	0.12077E-02	471914.3	3822312.3	857.0	3.40	
4.51	3.16	NO						
L0002962		0	0.12077E-02	471906.6	3822306.4	857.6	3.40	
4.51	3.16	NO						
L0002963		0	0.12077E-02	471898.8	3822300.6	858.0	3.40	
4.51	3.16	NO						
L0002964		0	0.12077E-02	471891.1	3822294.8	858.4	3.40	
4.51	3.16	NO						
L0002965		0	0.12077E-02	471883.3	3822288.9	858.8	3.40	
4.51	3.16	NO						
L0002966		0	0.12077E-02	471875.6	3822283.1	859.4	3.40	
4.51	3.16	NO						
L0002967		0	0.12077E-02	471867.8	3822277.3	859.9	3.40	
4.51	3.16	NO						
L0002968		0	0.12077E-02	471860.1	3822271.5	860.4	3.40	
4.51	3.16	NO						
L0002969		0	0.12077E-02	471852.3	3822265.6	860.7	3.40	
4.51	3.16	NO						
L0002970		0	0.12077E-02	471844.5	3822259.8	861.0	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0002971	0	0.12077E-02	471836.8	3822254.0	861.4	3.40	4.51	3.16	NO
L0002972	0	0.12077E-02	471829.0	3822248.2	861.9	3.40	4.51	3.16	NO
L0002973	0	0.12077E-02	471821.3	3822242.3	862.4	3.40	4.51	3.16	NO
L0002974	0	0.12077E-02	471813.5	3822236.5	862.9	3.40	4.51	3.16	NO
L0002975	0	0.12077E-02	471805.8	3822230.7	863.4	3.40	4.51	3.16	NO
L0002976	0	0.12077E-02	471798.0	3822224.9	863.8	3.40	4.51	3.16	NO
L0002977	0	0.12077E-02	471790.3	3822219.0	864.3	3.40	4.51	3.16	NO
L0002978	0	0.12077E-02	471782.5	3822213.2	864.8	3.40	4.51	3.16	NO
L0002979	0	0.12077E-02	471774.7	3822207.4	865.2	3.40	4.51	3.16	NO
L0002980	0	0.12077E-02	471767.0	3822201.5	865.4	3.40	4.51	3.16	NO
L0002981	0	0.12077E-02	471759.2	3822195.7	865.9	3.40	4.51	3.16	NO
L0002982	0	0.12077E-02	471751.5	3822189.9	866.4	3.40	4.51	3.16	NO
L0002983	0	0.12077E-02	471743.7	3822184.1	866.9	3.40	4.51	3.16	NO
L0002984	0	0.12077E-02	471736.0	3822178.2	867.6	3.40	4.51	3.16	NO
L0002985	0	0.12077E-02	471728.2	3822172.4	868.1	3.40	4.51	3.16	NO
L0002986	0	0.12077E-02	471720.5	3822166.6	868.3	3.40	4.51	3.16	NO

L0002987		0	0.12077E-02	471712.7	3822160.8	868.8	3.40	
4.51	3.16	NO						
L0002988		0	0.12077E-02	471705.0	3822154.9	869.2	3.40	
4.51	3.16	NO						
L0002989		0	0.12077E-02	471697.2	3822149.1	869.7	3.40	
4.51	3.16	NO						
L0002990		0	0.12077E-02	471689.4	3822143.3	870.1	3.40	
4.51	3.16	NO						
L0002991		0	0.12077E-02	471681.7	3822137.5	870.5	3.40	
4.51	3.16	NO						
L0002992		0	0.12077E-02	471673.9	3822131.6	870.9	3.40	
4.51	3.16	NO						
L0002993		0	0.12077E-02	471666.2	3822125.8	871.4	3.40	
4.51	3.16	NO						
L0002994		0	0.12077E-02	471658.4	3822120.0	871.9	3.40	
4.51	3.16	NO						
L0002995		0	0.12077E-02	471650.7	3822114.1	872.5	3.40	
4.51	3.16	NO						
L0002996		0	0.12077E-02	471642.9	3822108.3	872.9	3.40	
4.51	3.16	NO						
L0002997		0	0.12077E-02	471635.2	3822102.5	873.5	3.40	
4.51	3.16	NO						
L0002998		0	0.12077E-02	471627.4	3822096.7	874.0	3.40	
4.51	3.16	NO						
L0002999		0	0.12077E-02	471619.6	3822090.8	874.3	3.40	
4.51	3.16	NO						
L0003000		0	0.12077E-02	471611.9	3822085.0	874.9	3.40	
4.51	3.16	NO						
L0003001		0	0.12077E-02	471606.0	3822077.3	875.3	3.40	
4.51	3.16	NO						
L0003002		0	0.12077E-02	471600.0	3822069.7	875.7	3.40	
4.51	3.16	NO						
L0003003		0	0.12077E-02	471594.1	3822062.0	875.9	3.40	
4.51	3.16	NO						
L0003004		0	0.12077E-02	471588.2	3822054.3	876.3	3.40	
4.51	3.16	NO						
L0003005		0	0.12077E-02	471582.2	3822046.7	876.7	3.40	
4.51	3.16	NO						
L0003006		0	0.12077E-02	471576.3	3822039.0	877.1	3.40	
4.51	3.16	NO						
L0003007		0	0.12077E-02	471570.3	3822031.3	877.6	3.40	
4.51	3.16	NO						
L0003008		0	0.12077E-02	471564.4	3822023.6	878.0	3.40	
4.51	3.16	NO						
L0003009		0	0.12077E-02	471558.5	3822016.0	878.4	3.40	
4.51	3.16	NO						
L0003010		0	0.12077E-02	471552.5	3822008.3	878.8	3.40	
4.51	3.16	NO						

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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003011	0	0.12077E-02	471546.6	3822000.6	879.2	3.40	4.51	3.16	NO
L0003012	0	0.12077E-02	471540.6	3821993.0	879.5	3.40	4.51	3.16	NO
L0003013	0	0.12077E-02	471534.7	3821985.3	879.9	3.40	4.51	3.16	NO
L0003014	0	0.12077E-02	471528.8	3821977.6	880.2	3.40	4.51	3.16	NO
L0003015	0	0.12077E-02	471522.8	3821970.0	880.5	3.40	4.51	3.16	NO
L0003016	0	0.12077E-02	471516.9	3821962.3	880.9	3.40	4.51	3.16	NO
L0003017	0	0.12077E-02	471511.0	3821954.6	881.4	3.40	4.51	3.16	NO
L0003018	0	0.12077E-02	471505.6	3821946.6	881.6	3.40	4.51	3.16	NO
L0003019	0	0.12077E-02	471501.4	3821937.8	881.6	3.40	4.51	3.16	NO
L0003020	0	0.12077E-02	471497.3	3821929.1	881.8	3.40	4.51	3.16	NO
L0003021	0	0.12077E-02	471493.1	3821920.3	882.0	3.40	4.51	3.16	NO
L0003022	0	0.12077E-02	471488.9	3821911.6	882.1	3.40	4.51	3.16	NO
L0003023	0	0.12077E-02	471484.7	3821902.8	882.3	3.40	4.51	3.16	NO
L0003024	0	0.12077E-02	471480.6	3821894.0	882.5	3.40	4.51	3.16	NO
L0003025	0	0.12077E-02	471476.4	3821885.3	882.7	3.40	4.51	3.16	NO
L0003026	0	0.12077E-02	471472.2	3821876.5	882.8	3.40	4.51	3.16	NO

L0003027		0	0.12077E-02	471468.0	3821867.8	883.1	3.40	
4.51	3.16	NO						
L0003028		0	0.12077E-02	471463.8	3821859.0	883.1	3.40	
4.51	3.16	NO						
L0003029		0	0.12077E-02	471459.7	3821850.3	883.2	3.40	
4.51	3.16	NO						
L0003030		0	0.12077E-02	471455.5	3821841.5	883.3	3.40	
4.51	3.16	NO						
L0003031		0	0.12077E-02	471451.3	3821832.8	883.4	3.40	
4.51	3.16	NO						
L0003032		0	0.12077E-02	471447.1	3821824.0	883.5	3.40	
4.51	3.16	NO						
L0003033		0	0.12077E-02	471443.0	3821815.3	883.5	3.40	
4.51	3.16	NO						
L0003034		0	0.12077E-02	471438.8	3821806.5	883.7	3.40	
4.51	3.16	NO						
L0003035		0	0.12077E-02	471434.6	3821797.7	883.8	3.40	
4.51	3.16	NO						
L0003036		0	0.12077E-02	471430.4	3821789.0	883.9	3.40	
4.51	3.16	NO						
L0003037		0	0.12077E-02	471426.3	3821780.2	884.0	3.40	
4.51	3.16	NO						
L0003038		0	0.12077E-02	471422.1	3821771.5	884.0	3.40	
4.51	3.16	NO						
L0003039		0	0.12077E-02	471417.9	3821762.7	884.0	3.40	
4.51	3.16	NO						
L0003040		0	0.12077E-02	471413.7	3821754.0	884.0	3.40	
4.51	3.16	NO						
L0003041		0	0.12077E-02	471409.6	3821745.2	884.0	3.40	
4.51	3.16	NO						
L0003042		0	0.12077E-02	471405.4	3821736.5	884.0	3.40	
4.51	3.16	NO						
L0003043		0	0.12077E-02	471401.2	3821727.7	884.0	3.40	
4.51	3.16	NO						
L0003044		0	0.12077E-02	471397.0	3821718.9	884.0	3.40	
4.51	3.16	NO						
L0003045		0	0.12077E-02	471392.9	3821710.2	884.1	3.40	
4.51	3.16	NO						
L0003046		0	0.12077E-02	471388.7	3821701.4	884.1	3.40	
4.51	3.16	NO						
L0003047		0	0.12077E-02	471384.5	3821692.7	884.1	3.40	
4.51	3.16	NO						
L0003048		0	0.12077E-02	471380.3	3821683.9	884.0	3.40	
4.51	3.16	NO						
L0003049		0	0.12077E-02	471376.2	3821675.2	884.0	3.40	
4.51	3.16	NO						
L0003050		0	0.12077E-02	471372.0	3821666.4	884.0	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0003051	0	0.12077E-02	471368.1	3821657.5	884.0	3.40	4.51	3.16	NO
L0003052	0	0.12077E-02	471364.3	3821648.6	884.1	3.40	4.51	3.16	NO
L0003053	0	0.12077E-02	471360.4	3821639.7	884.1	3.40	4.51	3.16	NO
L0003054	0	0.12077E-02	471356.6	3821630.8	884.1	3.40	4.51	3.16	NO
L0003055	0	0.12077E-02	471352.8	3821621.9	884.1	3.40	4.51	3.16	NO
L0003056	0	0.12077E-02	471348.9	3821613.0	884.1	3.40	4.51	3.16	NO
L0003057	0	0.12077E-02	471345.1	3821604.1	884.1	3.40	4.51	3.16	NO
L0003058	0	0.12077E-02	471341.2	3821595.2	884.2	3.40	4.51	3.16	NO
L0003059	0	0.12077E-02	471337.4	3821586.3	884.2	3.40	4.51	3.16	NO
L0003060	0	0.12077E-02	471333.6	3821577.3	884.2	3.40	4.51	3.16	NO
L0003061	0	0.12077E-02	471329.7	3821568.4	884.2	3.40	4.51	3.16	NO
L0003062	0	0.12077E-02	471325.9	3821559.5	884.2	3.40	4.51	3.16	NO
L0003063	0	0.12077E-02	471322.1	3821550.6	884.2	3.40	4.51	3.16	NO
L0003064	0	0.12077E-02	471318.2	3821541.7	884.2	3.40	4.51	3.16	NO
L0003065	0	0.12077E-02	471314.4	3821532.8	884.3	3.40	4.51	3.16	NO
L0003066	0	0.12077E-02	471310.5	3821523.9	884.3	3.40	4.51	3.16	NO

L0003067		0	0.12077E-02	471306.7	3821515.0	884.4	3.40	
4.51	3.16	NO						
L0003068		0	0.12077E-02	471302.9	3821506.1	884.3	3.40	
4.51	3.16	NO						
L0003069		0	0.12077E-02	471299.0	3821497.2	884.3	3.40	
4.51	3.16	NO						
L0003070		0	0.12077E-02	471295.2	3821488.3	884.3	3.40	
4.51	3.16	NO						
L0003071		0	0.12077E-02	471291.4	3821479.4	884.3	3.40	
4.51	3.16	NO						
L0003072		0	0.12077E-02	471287.5	3821470.4	884.4	3.40	
4.51	3.16	NO						
L0003073		0	0.12077E-02	471283.7	3821461.5	884.4	3.40	
4.51	3.16	NO						
L0003074		0	0.12077E-02	471279.8	3821452.6	884.5	3.40	
4.51	3.16	NO						
L0003075		0	0.12077E-02	471276.0	3821443.7	884.4	3.40	
4.51	3.16	NO						
L0003076		0	0.12077E-02	471272.2	3821434.8	884.4	3.40	
4.51	3.16	NO						
L0003077		0	0.12077E-02	471268.3	3821425.9	884.4	3.40	
4.51	3.16	NO						
L0003078		0	0.12077E-02	471264.5	3821417.0	884.4	3.40	
4.51	3.16	NO						
L0003079		0	0.12077E-02	471260.7	3821408.1	884.5	3.40	
4.51	3.16	NO						
L0003080		0	0.12077E-02	471256.8	3821399.2	884.5	3.40	
4.51	3.16	NO						
L0003081		0	0.12077E-02	471253.0	3821390.3	884.5	3.40	
4.51	3.16	NO						
L0003082		0	0.12077E-02	471249.1	3821381.4	884.5	3.40	
4.51	3.16	NO						
L0003083		0	0.12077E-02	471245.3	3821372.4	884.4	3.40	
4.51	3.16	NO						
L0003084		0	0.12077E-02	471241.5	3821363.5	884.5	3.40	
4.51	3.16	NO						
L0003085		0	0.12077E-02	471237.6	3821354.6	884.5	3.40	
4.51	3.16	NO						
L0003086		0	0.12077E-02	471233.8	3821345.7	884.6	3.40	
4.51	3.16	NO						
L0003087		0	0.12077E-02	471230.0	3821336.8	884.6	3.40	
4.51	3.16	NO						
L0003088		0	0.12077E-02	471226.1	3821327.9	884.6	3.40	
4.51	3.16	NO						
L0003089		0	0.12077E-02	471222.3	3821319.0	884.6	3.40	
4.51	3.16	NO						
L0003090		0	0.12077E-02	471218.4	3821310.1	884.5	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0003091	0	0.12077E-02	471214.6	3821301.2	884.6	3.40	4.51	3.16	NO
L0003092	0	0.12077E-02	471210.8	3821292.3	884.6	3.40	4.51	3.16	NO
L0003093	0	0.12077E-02	471206.9	3821283.4	884.6	3.40	4.51	3.16	NO
L0003094	0	0.12077E-02	471203.1	3821274.5	884.4	3.40	4.51	3.16	NO
L0003095	0	0.12077E-02	471199.3	3821265.5	884.5	3.40	4.51	3.16	NO
L0003096	0	0.12077E-02	471195.4	3821256.6	884.6	3.40	4.51	3.16	NO
L0003097	0	0.12077E-02	471191.6	3821247.7	884.6	3.40	4.51	3.16	NO
L0003098	0	0.12077E-02	471187.7	3821238.8	884.7	3.40	4.51	3.16	NO
L0003099	0	0.12077E-02	471183.9	3821229.9	884.8	3.40	4.51	3.16	NO
L0003100	0	0.12077E-02	471180.1	3821221.0	884.8	3.40	4.51	3.16	NO
L0003101	0	0.12077E-02	471176.2	3821212.1	884.7	3.40	4.51	3.16	NO
L0003102	0	0.12077E-02	471172.4	3821203.2	884.7	3.40	4.51	3.16	NO
L0003103	0	0.12077E-02	471168.6	3821194.3	884.7	3.40	4.51	3.16	NO
L0003104	0	0.12077E-02	471164.7	3821185.4	884.7	3.40	4.51	3.16	NO
L0003105	0	0.12077E-02	471160.9	3821176.5	884.8	3.40	4.51	3.16	NO
L0003106	0	0.12077E-02	471157.0	3821167.6	884.9	3.40	4.51	3.16	NO

L0003107		0	0.12077E-02	471153.2	3821158.6	884.8	3.40	
4.51	3.16	NO						
L0003108		0	0.12077E-02	471149.4	3821149.7	884.8	3.40	
4.51	3.16	NO						
L0003109		0	0.12077E-02	471145.5	3821140.8	884.8	3.40	
4.51	3.16	NO						
L0003110		0	0.12077E-02	471141.7	3821131.9	884.8	3.40	
4.51	3.16	NO						
L0003111		0	0.12077E-02	471137.9	3821123.0	884.8	3.40	
4.51	3.16	NO						
L0003112		0	0.12077E-02	471134.0	3821114.1	884.9	3.40	
4.51	3.16	NO						
L0003113		0	0.12077E-02	471130.2	3821105.2	885.0	3.40	
4.51	3.16	NO						
L0003114		0	0.12077E-02	471126.4	3821096.3	884.9	3.40	
4.51	3.16	NO						
L0003115		0	0.12077E-02	471122.8	3821087.3	884.8	3.40	
4.51	3.16	NO						
L0003116		0	0.12077E-02	471119.2	3821078.3	884.9	3.40	
4.51	3.16	NO						
L0003117		0	0.12077E-02	471115.6	3821069.2	884.9	3.40	
4.51	3.16	NO						
L0003118		0	0.12077E-02	471112.0	3821060.2	884.9	3.40	
4.51	3.16	NO						
L0003119		0	0.12077E-02	471108.4	3821051.2	885.0	3.40	
4.51	3.16	NO						
L0003120		0	0.12077E-02	471104.8	3821042.2	885.1	3.40	
4.51	3.16	NO						
L0003121		0	0.12077E-02	471101.2	3821033.2	885.0	3.40	
4.51	3.16	NO						
L0003122		0	0.12077E-02	471097.6	3821024.2	885.0	3.40	
4.51	3.16	NO						
L0003123		0	0.12077E-02	471094.0	3821015.2	885.0	3.40	
4.51	3.16	NO						
L0003124		0	0.12077E-02	471090.5	3821006.2	885.0	3.40	
4.51	3.16	NO						
L0003125		0	0.12077E-02	471086.9	3820997.2	885.0	3.40	
4.51	3.16	NO						
L0003126		0	0.12077E-02	471083.3	3820988.1	885.1	3.40	
4.51	3.16	NO						
L0003127		0	0.12077E-02	471079.7	3820979.1	885.2	3.40	
4.51	3.16	NO						
L0003128		0	0.12077E-02	471076.1	3820970.1	885.2	3.40	
4.51	3.16	NO						
L0003129		0	0.12077E-02	471072.5	3820961.1	885.2	3.40	
4.51	3.16	NO						
L0003130		0	0.12077E-02	471068.9	3820952.1	885.2	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003131	0	0.12077E-02	471065.3	3820943.1	885.3	3.40	4.51	3.16	NO
L0003132	0	0.12077E-02	471061.7	3820934.1	885.3	3.40	4.51	3.16	NO
L0003133	0	0.12077E-02	471058.1	3820925.1	885.4	3.40	4.51	3.16	NO
L0003134	0	0.12077E-02	471054.5	3820916.1	885.5	3.40	4.51	3.16	NO
L0003135	0	0.12077E-02	471051.0	3820907.0	885.6	3.40	4.51	3.16	NO
L0003136	0	0.12077E-02	471047.4	3820898.0	885.6	3.40	4.51	3.16	NO
L0003137	0	0.12077E-02	471043.8	3820889.0	885.7	3.40	4.51	3.16	NO
L0003138	0	0.12077E-02	471040.2	3820880.0	885.9	3.40	4.51	3.16	NO
L0003139	0	0.12077E-02	471036.6	3820871.0	886.1	3.40	4.51	3.16	NO
L0003140	0	0.12077E-02	471033.0	3820862.0	886.1	3.40	4.51	3.16	NO
L0003141	0	0.12077E-02	471029.4	3820853.0	886.1	3.40	4.51	3.16	NO
L0003142	0	0.12077E-02	471025.8	3820844.0	886.1	3.40	4.51	3.16	NO
L0003143	0	0.12077E-02	471022.2	3820835.0	886.1	3.40	4.51	3.16	NO
L0003144	0	0.12077E-02	471018.6	3820825.9	886.2	3.40	4.51	3.16	NO
L0003145	0	0.12077E-02	471015.1	3820816.9	886.3	3.40	4.51	3.16	NO
L0003146	0	0.12077E-02	471011.5	3820807.9	886.5	3.40	4.51	3.16	NO

L0003147		0	0.12077E-02	471007.9	3820798.9	886.7	3.40	
4.51	3.16	NO						
L0003148		0	0.12077E-02	471004.3	3820789.9	886.8	3.40	
4.51	3.16	NO						
L0003149		0	0.12077E-02	471000.7	3820780.9	886.8	3.40	
4.51	3.16	NO						
L0003150		0	0.12077E-02	470997.1	3820771.9	886.9	3.40	
4.51	3.16	NO						
L0003151		0	0.12077E-02	470993.5	3820762.9	887.0	3.40	
4.51	3.16	NO						
L0003152		0	0.12077E-02	470989.9	3820753.9	887.1	3.40	
4.51	3.16	NO						
L0003153		0	0.12077E-02	470986.3	3820744.8	887.2	3.40	
4.51	3.16	NO						
L0003154		0	0.12077E-02	470982.7	3820735.8	887.4	3.40	
4.51	3.16	NO						
L0003155		0	0.12077E-02	470979.1	3820726.8	887.4	3.40	
4.51	3.16	NO						
L0003156		0	0.12077E-02	470975.6	3820717.8	887.5	3.40	
4.51	3.16	NO						
L0003157		0	0.12077E-02	470972.0	3820708.8	887.6	3.40	
4.51	3.16	NO						
L0003158		0	0.12077E-02	470968.4	3820699.8	887.6	3.40	
4.51	3.16	NO						
L0003159		0	0.12077E-02	470964.8	3820690.8	887.7	3.40	
4.51	3.16	NO						
L0003160		0	0.12077E-02	470961.2	3820681.8	887.8	3.40	
4.51	3.16	NO						
L0003161		0	0.12077E-02	470957.6	3820672.8	888.0	3.40	
4.51	3.16	NO						
L0003162		0	0.12077E-02	470954.0	3820663.7	888.2	3.40	
4.51	3.16	NO						
L0003163		0	0.12077E-02	470950.4	3820654.7	888.2	3.40	
4.51	3.16	NO						
L0003164		0	0.12077E-02	470946.8	3820645.7	888.3	3.40	
4.51	3.16	NO						
L0003165		0	0.12077E-02	470943.2	3820636.7	888.4	3.40	
4.51	3.16	NO						
L0003166		0	0.12077E-02	470939.7	3820627.7	888.5	3.40	
4.51	3.16	NO						
L0003167		0	0.12077E-02	470936.1	3820618.7	888.6	3.40	
4.51	3.16	NO						
L0003168		0	0.12077E-02	470932.5	3820609.7	888.8	3.40	
4.51	3.16	NO						
L0003169		0	0.12077E-02	470928.9	3820600.7	888.9	3.40	
4.51	3.16	NO						
L0003170		0	0.12077E-02	470925.3	3820591.7	888.9	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0003171	0	0.12077E-02	470921.7	3820582.6	889.0	3.40	4.51	3.16	NO
L0003172	0	0.12077E-02	470918.1	3820573.6	889.5	3.40	4.51	3.16	NO
L0003173	0	0.12077E-02	470914.5	3820564.6	889.8	3.40	4.51	3.16	NO
L0003174	0	0.12077E-02	470910.9	3820555.6	890.0	3.40	4.51	3.16	NO
L0003175	0	0.12077E-02	470907.3	3820546.6	890.0	3.40	4.51	3.16	NO
L0003176	0	0.12077E-02	470903.8	3820537.6	889.9	3.40	4.51	3.16	NO
L0003177	0	0.12077E-02	470900.2	3820528.6	889.6	3.40	4.51	3.16	NO
L0003178	0	0.12077E-02	470896.6	3820519.6	889.8	3.40	4.51	3.16	NO
L0003179	0	0.12077E-02	470893.0	3820510.6	890.3	3.40	4.51	3.16	NO
L0003180	0	0.12077E-02	470889.4	3820501.5	890.7	3.40	4.51	3.16	NO
L0003181	0	0.12077E-02	470885.8	3820492.5	890.9	3.40	4.51	3.16	NO
L0003182	0	0.12077E-02	470882.2	3820483.5	890.8	3.40	4.51	3.16	NO
L0003183	0	0.12077E-02	470878.6	3820474.5	890.6	3.40	4.51	3.16	NO
L0003184	0	0.12077E-02	470875.0	3820465.5	890.3	3.40	4.51	3.16	NO
L0003185	0	0.12077E-02	470871.4	3820456.5	890.6	3.40	4.51	3.16	NO
L0003186	0	0.12077E-02	470867.8	3820447.5	891.2	3.40	4.51	3.16	NO

L0003187		0	0.12077E-02	470864.3	3820438.5	891.6	3.40	
4.51	3.16	NO						
L0003188		0	0.12077E-02	470860.7	3820429.5	891.8	3.40	
4.51	3.16	NO						
L0003189		0	0.12077E-02	470857.1	3820420.4	891.5	3.40	
4.51	3.16	NO						
L0003190		0	0.12077E-02	470853.5	3820411.4	891.3	3.40	
4.51	3.16	NO						
L0003191		0	0.12077E-02	470849.9	3820402.4	891.0	3.40	
4.51	3.16	NO						
L0003192		0	0.12077E-02	470846.3	3820393.4	891.3	3.40	
4.51	3.16	NO						
L0003193		0	0.12077E-02	470842.7	3820384.4	891.8	3.40	
4.51	3.16	NO						
L0003194		0	0.12077E-02	470839.1	3820375.4	892.1	3.40	
4.51	3.16	NO						
L0003195		0	0.12077E-02	470835.5	3820366.4	892.1	3.40	
4.51	3.16	NO						
L0003196		0	0.12077E-02	470831.9	3820357.4	891.8	3.40	
4.51	3.16	NO						
L0003197		0	0.12077E-02	470828.4	3820348.4	891.6	3.40	
4.51	3.16	NO						
L0003198		0	0.12077E-02	470824.8	3820339.3	891.4	3.40	
4.51	3.16	NO						
L0003199		0	0.12077E-02	470821.2	3820330.3	891.2	3.40	
4.51	3.16	NO						
L0003200		0	0.12077E-02	470817.6	3820321.3	891.0	3.40	
4.51	3.16	NO						
L0003201		0	0.12077E-02	470814.0	3820312.3	891.0	3.40	
4.51	3.16	NO						
L0003202		0	0.12077E-02	470810.4	3820303.3	891.1	3.40	
4.51	3.16	NO						
L0003203		0	0.12077E-02	470806.8	3820294.3	891.4	3.40	
4.51	3.16	NO						
L0003204		0	0.12077E-02	470803.2	3820285.3	891.6	3.40	
4.51	3.16	NO						
L0003205		0	0.12077E-02	470799.6	3820276.3	891.9	3.40	
4.51	3.16	NO						
L0003206		0	0.12077E-02	470796.0	3820267.3	891.9	3.40	
4.51	3.16	NO						
L0003207		0	0.12077E-02	470792.5	3820258.2	891.8	3.40	
4.51	3.16	NO						
L0003208		0	0.12077E-02	470788.9	3820249.2	891.8	3.40	
4.51	3.16	NO						
L0003209		0	0.12077E-02	470785.3	3820240.2	891.9	3.40	
4.51	3.16	NO						
L0003210		0	0.12077E-02	470781.7	3820231.2	892.1	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0003211	0	0.12077E-02	470778.1	3820222.2	892.3	3.40	4.51	3.16	NO
L0003212	0	0.12077E-02	470774.5	3820213.2	892.7	3.40	4.51	3.16	NO
L0003213	0	0.12077E-02	470770.9	3820204.2	893.0	3.40	4.51	3.16	NO
L0003214	0	0.12077E-02	470767.3	3820195.2	893.1	3.40	4.51	3.16	NO
L0003215	0	0.12077E-02	470763.7	3820186.2	893.1	3.40	4.51	3.16	NO
L0003216	0	0.12077E-02	470760.1	3820177.1	893.0	3.40	4.51	3.16	NO
L0003217	0	0.12077E-02	470756.5	3820168.1	893.0	3.40	4.51	3.16	NO
L0003218	0	0.12077E-02	470753.0	3820159.1	893.2	3.40	4.51	3.16	NO
L0003219	0	0.12077E-02	470749.4	3820150.1	893.5	3.40	4.51	3.16	NO
L0003220	0	0.12077E-02	470745.8	3820141.1	893.9	3.40	4.51	3.16	NO
L0003221	0	0.12077E-02	470742.2	3820132.1	894.0	3.40	4.51	3.16	NO
L0003222	0	0.12077E-02	470738.6	3820123.1	894.1	3.40	4.51	3.16	NO
L0003223	0	0.12077E-02	470735.0	3820114.1	894.2	3.40	4.51	3.16	NO
L0003224	0	0.12077E-02	470731.4	3820105.1	894.3	3.40	4.51	3.16	NO
L0003225	0	0.12077E-02	470727.8	3820096.0	894.4	3.40	4.51	3.16	NO
L0003226	0	0.12077E-02	470724.2	3820087.0	894.5	3.40	4.51	3.16	NO

L0003227		0	0.12077E-02	470720.6	3820078.0	894.8	3.40	
4.51	3.16	NO						
L0003228		0	0.12077E-02	470717.1	3820069.0	894.9	3.40	
4.51	3.16	NO						
L0003229		0	0.12077E-02	470713.5	3820060.0	895.1	3.40	
4.51	3.16	NO						
L0003230		0	0.12077E-02	470709.9	3820051.0	895.1	3.40	
4.51	3.16	NO						
L0003231		0	0.12077E-02	470706.3	3820042.0	895.2	3.40	
4.51	3.16	NO						
L0003232		0	0.12077E-02	470702.7	3820033.0	895.3	3.40	
4.51	3.16	NO						
L0003233		0	0.12077E-02	470699.1	3820024.0	895.4	3.40	
4.51	3.16	NO						
L0003234		0	0.12077E-02	470695.5	3820014.9	895.5	3.40	
4.51	3.16	NO						
L0003235		0	0.12077E-02	470691.9	3820005.9	895.6	3.40	
4.51	3.16	NO						
L0003236		0	0.12077E-02	470688.3	3819996.9	895.6	3.40	
4.51	3.16	NO						
L0003237		0	0.12077E-02	470684.7	3819987.9	895.7	3.40	
4.51	3.16	NO						
L0003238		0	0.12077E-02	470681.1	3819978.9	895.7	3.40	
4.51	3.16	NO						
L0003239		0	0.14451E-02	475273.9	3826374.1	879.1	3.40	
4.51	3.16	NO						
L0003240		0	0.14451E-02	475279.1	3826382.3	879.3	3.40	
4.51	3.16	NO						
L0003241		0	0.14451E-02	475284.3	3826390.4	879.4	3.40	
4.51	3.16	NO						
L0003242		0	0.14451E-02	475289.6	3826398.6	879.6	3.40	
4.51	3.16	NO						
L0003243		0	0.14451E-02	475294.8	3826406.8	879.8	3.40	
4.51	3.16	NO						
L0003244		0	0.14451E-02	475300.0	3826414.9	879.9	3.40	
4.51	3.16	NO						
L0003245		0	0.14451E-02	475305.3	3826423.1	880.1	3.40	
4.51	3.16	NO						
L0003246		0	0.14451E-02	475310.5	3826431.3	880.2	3.40	
4.51	3.16	NO						
L0003247		0	0.14451E-02	475315.7	3826439.4	880.3	3.40	
4.51	3.16	NO						
L0003248		0	0.14451E-02	475321.0	3826447.6	880.4	3.40	
4.51	3.16	NO						
L0003249		0	0.14451E-02	475326.2	3826455.8	880.4	3.40	
4.51	3.16	NO						
L0003250		0	0.14451E-02	475331.4	3826463.9	880.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

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L0003251	0	0.14451E-02	475336.7	3826472.1	881.2	3.40	4.51	3.16	NO
L0003252	0	0.14451E-02	475341.9	3826480.3	881.5	3.40	4.51	3.16	NO
L0003253	0	0.14451E-02	475347.1	3826488.5	881.8	3.40	4.51	3.16	NO
L0003254	0	0.14451E-02	475352.4	3826496.6	881.7	3.40	4.51	3.16	NO
L0003255	0	0.14451E-02	475357.6	3826504.8	881.6	3.40	4.51	3.16	NO
L0003256	0	0.14451E-02	475362.8	3826513.0	881.7	3.40	4.51	3.16	NO
L0003257	0	0.14451E-02	475368.1	3826521.1	881.9	3.40	4.51	3.16	NO
L0003258	0	0.14451E-02	475373.3	3826529.3	881.8	3.40	4.51	3.16	NO
L0003259	0	0.14451E-02	475378.5	3826537.5	881.8	3.40	4.51	3.16	NO
L0003260	0	0.14451E-02	475383.8	3826545.6	881.7	3.40	4.51	3.16	NO
L0003261	0	0.14451E-02	475389.0	3826553.8	881.9	3.40	4.51	3.16	NO
L0003262	0	0.14451E-02	475394.2	3826562.0	882.0	3.40	4.51	3.16	NO
L0003263	0	0.14451E-02	475399.5	3826570.1	882.0	3.40	4.51	3.16	NO
L0003264	0	0.14451E-02	475404.7	3826578.3	882.0	3.40	4.51	3.16	NO
L0003265	0	0.14451E-02	475409.9	3826586.5	882.4	3.40	4.51	3.16	NO
L0003266	0	0.14451E-02	475415.2	3826594.6	882.6	3.40	4.51	3.16	NO

L0003267		0	0.14451E-02	475420.4	3826602.8	882.7	3.40	
4.51	3.16	NO						
L0003268		0	0.14451E-02	475425.6	3826611.0	882.7	3.40	
4.51	3.16	NO						
L0003269		0	0.14451E-02	475430.9	3826619.1	882.8	3.40	
4.51	3.16	NO						
L0003270		0	0.14451E-02	475436.1	3826627.3	883.1	3.40	
4.51	3.16	NO						
L0003271		0	0.14451E-02	475441.3	3826635.5	883.4	3.40	
4.51	3.16	NO						
L0003272		0	0.14451E-02	475446.6	3826643.6	883.5	3.40	
4.51	3.16	NO						
L0003273		0	0.14451E-02	475451.8	3826651.8	883.5	3.40	
4.51	3.16	NO						
L0003274		0	0.14451E-02	475457.0	3826660.0	883.5	3.40	
4.51	3.16	NO						
L0003275		0	0.14451E-02	475462.3	3826668.1	883.7	3.40	
4.51	3.16	NO						
L0003276		0	0.14451E-02	475467.5	3826676.3	883.9	3.40	
4.51	3.16	NO						
L0003277		0	0.14451E-02	475472.7	3826684.5	883.9	3.40	
4.51	3.16	NO						
L0003278		0	0.14451E-02	475478.0	3826692.6	883.6	3.40	
4.51	3.16	NO						
L0003279		0	0.14451E-02	475483.2	3826700.8	883.4	3.40	
4.51	3.16	NO						
L0003280		0	0.14451E-02	475488.4	3826709.0	883.8	3.40	
4.51	3.16	NO						
L0003281		0	0.14451E-02	475493.7	3826717.1	883.8	3.40	
4.51	3.16	NO						
L0003282		0	0.14451E-02	475498.9	3826725.3	883.6	3.40	
4.51	3.16	NO						
L0003283		0	0.14451E-02	475504.1	3826733.5	883.2	3.40	
4.51	3.16	NO						
L0003284		0	0.14451E-02	475509.4	3826741.6	883.6	3.40	
4.51	3.16	NO						
L0003285		0	0.14451E-02	475514.6	3826749.8	883.7	3.40	
4.51	3.16	NO						
L0003286		0	0.14451E-02	475519.8	3826758.0	883.6	3.40	
4.51	3.16	NO						
L0003287		0	0.14451E-02	475525.1	3826766.1	883.4	3.40	
4.51	3.16	NO						
L0003288		0	0.14451E-02	475530.3	3826774.3	883.4	3.40	
4.51	3.16	NO						
L0003289		0	0.14451E-02	475535.5	3826782.5	883.6	3.40	
4.51	3.16	NO						
L0003290		0	0.14451E-02	475540.8	3826790.6	883.5	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003291	0	0.14451E-02	475546.0	3826798.8	883.6	3.40	4.51	3.16	NO
L0003292	0	0.14451E-02	475551.2	3826807.0	883.7	3.40	4.51	3.16	NO
L0003293	0	0.14451E-02	475556.5	3826815.1	883.7	3.40	4.51	3.16	NO
L0003294	0	0.14451E-02	475561.7	3826823.3	883.8	3.40	4.51	3.16	NO
L0003295	0	0.14451E-02	475566.9	3826831.5	883.9	3.40	4.51	3.16	NO
L0003296	0	0.14451E-02	475572.2	3826839.6	884.0	3.40	4.51	3.16	NO
L0003297	0	0.14451E-02	475577.4	3826847.8	884.1	3.40	4.51	3.16	NO
L0003298	0	0.14451E-02	475582.6	3826856.0	884.1	3.40	4.51	3.16	NO
L0003299	0	0.14451E-02	475587.9	3826864.1	884.2	3.40	4.51	3.16	NO
L0003300	0	0.14451E-02	475593.1	3826872.3	884.3	3.40	4.51	3.16	NO
L0003301	0	0.14451E-02	475598.3	3826880.5	884.4	3.40	4.51	3.16	NO
L0003302	0	0.14451E-02	475603.6	3826888.6	884.5	3.40	4.51	3.16	NO
L0003303	0	0.14451E-02	475608.8	3826896.8	884.6	3.40	4.51	3.16	NO
L0003304	0	0.14451E-02	475614.0	3826905.0	884.7	3.40	4.51	3.16	NO
L0003305	0	0.14451E-02	475619.3	3826913.1	884.8	3.40	4.51	3.16	NO
L0003306	0	0.14451E-02	475624.5	3826921.3	884.8	3.40	4.51	3.16	NO

L0003307		0	0.14451E-02	475629.7	3826929.5	884.9	3.40	
4.51	3.16	NO						
L0003308		0	0.14451E-02	475635.0	3826937.6	885.1	3.40	
4.51	3.16	NO						
L0003309		0	0.14451E-02	475640.2	3826945.8	885.1	3.40	
4.51	3.16	NO						
L0003310		0	0.14451E-02	475645.5	3826954.0	885.1	3.40	
4.51	3.16	NO						
L0003311		0	0.14451E-02	475650.7	3826962.1	885.1	3.40	
4.51	3.16	NO						
L0003312		0	0.14451E-02	475655.9	3826970.3	885.3	3.40	
4.51	3.16	NO						
L0003313		0	0.14451E-02	475661.2	3826978.5	885.4	3.40	
4.51	3.16	NO						
L0003314		0	0.14451E-02	475666.4	3826986.6	885.2	3.40	
4.51	3.16	NO						
L0003315		0	0.14451E-02	475671.8	3826994.7	885.2	3.40	
4.51	3.16	NO						
L0003316		0	0.14451E-02	475677.3	3827002.6	885.4	3.40	
4.51	3.16	NO						
L0003317		0	0.14451E-02	475682.9	3827010.6	885.6	3.40	
4.51	3.16	NO						
L0003318		0	0.14451E-02	475688.5	3827018.5	885.6	3.40	
4.51	3.16	NO						
L0003319		0	0.14451E-02	475694.1	3827026.5	885.7	3.40	
4.51	3.16	NO						
L0003320		0	0.14451E-02	475699.6	3827034.4	885.8	3.40	
4.51	3.16	NO						
L0003321		0	0.14451E-02	475705.2	3827042.3	885.8	3.40	
4.51	3.16	NO						
L0003322		0	0.14451E-02	475710.8	3827050.3	886.0	3.40	
4.51	3.16	NO						
L0003323		0	0.14451E-02	475716.3	3827058.2	886.0	3.40	
4.51	3.16	NO						
L0003324		0	0.14451E-02	475721.9	3827066.2	886.0	3.40	
4.51	3.16	NO						
L0003325		0	0.14451E-02	475727.5	3827074.1	886.0	3.40	
4.51	3.16	NO						
L0003326		0	0.14451E-02	475733.0	3827082.1	886.0	3.40	
4.51	3.16	NO						
L0003327		0	0.14451E-02	475738.6	3827090.0	886.2	3.40	
4.51	3.16	NO						
L0003328		0	0.14451E-02	475744.2	3827097.9	886.1	3.40	
4.51	3.16	NO						
L0003329		0	0.14451E-02	475749.7	3827105.9	885.9	3.40	
4.51	3.16	NO						
L0003330		0	0.14451E-02	475755.3	3827113.8	885.9	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003331	0	0.14451E-02	475760.9	3827121.8	886.3	3.40	4.51	3.16	NO
L0003332	0	0.14451E-02	475766.5	3827129.7	886.3	3.40	4.51	3.16	NO
L0003333	0	0.14451E-02	475772.0	3827137.6	885.9	3.40	4.51	3.16	NO
L0003334	0	0.14451E-02	475777.6	3827145.6	885.8	3.40	4.51	3.16	NO
L0003335	0	0.14451E-02	475783.2	3827153.5	886.2	3.40	4.51	3.16	NO
L0003336	0	0.14451E-02	475788.7	3827161.5	886.6	3.40	4.51	3.16	NO
L0003337	0	0.14451E-02	475794.3	3827169.4	886.2	3.40	4.51	3.16	NO
L0003338	0	0.14451E-02	475799.9	3827177.4	886.0	3.40	4.51	3.16	NO
L0003339	0	0.14451E-02	475805.4	3827185.3	886.2	3.40	4.51	3.16	NO
L0003340	0	0.14451E-02	475811.0	3827193.2	886.6	3.40	4.51	3.16	NO
L0003341	0	0.14451E-02	475816.6	3827201.2	886.4	3.40	4.51	3.16	NO
L0003342	0	0.14451E-02	475822.2	3827209.1	886.3	3.40	4.51	3.16	NO
L0003343	0	0.14451E-02	475827.7	3827217.1	886.4	3.40	4.51	3.16	NO
L0003344	0	0.14451E-02	475833.3	3827225.0	886.5	3.40	4.51	3.16	NO
L0003345	0	0.14451E-02	475838.9	3827232.9	886.4	3.40	4.51	3.16	NO
L0003346	0	0.14451E-02	475844.4	3827240.9	886.3	3.40	4.51	3.16	NO

L0003347		0	0.14451E-02	475850.0	3827248.8	886.3	3.40	
4.51	3.16	NO						
L0003348		0	0.14451E-02	475855.6	3827256.8	886.4	3.40	
4.51	3.16	NO						
L0003349		0	0.14451E-02	475861.1	3827264.7	886.5	3.40	
4.51	3.16	NO						
L0003350		0	0.14451E-02	475866.7	3827272.7	886.4	3.40	
4.51	3.16	NO						
L0003351		0	0.14451E-02	475872.3	3827280.6	886.4	3.40	
4.51	3.16	NO						
L0003352		0	0.14451E-02	475877.8	3827288.5	886.4	3.40	
4.51	3.16	NO						
L0003353		0	0.14451E-02	475883.4	3827296.5	886.5	3.40	
4.51	3.16	NO						
L0003354		0	0.14451E-02	475889.0	3827304.4	886.5	3.40	
4.51	3.16	NO						
L0003355		0	0.14451E-02	475894.6	3827312.4	886.5	3.40	
4.51	3.16	NO						
L0003356		0	0.14451E-02	475900.1	3827320.3	886.4	3.40	
4.51	3.16	NO						
L0003357		0	0.14451E-02	475905.7	3827328.2	886.4	3.40	
4.51	3.16	NO						
L0003358		0	0.14451E-02	475911.3	3827336.2	886.5	3.40	
4.51	3.16	NO						
L0003359		0	0.14451E-02	475916.8	3827344.1	886.7	3.40	
4.51	3.16	NO						
L0003360		0	0.14451E-02	475922.4	3827352.1	886.3	3.40	
4.51	3.16	NO						
L0003361		0	0.14451E-02	475928.0	3827360.0	886.1	3.40	
4.51	3.16	NO						
L0003362		0	0.14451E-02	475933.5	3827368.0	886.2	3.40	
4.51	3.16	NO						
L0003363		0	0.14451E-02	475939.1	3827375.9	886.5	3.40	
4.51	3.16	NO						
L0003364		0	0.14451E-02	475944.7	3827383.8	886.0	3.40	
4.51	3.16	NO						
L0003365		0	0.14451E-02	475950.3	3827391.8	885.6	3.40	
4.51	3.16	NO						
L0003366		0	0.14451E-02	475955.8	3827399.7	885.6	3.40	
4.51	3.16	NO						
L0003367		0	0.14451E-02	475961.4	3827407.7	886.0	3.40	
4.51	3.16	NO						
L0003368		0	0.14451E-02	475967.0	3827415.6	886.1	3.40	
4.51	3.16	NO						
L0003369		0	0.14451E-02	475972.5	3827423.5	885.8	3.40	
4.51	3.16	NO						
L0003370		0	0.14451E-02	475978.1	3827431.5	885.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0003371	0	0.14451E-02	475983.7	3827439.4	886.0	3.40	4.51	3.16	NO
L0003372	0	0.14451E-02	475989.2	3827447.4	886.1	3.40	4.51	3.16	NO
L0003373	0	0.14451E-02	475994.8	3827455.3	886.1	3.40	4.51	3.16	NO
L0003374	0	0.14451E-02	476000.4	3827463.3	886.1	3.40	4.51	3.16	NO
L0003375	0	0.14451E-02	476005.9	3827471.2	886.0	3.40	4.51	3.16	NO
L0003376	0	0.14451E-02	476011.5	3827479.1	886.0	3.40	4.51	3.16	NO
L0003377	0	0.14451E-02	476017.1	3827487.1	886.4	3.40	4.51	3.16	NO
L0003378	0	0.14451E-02	476022.7	3827495.0	886.4	3.40	4.51	3.16	NO
L0003379	0	0.14451E-02	476028.2	3827503.0	886.4	3.40	4.51	3.16	NO
L0003380	0	0.14451E-02	476033.8	3827510.9	886.4	3.40	4.51	3.16	NO
L0003381	0	0.14451E-02	476039.4	3827518.8	886.3	3.40	4.51	3.16	NO
L0003382	0	0.14451E-02	476044.9	3827526.8	886.2	3.40	4.51	3.16	NO
L0003383	0	0.14451E-02	476050.5	3827534.7	886.6	3.40	4.51	3.16	NO
L0003384	0	0.14451E-02	476056.1	3827542.7	887.0	3.40	4.51	3.16	NO
L0003385	0	0.14451E-02	476061.6	3827550.6	886.9	3.40	4.51	3.16	NO
L0003386	0	0.14451E-02	476067.2	3827558.6	886.1	3.40	4.51	3.16	NO

L0003387		0	0.14451E-02	476072.8	3827566.5	885.8	3.40	
4.51	3.16	NO						
L0003388		0	0.14451E-02	476078.3	3827574.4	885.6	3.40	
4.51	3.16	NO						
L0003389		0	0.14451E-02	476083.9	3827582.4	885.6	3.40	
4.51	3.16	NO						
L0003390		0	0.14451E-02	476089.5	3827590.3	885.8	3.40	
4.51	3.16	NO						
L0003391		0	0.14451E-02	476095.1	3827598.3	885.4	3.40	
4.51	3.16	NO						
L0003392		0	0.14451E-02	476100.6	3827606.2	884.8	3.40	
4.51	3.16	NO						
L0003393		0	0.14451E-02	476106.2	3827614.1	884.7	3.40	
4.51	3.16	NO						
L0003394		0	0.14451E-02	476111.8	3827622.1	884.9	3.40	
4.51	3.16	NO						
L0003395		0	0.14451E-02	476117.3	3827630.0	884.0	3.40	
4.51	3.16	NO						
L0003396		0	0.14451E-02	476122.9	3827638.0	882.0	3.40	
4.51	3.16	NO						
L0003397		0	0.14451E-02	476128.5	3827645.9	879.9	3.40	
4.51	3.16	NO						
L0003398		0	0.14451E-02	476134.0	3827653.9	877.9	3.40	
4.51	3.16	NO						
L0003399		0	0.14451E-02	476139.6	3827661.8	879.2	3.40	
4.51	3.16	NO						
L0003400		0	0.14451E-02	476145.2	3827669.7	881.1	3.40	
4.51	3.16	NO						
L0003401		0	0.14451E-02	476150.8	3827677.7	882.9	3.40	
4.51	3.16	NO						
L0003402		0	0.14451E-02	476156.3	3827685.6	884.7	3.40	
4.51	3.16	NO						
L0003403		0	0.14451E-02	476161.9	3827693.6	884.7	3.40	
4.51	3.16	NO						
L0003404		0	0.14451E-02	476167.5	3827701.5	885.2	3.40	
4.51	3.16	NO						
L0003405		0	0.14451E-02	476173.0	3827709.4	885.6	3.40	
4.51	3.16	NO						
L0003406		0	0.14451E-02	476178.6	3827717.4	885.6	3.40	
4.51	3.16	NO						
L0003407		0	0.14451E-02	476184.2	3827725.3	885.3	3.40	
4.51	3.16	NO						
L0003408		0	0.14451E-02	476189.7	3827733.3	885.4	3.40	
4.51	3.16	NO						
L0003409		0	0.14451E-02	476195.3	3827741.2	885.7	3.40	
4.51	3.16	NO						
L0003410		0	0.14451E-02	476200.9	3827749.2	885.7	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003411	0	0.14451E-02	476206.4	3827757.1	885.6	3.40	4.51	3.16	NO
L0003412	0	0.14451E-02	476212.0	3827765.0	885.6	3.40	4.51	3.16	NO
L0003413	0	0.14451E-02	476217.6	3827773.0	885.7	3.40	4.51	3.16	NO
L0003414	0	0.14451E-02	476223.2	3827780.9	885.8	3.40	4.51	3.16	NO
L0003415	0	0.14451E-02	476228.7	3827788.9	885.9	3.40	4.51	3.16	NO
L0003416	0	0.14451E-02	476234.3	3827796.8	886.0	3.40	4.51	3.16	NO
L0003417	0	0.14451E-02	476239.9	3827804.7	886.1	3.40	4.51	3.16	NO
L0003418	0	0.14451E-02	476245.4	3827812.7	886.2	3.40	4.51	3.16	NO
L0003419	0	0.14451E-02	476251.0	3827820.6	886.3	3.40	4.51	3.16	NO
L0003420	0	0.14451E-02	476256.6	3827828.6	886.4	3.40	4.51	3.16	NO
L0003421	0	0.14451E-02	476262.1	3827836.5	886.5	3.40	4.51	3.16	NO
L0003422	0	0.14451E-02	476267.7	3827844.5	886.7	3.40	4.51	3.16	NO
L0003423	0	0.14451E-02	476273.3	3827852.4	886.9	3.40	4.51	3.16	NO
L0003424	0	0.14451E-02	476278.9	3827860.3	887.0	3.40	4.51	3.16	NO
L0003425	0	0.14451E-02	476284.4	3827868.3	887.1	3.40	4.51	3.16	NO
L0003426	0	0.14451E-02	476290.0	3827876.2	887.3	3.40	4.51	3.16	NO

L0003427		0	0.14451E-02	476295.6	3827884.2	887.6	3.40	
4.51	3.16	NO						
L0003428		0	0.14451E-02	476301.1	3827892.1	888.0	3.40	
4.51	3.16	NO						
L0003429		0	0.14451E-02	476306.7	3827900.0	888.3	3.40	
4.51	3.16	NO						
L0003430		0	0.14451E-02	476312.3	3827908.0	888.5	3.40	
4.51	3.16	NO						
L0003431		0	0.14451E-02	476317.8	3827915.9	888.9	3.40	
4.51	3.16	NO						
L0003432		0	0.14451E-02	476323.4	3827923.9	889.2	3.40	
4.51	3.16	NO						
L0003433		0	0.14451E-02	476329.0	3827931.8	889.5	3.40	
4.51	3.16	NO						
L0003434		0	0.14451E-02	476334.5	3827939.8	889.7	3.40	
4.51	3.16	NO						
L0003435		0	0.14451E-02	476340.1	3827947.7	890.0	3.40	
4.51	3.16	NO						
L0003436		0	0.14451E-02	476345.7	3827955.6	890.4	3.40	
4.51	3.16	NO						
L0003437		0	0.14451E-02	476351.3	3827963.6	890.8	3.40	
4.51	3.16	NO						
L0003438		0	0.14451E-02	476356.8	3827971.5	891.0	3.40	
4.51	3.16	NO						
L0003439		0	0.14451E-02	476362.4	3827979.5	891.2	3.40	
4.51	3.16	NO						
L0003440		0	0.14451E-02	476368.0	3827987.4	891.5	3.40	
4.51	3.16	NO						
L0003441		0	0.14451E-02	476373.5	3827995.3	891.8	3.40	
4.51	3.16	NO						
L0003442		0	0.14451E-02	476379.1	3828003.3	892.1	3.40	
4.51	3.16	NO						
L0003443		0	0.14451E-02	476384.6	3828011.3	892.4	3.40	
4.51	3.16	NO						
L0003444		0	0.14451E-02	476390.0	3828019.3	892.6	3.40	
4.51	3.16	NO						
L0003445		0	0.14451E-02	476395.5	3828027.3	892.9	3.40	
4.51	3.16	NO						
L0003446		0	0.14451E-02	476401.0	3828035.3	893.3	3.40	
4.51	3.16	NO						
L0003447		0	0.14451E-02	476406.5	3828043.3	893.7	3.40	
4.51	3.16	NO						
L0003448		0	0.14451E-02	476411.9	3828051.3	894.1	3.40	
4.51	3.16	NO						
L0003449		0	0.14451E-02	476417.4	3828059.4	894.4	3.40	
4.51	3.16	NO						
L0003450		0	0.14451E-02	476422.9	3828067.4	894.7	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0003451	0	0.14451E-02	476428.4	3828075.4	895.1	3.40	4.51	3.16	NO
L0003452	0	0.14451E-02	476433.8	3828083.4	895.4	3.40	4.51	3.16	NO
L0003453	0	0.14451E-02	476439.3	3828091.4	895.6	3.40	4.51	3.16	NO
L0003454	0	0.14451E-02	476444.8	3828099.4	895.9	3.40	4.51	3.16	NO
L0003455	0	0.14451E-02	476450.3	3828107.4	896.4	3.40	4.51	3.16	NO
L0003456	0	0.14451E-02	476455.7	3828115.4	896.7	3.40	4.51	3.16	NO
L0003457	0	0.14451E-02	476461.2	3828123.4	896.9	3.40	4.51	3.16	NO
L0003458	0	0.14451E-02	476466.7	3828131.4	897.1	3.40	4.51	3.16	NO
L0003459	0	0.14451E-02	476472.2	3828139.4	897.4	3.40	4.51	3.16	NO
L0003460	0	0.14451E-02	476477.6	3828147.4	897.7	3.40	4.51	3.16	NO
L0003461	0	0.14451E-02	476483.1	3828155.4	898.0	3.40	4.51	3.16	NO
L0003462	0	0.14451E-02	476488.6	3828163.4	898.3	3.40	4.51	3.16	NO
L0003463	0	0.14451E-02	476494.1	3828171.4	898.5	3.40	4.51	3.16	NO
L0003464	0	0.14451E-02	476499.5	3828179.5	898.8	3.40	4.51	3.16	NO
L0003465	0	0.14451E-02	476505.0	3828187.5	899.1	3.40	4.51	3.16	NO
L0003466	0	0.14451E-02	476510.5	3828195.5	899.5	3.40	4.51	3.16	NO

L0003467		0	0.14451E-02	476516.0	3828203.5	899.8	3.40	
4.51	3.16	NO						
L0003468		0	0.14451E-02	476521.4	3828211.5	900.1	3.40	
4.51	3.16	NO						
L0003469		0	0.14451E-02	476526.9	3828219.5	900.4	3.40	
4.51	3.16	NO						
L0003470		0	0.14451E-02	476532.4	3828227.5	900.6	3.40	
4.51	3.16	NO						
L0003471		0	0.14451E-02	476537.9	3828235.5	900.9	3.40	
4.51	3.16	NO						
L0003472		0	0.14451E-02	476543.3	3828243.5	901.1	3.40	
4.51	3.16	NO						
L0003473		0	0.14451E-02	476548.8	3828251.5	901.3	3.40	
4.51	3.16	NO						
L0003474		0	0.14451E-02	476554.3	3828259.5	901.7	3.40	
4.51	3.16	NO						
L0003475		0	0.14451E-02	476559.8	3828267.5	901.9	3.40	
4.51	3.16	NO						
L0003476		0	0.14451E-02	476565.3	3828275.5	902.1	3.40	
4.51	3.16	NO						
L0003477		0	0.14451E-02	476570.7	3828283.5	902.2	3.40	
4.51	3.16	NO						
L0003478		0	0.14451E-02	476576.2	3828291.5	902.4	3.40	
4.51	3.16	NO						
L0003479		0	0.14451E-02	476581.7	3828299.6	902.6	3.40	
4.51	3.16	NO						
L0003480		0	0.14451E-02	476587.2	3828307.6	902.9	3.40	
4.51	3.16	NO						
L0003481		0	0.14451E-02	476592.6	3828315.6	903.1	3.40	
4.51	3.16	NO						
L0003482		0	0.14451E-02	476598.1	3828323.6	903.4	3.40	
4.51	3.16	NO						
L0003483		0	0.14451E-02	476603.6	3828331.6	903.7	3.40	
4.51	3.16	NO						
L0003484		0	0.14451E-02	476609.1	3828339.6	903.9	3.40	
4.51	3.16	NO						
L0003485		0	0.14451E-02	476614.5	3828347.6	904.2	3.40	
4.51	3.16	NO						
L0003486		0	0.14451E-02	476620.0	3828355.6	904.4	3.40	
4.51	3.16	NO						
L0003487		0	0.14451E-02	476625.5	3828363.6	904.7	3.40	
4.51	3.16	NO						
L0003488		0	0.14451E-02	476631.0	3828371.6	905.0	3.40	
4.51	3.16	NO						
L0003489		0	0.14451E-02	476636.4	3828379.6	905.2	3.40	
4.51	3.16	NO						
L0003490		0	0.14451E-02	476641.9	3828387.6	905.4	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0003491	0	0.14451E-02	476647.4	3828395.6	905.8	3.40	4.51	3.16	NO
L0003492	0	0.14451E-02	476652.9	3828403.6	906.0	3.40	4.51	3.16	NO
L0003493	0	0.14451E-02	476658.3	3828411.6	906.2	3.40	4.51	3.16	NO
L0003494	0	0.14451E-02	476663.8	3828419.6	906.5	3.40	4.51	3.16	NO
L0003495	0	0.14451E-02	476669.3	3828427.7	906.6	3.40	4.51	3.16	NO
L0003496	0	0.14451E-02	476674.8	3828435.7	906.8	3.40	4.51	3.16	NO
L0003497	0	0.14451E-02	476680.2	3828443.7	906.9	3.40	4.51	3.16	NO
L0003498	0	0.14451E-02	476685.7	3828451.7	907.1	3.40	4.51	3.16	NO
L0003499	0	0.14451E-02	476691.2	3828459.7	907.4	3.40	4.51	3.16	NO
L0003500	0	0.14451E-02	476696.7	3828467.7	907.7	3.40	4.51	3.16	NO
L0003501	0	0.14451E-02	476702.1	3828475.7	908.0	3.40	4.51	3.16	NO
L0003502	0	0.14451E-02	476707.6	3828483.7	908.2	3.40	4.51	3.16	NO
L0003503	0	0.14451E-02	476713.1	3828491.7	908.4	3.40	4.51	3.16	NO
L0003504	0	0.14451E-02	476718.6	3828499.7	908.7	3.40	4.51	3.16	NO
L0003505	0	0.14451E-02	476724.1	3828507.7	909.0	3.40	4.51	3.16	NO
L0003506	0	0.14451E-02	476729.5	3828515.7	909.3	3.40	4.51	3.16	NO

L0003507		0	0.14451E-02	476735.0	3828523.7	909.5	3.40	
4.51	3.16	NO						
L0003508		0	0.14451E-02	476740.5	3828531.7	909.6	3.40	
4.51	3.16	NO						
L0003509		0	0.14451E-02	476746.0	3828539.8	909.9	3.40	
4.51	3.16	NO						
L0003510		0	0.14451E-02	476751.4	3828547.8	910.2	3.40	
4.51	3.16	NO						
L0003511		0	0.14451E-02	476756.9	3828555.8	910.4	3.40	
4.51	3.16	NO						
L0003512		0	0.14451E-02	476762.4	3828563.8	910.6	3.40	
4.51	3.16	NO						
L0003513		0	0.14451E-02	476767.9	3828571.8	910.8	3.40	
4.51	3.16	NO						
L0003514		0	0.14451E-02	476773.3	3828579.8	911.1	3.40	
4.51	3.16	NO						
L0003515		0	0.14451E-02	476778.8	3828587.8	911.2	3.40	
4.51	3.16	NO						
L0003516		0	0.14451E-02	476784.3	3828595.8	911.4	3.40	
4.51	3.16	NO						
L0003517		0	0.14451E-02	476789.8	3828603.8	911.5	3.40	
4.51	3.16	NO						
L0003518		0	0.14451E-02	476795.2	3828611.8	911.8	3.40	
4.51	3.16	NO						
L0003519		0	0.14451E-02	476800.7	3828619.8	912.1	3.40	
4.51	3.16	NO						
L0003520		0	0.14451E-02	476806.2	3828627.8	912.4	3.40	
4.51	3.16	NO						
L0003521		0	0.14451E-02	476811.7	3828635.8	912.6	3.40	
4.51	3.16	NO						
L0003522		0	0.14451E-02	476817.1	3828643.8	912.8	3.40	
4.51	3.16	NO						
L0003523		0	0.14451E-02	476822.6	3828651.8	912.9	3.40	
4.51	3.16	NO						
L0003524		0	0.14451E-02	476828.1	3828659.8	913.2	3.40	
4.51	3.16	NO						
L0003525		0	0.14451E-02	476833.6	3828667.9	913.4	3.40	
4.51	3.16	NO						
L0003526		0	0.14451E-02	476839.0	3828675.9	913.6	3.40	
4.51	3.16	NO						
L0003527		0	0.14451E-02	476844.5	3828683.9	913.7	3.40	
4.51	3.16	NO						
L0003528		0	0.14451E-02	476850.0	3828691.9	913.9	3.40	
4.51	3.16	NO						
L0003529		0	0.14451E-02	476855.5	3828699.9	914.1	3.40	
4.51	3.16	NO						
L0003530		0	0.14451E-02	476860.9	3828707.9	914.2	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003531	0	0.14451E-02	476866.4	3828715.9	914.3	3.40	4.51	3.16	NO
L0003532	0	0.14451E-02	476871.9	3828723.9	914.5	3.40	4.51	3.16	NO
L0003533	0	0.14451E-02	476877.4	3828731.9	914.8	3.40	4.51	3.16	NO
L0003534	0	0.14451E-02	476882.8	3828739.9	914.9	3.40	4.51	3.16	NO
L0003535	0	0.14451E-02	476888.3	3828747.9	915.0	3.40	4.51	3.16	NO
L0003536	0	0.14451E-02	476893.8	3828755.9	915.1	3.40	4.51	3.16	NO
L0003537	0	0.14451E-02	476899.2	3828764.0	915.4	3.40	4.51	3.16	NO
L0003538	0	0.14451E-02	476904.5	3828772.1	915.7	3.40	4.51	3.16	NO
L0003539	0	0.14451E-02	476909.8	3828780.3	915.9	3.40	4.51	3.16	NO
L0003540	0	0.14451E-02	476915.0	3828788.4	916.1	3.40	4.51	3.16	NO
L0003541	0	0.14451E-02	476920.3	3828796.6	916.2	3.40	4.51	3.16	NO
L0003542	0	0.14451E-02	476925.6	3828804.7	916.4	3.40	4.51	3.16	NO
L0003543	0	0.14451E-02	476930.8	3828812.8	916.6	3.40	4.51	3.16	NO
L0003544	0	0.14451E-02	476936.1	3828821.0	916.9	3.40	4.51	3.16	NO
L0003545	0	0.14451E-02	476941.3	3828829.1	917.0	3.40	4.51	3.16	NO
L0003546	0	0.14451E-02	476946.6	3828837.3	917.1	3.40	4.51	3.16	NO

L0003547		0	0.14451E-02	476951.9	3828845.4	917.3	3.40	
4.51	3.16	NO						
L0003548		0	0.14451E-02	476957.1	3828853.6	917.6	3.40	
4.51	3.16	NO						
L0003549		0	0.14451E-02	476962.4	3828861.7	917.7	3.40	
4.51	3.16	NO						
L0003550		0	0.14451E-02	476967.7	3828869.9	917.8	3.40	
4.51	3.16	NO						
L0003551		0	0.14451E-02	476972.9	3828878.0	918.0	3.40	
4.51	3.16	NO						
L0003552		0	0.14451E-02	476978.2	3828886.2	918.2	3.40	
4.51	3.16	NO						
L0003553		0	0.14451E-02	476983.5	3828894.3	918.4	3.40	
4.51	3.16	NO						
L0003554		0	0.14451E-02	476988.7	3828902.5	918.5	3.40	
4.51	3.16	NO						
L0003555		0	0.14451E-02	476994.0	3828910.6	918.6	3.40	
4.51	3.16	NO						
L0003556		0	0.14451E-02	476999.3	3828918.7	918.9	3.40	
4.51	3.16	NO						
L0003557		0	0.14451E-02	477004.5	3828926.9	919.1	3.40	
4.51	3.16	NO						
L0003558		0	0.14451E-02	477009.8	3828935.0	919.4	3.40	
4.51	3.16	NO						
L0003559		0	0.14451E-02	477015.1	3828943.2	919.6	3.40	
4.51	3.16	NO						
L0003560		0	0.14451E-02	477020.3	3828951.3	919.7	3.40	
4.51	3.16	NO						
L0003561		0	0.14451E-02	477025.6	3828959.5	919.9	3.40	
4.51	3.16	NO						
L0003562		0	0.14451E-02	477030.9	3828967.6	920.1	3.40	
4.51	3.16	NO						
L0003563		0	0.14451E-02	477036.1	3828975.8	920.4	3.40	
4.51	3.16	NO						
L0003564		0	0.14451E-02	477041.4	3828983.9	920.5	3.40	
4.51	3.16	NO						
L0003565		0	0.14451E-02	477046.7	3828992.1	920.7	3.40	
4.51	3.16	NO						
L0003566		0	0.14451E-02	477051.9	3829000.2	920.9	3.40	
4.51	3.16	NO						
L0003567		0	0.14451E-02	477057.2	3829008.4	921.1	3.40	
4.51	3.16	NO						
L0003568		0	0.14451E-02	477062.5	3829016.5	921.3	3.40	
4.51	3.16	NO						
L0003569		0	0.14451E-02	477067.7	3829024.6	921.3	3.40	
4.51	3.16	NO						
L0003570		0	0.14451E-02	477073.0	3829032.8	921.5	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0003571	0	0.14451E-02	477078.3	3829040.9	921.7	3.40	4.51	3.16	NO
L0003572	0	0.14451E-02	477083.5	3829049.1	921.9	3.40	4.51	3.16	NO
L0003573	0	0.14451E-02	477088.8	3829057.2	922.1	3.40	4.51	3.16	NO
L0003574	0	0.14451E-02	477094.1	3829065.4	922.3	3.40	4.51	3.16	NO
L0003575	0	0.14451E-02	477099.3	3829073.5	922.5	3.40	4.51	3.16	NO
L0003576	0	0.14451E-02	477104.6	3829081.7	922.7	3.40	4.51	3.16	NO
L0003577	0	0.14451E-02	477109.9	3829089.8	922.9	3.40	4.51	3.16	NO
L0003578	0	0.14451E-02	477115.1	3829098.0	923.2	3.40	4.51	3.16	NO
L0003579	0	0.14451E-02	477120.4	3829106.1	923.3	3.40	4.51	3.16	NO
L0003580	0	0.14451E-02	477125.7	3829114.3	923.4	3.40	4.51	3.16	NO
L0003581	0	0.14451E-02	477130.9	3829122.4	923.7	3.40	4.51	3.16	NO
L0003582	0	0.14451E-02	477136.2	3829130.6	923.9	3.40	4.51	3.16	NO
L0003583	0	0.14451E-02	477141.5	3829138.7	924.1	3.40	4.51	3.16	NO
L0003584	0	0.14451E-02	477146.7	3829146.8	924.2	3.40	4.51	3.16	NO
L0003585	0	0.14451E-02	477152.0	3829155.0	924.4	3.40	4.51	3.16	NO
L0003586	0	0.14451E-02	477157.2	3829163.1	924.6	3.40	4.51	3.16	NO

L0003587		0	0.14451E-02	477162.5	3829171.3	924.7	3.40	
4.51	3.16	NO						
L0003588		0	0.14451E-02	477167.8	3829179.4	924.9	3.40	
4.51	3.16	NO						
L0003589		0	0.14451E-02	477173.0	3829187.6	925.0	3.40	
4.51	3.16	NO						
L0003590		0	0.14451E-02	477178.3	3829195.7	925.2	3.40	
4.51	3.16	NO						
L0003591		0	0.14451E-02	477183.6	3829203.9	925.4	3.40	
4.51	3.16	NO						
L0003592		0	0.14451E-02	477188.8	3829212.0	925.6	3.40	
4.51	3.16	NO						
L0003593		0	0.14451E-02	477194.1	3829220.2	925.9	3.40	
4.51	3.16	NO						
L0003594		0	0.14451E-02	477199.4	3829228.3	926.0	3.40	
4.51	3.16	NO						
L0003595		0	0.14451E-02	477204.6	3829236.5	926.2	3.40	
4.51	3.16	NO						
L0003596		0	0.14451E-02	477209.9	3829244.6	926.4	3.40	
4.51	3.16	NO						
L0003597		0	0.14451E-02	477215.2	3829252.7	926.7	3.40	
4.51	3.16	NO						
L0003598		0	0.14451E-02	477220.4	3829260.9	926.8	3.40	
4.51	3.16	NO						
L0003599		0	0.14451E-02	477225.7	3829269.0	926.9	3.40	
4.51	3.16	NO						
L0003600		0	0.14451E-02	477231.0	3829277.2	927.1	3.40	
4.51	3.16	NO						
L0003601		0	0.14451E-02	477236.2	3829285.3	927.4	3.40	
4.51	3.16	NO						
L0003602		0	0.14451E-02	477241.5	3829293.5	927.5	3.40	
4.51	3.16	NO						
L0003603		0	0.14451E-02	477246.8	3829301.6	927.7	3.40	
4.51	3.16	NO						
L0003604		0	0.14451E-02	477252.0	3829309.8	927.9	3.40	
4.51	3.16	NO						
L0003605		0	0.14451E-02	477257.3	3829317.9	928.1	3.40	
4.51	3.16	NO						
L0003606		0	0.14451E-02	477262.6	3829326.1	928.2	3.40	
4.51	3.16	NO						
L0003607		0	0.14451E-02	477267.8	3829334.2	928.3	3.40	
4.51	3.16	NO						
L0003608		0	0.14451E-02	477273.1	3829342.4	928.4	3.40	
4.51	3.16	NO						
L0003609		0	0.14451E-02	477278.4	3829350.5	928.7	3.40	
4.51	3.16	NO						
L0003610		0	0.14451E-02	477283.6	3829358.6	928.9	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003611	0	0.14451E-02	477288.9	3829366.8	929.2	3.40	4.51	3.16	NO
L0003612	0	0.14451E-02	477294.2	3829374.9	929.4	3.40	4.51	3.16	NO
L0003613	0	0.14451E-02	477299.4	3829383.1	929.6	3.40	4.51	3.16	NO
L0003614	0	0.14451E-02	477304.7	3829391.2	929.7	3.40	4.51	3.16	NO
L0003615	0	0.14451E-02	477310.0	3829399.4	929.9	3.40	4.51	3.16	NO
L0003616	0	0.14451E-02	477315.2	3829407.5	930.2	3.40	4.51	3.16	NO
L0003617	0	0.14451E-02	477320.5	3829415.7	930.4	3.40	4.51	3.16	NO
L0003618	0	0.14451E-02	477325.8	3829423.8	930.5	3.40	4.51	3.16	NO
L0003619	0	0.14451E-02	477331.0	3829432.0	930.7	3.40	4.51	3.16	NO
L0003620	0	0.14451E-02	477336.3	3829440.1	930.9	3.40	4.51	3.16	NO
L0003621	0	0.14451E-02	477341.6	3829448.3	931.0	3.40	4.51	3.16	NO
L0003622	0	0.14451E-02	477346.8	3829456.4	931.2	3.40	4.51	3.16	NO
L0003623	0	0.14451E-02	477352.1	3829464.5	931.3	3.40	4.51	3.16	NO
L0003624	0	0.14451E-02	477357.3	3829472.7	931.5	3.40	4.51	3.16	NO
L0003625	0	0.14451E-02	477362.6	3829480.8	931.7	3.40	4.51	3.16	NO
L0003626	0	0.14451E-02	477367.9	3829489.0	931.9	3.40	4.51	3.16	NO

L0003627		0	0.14451E-02	477373.1	3829497.1	932.0	3.40	
4.51	3.16	NO						
L0003628		0	0.14451E-02	477378.4	3829505.3	932.2	3.40	
4.51	3.16	NO						
L0003629		0	0.14451E-02	477383.7	3829513.4	932.5	3.40	
4.51	3.16	NO						
L0003630		0	0.14451E-02	477388.9	3829521.6	932.7	3.40	
4.51	3.16	NO						
L0003631		0	0.14451E-02	477394.2	3829529.7	933.0	3.40	
4.51	3.16	NO						
L0003632		0	0.14451E-02	477399.5	3829537.9	933.1	3.40	
4.51	3.16	NO						
L0003633		0	0.14451E-02	477404.7	3829546.0	933.3	3.40	
4.51	3.16	NO						
L0003634		0	0.14451E-02	477410.0	3829554.2	933.5	3.40	
4.51	3.16	NO						
L0003635		0	0.14451E-02	477415.3	3829562.3	933.7	3.40	
4.51	3.16	NO						
L0003636		0	0.14451E-02	477420.5	3829570.4	933.9	3.40	
4.51	3.16	NO						
L0003637		0	0.14451E-02	477425.8	3829578.6	934.1	3.40	
4.51	3.16	NO						
L0003638		0	0.14451E-02	477431.1	3829586.7	934.2	3.40	
4.51	3.16	NO						
L0003639		0	0.14451E-02	477436.3	3829594.9	934.4	3.40	
4.51	3.16	NO						
L0003640		0	0.14451E-02	477441.6	3829603.0	934.6	3.40	
4.51	3.16	NO						
L0003641		0	0.14451E-02	477446.9	3829611.2	934.8	3.40	
4.51	3.16	NO						
L0003642		0	0.14451E-02	477452.1	3829619.3	934.9	3.40	
4.51	3.16	NO						
L0003643		0	0.14451E-02	477457.4	3829627.5	935.1	3.40	
4.51	3.16	NO						
L0003644		0	0.14451E-02	477462.7	3829635.6	935.2	3.40	
4.51	3.16	NO						
L0003645		0	0.14451E-02	477467.9	3829643.8	935.4	3.40	
4.51	3.16	NO						
L0003646		0	0.14451E-02	477473.2	3829651.9	935.6	3.40	
4.51	3.16	NO						
L0003647		0	0.14451E-02	477478.5	3829660.1	935.7	3.40	
4.51	3.16	NO						
L0003648		0	0.14451E-02	477483.7	3829668.2	935.9	3.40	
4.51	3.16	NO						
L0003649		0	0.14451E-02	477489.0	3829676.3	936.1	3.40	
4.51	3.16	NO						
L0003650		0	0.14451E-02	477494.3	3829684.5	936.4	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0003651	0	0.14451E-02	477499.5	3829692.6	936.5	3.40	4.51	3.16	NO
L0003652	0	0.14451E-02	477504.8	3829700.8	936.6	3.40	4.51	3.16	NO
L0003653	0	0.14451E-02	477510.1	3829708.9	936.7	3.40	4.51	3.16	NO
L0003654	0	0.14451E-02	477515.3	3829717.1	936.9	3.40	4.51	3.16	NO
L0003655	0	0.14451E-02	477520.6	3829725.2	937.0	3.40	4.51	3.16	NO
L0003656	0	0.14451E-02	477525.9	3829733.4	937.1	3.40	4.51	3.16	NO
L0003657	0	0.14451E-02	477531.1	3829741.5	937.2	3.40	4.51	3.16	NO
L0003658	0	0.14451E-02	477536.4	3829749.7	937.2	3.40	4.51	3.16	NO
L0003659	0	0.14451E-02	477541.7	3829757.8	937.2	3.40	4.51	3.16	NO
L0003660	0	0.14451E-02	477546.9	3829766.0	937.2	3.40	4.51	3.16	NO
L0003661	0	0.14451E-02	477552.2	3829774.1	937.2	3.40	4.51	3.16	NO
L0003662	0	0.14451E-02	477557.4	3829782.3	937.3	3.40	4.51	3.16	NO
L0003663	0	0.14451E-02	477562.7	3829790.4	937.4	3.40	4.51	3.16	NO
L0003664	0	0.14451E-02	477568.0	3829798.5	937.4	3.40	4.51	3.16	NO
L0003665	0	0.14451E-02	477573.2	3829806.7	937.5	3.40	4.51	3.16	NO
L0003666	0	0.14451E-02	477578.5	3829814.8	937.6	3.40	4.51	3.16	NO

L0003667		0	0.14451E-02	477583.8	3829823.0	937.7	3.40	
4.51	3.16	NO						
L0003668		0	0.14451E-02	477589.0	3829831.1	937.7	3.40	
4.51	3.16	NO						
L0003669		0	0.14451E-02	477594.3	3829839.3	937.8	3.40	
4.51	3.16	NO						
L0003670		0	0.14451E-02	477599.6	3829847.4	937.9	3.40	
4.51	3.16	NO						
L0003671		0	0.14451E-02	477604.8	3829855.6	938.0	3.40	
4.51	3.16	NO						
L0003672		0	0.14451E-02	477610.1	3829863.7	938.0	3.40	
4.51	3.16	NO						
L0003673		0	0.14451E-02	477615.4	3829871.9	938.0	3.40	
4.51	3.16	NO						
L0003674		0	0.14451E-02	477620.6	3829880.0	938.0	3.40	
4.51	3.16	NO						
L0003675		0	0.14451E-02	477625.9	3829888.2	938.2	3.40	
4.51	3.16	NO						
L0003676		0	0.14451E-02	477631.2	3829896.3	938.3	3.40	
4.51	3.16	NO						
L0003677		0	0.14451E-02	477636.4	3829904.4	938.2	3.40	
4.51	3.16	NO						
L0003678		0	0.14451E-02	477641.7	3829912.6	938.1	3.40	
4.51	3.16	NO						
L0003679		0	0.14451E-02	477647.0	3829920.7	938.0	3.40	
4.51	3.16	NO						
L0003680		0	0.14451E-02	477652.2	3829928.9	937.9	3.40	
4.51	3.16	NO						
L0003681		0	0.14451E-02	477657.5	3829937.0	938.1	3.40	
4.51	3.16	NO						
L0003682		0	0.14451E-02	477662.8	3829945.2	938.2	3.40	
4.51	3.16	NO						
L0003683		0	0.14451E-02	477668.0	3829953.3	938.3	3.40	
4.51	3.16	NO						
L0003684		0	0.14451E-02	477673.3	3829961.5	938.4	3.40	
4.51	3.16	NO						
L0003685		0	0.14451E-02	477678.6	3829969.6	938.4	3.40	
4.51	3.16	NO						
L0003686		0	0.14451E-02	477683.8	3829977.8	938.5	3.40	
4.51	3.16	NO						
L0003687		0	0.14451E-02	477689.1	3829985.9	938.5	3.40	
4.51	3.16	NO						
L0003688		0	0.14451E-02	477694.4	3829994.1	938.6	3.40	
4.51	3.16	NO						
L0003689		0	0.14451E-02	477699.6	3830002.2	938.7	3.40	
4.51	3.16	NO						
L0003690		0	0.14451E-02	477704.9	3830010.3	938.7	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003691	0	0.14451E-02	477710.2	3830018.5	938.8	3.40	4.51	3.16	NO
L0003692	0	0.14451E-02	477715.4	3830026.6	938.7	3.40	4.51	3.16	NO
L0003693	0	0.14451E-02	477720.7	3830034.8	938.8	3.40	4.51	3.16	NO
L0003694	0	0.14451E-02	477726.0	3830042.9	938.9	3.40	4.51	3.16	NO
L0003695	0	0.14451E-02	477731.2	3830051.1	939.0	3.40	4.51	3.16	NO
L0003696	0	0.14451E-02	477736.5	3830059.2	939.0	3.40	4.51	3.16	NO
L0003697	0	0.14451E-02	477741.8	3830067.4	939.0	3.40	4.51	3.16	NO
L0003698	0	0.14451E-02	477747.0	3830075.5	939.0	3.40	4.51	3.16	NO
L0003699	0	0.14451E-02	477752.3	3830083.7	939.2	3.40	4.51	3.16	NO
L0003700	0	0.14451E-02	477757.5	3830091.8	939.3	3.40	4.51	3.16	NO
L0003701	0	0.14451E-02	477762.8	3830100.0	939.5	3.40	4.51	3.16	NO
L0003702	0	0.14451E-02	477768.1	3830108.1	939.6	3.40	4.51	3.16	NO
L0003703	0	0.14451E-02	477773.3	3830116.2	939.8	3.40	4.51	3.16	NO
L0003704	0	0.14451E-02	477778.6	3830124.4	940.1	3.40	4.51	3.16	NO
L0003705	0	0.14451E-02	477783.9	3830132.5	940.4	3.40	4.51	3.16	NO
L0003706	0	0.14451E-02	477789.1	3830140.7	940.6	3.40	4.51	3.16	NO

L0003707		0	0.14451E-02	477794.4	3830148.8	940.9	3.40	
4.51	3.16	NO						
L0003708		0	0.14451E-02	477799.7	3830157.0	941.3	3.40	
4.51	3.16	NO						
L0003709		0	0.14451E-02	477804.9	3830165.1	941.7	3.40	
4.51	3.16	NO						
L0003710		0	0.14451E-02	477810.2	3830173.3	942.1	3.40	
4.51	3.16	NO						
L0003711		0	0.14451E-02	477815.5	3830181.4	942.3	3.40	
4.51	3.16	NO						
L0003712		0	0.14451E-02	477820.7	3830189.6	942.6	3.40	
4.51	3.16	NO						
L0003713		0	0.14451E-02	477826.0	3830197.7	943.2	3.40	
4.51	3.16	NO						
L0003714		0	0.14451E-02	477831.3	3830205.9	943.8	3.40	
4.51	3.16	NO						
L0003715		0	0.14451E-02	477836.5	3830214.0	943.9	3.40	
4.51	3.16	NO						
L0003716		0	0.14451E-02	477841.8	3830222.1	944.0	3.40	
4.51	3.16	NO						
L0003717		0	0.14451E-02	477847.1	3830230.3	944.1	3.40	
4.51	3.16	NO						
L0003718		0	0.14451E-02	477852.3	3830238.4	944.4	3.40	
4.51	3.16	NO						
L0003719		0	0.14451E-02	477857.6	3830246.6	944.8	3.40	
4.51	3.16	NO						
L0003720		0	0.14451E-02	477862.9	3830254.7	945.5	3.40	
4.51	3.16	NO						
L0003721		0	0.14451E-02	477868.1	3830262.9	946.0	3.40	
4.51	3.16	NO						
L0003722		0	0.14451E-02	477873.4	3830271.0	946.6	3.40	
4.51	3.16	NO						
L0003723		0	0.14451E-02	477878.7	3830279.2	947.1	3.40	
4.51	3.16	NO						
L0003724		0	0.14451E-02	477883.9	3830287.3	947.5	3.40	
4.51	3.16	NO						
L0003725		0	0.14451E-02	477889.2	3830295.5	947.9	3.40	
4.51	3.16	NO						
L0003726		0	0.14451E-02	477894.5	3830303.6	948.3	3.40	
4.51	3.16	NO						
L0003727		0	0.14451E-02	477899.7	3830311.8	948.7	3.40	
4.51	3.16	NO						
L0003728		0	0.14451E-02	477905.0	3830319.9	949.2	3.40	
4.51	3.16	NO						
L0003729		0	0.14451E-02	477910.3	3830328.0	949.7	3.40	
4.51	3.16	NO						
L0003730		0	0.14451E-02	477915.5	3830336.2	949.9	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003731	0	0.14451E-02	477920.8	3830344.3	950.3	3.40	4.51	3.16	NO
L0003732	0	0.14451E-02	477926.1	3830352.5	950.7	3.40	4.51	3.16	NO
L0003733	0	0.14451E-02	477931.4	3830360.6	951.2	3.40	4.51	3.16	NO
L0003734	0	0.14451E-02	477936.7	3830368.7	951.5	3.40	4.51	3.16	NO
L0003735	0	0.14451E-02	477942.0	3830376.8	951.8	3.40	4.51	3.16	NO
L0003736	0	0.14451E-02	477947.3	3830384.9	952.0	3.40	4.51	3.16	NO
L0003737	0	0.14451E-02	477952.6	3830393.0	952.4	3.40	4.51	3.16	NO
L0003738	0	0.14451E-02	477958.0	3830401.2	952.8	3.40	4.51	3.16	NO
L0003739	0	0.14451E-02	477963.3	3830409.3	953.2	3.40	4.51	3.16	NO
L0003740	0	0.14451E-02	477968.6	3830417.4	953.6	3.40	4.51	3.16	NO
L0003741	0	0.14451E-02	477973.9	3830425.5	954.0	3.40	4.51	3.16	NO
L0003742	0	0.14451E-02	477979.2	3830433.6	954.3	3.40	4.51	3.16	NO
L0003743	0	0.14451E-02	477984.5	3830441.8	954.7	3.40	4.51	3.16	NO
L0003744	0	0.14451E-02	477989.8	3830449.9	955.0	3.40	4.51	3.16	NO
L0003745	0	0.14451E-02	477995.1	3830458.0	955.2	3.40	4.51	3.16	NO
L0003746	0	0.14451E-02	478000.4	3830466.1	955.5	3.40	4.51	3.16	NO

L0003747		0	0.14451E-02	478005.7	3830474.2	955.8	3.40	
4.51	3.16	NO						
L0003748		0	0.14451E-02	478011.0	3830482.3	956.2	3.40	
4.51	3.16	NO						
L0003749		0	0.14451E-02	478016.4	3830490.5	956.3	3.40	
4.51	3.16	NO						
L0003750		0	0.14451E-02	478021.7	3830498.6	956.4	3.40	
4.51	3.16	NO						
L0003751		0	0.14451E-02	478027.0	3830506.7	956.6	3.40	
4.51	3.16	NO						
L0003752		0	0.14451E-02	478032.3	3830514.8	956.8	3.40	
4.51	3.16	NO						
L0003753		0	0.14451E-02	478037.6	3830522.9	957.0	3.40	
4.51	3.16	NO						
L0003754		0	0.14451E-02	478042.9	3830531.1	957.1	3.40	
4.51	3.16	NO						
L0003755		0	0.14451E-02	478048.2	3830539.2	957.2	3.40	
4.51	3.16	NO						
L0003756		0	0.14451E-02	478053.5	3830547.3	957.4	3.40	
4.51	3.16	NO						
L0003757		0	0.14451E-02	478058.8	3830555.4	957.6	3.40	
4.51	3.16	NO						
L0003758		0	0.14451E-02	478064.1	3830563.5	957.8	3.40	
4.51	3.16	NO						
L0003759		0	0.14451E-02	478069.5	3830571.6	957.9	3.40	
4.51	3.16	NO						
L0003760		0	0.14451E-02	478074.8	3830579.8	958.1	3.40	
4.51	3.16	NO						
L0003761		0	0.14451E-02	478080.1	3830587.9	958.2	3.40	
4.51	3.16	NO						
L0003762		0	0.14451E-02	478085.4	3830596.0	958.3	3.40	
4.51	3.16	NO						
L0003763		0	0.14451E-02	478090.7	3830604.1	958.4	3.40	
4.51	3.16	NO						
L0003764		0	0.14451E-02	478096.0	3830612.2	958.4	3.40	
4.51	3.16	NO						
L0003765		0	0.14451E-02	478101.3	3830620.3	958.3	3.40	
4.51	3.16	NO						
L0003766		0	0.14451E-02	478106.6	3830628.5	958.4	3.40	
4.51	3.16	NO						
L0003767		0	0.14451E-02	478111.9	3830636.6	958.6	3.40	
4.51	3.16	NO						
L0003768		0	0.14451E-02	478117.2	3830644.7	958.5	3.40	
4.51	3.16	NO						
L0003769		0	0.14451E-02	478122.5	3830652.8	958.4	3.40	
4.51	3.16	NO						
L0003770		0	0.14451E-02	478127.9	3830660.9	958.4	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003771	0	0.14451E-02	478133.2	3830669.1	958.4	3.40	4.51	3.16	NO
L0003772	0	0.14451E-02	478138.5	3830677.2	958.5	3.40	4.51	3.16	NO
L0003773	0	0.14451E-02	478143.8	3830685.3	958.5	3.40	4.51	3.16	NO
L0003774	0	0.14451E-02	478149.1	3830693.4	958.5	3.40	4.51	3.16	NO
L0003775	0	0.14451E-02	478154.4	3830701.5	958.5	3.40	4.51	3.16	NO
L0003776	0	0.14451E-02	478159.7	3830709.6	958.6	3.40	4.51	3.16	NO
L0003777	0	0.14451E-02	478165.0	3830717.8	958.7	3.40	4.51	3.16	NO
L0003778	0	0.14451E-02	478170.3	3830725.9	958.7	3.40	4.51	3.16	NO
L0003779	0	0.14451E-02	478175.6	3830734.0	958.7	3.40	4.51	3.16	NO
L0003780	0	0.14451E-02	478181.0	3830742.1	958.8	3.40	4.51	3.16	NO
L0003781	0	0.14451E-02	478186.3	3830750.2	958.8	3.40	4.51	3.16	NO
L0003782	0	0.14451E-02	478191.6	3830758.4	958.9	3.40	4.51	3.16	NO
L0003783	0	0.14451E-02	478196.9	3830766.5	958.8	3.40	4.51	3.16	NO
L0003784	0	0.14451E-02	478202.2	3830774.6	958.8	3.40	4.51	3.16	NO
L0003785	0	0.14451E-02	478207.5	3830782.7	958.8	3.40	4.51	3.16	NO
L0003786	0	0.14451E-02	478212.8	3830790.8	958.9	3.40	4.51	3.16	NO

L0003787		0	0.14451E-02	478218.1	3830798.9	958.9	3.40	
4.51	3.16	NO						
L0003788		0	0.14451E-02	478223.4	3830807.1	958.8	3.40	
4.51	3.16	NO						
L0003789		0	0.14451E-02	478228.7	3830815.2	958.8	3.40	
4.51	3.16	NO						
L0003790		0	0.14451E-02	478234.0	3830823.3	958.8	3.40	
4.51	3.16	NO						
L0003791		0	0.14451E-02	478239.4	3830831.4	958.8	3.40	
4.51	3.16	NO						
L0003792		0	0.14451E-02	478244.7	3830839.5	958.9	3.40	
4.51	3.16	NO						
L0003793		0	0.14451E-02	478250.0	3830847.6	958.9	3.40	
4.51	3.16	NO						
L0003794		0	0.14451E-02	478255.3	3830855.8	958.9	3.40	
4.51	3.16	NO						
L0003795		0	0.14451E-02	478260.6	3830863.9	958.9	3.40	
4.51	3.16	NO						
L0003796		0	0.14451E-02	478265.9	3830872.0	959.1	3.40	
4.51	3.16	NO						
L0003797		0	0.14451E-02	478271.2	3830880.1	959.1	3.40	
4.51	3.16	NO						
L0003798		0	0.14451E-02	478276.5	3830888.2	959.1	3.40	
4.51	3.16	NO						
L0003799		0	0.14451E-02	478281.8	3830896.4	959.1	3.40	
4.51	3.16	NO						
L0003800		0	0.14451E-02	478287.1	3830904.5	959.3	3.40	
4.51	3.16	NO						
L0003801		0	0.14451E-02	478292.5	3830912.6	959.4	3.40	
4.51	3.16	NO						
L0003802		0	0.14451E-02	478297.8	3830920.7	959.4	3.40	
4.51	3.16	NO						
L0003803		0	0.14451E-02	478303.1	3830928.8	959.3	3.40	
4.51	3.16	NO						
L0003804		0	0.14451E-02	478308.4	3830936.9	959.4	3.40	
4.51	3.16	NO						
L0003805		0	0.14451E-02	478313.7	3830945.1	959.5	3.40	
4.51	3.16	NO						
L0003806		0	0.14451E-02	478319.0	3830953.2	959.6	3.40	
4.51	3.16	NO						
L0003807		0	0.14451E-02	478324.3	3830961.3	959.7	3.40	
4.51	3.16	NO						
L0003808		0	0.14451E-02	478329.6	3830969.4	959.8	3.40	
4.51	3.16	NO						
L0003809		0	0.14451E-02	478334.9	3830977.5	960.0	3.40	
4.51	3.16	NO						
L0003810		0	0.14451E-02	478340.2	3830985.7	960.2	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003811	0	0.14451E-02	478345.5	3830993.8	960.3	3.40	4.51	3.16	NO
L0003812	0	0.14451E-02	478350.9	3831001.9	960.6	3.40	4.51	3.16	NO
L0003813	0	0.14451E-02	478356.2	3831010.0	960.8	3.40	4.51	3.16	NO
L0003814	0	0.14451E-02	478361.5	3831018.1	961.1	3.40	4.51	3.16	NO
L0003815	0	0.14451E-02	478366.8	3831026.2	961.3	3.40	4.51	3.16	NO
L0003816	0	0.14451E-02	478372.1	3831034.4	961.5	3.40	4.51	3.16	NO
L0003817	0	0.14451E-02	478377.4	3831042.5	961.7	3.40	4.51	3.16	NO
L0003818	0	0.14451E-02	478382.7	3831050.6	961.9	3.40	4.51	3.16	NO
L0003819	0	0.14451E-02	478388.0	3831058.7	962.2	3.40	4.51	3.16	NO
L0003820	0	0.14451E-02	478393.3	3831066.8	962.5	3.40	4.51	3.16	NO
L0003821	0	0.14451E-02	478398.6	3831074.9	962.7	3.40	4.51	3.16	NO
L0003822	0	0.14451E-02	478404.0	3831083.1	962.8	3.40	4.51	3.16	NO
L0003823	0	0.14451E-02	478409.3	3831091.2	963.0	3.40	4.51	3.16	NO
L0003824	0	0.14451E-02	478414.6	3831099.3	963.2	3.40	4.51	3.16	NO
L0003825	0	0.14451E-02	478419.9	3831107.4	963.4	3.40	4.51	3.16	NO
L0003826	0	0.14451E-02	478425.2	3831115.5	963.6	3.40	4.51	3.16	NO

L0003827		0	0.14451E-02	478430.5	3831123.7	963.9	3.40	
4.51	3.16	NO						
L0003828		0	0.14451E-02	478435.8	3831131.8	964.1	3.40	
4.51	3.16	NO						
L0003829		0	0.14451E-02	478441.1	3831139.9	964.4	3.40	
4.51	3.16	NO						
L0003830		0	0.14451E-02	478446.4	3831148.0	964.6	3.40	
4.51	3.16	NO						
L0003831		0	0.14451E-02	478451.7	3831156.1	964.8	3.40	
4.51	3.16	NO						
L0003832		0	0.14451E-02	478457.0	3831164.2	965.0	3.40	
4.51	3.16	NO						
L0003833		0	0.14451E-02	478462.4	3831172.4	965.3	3.40	
4.51	3.16	NO						
L0003834		0	0.14451E-02	478467.7	3831180.5	965.5	3.40	
4.51	3.16	NO						
L0003835		0	0.14451E-02	478473.0	3831188.6	965.7	3.40	
4.51	3.16	NO						
L0003836		0	0.14451E-02	478478.3	3831196.7	965.7	3.40	
4.51	3.16	NO						
L0003837		0	0.14451E-02	478483.6	3831204.8	965.8	3.40	
4.51	3.16	NO						
L0003838		0	0.14451E-02	478488.9	3831213.0	966.0	3.40	
4.51	3.16	NO						
L0003839		0	0.14451E-02	478494.2	3831221.1	966.3	3.40	
4.51	3.16	NO						
L0003840		0	0.14451E-02	478499.5	3831229.2	966.3	3.40	
4.51	3.16	NO						
L0003841		0	0.14451E-02	478504.8	3831237.3	966.3	3.40	
4.51	3.16	NO						
L0003842		0	0.14451E-02	478510.1	3831245.4	966.3	3.40	
4.51	3.16	NO						
L0003843		0	0.14451E-02	478515.5	3831253.5	966.4	3.40	
4.51	3.16	NO						
L0003844		0	0.14451E-02	478520.8	3831261.7	966.5	3.40	
4.51	3.16	NO						
L0003845		0	0.14451E-02	478526.1	3831269.8	966.6	3.40	
4.51	3.16	NO						
L0003846		0	0.14451E-02	478531.4	3831277.9	966.7	3.40	
4.51	3.16	NO						
L0003847		0	0.14451E-02	478536.7	3831286.0	966.8	3.40	
4.51	3.16	NO						
L0003848		0	0.14451E-02	478542.0	3831294.1	966.8	3.40	
4.51	3.16	NO						
L0003849		0	0.14451E-02	478547.3	3831302.2	966.9	3.40	
4.51	3.16	NO						
L0003850		0	0.14451E-02	478552.6	3831310.4	966.9	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0003851	0	0.14451E-02	478557.9	3831318.5	966.9	3.40	4.51	3.16	NO
L0003852	0	0.14451E-02	478563.2	3831326.6	966.9	3.40	4.51	3.16	NO
L0003853	0	0.14451E-02	478568.5	3831334.7	966.9	3.40	4.51	3.16	NO
L0003854	0	0.14451E-02	478573.9	3831342.8	967.0	3.40	4.51	3.16	NO
L0003855	0	0.14451E-02	478579.2	3831351.0	966.9	3.40	4.51	3.16	NO
L0003856	0	0.14451E-02	478584.5	3831359.1	966.8	3.40	4.51	3.16	NO
L0003857	0	0.14451E-02	478589.8	3831367.2	966.8	3.40	4.51	3.16	NO
L0003858	0	0.14451E-02	478595.1	3831375.3	966.8	3.40	4.51	3.16	NO
L0003859	0	0.14451E-02	478600.4	3831383.4	966.8	3.40	4.51	3.16	NO
L0003860	0	0.14451E-02	478605.7	3831391.5	966.7	3.40	4.51	3.16	NO
L0003861	0	0.14451E-02	478611.0	3831399.7	966.6	3.40	4.51	3.16	NO
L0003862	0	0.14451E-02	478616.3	3831407.8	966.5	3.40	4.51	3.16	NO
L0003863	0	0.14451E-02	478621.6	3831415.9	966.5	3.40	4.51	3.16	NO
L0003864	0	0.14451E-02	478627.0	3831424.0	966.6	3.40	4.51	3.16	NO
L0003865	0	0.14451E-02	478632.3	3831432.1	966.6	3.40	4.51	3.16	NO
L0003866	0	0.14451E-02	478637.6	3831440.2	966.6	3.40	4.51	3.16	NO

L0003867		0	0.14451E-02	478642.9	3831448.4	966.6	3.40	
4.51	3.16	NO						
L0003868		0	0.14451E-02	478648.2	3831456.5	966.6	3.40	
4.51	3.16	NO						
L0003869		0	0.14451E-02	478653.5	3831464.6	966.6	3.40	
4.51	3.16	NO						
L0003870		0	0.14451E-02	478658.8	3831472.7	966.6	3.40	
4.51	3.16	NO						
L0003871		0	0.14451E-02	478664.1	3831480.8	966.6	3.40	
4.51	3.16	NO						
L0003872		0	0.14451E-02	478669.4	3831489.0	966.6	3.40	
4.51	3.16	NO						
L0003873		0	0.14451E-02	478674.7	3831497.1	966.6	3.40	
4.51	3.16	NO						
L0003874		0	0.14451E-02	478680.0	3831505.2	966.5	3.40	
4.51	3.16	NO						
L0003875		0	0.14451E-02	478685.4	3831513.3	966.4	3.40	
4.51	3.16	NO						
L0003876		0	0.14451E-02	478690.7	3831521.4	966.4	3.40	
4.51	3.16	NO						
L0003877		0	0.14451E-02	478696.0	3831529.5	966.4	3.40	
4.51	3.16	NO						
L0003878		0	0.14451E-02	478701.3	3831537.7	966.4	3.40	
4.51	3.16	NO						
L0003879		0	0.14451E-02	478706.6	3831545.8	966.3	3.40	
4.51	3.16	NO						
L0003880		0	0.14451E-02	478711.9	3831553.9	966.2	3.40	
4.51	3.16	NO						
L0003881		0	0.14451E-02	478717.2	3831562.0	966.2	3.40	
4.51	3.16	NO						
L0003882		0	0.14451E-02	478722.5	3831570.1	966.2	3.40	
4.51	3.16	NO						
L0003883		0	0.14451E-02	478727.8	3831578.3	966.2	3.40	
4.51	3.16	NO						
L0003884		0	0.14451E-02	478733.1	3831586.4	966.2	3.40	
4.51	3.16	NO						
L0003885		0	0.14451E-02	478738.5	3831594.5	966.3	3.40	
4.51	3.16	NO						
L0003886		0	0.14451E-02	478743.8	3831602.6	966.3	3.40	
4.51	3.16	NO						
L0003887		0	0.14451E-02	478749.1	3831610.7	966.4	3.40	
4.51	3.16	NO						
L0003888		0	0.14451E-02	478754.4	3831618.8	966.3	3.40	
4.51	3.16	NO						
L0003889		0	0.14451E-02	478759.7	3831627.0	966.3	3.40	
4.51	3.16	NO						
L0003890		0	0.14451E-02	478765.0	3831635.1	966.2	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003891	0	0.14451E-02	478770.3	3831643.2	966.3	3.40	4.51	3.16	NO
L0003892	0	0.14451E-02	478775.6	3831651.3	966.4	3.40	4.51	3.16	NO
L0003893	0	0.14451E-02	478780.9	3831659.4	966.3	3.40	4.51	3.16	NO
L0003894	0	0.14451E-02	478786.2	3831667.5	966.2	3.40	4.51	3.16	NO
L0003895	0	0.14451E-02	478791.5	3831675.7	966.1	3.40	4.51	3.16	NO
L0003896	0	0.14451E-02	478796.9	3831683.8	966.1	3.40	4.51	3.16	NO
L0003897	0	0.14451E-02	478802.2	3831691.9	966.2	3.40	4.51	3.16	NO
L0003898	0	0.14451E-02	478807.5	3831700.0	966.1	3.40	4.51	3.16	NO
L0003899	0	0.14451E-02	478812.8	3831708.1	966.0	3.40	4.51	3.16	NO
L0003900	0	0.14451E-02	478818.1	3831716.3	965.9	3.40	4.51	3.16	NO
L0003901	0	0.14451E-02	478823.4	3831724.4	965.9	3.40	4.51	3.16	NO
L0003902	0	0.14451E-02	478828.7	3831732.5	966.1	3.40	4.51	3.16	NO
L0003903	0	0.14451E-02	478834.0	3831740.6	966.2	3.40	4.51	3.16	NO
L0003904	0	0.14451E-02	478839.3	3831748.7	966.2	3.40	4.51	3.16	NO
L0003905	0	0.14451E-02	478844.6	3831756.8	966.2	3.40	4.51	3.16	NO
L0003906	0	0.14451E-02	478849.9	3831765.0	966.3	3.40	4.51	3.16	NO

L0003907		0	0.14451E-02	478855.3	3831773.1	966.5	3.40	
4.51	3.16	NO						
L0003908		0	0.14451E-02	478860.6	3831781.2	966.4	3.40	
4.51	3.16	NO						
L0003909		0	0.14451E-02	478865.9	3831789.3	966.4	3.40	
4.51	3.16	NO						
L0003910		0	0.14451E-02	478871.2	3831797.4	966.4	3.40	
4.51	3.16	NO						
L0003911		0	0.14451E-02	478876.5	3831805.6	966.6	3.40	
4.51	3.16	NO						
L0003912		0	0.14451E-02	478881.8	3831813.7	966.5	3.40	
4.51	3.16	NO						
L0003913		0	0.14451E-02	478887.1	3831821.8	966.4	3.40	
4.51	3.16	NO						
L0003914		0	0.14451E-02	478892.4	3831829.9	966.3	3.40	
4.51	3.16	NO						
L0003915		0	0.14451E-02	478897.7	3831838.0	966.4	3.40	
4.51	3.16	NO						
L0003916		0	0.14451E-02	478903.0	3831846.1	966.4	3.40	
4.51	3.16	NO						
L0003917		0	0.14451E-02	478908.4	3831854.3	966.4	3.40	
4.51	3.16	NO						
L0003918		0	0.14451E-02	478913.7	3831862.4	966.4	3.40	
4.51	3.16	NO						
L0003919		0	0.14451E-02	478919.0	3831870.5	966.4	3.40	
4.51	3.16	NO						
L0003920		0	0.14451E-02	478924.3	3831878.6	966.5	3.40	
4.51	3.16	NO						
L0003921		0	0.14451E-02	478929.6	3831886.7	966.5	3.40	
4.51	3.16	NO						
L0003922		0	0.14451E-02	478934.9	3831894.8	966.5	3.40	
4.51	3.16	NO						
L0003923		0	0.14451E-02	478940.2	3831903.0	966.6	3.40	
4.51	3.16	NO						
L0003924		0	0.14451E-02	478945.5	3831911.1	966.7	3.40	
4.51	3.16	NO						
L0003925		0	0.14451E-02	478950.8	3831919.2	966.7	3.40	
4.51	3.16	NO						
L0003926		0	0.14451E-02	478956.1	3831927.3	966.7	3.40	
4.51	3.16	NO						
L0003927		0	0.14451E-02	478961.4	3831935.4	966.6	3.40	
4.51	3.16	NO						
L0003928		0	0.14451E-02	478966.8	3831943.6	966.5	3.40	
4.51	3.16	NO						
L0003929		0	0.14451E-02	478972.1	3831951.7	966.6	3.40	
4.51	3.16	NO						
L0003930		0	0.14451E-02	478977.4	3831959.8	966.7	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0001521	0	0.29851E-02	475227.0	3825729.5	895.3	3.40	4.51	3.16	NO
L0001522	0	0.29851E-02	475233.1	3825737.1	895.7	3.40	4.51	3.16	NO
L0001523	0	0.29851E-02	475239.1	3825744.7	896.1	3.40	4.51	3.16	NO
L0001524	0	0.29851E-02	475245.1	3825752.3	896.3	3.40	4.51	3.16	NO
L0001525	0	0.29851E-02	475251.1	3825760.0	896.3	3.40	4.51	3.16	NO
L0001526	0	0.29851E-02	475257.1	3825767.6	896.3	3.40	4.51	3.16	NO
L0001527	0	0.29851E-02	475263.1	3825775.2	896.3	3.40	4.51	3.16	NO
L0001528	0	0.29851E-02	475269.1	3825782.8	896.2	3.40	4.51	3.16	NO
L0001529	0	0.29851E-02	475275.1	3825790.4	896.2	3.40	4.51	3.16	NO
L0001530	0	0.29851E-02	475281.2	3825798.0	896.2	3.40	4.51	3.16	NO
L0001531	0	0.29851E-02	475287.2	3825805.6	896.2	3.40	4.51	3.16	NO
L0001532	0	0.29851E-02	475293.2	3825813.2	896.2	3.40	4.51	3.16	NO
L0001533	0	0.29851E-02	475299.2	3825820.8	896.2	3.40	4.51	3.16	NO
L0001534	0	0.29851E-02	475305.2	3825828.5	896.1	3.40	4.51	3.16	NO
L0001535	0	0.29851E-02	475311.2	3825836.1	896.1	3.40	4.51	3.16	NO
L0001536	0	0.29851E-02	475317.2	3825843.7	896.1	3.40	4.51	3.16	NO

L0001537		0	0.29851E-02	475323.2	3825851.3	896.0	3.40	
4.51	3.16	NO						
L0001538		0	0.29851E-02	475329.3	3825858.9	896.0	3.40	
4.51	3.16	NO						
L0001539		0	0.29851E-02	475335.3	3825866.5	896.0	3.40	
4.51	3.16	NO						
L0001540		0	0.29851E-02	475341.3	3825874.1	895.9	3.40	
4.51	3.16	NO						
L0001541		0	0.29851E-02	475347.3	3825881.7	896.0	3.40	
4.51	3.16	NO						
L0001542		0	0.29851E-02	475353.3	3825889.4	896.1	3.40	
4.51	3.16	NO						
L0001543		0	0.29851E-02	475359.3	3825897.0	896.1	3.40	
4.51	3.16	NO						
L0001544		0	0.29851E-02	475365.3	3825904.6	896.2	3.40	
4.51	3.16	NO						
L0001545		0	0.29851E-02	475371.3	3825912.2	896.4	3.40	
4.51	3.16	NO						
L0001546		0	0.29851E-02	475377.4	3825919.8	896.5	3.40	
4.51	3.16	NO						
L0001547		0	0.29851E-02	475383.4	3825927.4	896.7	3.40	
4.51	3.16	NO						
L0001548		0	0.29851E-02	475389.4	3825935.0	897.0	3.40	
4.51	3.16	NO						
L0001549		0	0.29851E-02	475395.4	3825942.6	897.1	3.40	
4.51	3.16	NO						
L0001550		0	0.29851E-02	475401.4	3825950.2	897.1	3.40	
4.51	3.16	NO						
L0001551		0	0.29851E-02	475407.4	3825957.9	896.8	3.40	
4.51	3.16	NO						
L0001552		0	0.29851E-02	475413.4	3825965.5	896.6	3.40	
4.51	3.16	NO						
L0001553		0	0.29851E-02	475419.5	3825973.1	896.6	3.40	
4.51	3.16	NO						
L0001554		0	0.29851E-02	475425.5	3825980.7	896.8	3.40	
4.51	3.16	NO						
L0001555		0	0.29851E-02	475431.5	3825988.3	896.8	3.40	
4.51	3.16	NO						
L0001556		0	0.29851E-02	475437.5	3825995.9	896.3	3.40	
4.51	3.16	NO						
L0001557		0	0.29851E-02	475443.5	3826003.5	895.9	3.40	
4.51	3.16	NO						
L0001558		0	0.29851E-02	475449.5	3826011.1	895.6	3.40	
4.51	3.16	NO						
L0001559		0	0.29851E-02	475455.5	3826018.8	895.9	3.40	
4.51	3.16	NO						
L0001560		0	0.29851E-02	475461.5	3826026.4	896.4	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001561	0	0.29851E-02	475467.6	3826034.0	897.0	3.40	4.51	3.16	NO
L0001562	0	0.29851E-02	475473.6	3826041.6	897.5	3.40	4.51	3.16	NO
L0001563	0	0.29851E-02	475479.6	3826049.2	897.8	3.40	4.51	3.16	NO
L0001564	0	0.29851E-02	475485.6	3826056.8	897.8	3.40	4.51	3.16	NO
L0001565	0	0.29851E-02	475491.6	3826064.4	897.5	3.40	4.51	3.16	NO
L0001566	0	0.29851E-02	475497.6	3826072.0	897.0	3.40	4.51	3.16	NO
L0001567	0	0.29851E-02	475503.6	3826079.6	896.2	3.40	4.51	3.16	NO
L0001568	0	0.29851E-02	475509.6	3826087.3	896.4	3.40	4.51	3.16	NO
L0001569	0	0.29851E-02	475515.7	3826094.9	896.1	3.40	4.51	3.16	NO
L0001570	0	0.29851E-02	475521.7	3826102.5	895.5	3.40	4.51	3.16	NO
L0001571	0	0.29851E-02	475527.7	3826110.1	894.6	3.40	4.51	3.16	NO
L0001572	0	0.29851E-02	475533.7	3826117.7	893.7	3.40	4.51	3.16	NO
L0001573	0	0.29851E-02	475539.7	3826125.3	893.2	3.40	4.51	3.16	NO
L0001574	0	0.29851E-02	475545.7	3826132.9	892.7	3.40	4.51	3.16	NO
L0001575	0	0.29851E-02	475551.7	3826140.5	892.2	3.40	4.51	3.16	NO
L0001576	0	0.29851E-02	475557.7	3826148.2	892.4	3.40	4.51	3.16	NO

L0001577		0	0.29851E-02	475563.8	3826155.8	893.7	3.40	
4.51	3.16	NO						
L0001578		0	0.29851E-02	475569.8	3826163.4	894.9	3.40	
4.51	3.16	NO						
L0001579		0	0.29851E-02	475576.8	3826169.3	895.9	3.40	
4.51	3.16	NO						
L0001580		0	0.29851E-02	475586.4	3826170.4	896.5	3.40	
4.51	3.16	NO						
L0001581		0	0.29851E-02	475596.0	3826171.6	897.0	3.40	
4.51	3.16	NO						
L0001582		0	0.29851E-02	475605.6	3826172.8	897.3	3.40	
4.51	3.16	NO						
L0001583		0	0.29851E-02	475615.3	3826173.9	897.5	3.40	
4.51	3.16	NO						
L0001584		0	0.29851E-02	475624.9	3826175.1	897.6	3.40	
4.51	3.16	NO						
L0001585		0	0.29851E-02	475634.5	3826176.3	897.6	3.40	
4.51	3.16	NO						
L0001586		0	0.29851E-02	475644.2	3826177.5	897.4	3.40	
4.51	3.16	NO						
L0001587		0	0.29851E-02	475653.8	3826178.6	897.3	3.40	
4.51	3.16	NO						
L0001588		0	0.29851E-02	475663.4	3826179.8	897.9	3.40	
4.51	3.16	NO						
L0001589		0	0.29851E-02	475673.0	3826181.0	898.6	3.40	
4.51	3.16	NO						
L0001590		0	0.29851E-02	475682.7	3826182.2	899.2	3.40	
4.51	3.16	NO						
L0001591		0	0.29851E-02	475692.3	3826183.3	899.5	3.40	
4.51	3.16	NO						
L0001592		0	0.29851E-02	475701.9	3826184.5	899.9	3.40	
4.51	3.16	NO						
L0001593		0	0.29851E-02	475711.6	3826185.7	900.2	3.40	
4.51	3.16	NO						
L0001594		0	0.29851E-02	475721.2	3826186.9	900.5	3.40	
4.51	3.16	NO						
L0001595		0	0.29851E-02	475724.4	3826184.4	900.4	3.40	
4.51	3.16	NO						
L0001596		0	0.29851E-02	475718.4	3826176.8	900.0	3.40	
4.51	3.16	NO						
L0001597		0	0.29851E-02	475712.4	3826169.2	900.4	3.40	
4.51	3.16	NO						
L0001598		0	0.29851E-02	475706.3	3826161.6	900.7	3.40	
4.51	3.16	NO						
L0001599		0	0.29851E-02	475700.3	3826154.0	901.0	3.40	
4.51	3.16	NO						
L0001600		0	0.29851E-02	475694.3	3826146.4	901.3	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001601	0	0.29851E-02	475688.3	3826138.8	900.1	3.40	4.51	3.16	NO
L0001602	0	0.29851E-02	475682.3	3826131.2	898.7	3.40	4.51	3.16	NO
L0001603	0	0.29851E-02	475676.2	3826123.6	897.4	3.40	4.51	3.16	NO
L0001604	0	0.29851E-02	475670.2	3826116.0	896.3	3.40	4.51	3.16	NO
L0001605	0	0.29851E-02	475664.2	3826108.4	896.8	3.40	4.51	3.16	NO
L0001606	0	0.29851E-02	475658.2	3826100.8	897.4	3.40	4.51	3.16	NO
L0001607	0	0.29851E-02	475652.2	3826093.2	897.8	3.40	4.51	3.16	NO
L0001608	0	0.29851E-02	475646.1	3826085.6	898.2	3.40	4.51	3.16	NO
L0001609	0	0.29851E-02	475640.1	3826078.0	898.2	3.40	4.51	3.16	NO
L0001610	0	0.29851E-02	475634.1	3826070.4	898.1	3.40	4.51	3.16	NO
L0001611	0	0.29851E-02	475628.1	3826062.7	897.8	3.40	4.51	3.16	NO
L0001612	0	0.29851E-02	475622.1	3826055.1	897.8	3.40	4.51	3.16	NO
L0001613	0	0.29851E-02	475616.0	3826047.5	898.4	3.40	4.51	3.16	NO
L0001614	0	0.29851E-02	475610.0	3826039.9	899.1	3.40	4.51	3.16	NO
L0001615	0	0.29851E-02	475604.0	3826032.3	899.8	3.40	4.51	3.16	NO
L0001616	0	0.29851E-02	475598.0	3826024.7	900.7	3.40	4.51	3.16	NO

L0001617		0	0.29851E-02	475592.0	3826017.1	901.4	3.40	
4.51	3.16	NO						
L0001618		0	0.29851E-02	475586.0	3826009.5	901.8	3.40	
4.51	3.16	NO						
L0001619		0	0.29851E-02	475579.9	3826001.9	902.0	3.40	
4.51	3.16	NO						
L0001620		0	0.29851E-02	475573.9	3825994.3	902.0	3.40	
4.51	3.16	NO						
L0001621		0	0.29851E-02	475567.9	3825986.7	901.9	3.40	
4.51	3.16	NO						
L0001622		0	0.29851E-02	475561.9	3825979.1	901.6	3.40	
4.51	3.16	NO						
L0001623		0	0.29851E-02	475555.9	3825971.5	901.1	3.40	
4.51	3.16	NO						
L0001624		0	0.29851E-02	475549.8	3825963.9	900.7	3.40	
4.51	3.16	NO						
L0001625		0	0.29851E-02	475543.8	3825956.3	900.9	3.40	
4.51	3.16	NO						
L0001626		0	0.29851E-02	475537.8	3825948.7	901.1	3.40	
4.51	3.16	NO						
L0001627		0	0.29851E-02	475531.8	3825941.1	901.3	3.40	
4.51	3.16	NO						
L0001628		0	0.29851E-02	475525.8	3825933.4	901.4	3.40	
4.51	3.16	NO						
L0001629		0	0.29851E-02	475519.7	3825925.8	901.5	3.40	
4.51	3.16	NO						
L0001630		0	0.29851E-02	475513.7	3825918.2	901.5	3.40	
4.51	3.16	NO						
L0001631		0	0.29851E-02	475507.7	3825910.6	901.4	3.40	
4.51	3.16	NO						
L0001632		0	0.29851E-02	475501.7	3825903.0	901.3	3.40	
4.51	3.16	NO						
L0001633		0	0.29851E-02	475495.7	3825895.4	901.2	3.40	
4.51	3.16	NO						
L0001634		0	0.29851E-02	475489.6	3825887.8	901.1	3.40	
4.51	3.16	NO						
L0001635		0	0.29851E-02	475483.6	3825880.2	901.0	3.40	
4.51	3.16	NO						
L0001636		0	0.29851E-02	475477.6	3825872.6	900.9	3.40	
4.51	3.16	NO						
L0001637		0	0.29851E-02	475471.6	3825865.0	900.8	3.40	
4.51	3.16	NO						
L0001638		0	0.29851E-02	475465.6	3825857.4	900.8	3.40	
4.51	3.16	NO						
L0001639		0	0.29851E-02	475459.5	3825849.8	900.7	3.40	
4.51	3.16	NO						
L0001640		0	0.29851E-02	475453.5	3825842.2	900.6	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001641	0	0.29851E-02	475447.3	3825834.8	900.6	3.40	4.51	3.16	NO
L0001642	0	0.29851E-02	475440.9	3825827.5	900.5	3.40	4.51	3.16	NO
L0001643	0	0.29851E-02	475434.5	3825820.2	900.5	3.40	4.51	3.16	NO
L0001644	0	0.29851E-02	475428.0	3825812.9	900.5	3.40	4.51	3.16	NO
L0001645	0	0.29851E-02	475421.6	3825805.6	900.5	3.40	4.51	3.16	NO
L0001646	0	0.29851E-02	475415.2	3825798.3	900.5	3.40	4.51	3.16	NO
L0001647	0	0.29851E-02	475408.8	3825791.0	900.5	3.40	4.51	3.16	NO
L0001648	0	0.29851E-02	475402.4	3825783.8	900.5	3.40	4.51	3.16	NO
L0001649	0	0.29851E-02	475398.8	3825776.9	900.6	3.40	4.51	3.16	NO
L0001650	0	0.29851E-02	475406.9	3825771.6	901.0	3.40	4.51	3.16	NO
L0001651	0	0.29851E-02	475415.0	3825766.3	901.4	3.40	4.51	3.16	NO
L0001652	0	0.29851E-02	475423.2	3825761.0	901.7	3.40	4.51	3.16	NO
L0001653	0	0.29851E-02	475431.3	3825755.7	902.1	3.40	4.51	3.16	NO
L0001654	0	0.29851E-02	475439.4	3825750.4	902.5	3.40	4.51	3.16	NO
L0001655	0	0.29851E-02	475447.6	3825745.1	903.0	3.40	4.51	3.16	NO
L0001656	0	0.29851E-02	475455.7	3825739.8	903.4	3.40	4.51	3.16	NO

L0001657		0	0.29851E-02	475463.8	3825734.5	903.8	3.40	
4.51	3.16	NO						
L0001658		0	0.29851E-02	475471.9	3825729.2	904.3	3.40	
4.51	3.16	NO						
L0001659		0	0.29851E-02	475480.1	3825724.0	904.7	3.40	
4.51	3.16	NO						
L0001660		0	0.29851E-02	475488.2	3825718.7	905.1	3.40	
4.51	3.16	NO						
L0001661		0	0.29851E-02	475496.3	3825713.4	905.6	3.40	
4.51	3.16	NO						
L0001662		0	0.29851E-02	475504.5	3825708.1	906.0	3.40	
4.51	3.16	NO						
L0001663		0	0.29851E-02	475512.6	3825702.8	906.4	3.40	
4.51	3.16	NO						
L0001664		0	0.29851E-02	475520.7	3825697.5	906.8	3.40	
4.51	3.16	NO						
L0001665		0	0.29851E-02	475528.9	3825692.2	907.2	3.40	
4.51	3.16	NO						
L0001666		0	0.29851E-02	475537.0	3825686.9	907.7	3.40	
4.51	3.16	NO						
L0001667		0	0.29851E-02	475545.1	3825681.6	908.3	3.40	
4.51	3.16	NO						
L0001668		0	0.29851E-02	475553.3	3825676.4	908.8	3.40	
4.51	3.16	NO						
L0001669		0	0.29851E-02	475561.4	3825671.1	909.3	3.40	
4.51	3.16	NO						
L0001670		0	0.29851E-02	475569.5	3825665.8	909.8	3.40	
4.51	3.16	NO						
L0001671		0	0.29851E-02	475577.7	3825660.5	910.2	3.40	
4.51	3.16	NO						
L0001672		0	0.29851E-02	475585.8	3825655.2	910.8	3.40	
4.51	3.16	NO						
L0001673		0	0.29851E-02	475592.6	3825657.7	911.0	3.40	
4.51	3.16	NO						
L0001674		0	0.29851E-02	475598.5	3825665.4	911.0	3.40	
4.51	3.16	NO						
L0001675		0	0.29851E-02	475604.3	3825673.1	910.9	3.40	
4.51	3.16	NO						
L0001676		0	0.29851E-02	475610.2	3825680.8	910.9	3.40	
4.51	3.16	NO						
L0001677		0	0.29851E-02	475616.1	3825688.5	910.8	3.40	
4.51	3.16	NO						
L0001678		0	0.29851E-02	475622.0	3825696.2	910.8	3.40	
4.51	3.16	NO						
L0001679		0	0.29851E-02	475627.9	3825703.9	910.8	3.40	
4.51	3.16	NO						
L0001680		0	0.29851E-02	475633.8	3825711.6	910.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001681	0	0.29851E-02	475639.7	3825719.4	910.9	3.40	4.51	3.16	NO
L0001682	0	0.29851E-02	475645.5	3825727.1	910.9	3.40	4.51	3.16	NO
L0001683	0	0.29851E-02	475651.4	3825734.8	910.9	3.40	4.51	3.16	NO
L0001684	0	0.29851E-02	475657.3	3825742.5	910.9	3.40	4.51	3.16	NO
L0001685	0	0.29851E-02	475663.2	3825750.2	910.8	3.40	4.51	3.16	NO
L0001686	0	0.29851E-02	475669.1	3825757.9	910.7	3.40	4.51	3.16	NO
L0001687	0	0.29851E-02	475675.0	3825765.6	910.7	3.40	4.51	3.16	NO
L0001688	0	0.29851E-02	475680.9	3825773.3	910.7	3.40	4.51	3.16	NO
L0001689	0	0.29851E-02	475686.7	3825781.0	910.8	3.40	4.51	3.16	NO
L0001690	0	0.29851E-02	475692.6	3825788.8	910.7	3.40	4.51	3.16	NO
L0001691	0	0.29851E-02	475698.5	3825796.5	910.6	3.40	4.51	3.16	NO
L0001692	0	0.29851E-02	475704.4	3825804.2	910.4	3.40	4.51	3.16	NO
L0001693	0	0.29851E-02	475710.3	3825811.9	910.2	3.40	4.51	3.16	NO
L0001694	0	0.29851E-02	475716.2	3825819.6	910.1	3.40	4.51	3.16	NO
L0001695	0	0.29851E-02	475722.0	3825827.3	910.0	3.40	4.51	3.16	NO
L0001696	0	0.29851E-02	475727.9	3825835.0	910.0	3.40	4.51	3.16	NO

L0001697		0	0.29851E-02	475733.8	3825842.7	910.2	3.40	
4.51	3.16	NO						
L0001698		0	0.29851E-02	475739.7	3825850.4	910.5	3.40	
4.51	3.16	NO						
L0001699		0	0.29851E-02	475745.6	3825858.2	910.6	3.40	
4.51	3.16	NO						
L0001700		0	0.29851E-02	475751.5	3825865.9	910.6	3.40	
4.51	3.16	NO						
L0001701		0	0.29851E-02	475757.4	3825873.6	910.2	3.40	
4.51	3.16	NO						
L0001702		0	0.29851E-02	475763.2	3825881.3	910.0	3.40	
4.51	3.16	NO						
L0001703		0	0.29851E-02	475769.1	3825889.0	909.9	3.40	
4.51	3.16	NO						
L0001704		0	0.29851E-02	475775.0	3825896.7	909.8	3.40	
4.51	3.16	NO						
L0001705		0	0.29851E-02	475780.9	3825904.4	909.9	3.40	
4.51	3.16	NO						
L0001706		0	0.29851E-02	475786.8	3825912.1	910.2	3.40	
4.51	3.16	NO						
L0001707		0	0.29851E-02	475792.7	3825919.8	910.6	3.40	
4.51	3.16	NO						
L0001708		0	0.29851E-02	475798.6	3825927.5	911.0	3.40	
4.51	3.16	NO						
L0001709		0	0.29851E-02	475804.4	3825935.3	910.9	3.40	
4.51	3.16	NO						
L0001710		0	0.29851E-02	475810.3	3825943.0	910.2	3.40	
4.51	3.16	NO						
L0001711		0	0.29851E-02	475816.2	3825950.7	909.3	3.40	
4.51	3.16	NO						
L0001712		0	0.29851E-02	475822.1	3825958.4	908.4	3.40	
4.51	3.16	NO						
L0001713		0	0.29851E-02	475828.0	3825966.1	908.1	3.40	
4.51	3.16	NO						
L0001714		0	0.29851E-02	475833.9	3825973.8	908.3	3.40	
4.51	3.16	NO						
L0001715		0	0.29851E-02	475839.8	3825981.5	907.9	3.40	
4.51	3.16	NO						
L0001716		0	0.29851E-02	475845.6	3825989.2	907.0	3.40	
4.51	3.16	NO						
L0001717		0	0.29851E-02	475851.5	3825996.9	905.9	3.40	
4.51	3.16	NO						
L0001718		0	0.29851E-02	475857.4	3826004.7	905.2	3.40	
4.51	3.16	NO						
L0001719		0	0.29851E-02	475863.3	3826012.4	905.4	3.40	
4.51	3.16	NO						
L0001720		0	0.29851E-02	475869.2	3826020.1	906.1	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0001721	0	0.29851E-02	475875.1	3826027.8	906.9	3.40	4.51	3.16	NO
L0001722	0	0.29851E-02	475881.0	3826035.5	907.4	3.40	4.51	3.16	NO
L0001723	0	0.29851E-02	475886.5	3826043.5	907.6	3.40	4.51	3.16	NO
L0001724	0	0.29851E-02	475891.7	3826051.6	907.6	3.40	4.51	3.16	NO
L0001725	0	0.29851E-02	475897.0	3826059.8	907.7	3.40	4.51	3.16	NO
L0001726	0	0.29851E-02	475902.2	3826067.9	907.8	3.40	4.51	3.16	NO
L0001727	0	0.29851E-02	475907.5	3826076.1	908.1	3.40	4.51	3.16	NO
L0001728	0	0.29851E-02	475912.8	3826084.2	908.3	3.40	4.51	3.16	NO
L0001729	0	0.29851E-02	475918.0	3826092.4	908.5	3.40	4.51	3.16	NO
L0001730	0	0.29851E-02	475919.9	3826101.3	908.3	3.40	4.51	3.16	NO
L0001731	0	0.29851E-02	475918.7	3826110.9	908.0	3.40	4.51	3.16	NO
L0001732	0	0.29851E-02	475917.5	3826120.5	908.0	3.40	4.51	3.16	NO
L0001733	0	0.29851E-02	475916.3	3826130.2	908.2	3.40	4.51	3.16	NO
L0001734	0	0.29851E-02	475915.1	3826139.8	908.3	3.40	4.51	3.16	NO
L0001735	0	0.29851E-02	475907.8	3826145.5	908.0	3.40	4.51	3.16	NO
L0001736	0	0.29851E-02	475899.6	3826150.7	907.6	3.40	4.51	3.16	NO

L0001737		0	0.29851E-02	475891.3	3826155.8	907.2	3.40	
4.51	3.16	NO						
L0001738		0	0.29851E-02	475883.1	3826161.0	907.0	3.40	
4.51	3.16	NO						
L0001739		0	0.29851E-02	475874.9	3826166.1	906.9	3.40	
4.51	3.16	NO						
L0001740		0	0.29851E-02	475866.7	3826171.3	906.9	3.40	
4.51	3.16	NO						
L0001741		0	0.29851E-02	475858.5	3826176.4	906.9	3.40	
4.51	3.16	NO						
L0001742		0	0.29851E-02	475850.2	3826181.6	906.4	3.40	
4.51	3.16	NO						
L0001743		0	0.29851E-02	475842.0	3826186.7	905.9	3.40	
4.51	3.16	NO						
L0001744		0	0.29851E-02	475833.8	3826191.9	905.6	3.40	
4.51	3.16	NO						
L0001745		0	0.29851E-02	475825.6	3826197.0	905.3	3.40	
4.51	3.16	NO						
L0001746		0	0.29851E-02	475817.4	3826202.2	905.1	3.40	
4.51	3.16	NO						
L0001747		0	0.29851E-02	475809.1	3826207.3	905.0	3.40	
4.51	3.16	NO						
L0001748		0	0.29851E-02	475800.9	3826212.5	904.5	3.40	
4.51	3.16	NO						
L0001749		0	0.29851E-02	475792.7	3826217.6	904.1	3.40	
4.51	3.16	NO						
L0001750		0	0.29851E-02	475784.5	3826222.8	903.8	3.40	
4.51	3.16	NO						
L0001751		0	0.29851E-02	475776.3	3826227.9	903.4	3.40	
4.51	3.16	NO						
L0001752		0	0.29851E-02	475768.0	3826233.0	903.2	3.40	
4.51	3.16	NO						
L0001753		0	0.29851E-02	475759.7	3826237.7	903.0	3.40	
4.51	3.16	NO						
L0001754		0	0.29851E-02	475750.1	3826236.3	902.6	3.40	
4.51	3.16	NO						
L0001755		0	0.29851E-02	475740.5	3826234.8	902.0	3.40	
4.51	3.16	NO						
L0001756		0	0.29851E-02	475731.0	3826233.4	901.6	3.40	
4.51	3.16	NO						
L0001757		0	0.29851E-02	475721.4	3826231.9	901.2	3.40	
4.51	3.16	NO						
L0001758		0	0.29851E-02	475711.8	3826230.5	900.9	3.40	
4.51	3.16	NO						
L0001759		0	0.29851E-02	475702.2	3826229.0	900.5	3.40	
4.51	3.16	NO						
L0001760		0	0.29851E-02	475692.6	3826227.5	900.1	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001761	0	0.29851E-02	475683.0	3826226.1	899.8	3.40	4.51	3.16	NO
L0001762	0	0.29851E-02	475673.4	3826224.6	899.3	3.40	4.51	3.16	NO
L0001763	0	0.29851E-02	475663.8	3826223.2	899.0	3.40	4.51	3.16	NO
L0001764	0	0.29851E-02	475654.2	3826221.7	898.5	3.40	4.51	3.16	NO
L0001765	0	0.29851E-02	475644.6	3826220.3	897.7	3.40	4.51	3.16	NO
L0001766	0	0.29851E-02	475635.1	3826218.8	896.9	3.40	4.51	3.16	NO
L0001767	0	0.29851E-02	475625.5	3826217.3	896.1	3.40	4.51	3.16	NO
L0001768	0	0.29851E-02	475615.9	3826215.9	895.4	3.40	4.51	3.16	NO
L0001769	0	0.29851E-02	475607.4	3826219.4	895.0	3.40	4.51	3.16	NO
L0001770	0	0.29851E-02	475599.3	3826224.7	895.1	3.40	4.51	3.16	NO
L0001771	0	0.29851E-02	475591.2	3826230.1	894.7	3.40	4.51	3.16	NO
L0001772	0	0.29851E-02	475583.1	3826235.4	893.7	3.40	4.51	3.16	NO
L0001773	0	0.29851E-02	475575.0	3826240.8	893.1	3.40	4.51	3.16	NO
L0001774	0	0.29851E-02	475566.9	3826246.1	892.9	3.40	4.51	3.16	NO
L0001775	0	0.29851E-02	475558.8	3826251.4	892.4	3.40	4.51	3.16	NO
L0001776	0	0.29851E-02	475550.7	3826256.8	892.1	3.40	4.51	3.16	NO

L0001777		0	0.29851E-02	475542.6	3826262.1	892.0	3.40	
4.51	3.16	NO						
L0001778		0	0.29851E-02	475534.5	3826267.5	891.8	3.40	
4.51	3.16	NO						
L0001779		0	0.29851E-02	475526.4	3826272.8	891.5	3.40	
4.51	3.16	NO						
L0001780		0	0.29851E-02	475518.3	3826278.1	891.3	3.40	
4.51	3.16	NO						
L0001781		0	0.29851E-02	475510.2	3826283.5	891.0	3.40	
4.51	3.16	NO						
L0001782		0	0.29851E-02	475502.1	3826288.8	890.8	3.40	
4.51	3.16	NO						
L0001783		0	0.29851E-02	475494.0	3826294.2	890.4	3.40	
4.51	3.16	NO						
L0001784		0	0.29851E-02	475485.9	3826299.5	889.8	3.40	
4.51	3.16	NO						
L0001785		0	0.29851E-02	475477.8	3826304.9	889.1	3.40	
4.51	3.16	NO						
L0001786		0	0.29851E-02	475469.7	3826310.2	888.8	3.40	
4.51	3.16	NO						
L0001787		0	0.29851E-02	475461.6	3826315.5	888.6	3.40	
4.51	3.16	NO						
L0001788		0	0.29851E-02	475453.5	3826320.9	888.5	3.40	
4.51	3.16	NO						
L0001789		0	0.29851E-02	475445.4	3826326.2	888.3	3.40	
4.51	3.16	NO						
L0001790		0	0.29851E-02	475437.3	3826331.6	888.0	3.40	
4.51	3.16	NO						
L0001791		0	0.29851E-02	475428.6	3826334.4	887.8	3.40	
4.51	3.16	NO						
L0001792		0	0.29851E-02	475418.9	3826333.6	887.6	3.40	
4.51	3.16	NO						
L0001793		0	0.29851E-02	475409.3	3826332.9	887.4	3.40	
4.51	3.16	NO						
L0001794		0	0.29851E-02	475402.9	3826325.9	887.6	3.40	
4.51	3.16	NO						
L0001795		0	0.29851E-02	475396.8	3826318.3	887.8	3.40	
4.51	3.16	NO						
L0001796		0	0.29851E-02	475390.8	3826310.7	888.0	3.40	
4.51	3.16	NO						
L0001797		0	0.29851E-02	475384.7	3826303.2	888.0	3.40	
4.51	3.16	NO						
L0001798		0	0.29851E-02	475378.7	3826295.6	887.3	3.40	
4.51	3.16	NO						
L0001799		0	0.29851E-02	475372.6	3826288.0	886.0	3.40	
4.51	3.16	NO						
L0001800		0	0.29851E-02	475366.6	3826280.4	884.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001801	0	0.29851E-02	475360.5	3826272.8	883.9	3.40	4.51	3.16	NO
L0001802	0	0.29851E-02	475354.5	3826265.3	883.8	3.40	4.51	3.16	NO
L0001803	0	0.29851E-02	475348.4	3826257.7	884.2	3.40	4.51	3.16	NO
L0001804	0	0.29851E-02	475342.4	3826250.1	884.4	3.40	4.51	3.16	NO
L0001805	0	0.29851E-02	475336.3	3826242.5	884.2	3.40	4.51	3.16	NO
L0001806	0	0.29851E-02	475330.3	3826234.9	884.4	3.40	4.51	3.16	NO
L0001807	0	0.29851E-02	475324.2	3826227.4	885.5	3.40	4.51	3.16	NO
L0001808	0	0.29851E-02	475318.2	3826219.8	887.2	3.40	4.51	3.16	NO
L0001809	0	0.29851E-02	475312.1	3826212.2	888.3	3.40	4.51	3.16	NO
L0001810	0	0.29851E-02	475306.0	3826204.6	888.8	3.40	4.51	3.16	NO
L0001811	0	0.29851E-02	475300.0	3826197.0	888.8	3.40	4.51	3.16	NO
L0001812	0	0.29851E-02	475293.9	3826189.5	888.8	3.40	4.51	3.16	NO
L0001813	0	0.29851E-02	475287.9	3826181.9	888.3	3.40	4.51	3.16	NO
L0001814	0	0.29851E-02	475281.8	3826174.3	887.6	3.40	4.51	3.16	NO
L0001815	0	0.29851E-02	475275.8	3826166.7	887.3	3.40	4.51	3.16	NO
L0001816	0	0.29851E-02	475269.7	3826159.1	887.3	3.40	4.51	3.16	NO

L0001817		0	0.29851E-02	475263.7	3826151.6	886.8	3.40	
4.51	3.16	NO						
L0001818		0	0.29851E-02	475257.6	3826144.0	886.1	3.40	
4.51	3.16	NO						
L0001819		0	0.29851E-02	475251.6	3826136.4	885.7	3.40	
4.51	3.16	NO						
L0001820		0	0.29851E-02	475245.5	3826128.8	886.0	3.40	
4.51	3.16	NO						
L0001821		0	0.29851E-02	475239.5	3826121.2	886.6	3.40	
4.51	3.16	NO						
L0001822		0	0.29851E-02	475233.4	3826113.7	887.2	3.40	
4.51	3.16	NO						
L0001823		0	0.29851E-02	475227.4	3826106.1	887.7	3.40	
4.51	3.16	NO						
L0001824		0	0.29851E-02	475221.3	3826098.5	887.9	3.40	
4.51	3.16	NO						
L0001825		0	0.29851E-02	475215.3	3826090.9	888.0	3.40	
4.51	3.16	NO						
L0001826		0	0.29851E-02	475209.2	3826083.3	888.2	3.40	
4.51	3.16	NO						
L0001827		0	0.29851E-02	475203.2	3826075.8	888.6	3.40	
4.51	3.16	NO						
L0001828		0	0.29851E-02	475197.1	3826068.2	889.1	3.40	
4.51	3.16	NO						
L0001829		0	0.29851E-02	475191.1	3826060.6	889.5	3.40	
4.51	3.16	NO						
L0001830		0	0.29851E-02	475185.0	3826053.0	889.5	3.40	
4.51	3.16	NO						
L0001831		0	0.29851E-02	475179.0	3826045.4	889.2	3.40	
4.51	3.16	NO						
L0001832		0	0.29851E-02	475172.9	3826037.9	888.9	3.40	
4.51	3.16	NO						
L0001833		0	0.29851E-02	475166.8	3826030.3	888.5	3.40	
4.51	3.16	NO						
L0001834		0	0.29851E-02	475160.8	3826022.7	887.9	3.40	
4.51	3.16	NO						
L0001835		0	0.29851E-02	475154.7	3826015.1	887.4	3.40	
4.51	3.16	NO						
L0001836		0	0.29851E-02	475148.7	3826007.5	887.1	3.40	
4.51	3.16	NO						
L0001837		0	0.29851E-02	475142.6	3825999.9	887.0	3.40	
4.51	3.16	NO						
L0001838		0	0.29851E-02	475136.6	3825992.4	887.0	3.40	
4.51	3.16	NO						
L0001839		0	0.29851E-02	475130.5	3825984.8	887.0	3.40	
4.51	3.16	NO						
L0001840		0	0.29851E-02	475124.5	3825977.2	886.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0001841	0	0.29851E-02	475118.4	3825969.6	886.6	3.40	4.51	3.16	NO
L0001842	0	0.29851E-02	475112.4	3825962.0	886.4	3.40	4.51	3.16	NO
L0001843	0	0.29851E-02	475106.3	3825954.5	886.5	3.40	4.51	3.16	NO
L0001844	0	0.29851E-02	475100.3	3825946.9	886.4	3.40	4.51	3.16	NO
L0001845	0	0.29851E-02	475094.2	3825939.3	886.3	3.40	4.51	3.16	NO
L0001846	0	0.29851E-02	475088.2	3825931.7	886.2	3.40	4.51	3.16	NO
L0001847	0	0.29851E-02	475082.1	3825924.1	886.3	3.40	4.51	3.16	NO
L0001848	0	0.29851E-02	475076.1	3825916.6	886.5	3.40	4.51	3.16	NO
L0001849	0	0.29851E-02	475070.0	3825909.0	886.9	3.40	4.51	3.16	NO
L0001850	0	0.29851E-02	475064.0	3825901.4	887.4	3.40	4.51	3.16	NO
L0001851	0	0.29851E-02	475057.9	3825893.8	887.3	3.40	4.51	3.16	NO
L0001852	0	0.29851E-02	475051.9	3825886.2	887.1	3.40	4.51	3.16	NO
L0001853	0	0.29851E-02	475045.8	3825878.7	886.8	3.40	4.51	3.16	NO
L0001854	0	0.29851E-02	475039.8	3825871.1	886.5	3.40	4.51	3.16	NO
L0001855	0	0.29851E-02	475033.7	3825863.5	886.5	3.40	4.51	3.16	NO
L0004430	0	0.49020E-02	475394.9	3826286.0	887.2	3.40	4.51	3.16	NO

L0004431		0	0.49020E-02	475388.9	3826278.4	886.2	3.40	
4.51	3.16	NO						
L0004432		0	0.49020E-02	475382.8	3826270.8	885.3	3.40	
4.51	3.16	NO						
L0004433		0	0.49020E-02	475376.7	3826263.3	884.8	3.40	
4.51	3.16	NO						
L0004434		0	0.49020E-02	475370.7	3826255.7	884.6	3.40	
4.51	3.16	NO						
L0004435		0	0.49020E-02	475364.6	3826248.1	884.8	3.40	
4.51	3.16	NO						
L0004436		0	0.49020E-02	475358.5	3826240.6	885.4	3.40	
4.51	3.16	NO						
L0004437		0	0.49020E-02	475352.5	3826233.0	886.4	3.40	
4.51	3.16	NO						
L0004438		0	0.49020E-02	475346.4	3826225.4	886.9	3.40	
4.51	3.16	NO						
L0004439		0	0.49020E-02	475340.3	3826217.9	887.6	3.40	
4.51	3.16	NO						
L0004440		0	0.49020E-02	475334.3	3826210.3	888.8	3.40	
4.51	3.16	NO						
L0004441		0	0.49020E-02	475328.2	3826202.7	889.8	3.40	
4.51	3.16	NO						
L0004442		0	0.49020E-02	475322.1	3826195.2	890.3	3.40	
4.51	3.16	NO						
L0004443		0	0.49020E-02	475316.1	3826187.6	890.5	3.40	
4.51	3.16	NO						
L0004444		0	0.49020E-02	475310.0	3826180.0	890.5	3.40	
4.51	3.16	NO						
L0004445		0	0.49020E-02	475303.9	3826172.4	890.1	3.40	
4.51	3.16	NO						
L0004446		0	0.49020E-02	475297.9	3826164.9	889.4	3.40	
4.51	3.16	NO						
L0004447		0	0.49020E-02	475291.8	3826157.3	888.9	3.40	
4.51	3.16	NO						
L0004448		0	0.49020E-02	475285.7	3826149.7	888.7	3.40	
4.51	3.16	NO						
L0004449		0	0.49020E-02	475279.7	3826142.2	888.3	3.40	
4.51	3.16	NO						
L0004450		0	0.49020E-02	475273.6	3826134.6	887.4	3.40	
4.51	3.16	NO						
L0004451		0	0.49020E-02	475267.5	3826127.0	886.7	3.40	
4.51	3.16	NO						
L0004452		0	0.49020E-02	475261.5	3826119.5	886.4	3.40	
4.51	3.16	NO						
L0004453		0	0.49020E-02	475255.4	3826111.9	886.8	3.40	
4.51	3.16	NO						
L0004454		0	0.49020E-02	475249.3	3826104.3	887.5	3.40	
4.51	3.16	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0004455	0	0.49020E-02	475243.3	3826096.8	888.1	3.40	4.51	3.16	NO
L0004456	0	0.49020E-02	475237.2	3826089.2	888.5	3.40	4.51	3.16	NO
L0004457	0	0.49020E-02	475231.1	3826081.6	888.9	3.40	4.51	3.16	NO
L0004458	0	0.49020E-02	475225.1	3826074.1	889.4	3.40	4.51	3.16	NO
L0004459	0	0.49020E-02	475219.0	3826066.5	889.9	3.40	4.51	3.16	NO
L0004460	0	0.49020E-02	475212.9	3826058.9	890.3	3.40	4.51	3.16	NO
L0004461	0	0.49020E-02	475206.9	3826051.3	890.4	3.40	4.51	3.16	NO
L0004462	0	0.49020E-02	475200.8	3826043.8	890.2	3.40	4.51	3.16	NO
L0004463	0	0.49020E-02	475194.7	3826036.2	889.9	3.40	4.51	3.16	NO
L0004464	0	0.49020E-02	475188.7	3826028.6	889.6	3.40	4.51	3.16	NO
L0004465	0	0.49020E-02	475182.6	3826021.1	889.2	3.40	4.51	3.16	NO
L0004466	0	0.49020E-02	475176.5	3826013.5	888.7	3.40	4.51	3.16	NO
L0004467	0	0.49020E-02	475170.5	3826005.9	888.2	3.40	4.51	3.16	NO
L0004468	0	0.49020E-02	475164.4	3825998.4	887.8	3.40	4.51	3.16	NO
L0004469	0	0.49020E-02	475158.3	3825990.8	887.6	3.40	4.51	3.16	NO
L0004470	0	0.49020E-02	475152.3	3825983.2	887.6	3.40	4.51	3.16	NO

L0004471		0	0.49020E-02	475146.2	3825975.7	887.5	3.40	
4.51	3.16	NO						
L0004472		0	0.49020E-02	475140.1	3825968.1	887.4	3.40	
4.51	3.16	NO						
L0004473		0	0.49020E-02	475134.1	3825960.5	887.3	3.40	
4.51	3.16	NO						
L0004474		0	0.49020E-02	475128.0	3825952.9	887.4	3.40	
4.51	3.16	NO						
L0004475		0	0.49020E-02	475122.0	3825945.4	887.7	3.40	
4.51	3.16	NO						
L0004476		0	0.49020E-02	475115.9	3825937.8	887.7	3.40	
4.51	3.16	NO						
L0004477		0	0.49020E-02	475109.8	3825930.2	887.6	3.40	
4.51	3.16	NO						
L0004478		0	0.49020E-02	475103.8	3825922.7	887.2	3.40	
4.51	3.16	NO						
L0004479		0	0.49020E-02	475097.7	3825915.1	887.1	3.40	
4.51	3.16	NO						
L0004480		0	0.49020E-02	475091.6	3825907.5	887.2	3.40	
4.51	3.16	NO						
L0004481		0	0.49020E-02	475085.6	3825900.0	887.4	3.40	
4.51	3.16	NO						
L0004482		0	0.49020E-02	475079.5	3825892.4	887.7	3.40	
4.51	3.16	NO						
L0004483		0	0.49020E-02	475073.4	3825884.8	887.7	3.40	
4.51	3.16	NO						
L0004484		0	0.49020E-02	475067.4	3825877.3	887.6	3.40	
4.51	3.16	NO						
L0004485		0	0.49020E-02	475061.3	3825869.7	887.4	3.40	
4.51	3.16	NO						
L0004372		0	0.49020E-02	475584.9	3826148.2	895.0	3.40	
4.51	3.16	NO						
L0004373		0	0.49020E-02	475578.9	3826140.6	894.0	3.40	
4.51	3.16	NO						
L0004374		0	0.49020E-02	475572.9	3826133.0	893.4	3.40	
4.51	3.16	NO						
L0004375		0	0.49020E-02	475566.9	3826125.4	893.3	3.40	
4.51	3.16	NO						
L0004376		0	0.49020E-02	475560.9	3826117.8	893.7	3.40	
4.51	3.16	NO						
L0004377		0	0.49020E-02	475554.9	3826110.2	894.4	3.40	
4.51	3.16	NO						
L0004378		0	0.49020E-02	475548.9	3826102.6	895.0	3.40	
4.51	3.16	NO						
L0004379		0	0.49020E-02	475542.9	3826094.9	896.0	3.40	
4.51	3.16	NO						
L0004380		0	0.49020E-02	475536.9	3826087.3	897.5	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004381	0	0.49020E-02	475530.8	3826079.7	898.7	3.40	4.51	3.16	NO
L0004382	0	0.49020E-02	475524.8	3826072.1	898.4	3.40	4.51	3.16	NO
L0004383	0	0.49020E-02	475518.8	3826064.5	898.0	3.40	4.51	3.16	NO
L0004384	0	0.49020E-02	475512.8	3826056.9	898.0	3.40	4.51	3.16	NO
L0004385	0	0.49020E-02	475506.8	3826049.3	898.3	3.40	4.51	3.16	NO
L0004386	0	0.49020E-02	475500.8	3826041.6	898.6	3.40	4.51	3.16	NO
L0004387	0	0.49020E-02	475494.8	3826034.0	898.6	3.40	4.51	3.16	NO
L0004388	0	0.49020E-02	475488.8	3826026.4	898.3	3.40	4.51	3.16	NO
L0004389	0	0.49020E-02	475482.8	3826018.8	897.8	3.40	4.51	3.16	NO
L0004390	0	0.49020E-02	475476.8	3826011.2	897.4	3.40	4.51	3.16	NO
L0004391	0	0.49020E-02	475470.7	3826003.6	897.0	3.40	4.51	3.16	NO
L0004392	0	0.49020E-02	475464.7	3825996.0	896.7	3.40	4.51	3.16	NO
L0004393	0	0.49020E-02	475458.7	3825988.3	896.6	3.40	4.51	3.16	NO
L0004394	0	0.49020E-02	475452.7	3825980.7	896.9	3.40	4.51	3.16	NO
L0004395	0	0.49020E-02	475446.7	3825973.1	897.4	3.40	4.51	3.16	NO
L0004396	0	0.49020E-02	475440.7	3825965.5	897.5	3.40	4.51	3.16	NO

L0004397		0	0.49020E-02	475434.7	3825957.9	897.4	3.40	
4.51	3.16	NO						
L0004398		0	0.49020E-02	475428.7	3825950.3	897.4	3.40	
4.51	3.16	NO						
L0004399		0	0.49020E-02	475422.7	3825942.7	897.8	3.40	
4.51	3.16	NO						
L0004400		0	0.49020E-02	475416.7	3825935.0	898.1	3.40	
4.51	3.16	NO						
L0004401		0	0.49020E-02	475410.6	3825927.4	898.0	3.40	
4.51	3.16	NO						
L0004402		0	0.49020E-02	475404.6	3825919.8	897.7	3.40	
4.51	3.16	NO						
L0004403		0	0.49020E-02	475398.6	3825912.2	897.5	3.40	
4.51	3.16	NO						
L0004404		0	0.49020E-02	475392.6	3825904.6	897.3	3.40	
4.51	3.16	NO						
L0004405		0	0.49020E-02	475386.6	3825897.0	897.1	3.40	
4.51	3.16	NO						
L0004406		0	0.49020E-02	475380.6	3825889.4	897.0	3.40	
4.51	3.16	NO						
L0004407		0	0.49020E-02	475374.6	3825881.7	896.9	3.40	
4.51	3.16	NO						
L0004408		0	0.49020E-02	475368.6	3825874.1	896.8	3.40	
4.51	3.16	NO						
L0004409		0	0.49020E-02	475362.6	3825866.5	896.8	3.40	
4.51	3.16	NO						
L0004410		0	0.49020E-02	475356.6	3825858.9	896.8	3.40	
4.51	3.16	NO						
L0004411		0	0.49020E-02	475350.6	3825851.3	896.8	3.40	
4.51	3.16	NO						
L0004412		0	0.49020E-02	475344.5	3825843.7	896.9	3.40	
4.51	3.16	NO						
L0004413		0	0.49020E-02	475338.5	3825836.1	896.9	3.40	
4.51	3.16	NO						
L0004414		0	0.49020E-02	475332.5	3825828.4	896.9	3.40	
4.51	3.16	NO						
L0004415		0	0.49020E-02	475326.5	3825820.8	896.9	3.40	
4.51	3.16	NO						
L0004416		0	0.49020E-02	475320.5	3825813.2	896.9	3.40	
4.51	3.16	NO						
L0004417		0	0.49020E-02	475314.5	3825805.6	897.0	3.40	
4.51	3.16	NO						
L0004418		0	0.49020E-02	475308.5	3825798.0	897.0	3.40	
4.51	3.16	NO						
L0004419		0	0.49020E-02	475302.5	3825790.4	897.1	3.40	
4.51	3.16	NO						
L0004420		0	0.49020E-02	475296.5	3825782.8	897.1	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004421	0	0.49020E-02	475290.5	3825775.1	897.1	3.40	4.51	3.16	NO
L0004422	0	0.49020E-02	475284.4	3825767.5	897.1	3.40	4.51	3.16	NO
L0004423	0	0.49020E-02	475278.4	3825759.9	897.1	3.40	4.51	3.16	NO
L0004424	0	0.49020E-02	475272.4	3825752.3	897.1	3.40	4.51	3.16	NO
L0004425	0	0.49020E-02	475266.4	3825744.7	897.1	3.40	4.51	3.16	NO
L0004426	0	0.49020E-02	475260.4	3825737.1	896.8	3.40	4.51	3.16	NO
L0004427	0	0.49020E-02	475254.4	3825729.5	896.5	3.40	4.51	3.16	NO
L0004428	0	0.49020E-02	475248.4	3825721.8	896.2	3.40	4.51	3.16	NO
L0004429	0	0.49020E-02	475242.4	3825714.2	895.9	3.40	4.51	3.16	NO
L0004326	0	0.49020E-02	475730.6	3826176.7	900.2	3.40	4.51	3.16	NO
L0004327	0	0.49020E-02	475724.7	3826169.0	900.5	3.40	4.51	3.16	NO
L0004328	0	0.49020E-02	475718.8	3826161.3	900.9	3.40	4.51	3.16	NO
L0004329	0	0.49020E-02	475712.9	3826153.6	901.3	3.40	4.51	3.16	NO
L0004330	0	0.49020E-02	475707.0	3826145.9	901.7	3.40	4.51	3.16	NO
L0004331	0	0.49020E-02	475701.1	3826138.2	900.4	3.40	4.51	3.16	NO
L0004332	0	0.49020E-02	475695.2	3826130.5	899.1	3.40	4.51	3.16	NO

L0004333		0	0.49020E-02	475689.3	3826122.8	897.6	3.40	
4.51	3.16	NO						
L0004334		0	0.49020E-02	475683.4	3826115.1	896.1	3.40	
4.51	3.16	NO						
L0004335		0	0.49020E-02	475677.4	3826107.4	897.0	3.40	
4.51	3.16	NO						
L0004336		0	0.49020E-02	475671.5	3826099.8	897.8	3.40	
4.51	3.16	NO						
L0004337		0	0.49020E-02	475665.6	3826092.1	898.4	3.40	
4.51	3.16	NO						
L0004338		0	0.49020E-02	475659.7	3826084.4	898.8	3.40	
4.51	3.16	NO						
L0004339		0	0.49020E-02	475653.8	3826076.7	898.7	3.40	
4.51	3.16	NO						
L0004340		0	0.49020E-02	475647.9	3826069.0	898.7	3.40	
4.51	3.16	NO						
L0004341		0	0.49020E-02	475642.0	3826061.3	898.5	3.40	
4.51	3.16	NO						
L0004342		0	0.49020E-02	475636.1	3826053.6	898.3	3.40	
4.51	3.16	NO						
L0004343		0	0.49020E-02	475630.2	3826045.9	898.7	3.40	
4.51	3.16	NO						
L0004344		0	0.49020E-02	475624.3	3826038.2	899.4	3.40	
4.51	3.16	NO						
L0004345		0	0.49020E-02	475618.4	3826030.5	900.1	3.40	
4.51	3.16	NO						
L0004346		0	0.49020E-02	475612.5	3826022.8	900.7	3.40	
4.51	3.16	NO						
L0004347		0	0.49020E-02	475606.6	3826015.1	901.2	3.40	
4.51	3.16	NO						
L0004348		0	0.49020E-02	475600.7	3826007.4	901.9	3.40	
4.51	3.16	NO						
L0004349		0	0.49020E-02	475594.7	3825999.7	902.3	3.40	
4.51	3.16	NO						
L0004350		0	0.49020E-02	475588.8	3825992.0	902.5	3.40	
4.51	3.16	NO						
L0004351		0	0.49020E-02	475582.9	3825984.4	902.6	3.40	
4.51	3.16	NO						
L0004352		0	0.49020E-02	475577.0	3825976.7	902.6	3.40	
4.51	3.16	NO						
L0004353		0	0.49020E-02	475571.1	3825969.0	902.4	3.40	
4.51	3.16	NO						
L0004354		0	0.49020E-02	475565.2	3825961.3	901.9	3.40	
4.51	3.16	NO						
L0004355		0	0.49020E-02	475559.3	3825953.6	901.7	3.40	
4.51	3.16	NO						
L0004356		0	0.49020E-02	475553.4	3825945.9	901.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004357	0	0.49020E-02	475547.5	3825938.2	902.0	3.40	4.51	3.16	NO
L0004358	0	0.49020E-02	475541.6	3825930.5	902.2	3.40	4.51	3.16	NO
L0004359	0	0.49020E-02	475535.7	3825922.8	902.1	3.40	4.51	3.16	NO
L0004360	0	0.49020E-02	475529.8	3825915.1	902.0	3.40	4.51	3.16	NO
L0004361	0	0.49020E-02	475523.9	3825907.4	902.0	3.40	4.51	3.16	NO
L0004362	0	0.49020E-02	475517.9	3825899.7	902.0	3.40	4.51	3.16	NO
L0004363	0	0.49020E-02	475512.0	3825892.0	901.9	3.40	4.51	3.16	NO
L0004364	0	0.49020E-02	475506.1	3825884.3	901.7	3.40	4.51	3.16	NO
L0004365	0	0.49020E-02	475500.2	3825876.6	901.6	3.40	4.51	3.16	NO
L0004366	0	0.49020E-02	475494.3	3825868.9	901.5	3.40	4.51	3.16	NO
L0004367	0	0.49020E-02	475488.4	3825861.3	901.5	3.40	4.51	3.16	NO
L0004368	0	0.49020E-02	475482.5	3825853.6	901.5	3.40	4.51	3.16	NO
L0004369	0	0.49020E-02	475476.6	3825845.9	901.4	3.40	4.51	3.16	NO
L0004370	0	0.49020E-02	475470.7	3825838.2	901.4	3.40	4.51	3.16	NO
L0004371	0	0.49020E-02	475464.8	3825830.5	901.3	3.40	4.51	3.16	NO
L0004282	0	0.49020E-02	475890.5	3826024.7	908.1	3.40	4.51	3.16	NO

L0004283		0	0.49020E-02	475884.7	3826017.0	907.6	3.40	
4.51	3.16	NO						
L0004284		0	0.49020E-02	475878.8	3826009.2	906.6	3.40	
4.51	3.16	NO						
L0004285		0	0.49020E-02	475873.0	3826001.5	905.9	3.40	
4.51	3.16	NO						
L0004286		0	0.49020E-02	475867.1	3825993.7	905.5	3.40	
4.51	3.16	NO						
L0004287		0	0.49020E-02	475861.3	3825986.0	905.8	3.40	
4.51	3.16	NO						
L0004288		0	0.49020E-02	475855.4	3825978.3	906.7	3.40	
4.51	3.16	NO						
L0004289		0	0.49020E-02	475849.6	3825970.5	907.6	3.40	
4.51	3.16	NO						
L0004290		0	0.49020E-02	475843.7	3825962.8	908.1	3.40	
4.51	3.16	NO						
L0004291		0	0.49020E-02	475837.9	3825955.1	909.3	3.40	
4.51	3.16	NO						
L0004292		0	0.49020E-02	475832.0	3825947.3	910.6	3.40	
4.51	3.16	NO						
L0004293		0	0.49020E-02	475826.2	3825939.6	911.6	3.40	
4.51	3.16	NO						
L0004294		0	0.49020E-02	475820.3	3825931.8	912.5	3.40	
4.51	3.16	NO						
L0004295		0	0.49020E-02	475814.5	3825924.1	912.4	3.40	
4.51	3.16	NO						
L0004296		0	0.49020E-02	475808.6	3825916.4	912.1	3.40	
4.51	3.16	NO						
L0004297		0	0.49020E-02	475802.8	3825908.6	911.7	3.40	
4.51	3.16	NO						
L0004298		0	0.49020E-02	475796.9	3825900.9	911.3	3.40	
4.51	3.16	NO						
L0004299		0	0.49020E-02	475791.1	3825893.2	910.9	3.40	
4.51	3.16	NO						
L0004300		0	0.49020E-02	475785.2	3825885.4	910.6	3.40	
4.51	3.16	NO						
L0004301		0	0.49020E-02	475779.4	3825877.7	910.6	3.40	
4.51	3.16	NO						
L0004302		0	0.49020E-02	475773.5	3825869.9	910.7	3.40	
4.51	3.16	NO						
L0004303		0	0.49020E-02	475767.7	3825862.2	910.8	3.40	
4.51	3.16	NO						
L0004304		0	0.49020E-02	475761.9	3825854.5	910.8	3.40	
4.51	3.16	NO						
L0004305		0	0.49020E-02	475756.0	3825846.7	910.7	3.40	
4.51	3.16	NO						
L0004306		0	0.49020E-02	475750.2	3825839.0	910.6	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0004307	0	0.49020E-02	475744.3	3825831.2	910.5	3.40	4.51	3.16	NO
L0004308	0	0.49020E-02	475738.5	3825823.5	910.4	3.40	4.51	3.16	NO
L0004309	0	0.49020E-02	475732.6	3825815.8	910.2	3.40	4.51	3.16	NO
L0004310	0	0.49020E-02	475726.8	3825808.0	910.3	3.40	4.51	3.16	NO
L0004311	0	0.49020E-02	475720.9	3825800.3	910.7	3.40	4.51	3.16	NO
L0004312	0	0.49020E-02	475715.1	3825792.6	911.0	3.40	4.51	3.16	NO
L0004313	0	0.49020E-02	475709.2	3825784.8	911.4	3.40	4.51	3.16	NO
L0004314	0	0.49020E-02	475703.4	3825777.1	911.6	3.40	4.51	3.16	NO
L0004315	0	0.49020E-02	475697.5	3825769.3	911.6	3.40	4.51	3.16	NO
L0004316	0	0.49020E-02	475691.7	3825761.6	911.5	3.40	4.51	3.16	NO
L0004317	0	0.49020E-02	475685.8	3825753.9	911.4	3.40	4.51	3.16	NO
L0004318	0	0.49020E-02	475680.0	3825746.1	911.2	3.40	4.51	3.16	NO
L0004319	0	0.49020E-02	475674.1	3825738.4	911.4	3.40	4.51	3.16	NO
L0004320	0	0.49020E-02	475668.3	3825730.6	911.6	3.40	4.51	3.16	NO
L0004321	0	0.49020E-02	475662.4	3825722.9	911.7	3.40	4.51	3.16	NO
L0004322	0	0.49020E-02	475656.6	3825715.2	911.8	3.40	4.51	3.16	NO

L0004323		0	0.49020E-02	475650.7	3825707.4	911.8	3.40	
4.51	3.16	NO						
L0004324		0	0.49020E-02	475644.9	3825699.7	911.8	3.40	
4.51	3.16	NO						
L0004325		0	0.49020E-02	475639.0	3825692.0	911.7	3.40	
4.51	3.16	NO						
L0004074		0	0.28490E-02	475015.0	3825848.3	886.1	3.40	
4.51	3.16	NO						
L0004075		0	0.28490E-02	475009.4	3825840.4	885.9	3.40	
4.51	3.16	NO						
L0004076		0	0.28490E-02	475003.9	3825832.4	885.6	3.40	
4.51	3.16	NO						
L0004077		0	0.28490E-02	474998.4	3825824.4	885.3	3.40	
4.51	3.16	NO						
L0004078		0	0.28490E-02	474992.9	3825816.4	885.0	3.40	
4.51	3.16	NO						
L0004079		0	0.28490E-02	474987.3	3825808.5	884.6	3.40	
4.51	3.16	NO						
L0004080		0	0.28490E-02	474981.8	3825800.5	884.3	3.40	
4.51	3.16	NO						
L0004081		0	0.28490E-02	474976.3	3825792.5	884.2	3.40	
4.51	3.16	NO						
L0004082		0	0.28490E-02	474970.8	3825784.6	884.0	3.40	
4.51	3.16	NO						
L0004083		0	0.28490E-02	474965.2	3825776.6	883.9	3.40	
4.51	3.16	NO						
L0004084		0	0.28490E-02	474959.7	3825768.6	883.9	3.40	
4.51	3.16	NO						
L0004085		0	0.28490E-02	474954.2	3825760.6	884.0	3.40	
4.51	3.16	NO						
L0004086		0	0.28490E-02	474948.6	3825752.7	884.2	3.40	
4.51	3.16	NO						
L0004087		0	0.28490E-02	474943.1	3825744.7	884.4	3.40	
4.51	3.16	NO						
L0004088		0	0.28490E-02	474937.6	3825736.7	884.3	3.40	
4.51	3.16	NO						
L0004089		0	0.28490E-02	474939.1	3825730.2	884.4	3.40	
4.51	3.16	NO						
L0004090		0	0.28490E-02	474947.3	3825724.9	884.7	3.40	
4.51	3.16	NO						
L0004091		0	0.28490E-02	474955.4	3825719.6	884.9	3.40	
4.51	3.16	NO						
L0004092		0	0.28490E-02	474963.6	3825714.3	885.2	3.40	
4.51	3.16	NO						
L0004093		0	0.28490E-02	474971.7	3825709.1	885.6	3.40	
4.51	3.16	NO						
L0004094		0	0.28490E-02	474979.8	3825703.8	886.2	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004095	0	0.28490E-02	474988.0	3825698.5	886.8	3.40	4.51	3.16	NO
L0004096	0	0.28490E-02	474996.1	3825693.2	887.4	3.40	4.51	3.16	NO
L0004097	0	0.28490E-02	475004.3	3825688.0	887.9	3.40	4.51	3.16	NO
L0004098	0	0.28490E-02	475012.4	3825682.7	888.4	3.40	4.51	3.16	NO
L0004099	0	0.28490E-02	475020.5	3825677.4	888.6	3.40	4.51	3.16	NO
L0004100	0	0.28490E-02	475028.7	3825672.1	888.9	3.40	4.51	3.16	NO
L0004101	0	0.28490E-02	475036.8	3825666.9	889.5	3.40	4.51	3.16	NO
L0004102	0	0.28490E-02	475045.0	3825661.6	890.2	3.40	4.51	3.16	NO
L0004103	0	0.28490E-02	475054.1	3825659.4	890.3	3.40	4.51	3.16	NO
L0004104	0	0.28490E-02	475063.8	3825659.1	890.3	3.40	4.51	3.16	NO
L0004105	0	0.28490E-02	475073.5	3825658.8	890.4	3.40	4.51	3.16	NO
L0004106	0	0.28490E-02	475083.2	3825658.5	890.8	3.40	4.51	3.16	NO
L0004107	0	0.28490E-02	475092.9	3825658.2	891.1	3.40	4.51	3.16	NO
L0004108	0	0.28490E-02	475102.6	3825657.8	891.4	3.40	4.51	3.16	NO
L0004109	0	0.28490E-02	475112.2	3825657.5	891.7	3.40	4.51	3.16	NO
L0004110	0	0.28490E-02	475121.9	3825657.2	892.1	3.40	4.51	3.16	NO

L0004111		0	0.28490E-02	475131.6	3825656.9	892.6	3.40	
4.51	3.16	NO						
L0004112		0	0.28490E-02	475141.3	3825656.6	893.2	3.40	
4.51	3.16	NO						
L0004113		0	0.28490E-02	475151.0	3825656.3	893.6	3.40	
4.51	3.16	NO						
L0004114		0	0.28490E-02	475160.7	3825655.9	893.8	3.40	
4.51	3.16	NO						
L0004115		0	0.28490E-02	475170.4	3825655.6	894.0	3.40	
4.51	3.16	NO						
L0004116		0	0.28490E-02	475180.1	3825655.3	894.4	3.40	
4.51	3.16	NO						
L0004117		0	0.28490E-02	475189.8	3825655.0	894.9	3.40	
4.51	3.16	NO						
L0004118		0	0.28490E-02	475197.7	3825658.7	895.1	3.40	
4.51	3.16	NO						
L0004119		0	0.28490E-02	475203.8	3825666.3	895.2	3.40	
4.51	3.16	NO						
L0004120		0	0.28490E-02	475209.9	3825673.8	895.3	3.40	
4.51	3.16	NO						
L0004121		0	0.28490E-02	475216.0	3825681.3	895.5	3.40	
4.51	3.16	NO						
L0004122		0	0.28490E-02	475222.2	3825688.8	895.6	3.40	
4.51	3.16	NO						
L0004123		0	0.28490E-02	475228.3	3825696.3	895.7	3.40	
4.51	3.16	NO						
L0004124		0	0.28490E-02	475237.2	3825698.8	896.1	3.40	
4.51	3.16	NO						
L0004125		0	0.28490E-02	475246.8	3825700.0	896.5	3.40	
4.51	3.16	NO						
L0004126		0	0.28490E-02	475255.9	3825702.2	896.8	3.40	
4.51	3.16	NO						
L0004127		0	0.28490E-02	475261.9	3825709.8	896.8	3.40	
4.51	3.16	NO						
L0004128		0	0.28490E-02	475267.8	3825717.5	897.0	3.40	
4.51	3.16	NO						
L0004129		0	0.28490E-02	475273.8	3825725.2	897.3	3.40	
4.51	3.16	NO						
L0004130		0	0.28490E-02	475279.7	3825732.8	897.5	3.40	
4.51	3.16	NO						
L0004131		0	0.28490E-02	475285.7	3825740.5	897.7	3.40	
4.51	3.16	NO						
L0004132		0	0.28490E-02	475291.6	3825748.1	897.8	3.40	
4.51	3.16	NO						
L0004133		0	0.28490E-02	475297.6	3825755.8	897.8	3.40	
4.51	3.16	NO						
L0004134		0	0.28490E-02	475303.5	3825763.5	897.8	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004135	0	0.28490E-02	475309.5	3825771.1	897.8	3.40	4.51	3.16	NO
L0004136	0	0.28490E-02	475315.4	3825778.8	897.8	3.40	4.51	3.16	NO
L0004137	0	0.28490E-02	475321.4	3825786.4	897.8	3.40	4.51	3.16	NO
L0004138	0	0.28490E-02	475327.4	3825794.1	897.7	3.40	4.51	3.16	NO
L0004139	0	0.28490E-02	475333.3	3825801.7	897.7	3.40	4.51	3.16	NO
L0004140	0	0.28490E-02	475339.3	3825809.4	897.6	3.40	4.51	3.16	NO
L0004141	0	0.28490E-02	475345.2	3825817.1	897.6	3.40	4.51	3.16	NO
L0004142	0	0.28490E-02	475351.2	3825824.7	897.6	3.40	4.51	3.16	NO
L0004143	0	0.28490E-02	475357.1	3825832.4	897.6	3.40	4.51	3.16	NO
L0004144	0	0.28490E-02	475363.1	3825840.0	897.6	3.40	4.51	3.16	NO
L0004145	0	0.28490E-02	475369.0	3825847.7	897.5	3.40	4.51	3.16	NO
L0004146	0	0.28490E-02	475375.0	3825855.4	897.5	3.40	4.51	3.16	NO
L0004147	0	0.28490E-02	475380.9	3825863.0	897.5	3.40	4.51	3.16	NO
L0004148	0	0.28490E-02	475386.9	3825870.7	897.5	3.40	4.51	3.16	NO
L0004149	0	0.28490E-02	475392.8	3825878.3	897.6	3.40	4.51	3.16	NO
L0004150	0	0.28490E-02	475398.8	3825886.0	897.7	3.40	4.51	3.16	NO

L0004151		0	0.28490E-02	475404.7	3825893.6	897.9	3.40	
4.51	3.16	NO						
L0004152		0	0.28490E-02	475410.7	3825901.3	898.0	3.40	
4.51	3.16	NO						
L0004153		0	0.28490E-02	475416.7	3825909.0	898.2	3.40	
4.51	3.16	NO						
L0004154		0	0.28490E-02	475422.6	3825916.6	898.5	3.40	
4.51	3.16	NO						
L0004155		0	0.28490E-02	475428.6	3825924.3	898.8	3.40	
4.51	3.16	NO						
L0004156		0	0.28490E-02	475434.5	3825931.9	898.9	3.40	
4.51	3.16	NO						
L0004157		0	0.28490E-02	475440.5	3825939.6	898.7	3.40	
4.51	3.16	NO						
L0004158		0	0.28490E-02	475446.4	3825947.3	898.6	3.40	
4.51	3.16	NO						
L0004159		0	0.28490E-02	475452.4	3825954.9	898.8	3.40	
4.51	3.16	NO						
L0004160		0	0.28490E-02	475458.3	3825962.6	898.7	3.40	
4.51	3.16	NO						
L0004161		0	0.28490E-02	475464.3	3825970.2	898.3	3.40	
4.51	3.16	NO						
L0004162		0	0.28490E-02	475470.2	3825977.9	898.0	3.40	
4.51	3.16	NO						
L0004163		0	0.28490E-02	475476.2	3825985.5	897.9	3.40	
4.51	3.16	NO						
L0004164		0	0.28490E-02	475482.1	3825993.2	898.1	3.40	
4.51	3.16	NO						
L0004165		0	0.28490E-02	475488.1	3826000.9	898.5	3.40	
4.51	3.16	NO						
L0004166		0	0.28490E-02	475494.0	3826008.5	898.9	3.40	
4.51	3.16	NO						
L0004167		0	0.28490E-02	475500.0	3826016.2	899.4	3.40	
4.51	3.16	NO						
L0004168		0	0.28490E-02	475506.0	3826023.8	899.8	3.40	
4.51	3.16	NO						
L0004169		0	0.28490E-02	475511.9	3826031.5	899.5	3.40	
4.51	3.16	NO						
L0004170		0	0.28490E-02	475517.9	3826039.2	899.1	3.40	
4.51	3.16	NO						
L0004171		0	0.28490E-02	475523.8	3826046.8	898.7	3.40	
4.51	3.16	NO						
L0004172		0	0.28490E-02	475529.8	3826054.5	898.3	3.40	
4.51	3.16	NO						
L0004173		0	0.28490E-02	475535.7	3826062.1	898.4	3.40	
4.51	3.16	NO						
L0004174		0	0.28490E-02	475541.7	3826069.8	897.9	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004175	0	0.28490E-02	475547.6	3826077.4	896.9	3.40	4.51	3.16	NO
L0004176	0	0.28490E-02	475553.6	3826085.1	895.3	3.40	4.51	3.16	NO
L0004177	0	0.28490E-02	475559.5	3826092.8	895.3	3.40	4.51	3.16	NO
L0004178	0	0.28490E-02	475565.5	3826100.4	894.9	3.40	4.51	3.16	NO
L0004179	0	0.28490E-02	475571.4	3826108.1	894.0	3.40	4.51	3.16	NO
L0004180	0	0.28490E-02	475577.4	3826115.7	892.7	3.40	4.51	3.16	NO
L0004181	0	0.28490E-02	475583.3	3826123.4	893.2	3.40	4.51	3.16	NO
L0004182	0	0.28490E-02	475589.3	3826131.0	894.2	3.40	4.51	3.16	NO
L0004183	0	0.28490E-02	475595.3	3826138.7	895.3	3.40	4.51	3.16	NO
L0004184	0	0.28490E-02	475601.2	3826146.4	896.4	3.40	4.51	3.16	NO
L0004185	0	0.28490E-02	475605.7	3826154.6	896.9	3.40	4.51	3.16	NO
L0004186	0	0.28490E-02	475607.0	3826164.2	897.2	3.40	4.51	3.16	NO
L0004187	0	0.28490E-02	475608.2	3826173.9	897.4	3.40	4.51	3.16	NO
L0004188	0	0.28490E-02	475609.5	3826183.5	896.8	3.40	4.51	3.16	NO
L0004189	0	0.28490E-02	475610.7	3826193.1	896.0	3.40	4.51	3.16	NO
L0004190	0	0.28490E-02	475611.6	3826202.7	895.1	3.40	4.51	3.16	NO

L0004191		0	0.28490E-02	475610.8	3826212.4	894.8	3.40	
4.51	3.16	NO						
L0004192		0	0.28490E-02	475610.0	3826222.1	895.4	3.40	
4.51	3.16	NO						
L0004193		0	0.28490E-02	475609.2	3826231.7	895.9	3.40	
4.51	3.16	NO						
L0004194		0	0.28490E-02	475606.8	3826240.4	896.0	3.40	
4.51	3.16	NO						
L0004195		0	0.28490E-02	475598.6	3826245.7	895.0	3.40	
4.51	3.16	NO						
L0004196		0	0.28490E-02	475590.5	3826251.0	894.0	3.40	
4.51	3.16	NO						
L0004197		0	0.28490E-02	475582.3	3826256.2	893.3	3.40	
4.51	3.16	NO						
L0004198		0	0.28490E-02	475574.2	3826261.5	892.9	3.40	
4.51	3.16	NO						
L0004199		0	0.28490E-02	475566.0	3826266.8	892.2	3.40	
4.51	3.16	NO						
L0004200		0	0.28490E-02	475557.9	3826272.1	891.6	3.40	
4.51	3.16	NO						
L0004201		0	0.28490E-02	475549.7	3826277.3	891.6	3.40	
4.51	3.16	NO						
L0004202		0	0.28490E-02	475541.6	3826282.6	891.6	3.40	
4.51	3.16	NO						
L0004203		0	0.28490E-02	475533.5	3826287.9	891.0	3.40	
4.51	3.16	NO						
L0004204		0	0.28490E-02	475525.3	3826293.1	890.5	3.40	
4.51	3.16	NO						
L0004205		0	0.28490E-02	475517.2	3826298.4	890.3	3.40	
4.51	3.16	NO						
L0004206		0	0.28490E-02	475509.0	3826303.7	890.2	3.40	
4.51	3.16	NO						
L0004207		0	0.28490E-02	475500.9	3826308.9	889.7	3.40	
4.51	3.16	NO						
L0004208		0	0.28490E-02	475493.0	3826314.5	889.0	3.40	
4.51	3.16	NO						
L0004209		0	0.28490E-02	475485.1	3826320.2	888.4	3.40	
4.51	3.16	NO						
L0004210		0	0.28490E-02	475477.2	3826325.8	888.0	3.40	
4.51	3.16	NO						
L0004211		0	0.28490E-02	475469.3	3826331.5	887.8	3.40	
4.51	3.16	NO						
L0004212		0	0.28490E-02	475461.4	3826337.1	887.6	3.40	
4.51	3.16	NO						
L0004213		0	0.28490E-02	475453.5	3826342.7	887.2	3.40	
4.51	3.16	NO						
L0004214		0	0.28490E-02	475445.6	3826348.4	886.6	3.40	
4.51	3.16	NO						

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0004215	0	0.28490E-02	475437.0	3826345.5	886.8	3.40	4.51	3.16	NO
L0004216	0	0.28490E-02	475428.3	3826341.2	887.1	3.40	4.51	3.16	NO
L0004217	0	0.28490E-02	475419.6	3826337.0	887.4	3.40	4.51	3.16	NO
L0004218	0	0.28490E-02	475410.9	3826332.7	887.4	3.40	4.51	3.16	NO
L0004219	0	0.28490E-02	475402.1	3826328.5	887.4	3.40	4.51	3.16	NO
L0004220	0	0.28490E-02	475393.4	3826324.2	887.6	3.40	4.51	3.16	NO
L0004221	0	0.28490E-02	475384.7	3826320.0	887.6	3.40	4.51	3.16	NO
L0004222	0	0.28490E-02	475376.0	3826315.7	887.5	3.40	4.51	3.16	NO
L0004223	0	0.28490E-02	475368.0	3826310.2	886.3	3.40	4.51	3.16	NO
L0004224	0	0.28490E-02	475360.1	3826304.6	884.9	3.40	4.51	3.16	NO
L0004225	0	0.28490E-02	475352.1	3826299.1	883.3	3.40	4.51	3.16	NO
L0004226	0	0.28490E-02	475344.1	3826293.6	882.9	3.40	4.51	3.16	NO
L0004227	0	0.28490E-02	475336.2	3826288.0	882.8	3.40	4.51	3.16	NO
L0004228	0	0.28490E-02	475328.2	3826282.5	882.8	3.40	4.51	3.16	NO
L0004229	0	0.28490E-02	475320.2	3826277.0	882.9	3.40	4.51	3.16	NO
L0004230	0	0.28490E-02	475313.8	3826269.8	883.5	3.40	4.51	3.16	NO

L0004231		0	0.28490E-02	475307.7	3826262.2	884.1	3.40	
4.51	3.16	NO						
L0004232		0	0.28490E-02	475301.6	3826254.7	885.0	3.40	
4.51	3.16	NO						
L0004233		0	0.28490E-02	475295.6	3826247.1	885.6	3.40	
4.51	3.16	NO						
L0004234		0	0.28490E-02	475289.5	3826239.6	886.4	3.40	
4.51	3.16	NO						
L0004235		0	0.28490E-02	475283.4	3826232.0	886.9	3.40	
4.51	3.16	NO						
L0004236		0	0.28490E-02	475277.3	3826224.4	887.6	3.40	
4.51	3.16	NO						
L0004237		0	0.28490E-02	475271.2	3826216.9	887.9	3.40	
4.51	3.16	NO						
L0004238		0	0.28490E-02	475265.2	3826209.3	887.8	3.40	
4.51	3.16	NO						
L0004239		0	0.28490E-02	475259.1	3826201.8	887.0	3.40	
4.51	3.16	NO						
L0004240		0	0.28490E-02	475253.0	3826194.2	886.5	3.40	
4.51	3.16	NO						
L0004241		0	0.28490E-02	475246.9	3826186.6	886.0	3.40	
4.51	3.16	NO						
L0004242		0	0.28490E-02	475240.9	3826179.1	885.3	3.40	
4.51	3.16	NO						
L0004243		0	0.28490E-02	475234.8	3826171.5	884.6	3.40	
4.51	3.16	NO						
L0004244		0	0.28490E-02	475228.7	3826164.0	884.1	3.40	
4.51	3.16	NO						
L0004245		0	0.28490E-02	475222.6	3826156.4	884.0	3.40	
4.51	3.16	NO						
L0004246		0	0.28490E-02	475216.5	3826148.8	884.3	3.40	
4.51	3.16	NO						
L0004247		0	0.28490E-02	475210.5	3826141.3	884.8	3.40	
4.51	3.16	NO						
L0004248		0	0.28490E-02	475204.4	3826133.7	885.2	3.40	
4.51	3.16	NO						
L0004249		0	0.28490E-02	475198.3	3826126.2	885.5	3.40	
4.51	3.16	NO						
L0004250		0	0.28490E-02	475192.2	3826118.6	886.1	3.40	
4.51	3.16	NO						
L0004251		0	0.28490E-02	475186.2	3826111.0	886.9	3.40	
4.51	3.16	NO						
L0004252		0	0.28490E-02	475180.1	3826103.5	887.8	3.40	
4.51	3.16	NO						
L0004253		0	0.28490E-02	475174.0	3826095.9	888.6	3.40	
4.51	3.16	NO						
L0004254		0	0.28490E-02	475167.9	3826088.4	889.1	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004255	0	0.28490E-02	475161.8	3826080.8	889.0	3.40	4.51	3.16	NO
L0004256	0	0.28490E-02	475155.8	3826073.2	888.6	3.40	4.51	3.16	NO
L0004257	0	0.28490E-02	475149.7	3826065.7	888.3	3.40	4.51	3.16	NO
L0004258	0	0.28490E-02	475143.6	3826058.1	887.9	3.40	4.51	3.16	NO
L0004259	0	0.28490E-02	475137.5	3826050.6	887.2	3.40	4.51	3.16	NO
L0004260	0	0.28490E-02	475131.5	3826043.0	886.6	3.40	4.51	3.16	NO
L0004261	0	0.28490E-02	475125.4	3826035.4	886.1	3.40	4.51	3.16	NO
L0004262	0	0.28490E-02	475119.3	3826027.9	885.7	3.40	4.51	3.16	NO
L0004263	0	0.28490E-02	475113.2	3826020.3	885.6	3.40	4.51	3.16	NO
L0004264	0	0.28490E-02	475107.1	3826012.8	885.6	3.40	4.51	3.16	NO
L0004265	0	0.28490E-02	475101.1	3826005.2	885.6	3.40	4.51	3.16	NO
L0004266	0	0.28490E-02	475095.0	3825997.6	885.5	3.40	4.51	3.16	NO
L0004267	0	0.28490E-02	475088.9	3825990.1	885.4	3.40	4.51	3.16	NO
L0004268	0	0.28490E-02	475082.8	3825982.5	885.2	3.40	4.51	3.16	NO
L0004269	0	0.28490E-02	475076.8	3825975.0	885.0	3.40	4.51	3.16	NO
L0004270	0	0.28490E-02	475070.7	3825967.4	884.8	3.40	4.51	3.16	NO

L0004271		0	0.28490E-02	475064.6	3825959.8	884.7	3.40	
4.51	3.16	NO						
L0004272		0	0.28490E-02	475058.5	3825952.3	884.8	3.40	
4.51	3.16	NO						
L0004273		0	0.28490E-02	475052.4	3825944.7	885.0	3.40	
4.51	3.16	NO						
L0004274		0	0.28490E-02	475046.4	3825937.2	885.5	3.40	
4.51	3.16	NO						
L0004275		0	0.28490E-02	475040.3	3825929.6	885.9	3.40	
4.51	3.16	NO						
L0004276		0	0.28490E-02	475034.2	3825922.0	886.1	3.40	
4.51	3.16	NO						
L0004277		0	0.28490E-02	475028.1	3825914.5	886.1	3.40	
4.51	3.16	NO						
L0004278		0	0.28490E-02	475022.0	3825906.9	886.0	3.40	
4.51	3.16	NO						
L0004279		0	0.28490E-02	475016.0	3825899.4	885.7	3.40	
4.51	3.16	NO						
L0004280		0	0.28490E-02	475009.9	3825891.8	885.4	3.40	
4.51	3.16	NO						
L0004281		0	0.28490E-02	475003.8	3825884.3	885.2	3.40	
4.51	3.16	NO						
L0003931		0	0.28490E-02	475718.5	3826205.3	901.0	3.40	
4.51	3.16	NO						
L0003932		0	0.28490E-02	475712.3	3826197.8	900.5	3.40	
4.51	3.16	NO						
L0003933		0	0.28490E-02	475706.2	3826190.3	900.1	3.40	
4.51	3.16	NO						
L0003934		0	0.28490E-02	475700.0	3826182.8	899.8	3.40	
4.51	3.16	NO						
L0003935		0	0.28490E-02	475693.8	3826175.3	899.6	3.40	
4.51	3.16	NO						
L0003936		0	0.28490E-02	475687.7	3826167.8	899.9	3.40	
4.51	3.16	NO						
L0003937		0	0.28490E-02	475681.5	3826160.4	900.1	3.40	
4.51	3.16	NO						
L0003938		0	0.28490E-02	475675.4	3826152.9	900.2	3.40	
4.51	3.16	NO						
L0003939		0	0.28490E-02	475669.2	3826145.4	900.3	3.40	
4.51	3.16	NO						
L0003940		0	0.28490E-02	475663.0	3826137.9	899.1	3.40	
4.51	3.16	NO						
L0003941		0	0.28490E-02	475656.9	3826130.4	898.0	3.40	
4.51	3.16	NO						
L0003942		0	0.28490E-02	475650.7	3826122.9	897.0	3.40	
4.51	3.16	NO						
L0003943		0	0.28490E-02	475644.5	3826115.4	896.0	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003944	0	0.28490E-02	475638.4	3826107.9	896.4	3.40	4.51	3.16	NO
L0003945	0	0.28490E-02	475632.2	3826100.5	896.8	3.40	4.51	3.16	NO
L0003946	0	0.28490E-02	475626.0	3826093.0	896.8	3.40	4.51	3.16	NO
L0003947	0	0.28490E-02	475619.9	3826085.5	896.4	3.40	4.51	3.16	NO
L0003948	0	0.28490E-02	475613.7	3826078.0	896.1	3.40	4.51	3.16	NO
L0003949	0	0.28490E-02	475607.5	3826070.5	896.2	3.40	4.51	3.16	NO
L0003950	0	0.28490E-02	475601.4	3826063.0	897.0	3.40	4.51	3.16	NO
L0003951	0	0.28490E-02	475595.2	3826055.5	898.1	3.40	4.51	3.16	NO
L0003952	0	0.28490E-02	475589.0	3826048.0	899.1	3.40	4.51	3.16	NO
L0003953	0	0.28490E-02	475583.0	3826040.4	900.1	3.40	4.51	3.16	NO
L0003954	0	0.28490E-02	475577.1	3826032.7	900.8	3.40	4.51	3.16	NO
L0003955	0	0.28490E-02	475571.2	3826025.0	901.1	3.40	4.51	3.16	NO
L0003956	0	0.28490E-02	475565.3	3826017.4	901.0	3.40	4.51	3.16	NO
L0003957	0	0.28490E-02	475559.3	3826009.7	901.0	3.40	4.51	3.16	NO
L0003958	0	0.28490E-02	475553.4	3826002.0	901.0	3.40	4.51	3.16	NO
L0003959	0	0.28490E-02	475547.5	3825994.3	901.3	3.40	4.51	3.16	NO

L0003960		0	0.28490E-02	475541.5	3825986.7	901.2	3.40	
4.51	3.16	NO						
L0003961		0	0.28490E-02	475535.6	3825979.0	900.9	3.40	
4.51	3.16	NO						
L0003962		0	0.28490E-02	475529.7	3825971.3	900.7	3.40	
4.51	3.16	NO						
L0003963		0	0.28490E-02	475523.8	3825963.6	900.2	3.40	
4.51	3.16	NO						
L0003964		0	0.28490E-02	475517.8	3825956.0	900.0	3.40	
4.51	3.16	NO						
L0003965		0	0.28490E-02	475511.9	3825948.3	900.2	3.40	
4.51	3.16	NO						
L0003966		0	0.28490E-02	475506.0	3825940.6	900.5	3.40	
4.51	3.16	NO						
L0003967		0	0.28490E-02	475500.0	3825932.9	900.9	3.40	
4.51	3.16	NO						
L0003968		0	0.28490E-02	475494.1	3825925.2	900.8	3.40	
4.51	3.16	NO						
L0003969		0	0.28490E-02	475488.2	3825917.6	900.6	3.40	
4.51	3.16	NO						
L0003970		0	0.28490E-02	475482.2	3825909.9	900.4	3.40	
4.51	3.16	NO						
L0003971		0	0.28490E-02	475476.3	3825902.2	900.3	3.40	
4.51	3.16	NO						
L0003972		0	0.28490E-02	475470.4	3825894.5	900.2	3.40	
4.51	3.16	NO						
L0003973		0	0.28490E-02	475464.5	3825886.9	900.2	3.40	
4.51	3.16	NO						
L0003974		0	0.28490E-02	475458.5	3825879.2	900.1	3.40	
4.51	3.16	NO						
L0003975		0	0.28490E-02	475452.6	3825871.5	900.1	3.40	
4.51	3.16	NO						
L0003976		0	0.28490E-02	475446.7	3825863.8	900.0	3.40	
4.51	3.16	NO						
L0003977		0	0.28490E-02	475440.7	3825856.2	899.9	3.40	
4.51	3.16	NO						
L0003978		0	0.28490E-02	475434.8	3825848.5	899.8	3.40	
4.51	3.16	NO						
L0003979		0	0.28490E-02	475429.0	3825840.7	899.8	3.40	
4.51	3.16	NO						
L0003980		0	0.28490E-02	475423.2	3825832.9	899.8	3.40	
4.51	3.16	NO						
L0003981		0	0.28490E-02	475417.4	3825825.2	899.8	3.40	
4.51	3.16	NO						
L0003982		0	0.28490E-02	475411.6	3825817.4	899.8	3.40	
4.51	3.16	NO						
L0003983		0	0.28490E-02	475405.7	3825809.7	899.9	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0003984	0	0.28490E-02	475400.1	3825801.8	899.9	3.40	4.51	3.16	NO
L0003985	0	0.28490E-02	475394.5	3825793.9	899.9	3.40	4.51	3.16	NO
L0003986	0	0.28490E-02	475388.9	3825785.9	900.0	3.40	4.51	3.16	NO
L0003987	0	0.28490E-02	475383.3	3825778.0	900.1	3.40	4.51	3.16	NO
L0003988	0	0.28490E-02	475377.7	3825770.1	900.1	3.40	4.51	3.16	NO
L0003989	0	0.28490E-02	475372.1	3825762.2	900.1	3.40	4.51	3.16	NO
L0003990	0	0.28490E-02	475365.9	3825754.7	900.1	3.40	4.51	3.16	NO
L0003991	0	0.28490E-02	475359.8	3825747.2	900.1	3.40	4.51	3.16	NO
L0003992	0	0.28490E-02	475353.6	3825739.7	900.1	3.40	4.51	3.16	NO
L0003993	0	0.28490E-02	475347.5	3825732.2	900.0	3.40	4.51	3.16	NO
L0003994	0	0.28490E-02	475342.4	3825724.0	900.0	3.40	4.51	3.16	NO
L0003995	0	0.28490E-02	475338.4	3825715.2	900.0	3.40	4.51	3.16	NO
L0003996	0	0.28490E-02	475344.6	3825709.2	900.2	3.40	4.51	3.16	NO
L0003997	0	0.28490E-02	475352.6	3825703.8	900.5	3.40	4.51	3.16	NO
L0003998	0	0.28490E-02	475360.7	3825698.4	900.9	3.40	4.51	3.16	NO
L0003999	0	0.28490E-02	475368.8	3825693.0	901.3	3.40	4.51	3.16	NO

L0004000		0	0.28490E-02	475376.8	3825687.6	901.7	3.40	
4.51	3.16	NO						
L0004001		0	0.28490E-02	475384.9	3825682.2	902.2	3.40	
4.51	3.16	NO						
L0004002		0	0.28490E-02	475392.9	3825676.7	902.7	3.40	
4.51	3.16	NO						
L0004003		0	0.28490E-02	475401.0	3825671.3	903.3	3.40	
4.51	3.16	NO						
L0004004		0	0.28490E-02	475409.0	3825665.9	903.7	3.40	
4.51	3.16	NO						
L0004005		0	0.28490E-02	475417.1	3825660.5	904.1	3.40	
4.51	3.16	NO						
L0004006		0	0.28490E-02	475425.1	3825655.1	904.6	3.40	
4.51	3.16	NO						
L0004007		0	0.28490E-02	475433.2	3825649.7	905.0	3.40	
4.51	3.16	NO						
L0004008		0	0.28490E-02	475442.5	3825648.3	905.4	3.40	
4.51	3.16	NO						
L0004009		0	0.28490E-02	475452.2	3825648.0	905.8	3.40	
4.51	3.16	NO						
L0004010		0	0.28490E-02	475461.9	3825647.7	906.2	3.40	
4.51	3.16	NO						
L0004011		0	0.28490E-02	475471.6	3825647.4	906.6	3.40	
4.51	3.16	NO						
L0004012		0	0.28490E-02	475481.3	3825647.1	907.0	3.40	
4.51	3.16	NO						
L0004013		0	0.28490E-02	475491.0	3825646.8	907.3	3.40	
4.51	3.16	NO						
L0004014		0	0.28490E-02	475500.7	3825646.6	907.7	3.40	
4.51	3.16	NO						
L0004015		0	0.28490E-02	475510.4	3825646.3	908.1	3.40	
4.51	3.16	NO						
L0004016		0	0.28490E-02	475520.0	3825646.0	908.5	3.40	
4.51	3.16	NO						
L0004017		0	0.28490E-02	475529.7	3825645.7	908.9	3.40	
4.51	3.16	NO						
L0004018		0	0.28490E-02	475539.4	3825645.4	909.3	3.40	
4.51	3.16	NO						
L0004019		0	0.28490E-02	475549.1	3825645.2	909.6	3.40	
4.51	3.16	NO						
L0004020		0	0.28490E-02	475558.8	3825644.9	910.0	3.40	
4.51	3.16	NO						
L0004021		0	0.28490E-02	475568.5	3825644.6	910.4	3.40	
4.51	3.16	NO						
L0004022		0	0.28490E-02	475578.2	3825644.3	910.8	3.40	
4.51	3.16	NO						
L0004023		0	0.28490E-02	475587.9	3825644.0	911.2	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0004024	0	0.28490E-02	475597.6	3825643.7	911.6	3.40	4.51	3.16	NO
L0004025	0	0.28490E-02	475605.4	3825649.1	911.8	3.40	4.51	3.16	NO
L0004026	0	0.28490E-02	475612.8	3825655.3	911.8	3.40	4.51	3.16	NO
L0004027	0	0.28490E-02	475620.3	3825661.5	911.9	3.40	4.51	3.16	NO
L0004028	0	0.28490E-02	475627.7	3825667.7	911.9	3.40	4.51	3.16	NO
L0004029	0	0.28490E-02	475635.1	3825673.9	912.7	3.40	4.51	3.16	NO
L0004030	0	0.28490E-02	475642.6	3825680.2	912.8	3.40	4.51	3.16	NO
L0004031	0	0.28490E-02	475650.0	3825686.4	912.4	3.40	4.51	3.16	NO
L0004032	0	0.28490E-02	475657.4	3825692.6	913.1	3.40	4.51	3.16	NO
L0004033	0	0.28490E-02	475664.9	3825698.8	914.3	3.40	4.51	3.16	NO
L0004034	0	0.28490E-02	475672.3	3825705.1	914.5	3.40	4.51	3.16	NO
L0004035	0	0.28490E-02	475679.1	3825711.9	913.4	3.40	4.51	3.16	NO
L0004036	0	0.28490E-02	475684.8	3825719.8	912.5	3.40	4.51	3.16	NO
L0004037	0	0.28490E-02	475690.5	3825727.6	912.4	3.40	4.51	3.16	NO
L0004038	0	0.28490E-02	475696.2	3825735.5	912.5	3.40	4.51	3.16	NO
L0004039	0	0.28490E-02	475701.9	3825743.3	912.6	3.40	4.51	3.16	NO

L0004040		0	0.28490E-02	475707.6	3825751.2	912.6	3.40	
4.51	3.16	NO						
L0004041		0	0.28490E-02	475713.3	3825759.0	912.5	3.40	
4.51	3.16	NO						
L0004042		0	0.28490E-02	475719.0	3825766.9	912.3	3.40	
4.51	3.16	NO						
L0004043		0	0.28490E-02	475724.7	3825774.7	912.1	3.40	
4.51	3.16	NO						
L0004044		0	0.28490E-02	475730.4	3825782.6	911.8	3.40	
4.51	3.16	NO						
L0004045		0	0.28490E-02	475736.1	3825790.4	911.5	3.40	
4.51	3.16	NO						
L0004046		0	0.28490E-02	475741.8	3825798.3	911.2	3.40	
4.51	3.16	NO						
L0004047		0	0.28490E-02	475747.5	3825806.1	911.1	3.40	
4.51	3.16	NO						
L0004048		0	0.28490E-02	475753.2	3825814.0	911.1	3.40	
4.51	3.16	NO						
L0004049		0	0.28490E-02	475758.9	3825821.8	911.2	3.40	
4.51	3.16	NO						
L0004050		0	0.28490E-02	475764.6	3825829.7	911.3	3.40	
4.51	3.16	NO						
L0004051		0	0.28490E-02	475770.2	3825837.5	911.3	3.40	
4.51	3.16	NO						
L0004052		0	0.28490E-02	475775.9	3825845.4	911.3	3.40	
4.51	3.16	NO						
L0004053		0	0.28490E-02	475781.6	3825853.2	911.3	3.40	
4.51	3.16	NO						
L0004054		0	0.28490E-02	475787.3	3825861.1	911.4	3.40	
4.51	3.16	NO						
L0004055		0	0.28490E-02	475793.0	3825868.9	911.5	3.40	
4.51	3.16	NO						
L0004056		0	0.28490E-02	475798.7	3825876.8	911.7	3.40	
4.51	3.16	NO						
L0004057		0	0.28490E-02	475804.4	3825884.6	912.1	3.40	
4.51	3.16	NO						
L0004058		0	0.28490E-02	475810.1	3825892.5	912.4	3.40	
4.51	3.16	NO						
L0004059		0	0.28490E-02	475815.8	3825900.3	912.4	3.40	
4.51	3.16	NO						
L0004060		0	0.28490E-02	475821.5	3825908.2	912.5	3.40	
4.51	3.16	NO						
L0004061		0	0.28490E-02	475827.2	3825916.0	912.9	3.40	
4.51	3.16	NO						
L0004062		0	0.28490E-02	475832.9	3825923.9	913.5	3.40	
4.51	3.16	NO						
L0004063		0	0.28490E-02	475838.6	3825931.8	913.6	3.40	
4.51	3.16	NO						

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN EMISSION RATE SCALAR VARY BY
L0004064	0	0.28490E-02	475844.3	3825939.6	912.1	3.40	4.51	3.16	NO
L0004065	0	0.28490E-02	475850.0	3825947.5	910.7	3.40	4.51	3.16	NO
L0004066	0	0.28490E-02	475855.7	3825955.3	909.1	3.40	4.51	3.16	NO
L0004067	0	0.28490E-02	475861.4	3825963.2	908.2	3.40	4.51	3.16	NO
L0004068	0	0.28490E-02	475867.1	3825971.0	908.4	3.40	4.51	3.16	NO
L0004069	0	0.28490E-02	475872.8	3825978.9	907.9	3.40	4.51	3.16	NO
L0004070	0	0.28490E-02	475878.5	3825986.7	906.9	3.40	4.51	3.16	NO
L0004071	0	0.28490E-02	475884.2	3825994.6	906.2	3.40	4.51	3.16	NO
L0004072	0	0.28490E-02	475889.9	3826002.4	906.9	3.40	4.51	3.16	NO
L0004073	0	0.28490E-02	475895.6	3826010.3	907.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALLIFT	L0001521 , L0001522 , L0001523 , L0001524 , L0001525 , L0001526 , L0001527 , L0001528 , L0001529 , L0001530 , L0001531 , L0001532 , L0001533 , L0001534 , L0001535 , L0001536 , L0001537 , L0001538 , L0001539 , L0001540 , L0001541 , L0001542 , L0001543 , L0001544 , L0001545 , L0001546 , L0001547 , L0001548 , L0001549 , L0001550 , L0001551 , L0001552 , L0001553 , L0001554 , L0001555 , L0001556 , L0001557 , L0001558 , L0001559 , L0001560 , L0001561 , L0001562 , L0001563 , L0001564 , L0001565 , L0001566 , L0001567 , L0001568 , L0001569 , L0001570 , L0001571 , L0001572 , L0001573 , L0001574 , L0001575 , L0001576 , L0001577 , L0001578 , L0001579 , L0001580 , L0001581 , L0001582 , L0001583 , L0001584 , L0001585 , L0001586 , L0001587 , L0001588 , L0001589 , L0001590 , L0001591 , L0001592 , L0001593 , L0001594 , L0001595 , L0001596 , L0001597 , L0001598 , L0001599 , L0001600 , L0001601 , L0001602 , L0001603 , L0001604 , L0001605 , L0001606 , L0001607 , L0001608 , L0001609 , L0001610 , L0001611 , L0001612 , L0001613 , L0001614 , L0001615 , L0001616 ,

L0001617 , L0001618 , L0001619 , L0001620 ,
L0001621 , L0001622 , L0001623 , L0001624 ,

L0001625 , L0001626 , L0001627 , L0001628 ,
L0001629 , L0001630 , L0001631 , L0001632 ,

L0001633 , L0001634 , L0001635 , L0001636 ,
L0001637 , L0001638 , L0001639 , L0001640 ,

L0001641 , L0001642 , L0001643 , L0001644 ,
L0001645 , L0001646 , L0001647 , L0001648 ,

L0001649 , L0001650 , L0001651 , L0001652 ,
L0001653 , L0001654 , L0001655 , L0001656 ,

L0001657 , L0001658 , L0001659 , L0001660 ,
L0001661 , L0001662 , L0001663 , L0001664 ,

L0001665 , L0001666 , L0001667 , L0001668 ,
L0001669 , L0001670 , L0001671 , L0001672 ,

L0001673 , L0001674 , L0001675 , L0001676 ,
L0001677 , L0001678 , L0001679 , L0001680 ,

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 ,
	L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , L0001694 , L0001695 , L0001696 ,
	L0001697 , L0001698 , L0001699 , L0001700 , L0001701 , L0001702 , L0001703 , L0001704 ,
	L0001705 , L0001706 , L0001707 , L0001708 , L0001709 , L0001710 , L0001711 , L0001712 ,
	L0001713 , L0001714 , L0001715 , L0001716 , L0001717 , L0001718 , L0001719 , L0001720 ,
	L0001721 , L0001722 , L0001723 , L0001724 , L0001725 , L0001726 , L0001727 , L0001728 ,
	L0001729 , L0001730 , L0001731 , L0001732 , L0001733 , L0001734 , L0001735 , L0001736 ,
	L0001737 , L0001738 , L0001739 , L0001740 , L0001741 , L0001742 , L0001743 , L0001744 ,
	L0001745 , L0001746 , L0001747 , L0001748 , L0001749 , L0001750 , L0001751 , L0001752 ,
	L0001753 , L0001754 , L0001755 , L0001756 , L0001757 , L0001758 , L0001759 , L0001760 ,
	L0001761 , L0001762 , L0001763 , L0001764 , L0001765 , L0001766 , L0001767 , L0001768 ,
	L0001769 , L0001770 , L0001771 , L0001772 , L0001773 , L0001774 , L0001775 , L0001776 ,

L0001777 , L0001778 , L0001779 , L0001780 ,
L0001781 , L0001782 , L0001783 , L0001784 ,

L0001785 , L0001786 , L0001787 , L0001788 ,
L0001789 , L0001790 , L0001791 , L0001792 ,

L0001793 , L0001794 , L0001795 , L0001796 ,
L0001797 , L0001798 , L0001799 , L0001800 ,

L0001801 , L0001802 , L0001803 , L0001804 ,
L0001805 , L0001806 , L0001807 , L0001808 ,

L0001809 , L0001810 , L0001811 , L0001812 ,
L0001813 , L0001814 , L0001815 , L0001816 ,

L0001817 , L0001818 , L0001819 , L0001820 ,
L0001821 , L0001822 , L0001823 , L0001824 ,

L0001825 , L0001826 , L0001827 , L0001828 ,
L0001829 , L0001830 , L0001831 , L0001832 ,

L0001833 , L0001834 , L0001835 , L0001836 ,
L0001837 , L0001838 , L0001839 , L0001840 ,

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0001841 , L0001842 , L0001843 , L0001844 , L0001845 , L0001846 , L0001847 , L0001848 ,
	L0001849 , L0001850 , L0001851 , L0001852 , L0001853 , L0001854 , L0001855 ,
IDLE	L0004430 , L0004431 , L0004432 , L0004433 , L0004434 , L0004435 , L0004436 , L0004437 ,
	L0004438 , L0004439 , L0004440 , L0004441 , L0004442 , L0004443 , L0004444 , L0004445 ,
	L0004446 , L0004447 , L0004448 , L0004449 , L0004450 , L0004451 , L0004452 , L0004453 ,
	L0004454 , L0004455 , L0004456 , L0004457 , L0004458 , L0004459 , L0004460 , L0004461 ,
	L0004462 , L0004463 , L0004464 , L0004465 , L0004466 , L0004467 , L0004468 , L0004469 ,
	L0004470 , L0004471 , L0004472 , L0004473 , L0004474 , L0004475 , L0004476 , L0004477 ,
	L0004478 , L0004479 , L0004480 , L0004481 , L0004482 , L0004483 , L0004484 , L0004485 ,
	L0004372 , L0004373 , L0004374 , L0004375 , L0004376 , L0004377 , L0004378 , L0004379 ,
	L0004380 , L0004381 , L0004382 , L0004383 , L0004384 , L0004385 , L0004386 , L0004387 ,
	L0004388 , L0004389 , L0004390 , L0004391 , L0004392 , L0004393 , L0004394 , L0004395 ,

L0004396 , L0004397 , L0004398 , L0004399 ,
L0004400 , L0004401 , L0004402 , L0004403 ,

L0004404 , L0004405 , L0004406 , L0004407 ,
L0004408 , L0004409 , L0004410 , L0004411 ,

L0004412 , L0004413 , L0004414 , L0004415 ,
L0004416 , L0004417 , L0004418 , L0004419 ,

L0004420 , L0004421 , L0004422 , L0004423 ,
L0004424 , L0004425 , L0004426 , L0004427 ,

L0004428 , L0004429 , L0004326 , L0004327 ,
L0004328 , L0004329 , L0004330 , L0004331 ,

L0004332 , L0004333 , L0004334 , L0004335 ,
L0004336 , L0004337 , L0004338 , L0004339 ,

L0004340 , L0004341 , L0004342 , L0004343 ,
L0004344 , L0004345 , L0004346 , L0004347 ,

L0004348 , L0004349 , L0004350 , L0004351 ,
L0004352 , L0004353 , L0004354 , L0004355 ,

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0004356 , L0004357 , L0004358 , L0004359 , L0004360 , L0004361 , L0004362 , L0004363 ,
	L0004364 , L0004365 , L0004366 , L0004367 , L0004368 , L0004369 , L0004370 , L0004371 ,
	L0004282 , L0004283 , L0004284 , L0004285 , L0004286 , L0004287 , L0004288 , L0004289 ,
	L0004290 , L0004291 , L0004292 , L0004293 , L0004294 , L0004295 , L0004296 , L0004297 ,
	L0004298 , L0004299 , L0004300 , L0004301 , L0004302 , L0004303 , L0004304 , L0004305 ,
	L0004306 , L0004307 , L0004308 , L0004309 , L0004310 , L0004311 , L0004312 , L0004313 ,
	L0004314 , L0004315 , L0004316 , L0004317 , L0004318 , L0004319 , L0004320 , L0004321 ,
	L0004322 , L0004323 , L0004324 , L0004325 ,
TRUCK1	L0002411 , L0002412 , L0002413 , L0002414 , L0002415 , L0002416 , L0002417 , L0002418 ,
	L0002419 , L0002420 , L0002421 , L0002422 , L0002423 , L0002424 , L0002425 , L0002426 ,
	L0002427 , L0002428 , L0002429 , L0002430 , L0002431 , L0002432 , L0002433 , L0002434 ,
	L0002435 , L0002436 , L0002437 , L0002438 , L0002439 , L0002440 , L0002441 , L0002442 ,
	L0002443 , L0002444 , L0002445 , L0002446 , L0002447 , L0002448 , L0002449 , L0002450 ,

L0002451 , L0002452 , L0002453 , L0002454 ,
L0002455 , L0002456 , L0002457 , L0002458 ,

L0002459 , L0002460 , L0002461 , L0002462 ,
L0002463 , L0002464 , L0002465 , L0002466 ,

L0002467 , L0002468 , L0002469 , L0002470 ,
L0002471 , L0002472 , L0002473 , L0002474 ,

L0002475 , L0002476 , L0002477 , L0002478 ,
L0002479 , L0002480 , L0002481 , L0002482 ,

L0002483 , L0002484 , L0002485 , L0002486 ,
L0002487 , L0002488 , L0002489 , L0002490 ,

L0002491 , L0002492 , L0002493 , L0002494 ,
L0002495 , L0002496 , L0002497 , L0002498 ,

L0002499 , L0002500 , L0002501 , L0002502 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0002563 , L0002564 , L0002565 , L0002566 , L0002567 , L0002568 , L0002569 , L0002570 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0003003 , L0003004 , L0003005 , L0003006 , L0003007 , L0003008 , L0003009 , L0003010 ,
	L0003011 , L0003012 , L0003013 , L0003014 , L0003015 , L0003016 , L0003017 , L0003018 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0003319 , L0003320 , L0003321 , L0003322 , L0003323 , L0003324 , L0003325 , L0003326 ,
	L0003327 , L0003328 , L0003329 , L0003330 , L0003331 , L0003332 , L0003333 , L0003334 ,
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	L0003359 , L0003360 , L0003361 , L0003362 , L0003363 , L0003364 , L0003365 , L0003366 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0003487 , L0003488 , L0003489 , L0003490 , L0003491 , L0003492 , L0003493 , L0003494 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0004106 , L0004107 , L0004108 , L0004109 , L0004110 , L0004111 , L0004112 , L0004113 ,
	L0004114 , L0004115 , L0004116 , L0004117 , L0004118 , L0004119 , L0004120 , L0004121 ,
	L0004122 , L0004123 , L0004124 , L0004125 , L0004126 , L0004127 , L0004128 , L0004129 ,
	L0004130 , L0004131 , L0004132 , L0004133 , L0004134 , L0004135 , L0004136 , L0004137 ,
	L0004138 , L0004139 , L0004140 , L0004141 , L0004142 , L0004143 , L0004144 , L0004145 ,
	L0004146 , L0004147 , L0004148 , L0004149 , L0004150 , L0004151 , L0004152 , L0004153 ,
	L0004154 , L0004155 , L0004156 , L0004157 , L0004158 , L0004159 , L0004160 , L0004161 ,
	L0004162 , L0004163 , L0004164 , L0004165 , L0004166 , L0004167 , L0004168 , L0004169 ,
	L0004170 , L0004171 , L0004172 , L0004173 , L0004174 , L0004175 , L0004176 , L0004177 ,

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L0004222 , L0004223 , L0004224 , L0004225 ,

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L0004230 , L0004231 , L0004232 , L0004233 ,

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0004258 , L0004259 , L0004260 , L0004261 , L0004262 , L0004263 , L0004264 , L0004265 ,
	L0004266 , L0004267 , L0004268 , L0004269 , L0004270 , L0004271 , L0004272 , L0004273 ,
	L0004274 , L0004275 , L0004276 , L0004277 , L0004278 , L0004279 , L0004280 , L0004281 ,
	L0003931 , L0003932 , L0003933 , L0003934 , L0003935 , L0003936 , L0003937 , L0003938 ,
	L0003939 , L0003940 , L0003941 , L0003942 , L0003943 , L0003944 , L0003945 , L0003946 ,
	L0003947 , L0003948 , L0003949 , L0003950 , L0003951 , L0003952 , L0003953 , L0003954 ,
	L0003955 , L0003956 , L0003957 , L0003958 , L0003959 , L0003960 , L0003961 , L0003962 ,
	L0003963 , L0003964 , L0003965 , L0003966 , L0003967 , L0003968 , L0003969 , L0003970 ,
	L0003971 , L0003972 , L0003973 , L0003974 , L0003975 , L0003976 , L0003977 , L0003978 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0002595 , L0002596 , L0002597 , L0002598 , L0002599 , L0002600 , L0002601 , L0002602 ,
	L0002603 , L0002604 , L0002605 , L0002606 , L0002607 , L0002608 , L0002609 , L0002610 ,
	L0002611 , L0002612 , L0002613 , L0002614 , L0002615 , L0002616 , L0002617 , L0002618 ,
	L0002619 , L0002620 , L0002621 , L0002622 , L0002623 , L0002624 , L0002625 , L0002626 ,
	L0002627 , L0002628 , L0002629 , L0002630 , L0002631 , L0002632 , L0002633 , L0002634 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0002723 , L0002724 , L0002725 , L0002726 , L0002727 , L0002728 , L0002729 , L0002730 ,
	L0002731 , L0002732 , L0002733 , L0002734 , L0002735 , L0002736 , L0002737 , L0002738 ,
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	L0002747 , L0002748 , L0002749 , L0002750 , L0002751 , L0002752 , L0002753 , L0002754 ,
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	L0002763 , L0002764 , L0002765 , L0002766 , L0002767 , L0002768 , L0002769 , L0002770 ,
	L0002771 , L0002772 , L0002773 , L0002774 , L0002775 , L0002776 , L0002777 , L0002778 ,
	L0002779 , L0002780 , L0002781 , L0002782 , L0002783 , L0002784 , L0002785 , L0002786 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0002883 , L0002884 , L0002885 , L0002886 , L0002887 , L0002888 , L0002889 , L0002890 ,
	L0002891 , L0002892 , L0002893 , L0002894 , L0002895 , L0002896 , L0002897 , L0002898 ,
	L0002899 , L0002900 , L0002901 , L0002902 , L0002903 , L0002904 , L0002905 , L0002906 ,
	L0002907 , L0002908 , L0002909 , L0002910 , L0002911 , L0002912 , L0002913 , L0002914 ,
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	L0002923 , L0002924 , L0002925 , L0002926 , L0002927 , L0002928 , L0002929 , L0002930 ,
	L0002931 , L0002932 , L0002933 , L0002934 , L0002935 , L0002936 , L0002937 , L0002938 ,
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L0003015 , L0003016 , L0003017 , L0003018 ,

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L0003023 , L0003024 , L0003025 , L0003026 ,

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0003043 , L0003044 , L0003045 , L0003046 , L0003047 , L0003048 , L0003049 , L0003050 ,
	L0003051 , L0003052 , L0003053 , L0003054 , L0003055 , L0003056 , L0003057 , L0003058 ,
	L0003059 , L0003060 , L0003061 , L0003062 , L0003063 , L0003064 , L0003065 , L0003066 ,
	L0003067 , L0003068 , L0003069 , L0003070 , L0003071 , L0003072 , L0003073 , L0003074 ,
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	L0003083 , L0003084 , L0003085 , L0003086 , L0003087 , L0003088 , L0003089 , L0003090 ,
	L0003091 , L0003092 , L0003093 , L0003094 , L0003095 , L0003096 , L0003097 , L0003098 ,
	L0003099 , L0003100 , L0003101 , L0003102 , L0003103 , L0003104 , L0003105 , L0003106 ,
	L0003107 , L0003108 , L0003109 , L0003110 , L0003111 , L0003112 , L0003113 , L0003114 ,
	L0003115 , L0003116 , L0003117 , L0003118 , L0003119 , L0003120 , L0003121 , L0003122 ,

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0003203 , L0003204 , L0003205 , L0003206 , L0003207 , L0003208 , L0003209 , L0003210 ,
	L0003211 , L0003212 , L0003213 , L0003214 , L0003215 , L0003216 , L0003217 , L0003218 ,
	L0003219 , L0003220 , L0003221 , L0003222 , L0003223 , L0003224 , L0003225 , L0003226 ,
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	L0003251 , L0003252 , L0003253 , L0003254 , L0003255 , L0003256 , L0003257 , L0003258 ,
	L0003259 , L0003260 , L0003261 , L0003262 , L0003263 , L0003264 , L0003265 , L0003266 ,
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

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     ( 474512.5, 3823157.6,     913.1,    1019.5,       0.0);         (
474732.6, 3823235.4,     912.8,    1019.5,       0.0);
     ( 474808.1, 3823237.6,     913.8,    1019.5,       0.0);         (
474663.6, 3823155.4,     911.1,    1019.5,       0.0);
     ( 474637.0, 3823275.4,     916.2,    1019.5,       0.0);         (
474517.0, 3823215.4,     915.9,    1019.5,       0.0);
     ( 474383.6, 3823059.8,     908.1,     966.1,       0.0);         (
474296.9, 3822997.5,     901.3,     966.1,       0.0);
     ( 474310.2, 3822935.3,     901.1,     965.8,       0.0);         (
474399.1, 3823004.2,     905.4,     965.8,       0.0);
     ( 474456.9, 3823013.1,     906.4,     965.8,       0.0);         (
474577.0, 3823055.3,     907.1,    1019.5,       0.0);
     ( 474637.0, 3823086.5,     909.0,    1019.5,       0.0);         (
474543.6, 3823113.1,     911.3,    1019.5,       0.0);
     ( 474456.9, 3823108.7,     909.7,    1017.9,       0.0);         (
475959.4, 3823583.1,     923.6,    1019.5,       0.0);
     ( 476140.9, 3823647.7,     918.4,    1019.5,       0.0);         (
476088.6, 3823632.3,     917.6,    1019.5,       0.0);
     ( 474394.0, 3822955.1,     903.4,     965.8,       0.0);         (
476394.5, 3823666.4,     922.5,    1007.5,       0.0);
     ( 477861.5, 3824469.2,     949.4,    1120.7,       0.0);         (
477848.4, 3824432.6,     948.6,    1120.7,       0.0);
     ( 477971.3, 3824675.8,     954.1,    1120.7,       0.0);         (
472613.1, 3822484.4,     824.5,     864.0,       0.0);
     ( 474336.5, 3822811.3,     898.5,     957.0,       0.0);         (
474263.2, 3822769.5,     897.0,     957.0,       0.0);
     ( 474516.9, 3822840.1,     899.0,     899.0,       0.0);         (
474590.1, 3822952.5,     902.7,    1019.5,       0.0);
     ( 473463.0, 3824861.5,     846.8,    1379.8,       0.0);         (
473507.5, 3824840.6,     847.2,    1379.8,       0.0);
     ( 473314.0, 3824934.7,     846.1,    1379.8,       0.0);         (
473287.8, 3824866.7,     843.1,    1379.8,       0.0);
     ( 473619.9, 3824814.4,     849.1,    1379.8,       0.0);
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1   1 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\Apple Valley IENL Con HRA\construction HRA files\KDAG_723815_23161\KDAG_2015_ Met Version: 19191
Profile file: ..\Apple Valley IENL Con HRA\construction HRA files\KDAG_723815_23161\KDAG_2015_
Surface format: FREE
Profile format: FREE
Surface station no.: 23161 Upper air station no.: 3120
Name: BARSTOW-DAGGETT_AIRPORT Name: UNKNOWN
Year: 2015 Year: 2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-24.9	0.256	-9.000	-9.000	-999.	311.	72.1	0.02	4.18	1.00	4.27	251.	10.0	272.5	2.0
15	01	01	1	02	-24.3	0.250	-9.000	-9.000	-999.	300.	68.6	0.02	4.18	1.00	4.17	240.	10.0	272.5	2.0
15	01	01	1	03	-28.4	0.292	-9.000	-9.000	-999.	379.	94.0	0.02	4.18	1.00	4.85	255.	10.0	273.1	2.0
15	01	01	1	04	-26.1	0.266	-9.000	-9.000	-999.	329.	77.8	0.02	4.18	1.00	4.51	274.	10.0	270.4	2.0
15	01	01	1	05	-32.2	0.328	-9.000	-9.000	-999.	450.	118.0	0.02	4.18	1.00	5.51	275.	10.0	270.4	2.0
15	01	01	1	06	-34.9	0.355	-9.000	-9.000	-999.	507.	138.4	0.02	4.18	1.00	5.84	252.	10.0	270.4	2.0
15	01	01	1	07	-34.8	0.355	-9.000	-9.000	-999.	508.	138.9	0.02	4.18	1.00	5.85	251.	10.0	271.4	2.0
15	01	01	1	08	-19.3	0.250	-9.000	-9.000	-999.	306.	68.6	0.02	4.18	0.57	4.15	266.	10.0	270.9	2.0
15	01	01	1	09	31.4	0.236	0.499	0.005	134.	276.	-35.7	0.02	4.18	0.36	3.40	255.	10.0	273.1	2.0
15	01	01	1	10	103.0	0.183	1.101	0.005	441.	188.	-5.0	0.02	4.18	0.29	2.15	300.	10.0	277.0	2.0
15	01	01	1	11	152.0	0.131	1.445	0.005	675.	114.	-1.3	0.04	4.18	0.26	1.08	230.	10.0	278.8	2.0
15	01	01	1	12	175.1	0.131	2.058	0.006	1692.	114.	-1.1	0.02	4.18	0.25	1.31	109.	10.0	280.4	2.0

```
 15 01 01   1 13  171.2  0.143  2.108  0.011 1860.  130.     -1.4  0.01
4.18   0.26    1.55   35.   10.0  281.4    2.0
 15 01 01   1 14  140.5  0.177  1.982  0.011 1882.  179.     -3.4  0.01
4.18   0.27    2.16   55.   10.0  282.0    2.0
 15 01 01   1 15   84.4  0.150  1.677  0.011 1895.  139.     -3.4  0.02
4.18   0.30    1.77   64.   10.0  282.5    2.0
 15 01 01   1 16    8.8  0.148  0.789  0.010 1896.  136.    -31.1  0.02
4.18   0.40    2.15   70.   10.0  282.5    2.0
 15 01 01   1 17   -7.9  0.117 -9.000 -9.000 -999.   96.     17.3  0.02
4.18   0.70    2.08   75.   10.0  279.9    2.0
 15 01 01   1 18   -3.9  0.085 -9.000 -9.000 -999.   60.     13.5  0.05
4.18   1.00    1.24  196.   10.0  277.0    2.0
 15 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.03
4.18   1.00    0.00    0.   10.0  274.9    2.0
 15 01 01   1 21  -10.8  0.137 -9.000 -9.000 -999.  121.     20.5  0.02
4.18   1.00    2.36  260.   10.0  274.2    2.0
 15 01 01   1 22  -19.5  0.199 -9.000 -9.000 -999.  214.     43.7  0.02
4.18   1.00    3.36  262.   10.0  272.0    2.0
 15 01 01   1 23  -18.8  0.192 -9.000 -9.000 -999.  202.     40.5  0.04
4.18   1.00    2.86  230.   10.0  272.0    2.0
 15 01 01   1 24  -28.1  0.287 -9.000 -9.000 -999.  370.     90.9  0.02
4.18   1.00    4.86  270.   10.0  272.0    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 15 01 01 01   10.0 1  251.    4.27   272.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALLIFT ***
INCLUDING SOURCE(S): L0001521 ,
L0001522 , L0001523 , L0001524 , L0001525 ,
L0001526 , L0001527 , L0001528 , L0001529 ,
L0001530 , L0001531 , L0001532 , L0001533 ,
L0001534 , L0001535 , L0001536 , L0001537 ,
L0001538 , L0001539 , L0001540 , L0001541 ,
L0001542 , L0001543 , L0001544 , L0001545 ,
L0001546 , L0001547 , L0001548 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473710.07	3824861.33	0.13752	473670.95	3824865.94	0.13509
473728.48	3824763.53	0.12940	473730.79	3824714.05	0.12546
473726.18	3824684.13	0.12274	473674.40	3824609.33	0.11381
473626.07	3824610.49	0.11115	473676.70	3824657.66	0.11758
473722.73	3824662.27	0.12077	473649.09	3824752.02	0.12320
473565.09	3824612.79	0.10826	473601.91	3824654.21	0.11288
473601.91	3824695.64	0.11585	473545.53	3824967.19	0.13739
473514.46	3824993.66	0.13777	473496.05	3825038.54	0.14099
473458.08	3825062.70	0.14049	473427.01	3825039.69	0.13604
473373.46	3824580.79	0.09739	475731.86	3823740.67	0.04231
474874.51	3823423.36	0.04404	474767.72	3823408.10	0.04455
474548.04	3823365.39	0.04223	476494.64	3823804.75	0.04703

```
         478000.21    3824540.53        0.09692
477772.95    3827982.32        0.17261
         478912.91    3829110.80        0.08119
479067.84    3829326.94        0.07217
         472613.60    3822601.57        0.03572
471900.77    3822140.93        0.03507
         471795.39    3822394.93        0.03440
475655.01    3823712.09        0.04330
         475759.61    3823672.10        0.04191
475571.95    3823641.33        0.04295
         475664.24    3823659.79        0.04409
475624.25    3823582.88        0.04305
         475765.76    3823622.88        0.04325
475685.78    3823604.42        0.04547
         475541.19    3823579.81        0.04548
475513.50    3823444.44        0.04912
         475464.27    3823404.45        0.04972
475408.90    3823349.07        0.05176
         475325.84    3823361.38        0.04475
475258.15    3823370.61        0.04656
         474956.66    3823389.07        0.04446
475092.03    3823382.91        0.04565
         474938.21    3823327.54        0.04631
475027.42    3823302.93        0.04930
         475193.55    3823306.00        0.05107
475252.00    3823318.31        0.05140
         474559.80    3823275.24        0.04178
475894.97    3823576.73        0.03911
         474512.51    3823157.59        0.04398
474732.56    3823235.38        0.04819
         474808.13    3823237.61        0.04813
474663.65    3823155.36        0.04669
         474636.98    3823275.39        0.04484
474516.95    3823215.38        0.04310
         474383.59    3823059.79        0.04442
474296.90    3822997.55        0.04639
         474310.24    3822935.31        0.04491
474399.15    3823004.22        0.04463
         474456.94    3823013.11        0.04417
474576.96    3823055.34        0.04551
         474636.98    3823086.46        0.04595
474543.62    3823113.13        0.04438
         474456.94    3823108.69        0.04480
475959.42    3823583.06        0.04055
         476140.94    3823647.67        0.04858
476088.64    3823632.29        0.04863
         474393.98    3822955.12        0.04414
476394.48    3823666.41        0.04591
         477861.51    3824469.23        0.08798
477848.44    3824432.62        0.08339
         477971.34    3824675.82        0.12553
472613.13    3822484.42        0.03362
         474336.45    3822811.30        0.04231
474263.23    3822769.46        0.04168
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474516.89 3822840.07 0.04355
474590.11 3822952.51 0.04544

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALLIFT ***
INCLUDING SOURCE(S): L0001521 ,
L0001522 , L0001523 , L0001524 , L0001525 ,
L0001526 , L0001527 , L0001528 , L0001529 ,
L0001530 , L0001531 , L0001532 , L0001533 ,
L0001534 , L0001535 , L0001536 , L0001537 ,
L0001538 , L0001539 , L0001540 , L0001541 ,
L0001542 , L0001543 , L0001544 , L0001545 ,
L0001546 , L0001547 , L0001548 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473463.03	3824861.50	0.12201	473507.48	3824840.58	0.12273
473313.97	3824934.72	0.11925	473287.82	3824866.73	0.11265
473619.93	3824814.43	0.12681			

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: IDLE ***
INCLUDING SOURCE(S): L0004430 ,
L0004431 , L0004432 , L0004433 , L0004434 ,
L0004435 , L0004436 , L0004437 , L0004438 ,
L0004439 , L0004440 , L0004441 , L0004442 ,
L0004443 , L0004444 , L0004445 , L0004446 ,
L0004447 , L0004448 , L0004449 , L0004450 ,
L0004451 , L0004452 , L0004453 , L0004454 ,
L0004455 , L0004456 , L0004457 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473710.07	3824861.33	0.14395	473670.95	3824865.94	0.14137
473728.48	3824763.53	0.13511	473730.79	3824714.05	0.13087
473726.18	3824684.13	0.12797	473674.40	3824609.33	0.11847
473626.07	3824610.49	0.11562	473676.70	3824657.66	0.12246
473722.73	3824662.27	0.12588	473649.09	3824752.02	0.12859
473565.09	3824612.79	0.11256	473601.91	3824654.21	0.11749
473601.91	3824695.64	0.12072	473545.53	3824967.19	0.14320
473514.46	3824993.66	0.14345	473496.05	3825038.54	0.14680
473458.08	3825062.70	0.14630	473427.01	3825039.69	0.14153
473373.46	3824580.79	0.10122	475731.86	3823740.67	0.04240
474874.51	3823423.36	0.04492	474767.72	3823408.10	0.04555
474548.04	3823365.39	0.04306	476494.64	3823804.75	0.04695

```
         478000.21    3824540.53        0.10374
477772.95    3827982.32        0.16522
         478912.91    3829110.80        0.07905
479067.84    3829326.94        0.07039
         472613.60    3822601.57        0.03623
471900.77    3822140.93        0.03564
         471795.39    3822394.93        0.03514
475655.01    3823712.09        0.04284
         475759.61    3823672.10        0.04211
475571.95    3823641.33        0.04230
         475664.24    3823659.79        0.04368
475624.25    3823582.88        0.04247
         475765.76    3823622.88        0.04347
475685.78    3823604.42        0.04520
         475541.19    3823579.81        0.04491
475513.50    3823444.44        0.04883
         475464.27    3823404.45        0.04991
475408.90    3823349.07        0.05179
         475325.84    3823361.38        0.04468
475258.15    3823370.61        0.04638
         474956.66    3823389.07        0.04508
475092.03    3823382.91        0.04542
         474938.21    3823327.54        0.04716
475027.42    3823302.93        0.04969
         475193.55    3823306.00        0.05135
475252.00    3823318.31        0.05177
         474559.80    3823275.24        0.04269
475894.97    3823576.73        0.03948
         474512.51    3823157.59        0.04490
474732.56    3823235.38        0.04944
         474808.13    3823237.61        0.04965
474663.65    3823155.36        0.04760
         474636.98    3823275.39        0.04630
474516.95    3823215.38        0.04437
         474383.59    3823059.79        0.04506
474296.90    3822997.55        0.04766
         474310.24    3822935.31        0.04602
474399.15    3823004.22        0.04535
         474456.94    3823013.11        0.04512
474576.96    3823055.34        0.04630
         474636.98    3823086.46        0.04674
474543.62    3823113.13        0.04511
         474456.94    3823108.69        0.04551
475959.42    3823583.06        0.04090
         476140.94    3823647.67        0.04926
476088.64    3823632.29        0.04933
         474393.98    3822955.12        0.04503
476394.48    3823666.41        0.04653
         477861.51    3824469.23        0.09404
477848.44    3824432.62        0.08864
         477971.34    3824675.82        0.13370
472613.13    3822484.42        0.03411
         474336.45    3822811.30        0.04331
474263.23    3822769.46        0.04257
```

474516.89 3822840.07 0.04456
474590.11 3822952.51 0.04650

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: IDLE ***
INCLUDING SOURCE(S): L0004430 ,
L0004431 , L0004432 , L0004433 , L0004434 ,
L0004435 , L0004436 , L0004437 , L0004438 ,
L0004439 , L0004440 , L0004441 , L0004442 ,
L0004443 , L0004444 , L0004445 , L0004446 ,
L0004447 , L0004448 , L0004449 , L0004450 ,
L0004451 , L0004452 , L0004453 , L0004454 ,
L0004455 , L0004456 , L0004457 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473463.03	3824861.50	0.12714	473507.48	3824840.58	0.12808
473313.97	3824934.72	0.12369	473287.82	3824866.73	0.11683
473619.93	3824814.43	0.13256			

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK1 ***
INCLUDING SOURCE(S): L0002411 ,
L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 ,
L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 ,
L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 ,
L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473710.07	3824861.33	0.56010	473670.95	3824865.94	0.51452
473728.48	3824763.53	0.68199	473730.79	3824714.05	0.75510
473726.18	3824684.13	0.79246	473674.40	3824609.33	0.78967
473626.07	3824610.49	0.68646	473676.70	3824657.66	0.72229
473722.73	3824662.27	0.82192	473649.09	3824752.02	0.57623
473565.09	3824612.79	0.59236	473601.91	3824654.21	0.60220
473601.91	3824695.64	0.56589	473545.53	3824967.19	0.38098
473514.46	3824993.66	0.35775	473496.05	3825038.54	0.33694
473458.08	3825062.70	0.31698	473427.01	3825039.69	0.31271
473373.46	3824580.79	0.43261	475731.86	3823740.67	0.15159
474874.51	3823423.36	0.19525	474767.72	3823408.10	0.20675
474548.04	3823365.39	0.22547	476494.64	3823804.75	0.13876

```
         478000.21    3824540.53        0.09471
477772.95    3827982.32        0.05116
         478912.91    3829110.80        0.02591
479067.84    3829326.94        0.02362
         472613.60    3822601.57        1.94470
471900.77    3822140.93        2.28422
         471795.39    3822394.93        0.81374
475655.01    3823712.09        0.15394
         475759.61    3823672.10        0.15236
475571.95    3823641.33        0.15553
         475664.24    3823659.79        0.15628
475624.25    3823582.88        0.15709
         475765.76    3823622.88        0.15562
475685.78    3823604.42        0.16003
         475541.19    3823579.81        0.16084
475513.50    3823444.44        0.17292
         475464.27    3823404.45        0.17631
475408.90    3823349.07        0.18379
         475325.84    3823361.38        0.17048
475258.15    3823370.61        0.17515
         474956.66    3823389.07        0.18967
475092.03    3823382.91        0.18120
         474938.21    3823327.54        0.19683
475027.42    3823302.93        0.19616
         475193.55    3823306.00        0.18916
475252.00    3823318.31        0.18706
         474559.80    3823275.24        0.22769
475894.97    3823576.73        0.14884
         474512.51    3823157.59        0.24422
474732.56    3823235.38        0.22581
         474808.13    3823237.61        0.21726
474663.65    3823155.36        0.23441
         474636.98    3823275.39        0.22721
474516.95    3823215.38        0.23890
         474383.59    3823059.79        0.26707
474296.90    3822997.55        0.29210
         474310.24    3822935.31        0.28668
474399.15    3823004.22        0.26932
         474456.94    3823013.11        0.26111
474576.96    3823055.34        0.24934
         474636.98    3823086.46        0.23994
474543.62    3823113.13        0.24412
         474456.94    3823108.69        0.25703
475959.42    3823583.06        0.14945
         476140.94    3823647.67        0.15469
476088.64    3823632.29        0.15712
         474393.98    3822955.12        0.27251
476394.48    3823666.41        0.14280
         477861.51    3824469.23        0.10099
477848.44    3824432.62        0.10143
         477971.34    3824675.82        0.09808
472613.13    3822484.42        1.37624
         474336.45    3822811.30        0.28315
474263.23    3822769.46        0.29240
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474516.89 3822840.07 0.26995
474590.11 3822952.51 0.25560

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK1 ***
INCLUDING SOURCE(S): L0002411 ,
L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 ,
L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 ,
L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 ,
L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473463.03	3824861.50	0.37750	473507.48	3824840.58	0.40804
473313.97	3824934.72	0.30225	473287.82	3824866.73	0.30926
473619.93	3824814.43	0.50024			

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK2 ***
INCLUDING SOURCE(S): L0003239 ,
L0003240 , L0003241 , L0003242 , L0003243 ,
L0003244 , L0003245 , L0003246 , L0003247 ,
L0003248 , L0003249 , L0003250 , L0003251 ,
L0003252 , L0003253 , L0003254 , L0003255 ,
L0003256 , L0003257 , L0003258 , L0003259 ,
L0003260 , L0003261 , L0003262 , L0003263 ,
L0003264 , L0003265 , L0003266 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473710.07	3824861.33	0.03775	473670.95	3824865.94	0.03744
473728.48	3824763.53	0.03551	473730.79	3824714.05	0.03442
473726.18	3824684.13	0.03374	473674.40	3824609.33	0.03214
473626.07	3824610.49	0.03222	473676.70	3824657.66	0.03322
473722.73	3824662.27	0.03324	473649.09	3824752.02	0.03512
473565.09	3824612.79	0.03240	473601.91	3824654.21	0.03308
473601.91	3824695.64	0.03382	473545.53	3824967.19	0.03780
473514.46	3824993.66	0.03770	473496.05	3825038.54	0.03810
473458.08	3825062.70	0.03792	473427.01	3825039.69	0.03728
473373.46	3824580.79	0.03096	475731.86	3823740.67	0.01644
474874.51	3823423.36	0.01563	474767.72	3823408.10	0.01572
474548.04	3823365.39	0.01548	476494.64	3823804.75	0.01698

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         478000.21    3824540.53        0.01549
477772.95    3827982.32        0.62150
         478912.91    3829110.80        0.50264
479067.84    3829326.94        0.49808
         472613.60    3822601.57        0.01402
471900.77    3822140.93        0.01440
         471795.39    3822394.93        0.01548
475655.01    3823712.09        0.01633
         475759.61    3823672.10        0.01648
475571.95    3823641.33        0.01595
         475664.24    3823659.79        0.01656
475624.25    3823582.88        0.01626
         475765.76    3823622.88        0.01677
475685.78    3823604.42        0.01696
         475541.19    3823579.81        0.01632
475513.50    3823444.44        0.01714
         475464.27    3823404.45        0.01712
475408.90    3823349.07        0.01734
         475325.84    3823361.38        0.01563
475258.15    3823370.61        0.01580
         474956.66    3823389.07        0.01564
475092.03    3823382.91        0.01559
         474938.21    3823327.54        0.01603
475027.42    3823302.93        0.01644
         475193.55    3823306.00        0.01661
475252.00    3823318.31        0.01675
         474559.80    3823275.24        0.01544
475894.97    3823576.73        0.01622
         474512.51    3823157.59        0.01587
474732.56    3823235.38        0.01633
         474808.13    3823237.61        0.01637
474663.65    3823155.36        0.01610
         474636.98    3823275.39        0.01592
474516.95    3823215.38        0.01576
         474383.59    3823059.79        0.01603
474296.90    3822997.55        0.01628
         474310.24    3822935.31        0.01601
474399.15    3823004.22        0.01603
         474456.94    3823013.11        0.01597
474576.96    3823055.34        0.01607
         474636.98    3823086.46        0.01601
474543.62    3823113.13        0.01588
         474456.94    3823108.69        0.01609
475959.42    3823583.06        0.01647
         476140.94    3823647.67        0.01763
476088.64    3823632.29        0.01770
         474393.98    3822955.12        0.01596
476394.48    3823666.41        0.01691
         477861.51    3824469.23        0.01595
477848.44    3824432.62        0.01585
         477971.34    3824675.82        0.01690
472613.13    3822484.42        0.01357
         474336.45    3822811.30        0.01562
474263.23    3822769.46        0.01550
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474516.89 3822840.07 0.01570
474590.11 3822952.51 0.01598

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK2 ***
INCLUDING SOURCE(S): L0003239 ,
L0003240 , L0003241 , L0003242 , L0003243 ,
L0003244 , L0003245 , L0003246 , L0003247 ,
L0003248 , L0003249 , L0003250 , L0003251 ,
L0003252 , L0003253 , L0003254 , L0003255 ,
L0003256 , L0003257 , L0003258 , L0003259 ,
L0003260 , L0003261 , L0003262 , L0003263 ,
L0003264 , L0003265 , L0003266 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473463.03	3824861.50	0.03520	473507.48	3824840.58	0.03544
473313.97	3824934.72	0.03442	473287.82	3824866.73	0.03326
473619.93	3824814.43	0.03607			

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: YTRK ***
INCLUDING SOURCE(S): L0004074 ,
L0004075 , L0004076 , L0004077 , L0004078 ,
L0004079 , L0004080 , L0004081 , L0004082 ,
L0004083 , L0004084 , L0004085 , L0004086 ,
L0004087 , L0004088 , L0004089 , L0004090 ,
L0004091 , L0004092 , L0004093 , L0004094 ,
L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473710.07	3824861.33	0.15744	473670.95	3824865.94	0.15415
473728.48	3824763.53	0.14788	473730.79	3824714.05	0.14313
473726.18	3824684.13	0.13981	473674.40	3824609.33	0.12890
473626.07	3824610.49	0.12560	473676.70	3824657.66	0.13344
473722.73	3824662.27	0.13740	473649.09	3824752.02	0.13997
473565.09	3824612.79	0.12195	473601.91	3824654.21	0.12753
473601.91	3824695.64	0.13101	473545.53	3824967.19	0.15634
473514.46	3824993.66	0.15700	473496.05	3825038.54	0.16149
473458.08	3825062.70	0.16132	473427.01	3825039.69	0.15565
473373.46	3824580.79	0.10837	475731.86	3823740.67	0.04140
474874.51	3823423.36	0.04425	474767.72	3823408.10	0.04582
474548.04	3823365.39	0.04292	476494.64	3823804.75	0.04808

```
         478000.21    3824540.53        0.11672
477772.95    3827982.32        0.16158
         478912.91    3829110.80        0.07674
479067.84    3829326.94        0.06840
         472613.60    3822601.57        0.03699
471900.77    3822140.93        0.03647
         471795.39    3822394.93        0.03634
475655.01    3823712.09        0.04214
         475759.61    3823672.10        0.04115
475571.95    3823641.33        0.04143
         475664.24    3823659.79        0.04302
475624.25    3823582.88        0.04185
         475765.76    3823622.88        0.04264
475685.78    3823604.42        0.04464
         475541.19    3823579.81        0.04382
475513.50    3823444.44        0.04800
         475464.27    3823404.45        0.04844
475408.90    3823349.07        0.05002
         475325.84    3823361.38        0.04269
475258.15    3823370.61        0.04493
         474956.66    3823389.07        0.04463
475092.03    3823382.91        0.04571
         474938.21    3823327.54        0.04678
475027.42    3823302.93        0.05036
         475193.55    3823306.00        0.05077
475252.00    3823318.31        0.05036
         474559.80    3823275.24        0.04317
475894.97    3823576.73        0.03890
         474512.51    3823157.59        0.04556
474732.56    3823235.38        0.05009
         474808.13    3823237.61        0.04941
474663.65    3823155.36        0.04895
         474636.98    3823275.39        0.04762
474516.95    3823215.38        0.04481
         474383.59    3823059.79        0.04521
474296.90    3822997.55        0.04776
         474310.24    3822935.31        0.04613
474399.15    3823004.22        0.04553
         474456.94    3823013.11        0.04560
474576.96    3823055.34        0.04793
         474636.98    3823086.46        0.04828
474543.62    3823113.13        0.04635
         474456.94    3823108.69        0.04599
475959.42    3823583.06        0.04062
         476140.94    3823647.67        0.05000
476088.64    3823632.29        0.05020
         474393.98    3822955.12        0.04568
476394.48    3823666.41        0.04658
         477861.51    3824469.23        0.10704
477848.44    3824432.62        0.10111
         477971.34    3824675.82        0.14888
472613.13    3822484.42        0.03479
         474336.45    3822811.30        0.04390
474263.23    3822769.46        0.04308
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474516.89 3822840.07 0.04622
474590.11 3822952.51 0.04839

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: YTRK ***
INCLUDING SOURCE(S): L0004074 ,
L0004075 , L0004076 , L0004077 , L0004078 ,
L0004079 , L0004080 , L0004081 , L0004082 ,
L0004083 , L0004084 , L0004085 , L0004086 ,
L0004087 , L0004088 , L0004089 , L0004090 ,
L0004091 , L0004092 , L0004093 , L0004094 ,
L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473463.03	3824861.50	0.13729	473507.48	3824840.58	0.13831
473313.97	3824934.72	0.13442	473287.82	3824866.73	0.12604
473619.93	3824814.43	0.14394			

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002411 ,
L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 ,
L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 ,
L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 ,
L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473710.07	3824861.33	1.03677	473670.95	3824865.94	0.98256
473728.48	3824763.53	1.12989	473730.79	3824714.05	1.18898
473726.18	3824684.13	1.21672	473674.40	3824609.33	1.18299
473626.07	3824610.49	1.07106	473676.70	3824657.66	1.12899
473722.73	3824662.27	1.23920	473649.09	3824752.02	1.00311
473565.09	3824612.79	0.96754	473601.91	3824654.21	0.99318
473601.91	3824695.64	0.96728	473545.53	3824967.19	0.85571
473514.46	3824993.66	0.83367	473496.05	3825038.54	0.82432
473458.08	3825062.70	0.80301	473427.01	3825039.69	0.78322
473373.46	3824580.79	0.77055	475731.86	3823740.67	0.29415
474874.51	3823423.36	0.34409	474767.72	3823408.10	0.35840
474548.04	3823365.39	0.36916	476494.64	3823804.75	0.29779

```
         478000.21    3824540.53        0.42759
477772.95    3827982.32        1.17208
         478912.91    3829110.80        0.76552
479067.84    3829326.94        0.73266
         472613.60    3822601.57        2.06766
471900.77    3822140.93        2.40581
         471795.39    3822394.93        0.93510
475655.01    3823712.09        0.29855
         475759.61    3823672.10        0.29402
475571.95    3823641.33        0.29816
         475664.24    3823659.79        0.30363
475624.25    3823582.88        0.30071
         475765.76    3823622.88        0.30174
475685.78    3823604.42        0.31231
         475541.19    3823579.81        0.31136
475513.50    3823444.44        0.33601
         475464.27    3823404.45        0.34150
475408.90    3823349.07        0.35470
         475325.84    3823361.38        0.31822
475258.15    3823370.61        0.32882
         474956.66    3823389.07        0.33949
475092.03    3823382.91        0.33357
         474938.21    3823327.54        0.35312
475027.42    3823302.93        0.36195
         475193.55    3823306.00        0.35895
475252.00    3823318.31        0.35733
         474559.80    3823275.24        0.37077
475894.97    3823576.73        0.28256
         474512.51    3823157.59        0.39453
474732.56    3823235.38        0.38985
         474808.13    3823237.61        0.38083
474663.65    3823155.36        0.39376
         474636.98    3823275.39        0.38189
474516.95    3823215.38        0.38693
         474383.59    3823059.79        0.41779
474296.90    3822997.55        0.45018
         474310.24    3822935.31        0.43974
474399.15    3823004.22        0.42086
         474456.94    3823013.11        0.41197
474576.96    3823055.34        0.40515
         474636.98    3823086.46        0.39693
474543.62    3823113.13        0.39584
         474456.94    3823108.69        0.40942
475959.42    3823583.06        0.28798
         476140.94    3823647.67        0.32016
476088.64    3823632.29        0.32298
         474393.98    3822955.12        0.42332
476394.48    3823666.41        0.29872
         477861.51    3824469.23        0.40600
477848.44    3824432.62        0.39042
         477971.34    3824675.82        0.52309
472613.13    3822484.42        1.49233
         474336.45    3822811.30        0.42829
474263.23    3822769.46        0.43523
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474516.89 3822840.07 0.41998
474590.11 3822952.51 0.41192

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002411 , L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 , L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 , L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 , L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473463.03	3824861.50	0.79913	473507.48	3824840.58	0.83261
473313.97	3824934.72	0.71403	473287.82	3824866.73	0.69805
473619.93	3824814.43	0.93961			

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALLIFT ***
INCLUDING SOURCE(S): L0001521 ,
L0001522 , L0001523 , L0001524 , L0001525 ,
L0001526 , L0001527 , L0001528 , L0001529 ,
L0001530 , L0001531 , L0001532 , L0001533 ,
L0001534 , L0001535 , L0001536 , L0001537 ,
L0001538 , L0001539 , L0001540 , L0001541 ,
L0001542 , L0001543 , L0001544 , L0001545 ,
L0001546 , L0001547 , L0001548 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473710.07	3824861.33	38.40217	(15010817)	473670.95	3824865.94	38.02365	(15010817)
473728.48	3824763.53	36.71983	(16010222)	473730.79	3824714.05	36.02335	(16010222)
473726.18	3824684.13	35.14671	(16010222)	473674.40	3824609.33	32.82758	(15021705)
473626.07	3824610.49	33.34429	(16010222)	473676.70	3824657.66	34.55633	(16010222)
473722.73	3824662.27	34.34636	(16010222)	473649.09	3824752.02	35.70159	(18120322)
473565.09	3824612.79	33.52213	(16010222)	473601.91	3824654.21	34.33010	(16010222)
473601.91	3824695.64	34.53796	(16010222)	473545.53	3824967.19	36.90785	(16022324)
473514.46	3824993.66	36.61757	(16022324)	473496.05	3825038.54	35.61671	(16022324)
473458.08	3825062.70	34.54095	(16011621)	473427.01	3825039.69	33.97137	(16011621)
473373.46	3824580.79	31.57402	(16012020)	475731.86	3823740.67	31.70395	(15120819)
474874.51	3823423.36	33.12077	(20122517)	474767.72	3823408.10	36.76132	(16022618)
474548.04	3823365.39	31.80180	(20040923)	476494.64	3823804.75	27.29155	(15121808)

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        478000.21   3824540.53       10.26355  (16111808)
477772.95   3827982.32       28.05260  (19120601)
        478912.91   3829110.80       23.82884  (16021119)
479067.84   3829326.94       23.91873  (20022721)
        472613.60   3822601.57       17.66331  (16120921)
471900.77   3822140.93       17.93089  (20010319)
        471795.39   3822394.93       17.85933  (15013021)
475655.01   3823712.09       29.55470  (15120819)
        475759.61   3823672.10       33.47045  (15120819)
475571.95   3823641.33       31.07707  (20040918)
        475664.24   3823659.79       32.57005  (15120819)
475624.25   3823582.88       31.30744  (20040918)
        475765.76   3823622.88       35.87232  (15120819)
475685.78   3823604.42       36.55504  (15120819)
        475541.19   3823579.81       35.37107  (20040918)
475513.50   3823444.44       40.63414  (20040918)
        475464.27   3823404.45       41.44898  (20040918)
475408.90   3823349.07       40.75214  (20040918)
        475325.84   3823361.38       33.19698  (20022718)
475258.15   3823370.61       35.53133  (20022718)
        474956.66   3823389.07       32.48914  (18122220)
475092.03   3823382.91       32.20211  (18010221)
        474938.21   3823327.54       34.74421  (18122220)
475027.42   3823302.93       35.65898  (18010221)
        475193.55   3823306.00       37.38818  (20022718)
475252.00   3823318.31       36.64558  (20022718)
        474559.80   3823275.24       33.95285  (20040923)
475894.97   3823576.73       28.83214  (15120819)
        474512.51   3823157.59       35.32626  (16020520)
474732.56   3823235.38       36.85164  (20122517)
        474808.13   3823237.61       36.02692  (18122220)
474663.65   3823155.36       36.43971  (20122517)
        474636.98   3823275.39       37.56784  (16012217)
474516.95   3823215.38       34.70103  (20040923)
        474383.59   3823059.79       31.35311  (20040923)
474296.90   3822997.55       25.89565  (16020520)
        474310.24   3822935.31       25.87380  (16020520)
474399.15   3823004.22       30.12725  (16020520)
        474456.94   3823013.11       32.37723  (16012217)
474576.96   3823055.34       34.73325  (16012217)
        474636.98   3823086.46       34.90126  (16012217)
474543.62   3823113.13       36.22951  (16012217)
        474456.94   3823108.69       33.69468  (16020520)
475959.42   3823583.06       29.60828  (18120603)
        476140.94   3823647.67       34.56757  (15112019)
476088.64   3823632.29       35.34408  (20030523)
        474393.98   3822955.12       29.33828  (16012217)
476394.48   3823666.41       31.70525  (16010405)
        477861.51   3824469.23       11.35913  (19120709)
477848.44   3824432.62       11.47067  (19120709)
        477971.34   3824675.82       12.13273  (15040307)
472613.13   3822484.42       16.34084  (16120921)
        474336.45   3822811.30       25.62825  (16012217)
474263.23   3822769.46       23.94152  (16020520)
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        474516.89   3822840.07       27.73975  (16012217)
474590.11   3822952.51       29.68507  (16012217)
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALLIFT ***
INCLUDING SOURCE(S): L0001521 ,
L0001522 , L0001523 , L0001524 , L0001525 ,
L0001526 , L0001527 , L0001528 , L0001529 ,
L0001530 , L0001531 , L0001532 , L0001533 ,
L0001534 , L0001535 , L0001536 , L0001537 ,
L0001538 , L0001539 , L0001540 , L0001541 ,
L0001542 , L0001543 , L0001544 , L0001545 ,
L0001546 , L0001547 , L0001548 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473463.03	3824861.50	34.05808	(16022324)	473507.48	3824840.58	34.79710	(15010817)
473313.97	3824934.72	32.82650	(16022324)	473287.82	3824866.73	33.00932	(16022324)
473619.93	3824814.43	36.89373	(15010817)				

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: IDLE ***
INCLUDING SOURCE(S): L0004430 ,
L0004431 , L0004432 , L0004433 , L0004434 ,
L0004435 , L0004436 , L0004437 , L0004438 ,
L0004439 , L0004440 , L0004441 , L0004442 ,
L0004443 , L0004444 , L0004445 , L0004446 ,
L0004447 , L0004448 , L0004449 , L0004450 ,
L0004451 , L0004452 , L0004453 , L0004454 ,
L0004455 , L0004456 , L0004457 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473710.07	3824861.33	41.77799	(15010817)	473670.95	3824865.94	40.95893	(15010817)
473728.48	3824763.53	39.19890	(16010222)	473730.79	3824714.05	38.76175	(16010222)
473726.18	3824684.13	37.81766	(16010222)	473674.40	3824609.33	34.95816	(16010222)
473626.07	3824610.49	35.69879	(16010222)	473676.70	3824657.66	37.10101	(16010222)
473722.73	3824662.27	36.88481	(16010222)	473649.09	3824752.02	38.58602	(16012020)
473565.09	3824612.79	35.78366	(16010222)	473601.91	3824654.21	36.63600	(16010222)
473601.91	3824695.64	36.86465	(16012020)	473545.53	3824967.19	40.29156	(16022324)
473514.46	3824993.66	39.22614	(16022324)	473496.05	3825038.54	38.61701	(16011621)
473458.08	3825062.70	38.08346	(16011621)	473427.01	3825039.69	37.59830	(16011621)
473373.46	3824580.79	33.81058	(16012020)	475731.86	3823740.67	29.56302	(15120819)
474874.51	3823423.36	28.05782	(20122517)	474767.72	3823408.10	32.23204	(16022618)
474548.04	3823365.39	31.36556	(16022618)	476494.64	3823804.75	30.43559	(16122521)

478000.21 3824540.53 12.66346 (19111908)
477772.95 3827982.32 27.17582 (19120601)
478912.91 3829110.80 23.41056 (16021119)
479067.84 3829326.94 23.47805 (20022721)
472613.60 3822601.57 17.55148 (16120921)
471900.77 3822140.93 18.07697 (20010319)
471795.39 3822394.93 18.06280 (15013021)
475655.01 3823712.09 27.94782 (20040918)
475759.61 3823672.10 31.59057 (15120819)
475571.95 3823641.33 29.08852 (20040918)
475664.24 3823659.79 29.59165 (15120819)
475624.25 3823582.88 29.84233 (20040918)
475765.76 3823622.88 33.65941 (15120819)
475685.78 3823604.42 33.57992 (15120819)
475541.19 3823579.81 32.19615 (20040918)
475513.50 3823444.44 36.33435 (20040918)
475464.27 3823404.45 36.68593 (20040918)
475408.90 3823349.07 37.84646 (20040918)
475325.84 3823361.38 29.42129 (20022718)
475258.15 3823370.61 31.38482 (20022718)
474956.66 3823389.07 27.57386 (18122220)
475092.03 3823382.91 27.84204 (18010221)
474938.21 3823327.54 29.85566 (18122220)
475027.42 3823302.93 32.35606 (18010221)
475193.55 3823306.00 34.02250 (20022718)
475252.00 3823318.31 33.35012 (20040918)
474559.80 3823275.24 33.40173 (16022618)
475894.97 3823576.73 27.80995 (15120819)
474512.51 3823157.59 33.76252 (16012217)
474732.56 3823235.38 33.08057 (20122517)
474808.13 3823237.61 33.43673 (18122220)
474663.65 3823155.36 33.67595 (20122517)
474636.98 3823275.39 34.39783 (20122517)
474516.95 3823215.38 33.60732 (16022618)
474383.59 3823059.79 31.63212 (16020520)
474296.90 3822997.55 27.87035 (16012217)
474310.24 3822935.31 27.79726 (16012217)
474399.15 3823004.22 31.49423 (16012217)
474456.94 3823013.11 31.94820 (16012217)
474576.96 3823055.34 32.12978 (20122517)
474636.98 3823086.46 32.60535 (20122517)
474543.62 3823113.13 34.41372 (16012217)
474456.94 3823108.69 33.15846 (16012217)
475959.42 3823583.06 28.60763 (18120603)
476140.94 3823647.67 35.03879 (15112019)
476088.64 3823632.29 35.16796 (20030523)
474393.98 3822955.12 30.50314 (16012217)
476394.48 3823666.41 34.42574 (16010405)
477861.51 3824469.23 12.82068 (20092807)
477848.44 3824432.62 12.39126 (20092807)
477971.34 3824675.82 15.89945 (16111808)
472613.13 3822484.42 16.01963 (16120921)
474336.45 3822811.30 26.81272 (16012217)
474263.23 3822769.46 26.02455 (16012217)

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        474516.89   3822840.07       25.88382  (18122220)
474590.11   3822952.51       28.98014  (18122220)
```

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: IDLE ***
INCLUDING SOURCE(S): L0004430 ,
L0004431 , L0004432 , L0004433 , L0004434 ,
L0004435 , L0004436 , L0004437 , L0004438 ,
L0004439 , L0004440 , L0004441 , L0004442 ,
L0004443 , L0004444 , L0004445 , L0004446 ,
L0004447 , L0004448 , L0004449 , L0004450 ,
L0004451 , L0004452 , L0004453 , L0004454 ,
L0004455 , L0004456 , L0004457 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473463.03	3824861.50	37.68682	(16022324)	473507.48	3824840.58	37.03766	(16031818)
473313.97	3824934.72	35.13921	(16011621)	473287.82	3824866.73	35.29714	(16022324)
473619.93	3824814.43	39.90987	(15010817)				

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK1 ***
INCLUDING SOURCE(S): L0002411 ,
L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 ,
L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 ,
L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 ,
L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473710.07	3824861.33	21.58441	(20010422)	473670.95	3824865.94	19.64151	(20010422)
473728.48	3824763.53	26.13610	(15121820)	473730.79	3824714.05	28.39749	(15121820)
473726.18	3824684.13	29.94204	(15012819)	473674.40	3824609.33	29.98308	(15012819)
473626.07	3824610.49	26.26466	(15021705)	473676.70	3824657.66	27.45159	(15021705)
473722.73	3824662.27	31.15481	(15012819)	473649.09	3824752.02	20.98830	(20010422)
473565.09	3824612.79	22.34785	(15021705)	473601.91	3824654.21	22.50311	(15021705)
473601.91	3824695.64	20.39665	(15021705)	473545.53	3824967.19	14.12972	(19120505)
473514.46	3824993.66	13.48092	(19120505)	473496.05	3825038.54	12.83325	(19120505)
473458.08	3825062.70	11.96851	(19120505)	473427.01	3825039.69	11.40997	(19120505)
473373.46	3824580.79	15.14833	(18120322)	475731.86	3823740.67	2.46930	(19010321)
474874.51	3823423.36	2.87049	(20100618)	474767.72	3823408.10	3.59896	(15011109)
474548.04	3823365.39	4.32100	(15011109)	476494.64	3823804.75	2.38927	(16010507)

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        478000.21   3824540.53        1.55383  (18032008)
477772.95   3827982.32        8.74001  (18032121)
        478912.91   3829110.80        5.77959  (15020221)
479067.84   3829326.94        5.36151  (15020221)
        472613.60   3822601.57       52.81264  (19012817)
471900.77   3822140.93       25.62459  (20120308)
        471795.39   3822394.93       47.66521  (16122718)
475655.01   3823712.09        2.48431  (19010321)
        475759.61   3823672.10        2.58475  (19010321)
475571.95   3823641.33        2.47317  (19010321)
        475664.24   3823659.79        2.64666  (19010321)
475624.25   3823582.88        2.66369  (19010321)
        475765.76   3823622.88        2.71211  (19010321)
475685.78   3823604.42        2.81693  (19010321)
        475541.19   3823579.81        2.71514  (19010321)
475513.50   3823444.44        3.06575  (16010507)
        475464.27   3823404.45        3.15765  (16010507)
475408.90   3823349.07        3.39827  (16010507)
        475325.84   3823361.38        2.85171  (19010321)
475258.15   3823370.61        2.93241  (19010321)
        474956.66   3823389.07        2.80601  (19010321)
475092.03   3823382.91        2.81728  (19010321)
        474938.21   3823327.54        3.14480  (19010321)
475027.42   3823302.93        3.32668  (19010321)
        475193.55   3823306.00        3.28591  (19010321)
475252.00   3823318.31        3.27063  (16010507)
        474559.80   3823275.24        4.29718  (15011109)
475894.97   3823576.73        2.47342  (19010321)
        474512.51   3823157.59        4.34037  (15011109)
474732.56   3823235.38        3.72964  (19010321)
        474808.13   3823237.61        3.61977  (19010321)
474663.65   3823155.36        3.99942  (15011109)
        474636.98   3823275.39        4.16316  (15011109)
474516.95   3823215.38        4.33676  (15011109)
        474383.59   3823059.79        4.40730  (15011109)
474296.90   3822997.55        5.64233  (20022718)
        474310.24   3822935.31        5.63487  (20022718)
474399.15   3823004.22        4.93128  (20022718)
        474456.94   3823013.11        4.76718  (20022718)
474576.96   3823055.34        4.57104  (20022718)
        474636.98   3823086.46        4.11016  (20022718)
474543.62   3823113.13        4.30400  (15011109)
        474456.94   3823108.69        4.38277  (15011109)
475959.42   3823583.06        2.53383  (16010507)
        476140.94   3823647.67        2.87813  (16010507)
476088.64   3823632.29        2.93970  (16010507)
        474393.98   3822955.12        5.27020  (20022718)
476394.48   3823666.41        2.53533  (16010507)
        477861.51   3824469.23        1.54505  (18032008)
477848.44   3824432.62        1.53915  (18032008)
        477971.34   3824675.82        1.58003  (18032008)
472613.13   3822484.42       45.25726  (16010219)
        474336.45   3822811.30        5.83674  (20022718)
474263.23   3822769.46        6.01093  (20022718)
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        474516.89   3822840.07        5.46867  (20022718)
474590.11   3822952.51        5.00410  (20022718)
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK1 ***
INCLUDING SOURCE(S): L0002411 ,
L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 ,
L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 ,
L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 ,
L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473463.03	3824861.50	13.59649	(19120505)	473507.48	3824840.58	14.25313	(19120505)
473313.97	3824934.72	10.56679	(19120505)	473287.82	3824866.73	10.73132	(19120505)
473619.93	3824814.43	17.75658	(20010422)				

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK2 ***
INCLUDING SOURCE(S): L0003239 ,
L0003240 , L0003241 , L0003242 , L0003243 ,
L0003244 , L0003245 , L0003246 , L0003247 ,
L0003248 , L0003249 , L0003250 , L0003251 ,
L0003252 , L0003253 , L0003254 , L0003255 ,
L0003256 , L0003257 , L0003258 , L0003259 ,
L0003260 , L0003261 , L0003262 , L0003263 ,
L0003264 , L0003265 , L0003266 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473710.07	3824861.33	17.38919	(16120921)	473670.95	3824865.94	16.78820	(16120921)
473728.48	3824763.53	16.99336	(16092102)	473730.79	3824714.05	16.73769	(16092102)
473726.18	3824684.13	16.43329	(16092102)	473674.40	3824609.33	15.97791	(15020318)
473626.07	3824610.49	15.85181	(16092102)	473676.70	3824657.66	16.26581	(16092102)
473722.73	3824662.27	16.48551	(15020318)	473649.09	3824752.02	16.66927	(16120921)
473565.09	3824612.79	15.71059	(16120921)	473601.91	3824654.21	15.95499	(16120921)
473601.91	3824695.64	16.18977	(16120921)	473545.53	3824967.19	13.90391	(15102517)
473514.46	3824993.66	13.08311	(15102517)	473496.05	3825038.54	12.74612	(18011418)
473458.08	3825062.70	12.18386	(18011418)	473427.01	3825039.69	12.01033	(18011418)
473373.46	3824580.79	14.22987	(16120921)	475731.86	3823740.67	6.28635	(18122220)
474874.51	3823423.36	8.60159	(16022618)	474767.72	3823408.10	9.10635	(16022618)
474548.04	3823365.39	8.66157	(15013017)	476494.64	3823804.75	6.19464	(15011109)

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        478000.21   3824540.53        4.42980  (15120819)
477772.95   3827982.32        9.66240  (16010501)
        478912.91   3829110.80        7.72797  (18120921)
479067.84   3829326.94        7.71759  (18111822)
        472613.60   3822601.57       11.01529  (15012118)
471900.77   3822140.93       10.85265  (19012817)
        471795.39   3822394.93        9.04506  (16092102)
475655.01   3823712.09        6.57913  (18122220)
        475759.61   3823672.10        6.04588  (18010221)
475571.95   3823641.33        6.78012  (18122220)
        475664.24   3823659.79        6.28927  (18122220)
475624.25   3823582.88        6.31162  (18122220)
        475765.76   3823622.88        6.12537  (18010221)
475685.78   3823604.42        6.06722  (18010221)
        475541.19   3823579.81        6.62968  (18122220)
475513.50   3823444.44        6.06025  (18122220)
        475464.27   3823404.45        6.16227  (18122220)
475408.90   3823349.07        6.30299  (18010221)
        475325.84   3823361.38        6.72125  (18122220)
475258.15   3823370.61        6.83297  (16012217)
        474956.66   3823389.07        8.25552  (16012217)
475092.03   3823382.91        7.86038  (16012217)
        474938.21   3823327.54        8.29503  (16012217)
475027.42   3823302.93        7.83756  (20122517)
        475193.55   3823306.00        7.05379  (18122220)
475252.00   3823318.31        6.93394  (18122220)
        474559.80   3823275.24        9.29927  (16022618)
475894.97   3823576.73        5.95244  (15011109)
        474512.51   3823157.59       10.11380  (16022618)
474732.56   3823235.38        9.25213  (16022618)
        474808.13   3823237.61        8.89197  (20122517)
474663.65   3823155.36        9.49632  (16022618)
        474636.98   3823275.39        9.80202  (16022618)
474516.95   3823215.38        9.83155  (16022618)
        474383.59   3823059.79       10.38756  (20040923)
474296.90   3822997.55       10.58992  (20040923)
        474310.24   3822935.31       10.35485  (20040923)
474399.15   3823004.22       10.36519  (16020520)
        474456.94   3823013.11       10.16872  (16020520)
474576.96   3823055.34        9.86239  (16012217)
        474636.98   3823086.46        9.56694  (16012217)
474543.62   3823113.13       10.08534  (16022618)
        474456.94   3823108.69       10.24195  (16022618)
475959.42   3823583.06        6.01278  (15011109)
        476140.94   3823647.67        6.14028  (15011109)
476088.64   3823632.29        6.12269  (15011109)
        474393.98   3822955.12       10.33773  (16020520)
476394.48   3823666.41        6.17022  (15011109)
        477861.51   3824469.23        4.41905  (15120819)
477848.44   3824432.62        4.38608  (15120819)
        477971.34   3824675.82        4.51248  (15120819)
472613.13   3822484.42       11.09733  (16010219)
        474336.45   3822811.30        9.97629  (16020520)
474263.23   3822769.46        9.81914  (16020520)
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474516.89 3822840.07 9.53951 (16012217)
474590.11 3822952.51 9.59840 (20122517)

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: TRUCK2 ***
INCLUDING SOURCE(S): L0003239 ,
L0003240 , L0003241 , L0003242 , L0003243 ,
L0003244 , L0003245 , L0003246 , L0003247 ,
L0003248 , L0003249 , L0003250 , L0003251 ,
L0003252 , L0003253 , L0003254 , L0003255 ,
L0003256 , L0003257 , L0003258 , L0003259 ,
L0003260 , L0003261 , L0003262 , L0003263 ,
L0003264 , L0003265 , L0003266 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473463.03	3824861.50	13.47395	(15102517)	473507.48	3824840.58	14.27121	(15102517)
473313.97	3824934.72	11.40544	(18011418)	473287.82	3824866.73	11.46680	(18011418)
473619.93	3824814.43	16.27941	(16120921)				

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: YTRK ***
INCLUDING SOURCE(S): L0004074 ,
L0004075 , L0004076 , L0004077 , L0004078 ,
L0004079 , L0004080 , L0004081 , L0004082 ,
L0004083 , L0004084 , L0004085 , L0004086 ,
L0004087 , L0004088 , L0004089 , L0004090 ,
L0004091 , L0004092 , L0004093 , L0004094 ,
L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473710.07	3824861.33	40.35560	(15010817)	473670.95	3824865.94	39.08238	(15010817)
473728.48	3824763.53	38.63543	(18120322)	473730.79	3824714.05	38.19691	(16010222)
473726.18	3824684.13	37.45360	(16010222)	473674.40	3824609.33	34.83627	(16010222)
473626.07	3824610.49	35.30133	(16010222)	473676.70	3824657.66	36.64641	(16010222)
473722.73	3824662.27	36.66391	(16010222)	473649.09	3824752.02	38.01702	(15010817)
473565.09	3824612.79	35.05301	(16010222)	473601.91	3824654.21	35.80604	(16010222)
473601.91	3824695.64	36.36767	(16012020)	473545.53	3824967.19	37.24456	(16022324)
473514.46	3824993.66	35.94300	(16011621)	473496.05	3825038.54	35.13920	(16011621)
473458.08	3825062.70	34.43561	(16120920)	473427.01	3825039.69	33.77624	(16120920)
473373.46	3824580.79	33.07003	(15010817)	475731.86	3823740.67	27.55861	(15120819)
474874.51	3823423.36	30.64817	(18122220)	474767.72	3823408.10	33.04276	(20122517)
474548.04	3823365.39	32.58927	(16022618)	476494.64	3823804.75	25.75537	(15121808)

478000.21 3824540.53 11.56524 (15040307)
477772.95 3827982.32 26.05028 (19120601)
478912.91 3829110.80 21.94954 (16021119)
479067.84 3829326.94 22.16101 (20022721)
472613.60 3822601.57 17.34652 (16120921)
471900.77 3822140.93 18.09837 (20010319)
471795.39 3822394.93 18.08287 (18011418)
475655.01 3823712.09 28.48609 (15120819)
475759.61 3823672.10 28.18352 (15120819)
475571.95 3823641.33 25.29024 (15120819)
475664.24 3823659.79 31.09590 (15120819)
475624.25 3823582.88 30.33100 (15120819)
475765.76 3823622.88 30.02630 (15120819)
475685.78 3823604.42 34.01858 (15120819)
475541.19 3823579.81 27.90406 (20040918)
475513.50 3823444.44 34.31293 (16020819)
475464.27 3823404.45 36.50930 (20040918)
475408.90 3823349.07 39.07644 (20040918)
475325.84 3823361.38 30.76787 (20040918)
475258.15 3823370.61 30.52406 (20022718)
474956.66 3823389.07 27.47603 (18010221)
475092.03 3823382.91 29.44242 (20022718)
474938.21 3823327.54 30.43280 (18010221)
475027.42 3823302.93 35.31038 (18010221)
475193.55 3823306.00 34.79314 (20022718)
475252.00 3823318.31 34.28276 (16122922)
474559.80 3823275.24 34.70431 (16022618)
475894.97 3823576.73 24.95971 (18120603)
474512.51 3823157.59 35.62493 (16012217)
474732.56 3823235.38 34.52465 (18122220)
474808.13 3823237.61 35.66042 (18122220)
474663.65 3823155.36 34.11975 (20122517)
474636.98 3823275.39 36.77905 (20122517)
474516.95 3823215.38 35.11019 (16020520)
474383.59 3823059.79 31.90299 (16020520)
474296.90 3822997.55 28.10194 (16012217)
474310.24 3822935.31 27.97964 (16012217)
474399.15 3823004.22 31.31013 (16012217)
474456.94 3823013.11 33.01439 (16012217)
474576.96 3823055.34 32.71765 (20122517)
474636.98 3823086.46 32.81065 (20122517)
474543.62 3823113.13 35.98893 (16012217)
474456.94 3823108.69 33.91694 (16020520)
475959.42 3823583.06 26.90429 (18120603)
476140.94 3823647.67 31.51575 (15112019)
476088.64 3823632.29 31.97406 (15112019)
474393.98 3822955.12 29.73563 (16012217)
476394.48 3823666.41 27.77565 (16010405)
477861.51 3824469.23 10.73908 (16111808)
477848.44 3824432.62 10.17416 (16111808)
477971.34 3824675.82 11.68436 (15040307)
472613.13 3822484.42 15.72170 (16092102)
474336.45 3822811.30 26.85554 (16012217)
474263.23 3822769.46 26.19670 (16012217)

474516.89 3822840.07 25.72913 (18122220)
474590.11 3822952.51 27.63582 (18122220)

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: YTRK ***
INCLUDING SOURCE(S): L0004074 ,
L0004075 , L0004076 , L0004077 , L0004078 ,
L0004079 , L0004080 , L0004081 , L0004082 ,
L0004083 , L0004084 , L0004085 , L0004086 ,
L0004087 , L0004088 , L0004089 , L0004090 ,
L0004091 , L0004092 , L0004093 , L0004094 ,
L0004095 , L0004096 , L0004097 , L0004098 ,
L0004099 , L0004100 , L0004101 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473463.03	3824861.50	36.27874	(16022324)	473507.48	3824840.58	36.38686	(16022324)
473313.97	3824934.72	32.59083	(16011621)	473287.82	3824866.73	32.12178	(16022324)
473619.93	3824814.43	38.34503	(15010817)				

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002411 ,
L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 ,
L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 ,
L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 ,
L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473710.07	3824861.33	137.88172	(15010817)	473670.95	3824865.94	134.20340	(15010817)
473728.48	3824763.53	135.74330	(16010222)	473730.79	3824714.05	136.36265	(16010222)
473726.18	3824684.13	134.25472	(16010222)	473674.40	3824609.33	131.46872	(15021705)
473626.07	3824610.49	125.36543	(16010222)	473676.70	3824657.66	130.50080	(16010222)
473722.73	3824662.27	134.04262	(15021705)	473649.09	3824752.02	131.44075	(18120322)
473565.09	3824612.79	123.44463	(16010222)	473601.91	3824654.21	126.26361	(16010222)
473601.91	3824695.64	126.33143	(18120322)	473545.53	3824967.19	126.36268	(16022324)
473514.46	3824993.66	122.51815	(16022324)	473496.05	3825038.54	117.30391	(16011621)
473458.08	3825062.70	114.81842	(16011621)	473427.01	3825039.69	113.51646	(16011621)
473373.46	3824580.79	113.18781	(18120322)	475731.86	3823740.67	90.74574	(15120819)
474874.51	3823423.36	93.65704	(18122220)	474767.72	3823408.10	109.05195	(16022618)
474548.04	3823365.39	103.39000	(16022618)	476494.64	3823804.75	82.02688	(15121808)

478000.21 3824540.53 33.38277 (16111808)
477772.95 3827982.32 89.95713 (15020221)
478912.91 3829110.80 73.84748 (20022721)
479067.84 3829326.94 75.62486 (20022721)
472613.60 3822601.57 96.46561 (19012817)
471900.77 3822140.93 67.39445 (16120921)
471795.39 3822394.93 68.30000 (18011418)
475655.01 3823712.09 86.36569 (15120819)
475759.61 3823672.10 95.49370 (15120819)
475571.95 3823641.33 85.87132 (20040918)
475664.24 3823659.79 95.39703 (15120819)
475624.25 3823582.88 89.84704 (15120819)
475765.76 3823622.88 102.26500 (15120819)
475685.78 3823604.42 106.90856 (15120819)
475541.19 3823579.81 98.31715 (20040918)
475513.50 3823444.44 114.26420 (20040918)
475464.27 3823404.45 119.10328 (20040918)
475408.90 3823349.07 122.65860 (20040918)
475325.84 3823361.38 92.10068 (20022718)
475258.15 3823370.61 101.67245 (20022718)
474956.66 3823389.07 91.18559 (18122220)
475092.03 3823382.91 92.91093 (18010221)
474938.21 3823327.54 98.92746 (18122220)
475027.42 3823302.93 108.33224 (18010221)
475193.55 3823306.00 111.65922 (20022718)
475252.00 3823318.31 106.36144 (20022718)
474559.80 3823275.24 111.47156 (16022618)
475894.97 3823576.73 79.01989 (15120819)
474512.51 3823157.59 113.34333 (16020520)
474732.56 3823235.38 111.83818 (20122517)
474808.13 3823237.61 111.90314 (18122220)
474663.65 3823155.36 113.62704 (20122517)
474636.98 3823275.39 117.18144 (16012217)
474516.95 3823215.38 111.28353 (16022618)
474383.59 3823059.79 104.70646 (16020520)
474296.90 3822997.55 91.65143 (16020520)
474310.24 3822935.31 91.74467 (16012217)
474399.15 3823004.22 102.84918 (16012217)
474456.94 3823013.11 107.52992 (16012217)
474576.96 3823055.34 109.21883 (16012217)
474636.98 3823086.46 109.87610 (20122517)
474543.62 3823113.13 116.12554 (16012217)
474456.94 3823108.69 110.65827 (16020520)
475959.42 3823583.06 86.61731 (18120603)
476140.94 3823647.67 103.17186 (15112019)
476088.64 3823632.29 104.25918 (20030523)
474393.98 3822955.12 100.08284 (16012217)
476394.48 3823666.41 95.47178 (16010405)
477861.51 3824469.23 30.43523 (19120709)
477848.44 3824432.62 32.90368 (19120709)
477971.34 3824675.82 39.81329 (15040307)
472613.13 3822484.42 89.61857 (19012817)
474336.45 3822811.30 89.79084 (16012217)
474263.23 3822769.46 86.31114 (16012217)

474516.89 3822840.07 88.24902 (16012217)
474590.11 3822952.51 92.22959 (16012217)

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0002411 ,
L0002412 , L0002413 , L0002414 , L0002415 ,
L0002416 , L0002417 , L0002418 , L0002419 ,
L0002420 , L0002421 , L0002422 , L0002423 ,
L0002424 , L0002425 , L0002426 , L0002427 ,
L0002428 , L0002429 , L0002430 , L0002431 ,
L0002432 , L0002433 , L0002434 , L0002435 ,
L0002436 , L0002437 , L0002438 , . . . ,

*** DISCRETE CARTESIAN
RECEPTOR POINTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473463.03	3824861.50	119.90561	(16022324)	473507.48	3824840.58	119.42359	(16031818)
473313.97	3824934.72	107.46773	(16022324)	473287.82	3824866.73	110.41694	(16022324)
473619.93	3824814.43	131.03645	(15010817)				

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD
(43848 HRS) RESULTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALLIFT	1ST HIGHEST VALUE IS	0.17261 AT (477772.95, 3827982.32, 892.64, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.14099 AT (473496.05, 3825038.54, 852.49, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.14049 AT (473458.08, 3825062.70, 852.03, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.13777 AT (473514.46, 3824993.66, 851.87, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.13752 AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.13739 AT (473545.53, 3824967.19, 852.20, 1379.79, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.13604 AT (473427.01, 3825039.69, 851.60, 1379.79, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.13509 AT (473670.95, 3824865.94, 851.44, 1379.79, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.12940 AT (473728.48, 3824763.53, 851.69, 1379.79, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.12681 AT (473619.93, 3824814.43, 849.08, 1379.79, 0.00)	DC	
IDLE	1ST HIGHEST VALUE IS	0.16522 AT (477772.95, 3827982.32, 892.64, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.14680 AT (473496.05, 3825038.54, 852.49, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.14630 AT (473458.08, 3825062.70, 852.03, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.14395 AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.14345 AT (473514.46, 3824993.66, 851.87, 1379.79, 0.00)	DC	

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          6TH HIGHEST VALUE IS      0.14320 AT (  473545.53,
3824967.19,   852.20,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS      0.14153 AT (  473427.01,
3825039.69,   851.60,  1379.79,    0.00)  DC
          8TH HIGHEST VALUE IS      0.14137 AT (  473670.95,
3824865.94,   851.44,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS      0.13511 AT (  473728.48,
3824763.53,   851.69,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS      0.13370 AT (  477971.34,
3824675.82,   954.10,  1120.73,    0.00)  DC

TRUCK1    1ST HIGHEST VALUE IS      2.28422 AT (  471900.77,
3822140.93,   875.73,   875.73,    0.00)  DC
          2ND HIGHEST VALUE IS      1.94470 AT (  472613.60,
3822601.57,   823.82,   823.82,    0.00)  DC
          3RD HIGHEST VALUE IS      1.37624 AT (  472613.13,
3822484.42,   824.54,   864.04,    0.00)  DC
          4TH HIGHEST VALUE IS      0.82192 AT (  473722.73,
3824662.27,   851.18,  1379.79,    0.00)  DC
          5TH HIGHEST VALUE IS      0.81374 AT (  471795.39,
3822394.93,   867.61,   875.97,    0.00)  DC
          6TH HIGHEST VALUE IS      0.79246 AT (  473726.18,
3824684.13,   851.48,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS      0.78967 AT (  473674.40,
3824609.33,   849.45,  1377.67,    0.00)  DC
          8TH HIGHEST VALUE IS      0.75510 AT (  473730.79,
3824714.05,   851.74,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS      0.72229 AT (  473676.70,
3824657.66,   850.15,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS      0.68646 AT (  473626.07,
3824610.49,   848.14,  1379.79,    0.00)  DC

TRUCK2    1ST HIGHEST VALUE IS      0.62150 AT (  477772.95,
3827982.32,   892.64,  1379.79,    0.00)  DC
          2ND HIGHEST VALUE IS      0.50264 AT (  478912.91,
3829110.80,   914.30,  1182.67,    0.00)  DC
          3RD HIGHEST VALUE IS      0.49808 AT (  479067.84,
3829326.94,   917.26,   917.26,    0.00)  DC
          4TH HIGHEST VALUE IS      0.03810 AT (  473496.05,
3825038.54,   852.49,  1379.79,    0.00)  DC
          5TH HIGHEST VALUE IS      0.03792 AT (  473458.08,
3825062.70,   852.03,  1379.79,    0.00)  DC
          6TH HIGHEST VALUE IS      0.03780 AT (  473545.53,
3824967.19,   852.20,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS      0.03775 AT (  473710.07,
3824861.33,   853.10,  1379.79,    0.00)  DC
          8TH HIGHEST VALUE IS      0.03770 AT (  473514.46,
3824993.66,   851.87,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS      0.03744 AT (  473670.95,
3824865.94,   851.44,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS      0.03728 AT (  473427.01,
3825039.69,   851.60,  1379.79,    0.00)  DC
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD
(43848 HRS) RESULTS ***

** CONC OF PM_10 IN
MICROGRAMS/M**3 **

NETWORK GROUP ID		AVERAGE CONC				RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
YTRK	1ST HIGHEST VALUE IS	0.16158	AT	477772.95,	3827982.32,	892.64, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.16149	AT	473496.05,	3825038.54,	852.49, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.16132	AT	473458.08,	3825062.70,	852.03, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.15744	AT	473710.07,	3824861.33,	853.10, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.15700	AT	473514.46,	3824993.66,	851.87, 1379.79, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.15634	AT	473545.53,	3824967.19,	852.20, 1379.79, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.15565	AT	473427.01,	3825039.69,	851.60, 1379.79, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.15415	AT	473670.95,	3824865.94,	851.44, 1379.79, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.14888	AT	477971.34,	3824675.82,	954.10, 1120.73, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.14788	AT	473728.48,	3824763.53,	851.69, 1379.79, 0.00)	DC	
ALL	1ST HIGHEST VALUE IS	2.40581	AT	471900.77,	3822140.93,	875.73, 875.73, 0.00)	DC	
	2ND HIGHEST VALUE IS	2.06766	AT	472613.60,	3822601.57,	823.82, 823.82, 0.00)	DC	
	3RD HIGHEST VALUE IS	1.49233	AT	472613.13,	3822484.42,	824.54, 864.04, 0.00)	DC	
	4TH HIGHEST VALUE IS	1.23920	AT	473722.73,	3824662.27,	851.18, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	1.21672	AT	473726.18,	3824684.13,	851.48, 1379.79, 0.00)	DC	

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          6TH HIGHEST VALUE IS       1.18898 AT (  473730.79,
3824714.05,   851.74,  1379.79,    0.00)  DC
          7TH HIGHEST VALUE IS       1.18299 AT (  473674.40,
3824609.33,   849.45,  1377.67,    0.00)  DC
          8TH HIGHEST VALUE IS       1.17208 AT (  477772.95,
3827982.32,   892.64,  1379.79,    0.00)  DC
          9TH HIGHEST VALUE IS       1.12989 AT (  473728.48,
3824763.53,   851.69,  1379.79,    0.00)  DC
         10TH HIGHEST VALUE IS       1.12899 AT (  473676.70,
3824657.66,   850.15,  1379.79,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALLIFT	1ST HIGH VALUE IS	41.44898	ON 20040918:	AT (475464.27, 3823404.45, 916.37, 1019.52, 0.00)	DC
IDLE	1ST HIGH VALUE IS	41.77799	ON 15010817:	AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC
TRUCK1	1ST HIGH VALUE IS	52.81264	ON 19012817:	AT (472613.60, 3822601.57, 823.82, 823.82, 0.00)	DC
TRUCK2	1ST HIGH VALUE IS	17.38919	ON 16120921:	AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC
YTRK	1ST HIGH VALUE IS	40.35560	ON 15010817:	AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC
ALL	1ST HIGH VALUE IS	137.88172	ON 15010817:	AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 637 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 191 Calm Hours Identified

A Total of 446 Missing Hours Identified (1.02 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 5483 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 5483 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 18010101
MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 1 year gap

****
*** AERMOD Finishes Successfully ***
****

HARP2 - HRACalc (dated 22118) 11/14/2023 10:24:19 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1.15

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1.15
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Warm

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigatedCancerRisk.csv
Cancer risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigatedCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigatedNCChronicRisk.csv
Chronic risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigatedNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigatedNCAcuteRisk.csv
Acute risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigatedNCAcuteRiskSumByRec.csv
HRA ran successfully

Inland Empire North Logistics Center Apple Valley Project - Operational HRA - Cancer Risk Unmitigated

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK	DERMAL_F	MMILK_RI	WATER_RI	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RIS	PIG_RISK	CHICKEN_F	EGG_RISK
1	ALL		473710.1	3824861	4.63E-06	1.15YrCanc	4.63E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	ALL		473671	3824866	4.53E-06	1.15YrCanc	4.53E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	ALL		473728.5	3824764	4.42E-06	1.15YrCanc	4.42E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4	ALL		473730.8	3824714	4.32E-06	1.15YrCanc	4.32E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5	ALL		473726.2	3824684	4.24E-06	1.15YrCanc	4.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	ALL		473674.4	3824609	3.96E-06	1.15YrCanc	3.96E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7	ALL		473626.1	3824610	3.83E-06	1.15YrCanc	3.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8	ALL		473676.7	3824658	4.05E-06	1.15YrCanc	4.05E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9	ALL		473722.7	3824662	4.19E-06	1.15YrCanc	4.19E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	ALL		473649.1	3824752	4.18E-06	1.15YrCanc	4.18E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	ALL		473565.1	3824613	3.70E-06	1.15YrCanc	3.70E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12	ALL		473601.9	3824654	3.85E-06	1.15YrCanc	3.85E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13	ALL		473601.9	3824696	3.94E-06	1.15YrCanc	3.94E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
14	ALL		473545.5	3824967	4.56E-06	1.15YrCanc	4.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15	ALL		473514.5	3824994	4.56E-06	1.15YrCanc	4.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	ALL		473496.1	3825039	4.66E-06	1.15YrCanc	4.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17	ALL		473458.1	3825063	4.63E-06	1.15YrCanc	4.63E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
18	ALL		473427	3825040	4.49E-06	1.15YrCanc	4.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
19	ALL		473373.5	3824581	3.29E-06	1.15YrCanc	3.29E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	ALL		475731.9	3823741	1.41E-06	1.15YrCanc	1.41E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21	ALL		474874.5	3823423	1.49E-06	1.15YrCanc	1.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22	ALL		474767.7	3823408	1.51E-06	1.15YrCanc	1.51E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
23	ALL		474548	3823365	1.44E-06	1.15YrCanc	1.44E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24	ALL		476494.6	3823805	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25	ALL		478000.2	3824541	3.15E-06	1.15YrCanc	3.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	ALL		477773	3827982	5.60E-06	1.15YrCanc	5.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27	ALL		478912.9	3829111	2.65E-06	1.15YrCanc	2.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	ALL		479067.8	3829327	2.36E-06	1.15YrCanc	2.36E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29	ALL		472613.6	3822602	1.90E-06	1.15YrCanc	1.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	ALL		471900.8	3822141	2.01E-06	1.15YrCanc	2.01E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31	ALL		471795.4	3822395	1.42E-06	1.15YrCanc	1.42E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	ALL		475655	3823712	1.45E-06	1.15YrCanc	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	ALL		475759.6	3823672	1.40E-06	1.15YrCanc	1.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
34	ALL		475572	3823641	1.44E-06	1.15YrCanc	1.44E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
35	ALL		475664.2	3823660	1.47E-06	1.15YrCanc	1.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
36	ALL		475624.3	3823583	1.44E-06	1.15YrCanc	1.44E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37	ALL		475765.8	3823623	1.45E-06	1.15YrCanc	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	ALL		475685.8	3823604	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39	ALL		475541.2	3823580	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	ALL		475513.5	3823444	1.64E-06	1.15YrCanc	1.64E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
41	ALL		475464.3	3823404	1.66E-06	1.15YrCanc	1.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42	ALL		475408.9	3823349	1.73E-06	1.15YrCanc	1.73E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	ALL		475325.8	3823361	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44	ALL		475258.2	3823371	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	ALL		474956.7	3823389	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	ALL		475092	3823383	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	ALL		474938.2	3823328	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48	ALL		475027.4	3823303	1.66E-06	1.15YrCanc	1.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49	ALL		475193.6	3823306	1.71E-06	1.15YrCanc	1.71E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	ALL		475252	3823318	1.72E-06	1.15YrCanc	1.72E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51	ALL		474559.8	3823275	1.43E-06	1.15YrCanc	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52	ALL		475895	3823577	1.31E-06	1.15YrCanc	1.31E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	ALL		474512.5	3823158	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
54	ALL		474732.6	3823235	1.63E-06	1.15YrCanc	1.63E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
55	ALL		474808.1	3823238	1.63E-06	1.15YrCanc	1.63E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
56	ALL		474663.7	3823155	1.59E-06	1.15YrCanc	1.59E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57	ALL		474637	3823275	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58	ALL		474517	3823215	1.47E-06	1.15YrCanc	1.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
59	ALL		474383.6	3823060	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	ALL		474296.9	3822998	1.60E-06	1.15YrCanc	1.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
61	ALL		474310.2	3822935	1.55E-06	1.15YrCanc	1.55E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62	ALL		474399.2	3823004	1.54E-06	1.15YrCanc	1.54E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63	ALL		474456.9	3823013	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
64	ALL		474577	3823055	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
65	ALL		474637	3823086	1.57E-06	1.15YrCanc	1.57E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
66	ALL		474543.6	3823113	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
67	ALL		474456.9	3823109	1.54E-06	1.15YrCanc	1.54E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68	ALL		475959.4	3823583	1.36E-06	1.15YrCanc	1.36E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
69	ALL		476140.9	3823648	1.62E-06	1.15YrCanc	1.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70	ALL		476088.6	3823632	1.62E-06	1.15YrCanc	1.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
71	ALL		474394	3822955	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
72	ALL		476394.5	3823666	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
73	ALL		477861.5	3824469	2.86E-06	1.15YrCanc	2.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
74	ALL		477848.4	3824433	2.72E-06	1.15YrCanc	2.72E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
75	ALL		477971.3	3824676	4.07E-06	1.15YrCanc	4.07E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76	ALL		472613.1	3822484	1.61E-06	1.15YrCanc	1.61E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
77	ALL		474336.5	3822811	1.47E-06	1.15YrCanc	1.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
78	ALL		474263.2	3822769	1.45E-06	1.15YrCanc	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79	ALL		474516.9	3822840	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
80	ALL		474590.1	3822953	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
81	ALL		473463	3824862	4.06E-06	1.15YrCanc	4.06E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
82	ALL		473507.5	3824841	4.10E-06	1.15YrCanc	4.10E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	ALL		473314	3824935	3.94E-06	1.15YrCanc	3.94E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
84	ALL		473287.8	3824867	3.73E-06	1.15YrCanc	3.73E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
85	ALL		473619.9	3824814	4.26E-06	1.15YrCanc	4.26E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Inland Empire North Logistics Center Apple Valley Project - Operational HRA - Chronic Risk Unmitigated

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE	RESP	SKIN	EYE	BONE/TEE	ENDO	BLOOD	ODOR	GENERAL	MAXHI
1	ALL		473710.1	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-03
2	ALL		473671	3824866	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.48E-03
3	ALL		473728.5	3824764	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-03
4	ALL		473730.8	3824714	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03
5	ALL		473726.2	3824684	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-03
6	ALL		473674.4	3824609	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-03
7	ALL		473626.1	3824610	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-03
8	ALL		473676.7	3824658	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-03
9	ALL		473722.7	3824662	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E-03
10	ALL		473649.1	3824752	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-03
11	ALL		473565.1	3824613	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-03
12	ALL		473601.9	3824654	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-03
13	ALL		473601.9	3824696	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E-03
14	ALL		473545.5	3824967	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-03
15	ALL		473514.5	3824994	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-03
16	ALL		473496.1	3825039	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-03
17	ALL		473458.1	3825063	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-03
18	ALL		473427	3825040	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-03
19	ALL		473373.5	3824581	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-03
20	ALL		475731.9	3823741	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03
21	ALL		474874.5	3823423	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03
22	ALL		474767.7	3823408	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03
23	ALL		474548	3823365	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03
24	ALL		476494.6	3823805	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03
25	ALL		478000.2	3824541	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-03
26	ALL		477773	3827982	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E-03
27	ALL		478912.9	3829111	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-03
28	ALL		479067.8	3829327	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-03
29	ALL		472613.6	3822602	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-03
30	ALL		471900.8	3822141	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-03
31	ALL		471795.4	3822395	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03
32	ALL		475655	3823712	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03
33	ALL		475759.6	3823672	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03
34	ALL		475572	3823641	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03
35	ALL		475664.2	3823660	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03
36	ALL		475624.3	3823583	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03
37	ALL		475765.8	3823623	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03
38	ALL		475685.8	3823604	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03
39	ALL		475541.2	3823580	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03
40	ALL		475513.5	3823444	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03
41	ALL		475464.3	3823404	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03
42	ALL		475408.9	3823349	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03
43	ALL		475325.8	3823361	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03
44	ALL		475258.2	3823371	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03
45	ALL		474956.7	3823389	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03
46	ALL		475092	3823383	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03
47	ALL		474938.2	3823328	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03
48	ALL		475027.4	3823303	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03
49	ALL		475193.6	3823306	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-03
50	ALL		475252	3823318	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-03
51	ALL		474559.8	3823275	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-03
52	ALL		475895	3823577	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03
53	ALL		474512.5	3823158	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03
54	ALL		474732.6	3823235	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-03
55	ALL		474808.1	3823238	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-03
56	ALL		474663.7	3823155	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-03
57	ALL		474637	3823275	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03
58	ALL		474517	3823215	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03
59	ALL		474383.6	3823060	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03
60	ALL		474296.9	3822998	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-03
61	ALL		474310.2	3822935	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-03
62	ALL		474399.2	3823004	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03
63	ALL		474456.9	3823013	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03
64	ALL		474577	3823055	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03
65	ALL		474637	3823086	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03
66	ALL		474543.6	3823113	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03
67	ALL		474456.9	3823109	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03
68	ALL		475959.4	3823583	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-03
69	ALL		476140.9	3823648	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03
70	ALL		476088.6	3823632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03
71	ALL		474394	3822955	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03
72	ALL		476394.5	3823666	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03
73	ALL		477861.5	3824469	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-03
74	ALL		477848.4	3824433	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-03
75	ALL		477971.3	3824676	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-03
76	ALL		472613.1	3822484	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-03
77	ALL		474336.5	3822811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-03
78	ALL		474263.2	3822769	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03
79	ALL		474516.9	3822840	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03
80	ALL		474590.1	3822953	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03
81	ALL		473463	3824862	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-03
82	ALL		473507.5	3824841	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.05E-03
83	ALL		473314	3824935	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-03
84	ALL		473287.8	3824867	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-03
85	ALL		473619.9	3824814	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-03

HARP2 - HRACalc (dated 22118) 11/14/2023 10:25:46 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1.15

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1.15
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Warm

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigatedCancerRisk.csv
Cancer risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigatedCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigatedNCChronicRisk.csv
Chronic risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigatedNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigatedNCAcuteRisk.csv
Acute risk total by receptor saved to:
C:\Users\tlenihan\Documents\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigatedNCAcuteRiskSumByRec.csv
HRA ran successfully

Inland Empire North Logistics Center Apple Valley Project - Operational HRA - Cancer Risk Mitigated

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK	DERMAL_F	MMILK_RI	WATER_RI	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RIS	PIG_RISK	CHICKEN_F	EGG_RISK
1	ALL		473710.1	3824861	2.64E-07	1.15YrCanc	2.64E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	ALL		473671	3824866	2.46E-07	1.15YrCanc	2.46E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	ALL		473728.5	3824764	3.08E-07	1.15YrCanc	3.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4	ALL		473730.8	3824714	3.35E-07	1.15YrCanc	3.35E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5	ALL		473726.2	3824684	3.48E-07	1.15YrCanc	3.48E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	ALL		473674.4	3824609	3.44E-07	1.15YrCanc	3.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7	ALL		473626.1	3824610	3.03E-07	1.15YrCanc	3.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8	ALL		473676.7	3824658	3.19E-07	1.15YrCanc	3.19E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9	ALL		473722.7	3824662	3.59E-07	1.15YrCanc	3.59E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	ALL		473649.1	3824752	2.65E-07	1.15YrCanc	2.65E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	ALL		473565.1	3824613	2.66E-07	1.15YrCanc	2.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12	ALL		473601.9	3824654	2.71E-07	1.15YrCanc	2.71E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13	ALL		473601.9	3824696	2.59E-07	1.15YrCanc	2.59E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
14	ALL		473545.5	3824967	1.95E-07	1.15YrCanc	1.95E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15	ALL		473514.5	3824994	1.86E-07	1.15YrCanc	1.86E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	ALL		473496.1	3825039	1.79E-07	1.15YrCanc	1.79E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17	ALL		473458.1	3825063	1.72E-07	1.15YrCanc	1.72E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
18	ALL		473427	3825040	1.68E-07	1.15YrCanc	1.68E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
19	ALL		473373.5	3824581	2.00E-07	1.15YrCanc	2.00E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	ALL		475731.9	3823741	7.17E-08	1.15YrCanc	7.17E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21	ALL		474874.5	3823423	8.93E-08	1.15YrCanc	8.93E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22	ALL		474767.7	3823408	9.42E-08	1.15YrCanc	9.42E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
23	ALL		474548	3823365	1.01E-07	1.15YrCanc	1.01E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24	ALL		476494.6	3823805	6.87E-08	1.15YrCanc	6.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25	ALL		478000.2	3824541	7.13E-08	1.15YrCanc	7.13E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	ALL		477773	3827982	1.16E-07	1.15YrCanc	1.16E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27	ALL		478912.9	3829111	7.27E-08	1.15YrCanc	7.27E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	ALL		479067.8	3829327	6.90E-08	1.15YrCanc	6.90E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29	ALL		472613.6	3822602	7.61E-07	1.15YrCanc	7.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	ALL		471900.8	3822141	8.92E-07	1.15YrCanc	8.92E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31	ALL		471795.4	3822395	3.25E-07	1.15YrCanc	3.25E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	ALL		475655	3823712	7.28E-08	1.15YrCanc	7.28E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	ALL		475759.6	3823672	7.19E-08	1.15YrCanc	7.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
34	ALL		475572	3823641	7.32E-08	1.15YrCanc	7.32E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
35	ALL		475664.2	3823660	7.40E-08	1.15YrCanc	7.40E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
36	ALL		475624.3	3823583	7.40E-08	1.15YrCanc	7.40E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37	ALL		475765.8	3823623	7.37E-08	1.15YrCanc	7.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	ALL		475685.8	3823604	7.59E-08	1.15YrCanc	7.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39	ALL		475541.2	3823580	7.60E-08	1.15YrCanc	7.60E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	ALL		475513.5	3823444	8.19E-08	1.15YrCanc	8.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
41	ALL		475464.3	3823404	8.33E-08	1.15YrCanc	8.33E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42	ALL		475408.9	3823349	8.67E-08	1.15YrCanc	8.67E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	ALL		475325.8	3823361	7.93E-08	1.15YrCanc	7.93E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44	ALL		475258.2	3823371	8.18E-08	1.15YrCanc	8.18E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	ALL		474956.7	3823389	8.73E-08	1.15YrCanc	8.73E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	ALL		475092	3823383	8.43E-08	1.15YrCanc	8.43E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	ALL		474938.2	3823328	9.07E-08	1.15YrCanc	9.07E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48	ALL		475027.4	3823303	9.15E-08	1.15YrCanc	9.15E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49	ALL		475193.6	3823306	8.89E-08	1.15YrCanc	8.89E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	ALL		475252	3823318	8.80E-08	1.15YrCanc	8.80E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51	ALL		474559.8	3823275	1.01E-07	1.15YrCanc	1.01E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52	ALL		475895	3823577	6.99E-08	1.15YrCanc	6.99E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	ALL		474512.5	3823158	1.09E-07	1.15YrCanc	1.09E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
54	ALL		474732.6	3823235	1.03E-07	1.15YrCanc	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
55	ALL		474808.1	3823238	9.93E-08	1.15YrCanc	9.93E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
56	ALL		474663.7	3823155	1.06E-07	1.15YrCanc	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57	ALL		474637	3823275	1.03E-07	1.15YrCanc	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58	ALL		474517	3823215	1.06E-07	1.15YrCanc	1.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
59	ALL		474383.6	3823060	1.17E-07	1.15YrCanc	1.17E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	ALL		474296.9	3822998	1.28E-07	1.15YrCanc	1.28E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
61	ALL		474310.2	3822935	1.25E-07	1.15YrCanc	1.25E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62	ALL		474399.2	3823004	1.18E-07	1.15YrCanc	1.18E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63	ALL		474456.9	3823013	1.15E-07	1.15YrCanc	1.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
64	ALL		474577	3823055	1.11E-07	1.15YrCanc	1.11E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
65	ALL		474637	3823086	1.08E-07	1.15YrCanc	1.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
66	ALL		474543.6	3823113	1.09E-07	1.15YrCanc	1.09E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
67	ALL		474456.9	3823109	1.14E-07	1.15YrCanc	1.14E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68	ALL		475959.4	3823583	7.07E-08	1.15YrCanc	7.07E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
69	ALL		476140.9	3823648	7.55E-08	1.15YrCanc	7.55E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70	ALL		476088.6	3823632	7.65E-08	1.15YrCanc	7.65E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
71	ALL		474394	3822955	1.20E-07	1.15YrCanc	1.20E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
72	ALL		476394.5	3823666	6.99E-08	1.15YrCanc	6.99E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
73	ALL		477861.5	3824469	7.09E-08	1.15YrCanc	7.09E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
74	ALL		477848.4	3824433	6.94E-08	1.15YrCanc	6.94E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
75	ALL		477971.3	3824676	8.19E-08	1.15YrCanc	8.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76	ALL		472613.1	3822484	5.42E-07	1.15YrCanc	5.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
77	ALL		474336.5	3822811	1.23E-07	1.15YrCanc	1.23E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
78	ALL		474263.2	3822769	1.26E-07	1.15YrCanc	1.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79	ALL		474516.9	3822840	1.19E-07	1.15YrCanc	1.19E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
80	ALL		474590.1	3822953	1.14E-07	1.15YrCanc	1.14E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
81	ALL		473463	3824862	1.88E-07	1.15YrCanc	1.88E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
82	ALL		473507.5	3824841	2.00E-07	1.15YrCanc	2.00E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	ALL		473314	3824935	1.58E-07	1.15YrCanc	1.58E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
84	ALL		473287.8	3824867	1.58E-07	1.15YrCanc	1.58E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
85	ALL		473619.9	3824814	2.37E-07	1.15YrCanc	2.37E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Inland Empire North Logistics Center Apple Valley Project - Operational HRA - Chronic Risk Mitigated

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE	RESP	SKIN	EYE	BONE/TEE	ENDO	BLOOD	ODOR	GENERAL	MAXHI
1	ALL		473710.1	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04
2	ALL		473671	3824866	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04
3	ALL		473728.5	3824764	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04
4	ALL		473730.8	3824714	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-04
5	ALL		473726.2	3824684	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-04
6	ALL		473674.4	3824609	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-04
7	ALL		473626.1	3824610	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-04
8	ALL		473676.7	3824658	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-04
9	ALL		473722.7	3824662	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-04
10	ALL		473649.1	3824752	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-04
11	ALL		473565.1	3824613	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-04
12	ALL		473601.9	3824654	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04
13	ALL		473601.9	3824696	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04
14	ALL		473545.5	3824967	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-04
15	ALL		473514.5	3824994	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04
16	ALL		473496.1	3825039	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04
17	ALL		473458.1	3825063	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04
18	ALL		473427	3825040	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-04
19	ALL		473373.5	3824581	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-04
20	ALL		475731.9	3823741	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.08E-05
21	ALL		474874.5	3823423	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E-05
22	ALL		474767.7	3823408	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-05
23	ALL		474548	3823365	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.93E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.93E-05
24	ALL		476494.6	3823805	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-05
25	ALL		478000.2	3824541	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.04E-05
26	ALL		477773	3827982	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-04
27	ALL		478912.9	3829111	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.18E-05
28	ALL		479067.8	3829327	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-05
29	ALL		472613.6	3822602	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E-04
30	ALL		471900.8	3822141	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.81E-04
31	ALL		471795.4	3822395	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-04
32	ALL		475655	3823712	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.19E-05
33	ALL		475759.6	3823672	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-05
34	ALL		475572	3823641	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-05
35	ALL		475664.2	3823660	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.31E-05
36	ALL		475624.3	3823583	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-05
37	ALL		475765.8	3823623	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-05
38	ALL		475685.8	3823604	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-05
39	ALL		475541.2	3823580	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-05
40	ALL		475513.5	3823444	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-05
41	ALL		475464.3	3823404	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-05
42	ALL		475408.9	3823349	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-05
43	ALL		475325.8	3823361	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-05
44	ALL		475258.2	3823371	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-05
45	ALL		474956.7	3823389	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-05
46	ALL		475092	3823383	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E-05
47	ALL		474938.2	3823328	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-05
48	ALL		475027.4	3823303	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.03E-05
49	ALL		475193.6	3823306	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-05
50	ALL		475252	3823318	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-05
51	ALL		474559.8	3823275	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-04
52	ALL		475895	3823577	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E-05
53	ALL		474512.5	3823158	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-04
54	ALL		474732.6	3823235	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-04
55	ALL		474808.1	3823238	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.81E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.81E-05
56	ALL		474663.7	3823155	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-04
57	ALL		474637	3823275	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-04
58	ALL		474517	3823215	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-04
59	ALL		474383.6	3823060	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-04
60	ALL		474296.9	3822998	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04
61	ALL		474310.2	3822935	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-04
62	ALL		474399.2	3823004	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04
63	ALL		474456.9	3823013	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04
64	ALL		474577	3823055	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04
65	ALL		474637	3823086	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04
66	ALL		474543.6	3823113	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-04
67	ALL		474456.9	3823109	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04
68	ALL		475959.4	3823583	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-05
69	ALL		476140.9	3823648	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-05
70	ALL		476088.6	3823632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-05
71	ALL		474394	3822955	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-04
72	ALL		476394.5	3823666	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-05
73	ALL		477861.5	3824469	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-05
74	ALL		477848.4	3824433	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-05
75	ALL		477971.3	3824676	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-05
76	ALL		472613.1	3822484	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-04
77	ALL		474336.5	3822811	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04
78	ALL		474263.2	3822769	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04
79	ALL		474516.9	3822840	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04
80	ALL		474590.1	3822953	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04
81	ALL		473463	3824862	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04
82	ALL		473507.5	3824841	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-04
83	ALL		473314	3824935	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04
84	ALL		473287.8	3824867	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04
85	ALL		473619.9	3824814	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-04

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Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at //sam.nrel.gov) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

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The energy output range is based on analysis of 30 years of historical weather data, and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

RESULTS

731,304 kWh/Year*

System output may range from 697,152 to 740,445 kWh per year near this location.

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)
January	5.09	50,305
February	5.77	51,067
March	6.73	63,589
April	7.47	66,896
May	8.02	72,873
June	8.26	70,703
July	7.95	68,812
August	7.88	69,152
September	7.19	62,054
October	6.48	59,908
November	5.36	50,015
December	4.60	45,930
Annual	**6.73**	**731,304**

Location and Station Identification

Requested Location	34.579949, -117.274933
Weather Data Source	Lat, Lng: 34.57, -117.26 1.1 mi
Latitude	34.57° N
Longitude	117.26° W

PV System Specifications

DC System Size	391.88 kW
Module Type	Standard
Array Type	Fixed (open rack)
System Losses	14.08%
Array Tilt	20°
Array Azimuth	180°
DC to AC Size Ratio	1.2
Inverter Efficiency	96%
Ground Coverage Ratio	0.4
Albedo	*From weather file*
Bifacial	No (0)
Monthly Irradiance Loss	Jan 0% Feb 0% Mar 0% Apr 0% May 0% June 0% July 0% Aug 0% Sept 0% Oct 0% Nov 0% Dec 0%

Performance Metrics	
DC Capacity Factor	21.3%

Appendix B2
Health Risk Assessment

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Inland Empire North Logistics Center Apple Valley

Construction HRA

Project Construction Emissions

Year	Unmitigated DPM tons/year	
2024	0.067	
2025	0.1052	
2026	0.0061	
Total	**0.178**	
Total Lbs	**356.600**	
Lbs/year	**210.718**	
Lbs/hour	**0.101**	

MEIR Risk	Unmitigated
Cancer (persons in a million)	**0.14**
Chronic	**0.0001**

Conversions:

1 ton =	2,000	lb			
Construction =	8	hours/day	Project Construction:	440	active days
	2080	hours/year		1.69	years
	260	days/year			
	12	months			

AERMOD Assumptions

Source Name	Description	No. of Vol. Sources	Emission Rate g/s	Release Height m	Plume Height m	Plume Width m
SLINE1	Off-Road Equipment and Trucks	2,760	1.00	5.00	10.00	10.00

Receptors

Grid Sizes	Spacing
Discrete	Nearest Sensitive Receptors

Meteorological Data

Station Name		Years	Lat	Long	Elev (m)
KDAG	BARSTOW-DAGGETT AIRPORT	2015-2020	34.854	-116.787	584.3

http://www.aqmd.gov/home/air-quality/meteorological-data/data-for-aerm n

Other Model Assumption

Rural or Urban	Rural
Urban Grp Pop	NA
Terrain Data	NED 1
Lakes Version	11.2.0
AERMOD Version	22112

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** AERMOD Input Produced by:

** AERMOD View Ver. 11.2.0

** Lakes Environmental Software Inc.

** Date: 10/11/2023

** File: C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA\Apple Valley IENL Con HRA.ADI

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** AERMOD Control Pathway

****

**

**

CO STARTING

  TITLEONE C:\Users\tlenihan\Documents\AERMOD\HARP II\Apple Valley IENL Con HRA

  MODELOPT DFAULT CONC

  AVERTIME 1 PERIOD

  POLLUTID PM_10

  RUNORNOT RUN

  ERRORFIL "Apple Valley IENL Con HRA.err"

CO FINISHED

**

****

** AERMOD Source Pathway

****

**

**

SO STARTING

** Source Location **

** Source ID - Type - X Coord. - Y Coord. **

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = SLINE1

** DESCRSRC line source 1 AV warehouses

** PREFIX

** Length of Side = 10.00

** Configuration = Adjacent

** Emission Rate = 1.0

** Vertical Dimension = 10.00

** SZINIT = 4.65

** Nodes = 118

** 475354.114, 3826410.610, 882.15, 5.00, 4.65

** 475348.211, 3826360.436, 885.75, 5.00, 4.65

** 475900.130, 3826350.597, 904.29, 5.00, 4.65

** 475902.098, 3825837.047, 915.23, 5.00, 4.65

** 475710.254, 3825840.982, 909.64, 5.00, 4.65

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** 475696.700, 3825604.663, 923.05, 5.00, 4.65

** 474708.922, 3825606.631, 881.76, 5.00, 4.65

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** 475678.151, 3825861.082, 908.12, 5.00, 4.65

** 475674.366, 3825620.712, 922.50, 5.00, 4.65

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** 475105.669, 3826087.378, 885.46, 5.00, 4.65

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LOCATION L0000003 VOLUME 475351.193 3826385.781 884.31

LOCATION L0000004 VOLUME 475350.024 3826375.850 885.23

LOCATION L0000005 VOLUME 475348.856 3826365.918 886.07

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LOCATION L0000008 VOLUME 475372.687 3826359.999 885.01

LOCATION L0000009 VOLUME 475382.685 3826359.821 884.59

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LOCATION L0000014 VOLUME 475432.677 3826358.930 885.30

LOCATION L0000015 VOLUME 475442.675 3826358.752 885.57

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LOCATION L0000045 VOLUME 475742.628 3826353.405 899.88

LOCATION L0000046 VOLUME 475752.626 3826353.227 900.09

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LOCATION L0000048 VOLUME 475772.623 3826352.870 900.93

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LOCATION L0000061 VOLUME 475900.140 3826348.125 904.29

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LOCATION L0000074 VOLUME 475900.638 3826218.126 907.17

LOCATION L0000075 VOLUME 475900.676 3826208.126 907.58

LOCATION L0000076 VOLUME 475900.714 3826198.126 908.08

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LOCATION L0000087 VOLUME 475901.136 3826088.127 907.99

LOCATION L0000088 VOLUME 475901.174 3826078.127 907.83

LOCATION L0000089 VOLUME 475901.212 3826068.127 907.81

LOCATION L0000090 VOLUME 475901.251 3826058.127 907.62

LOCATION L0000091 VOLUME 475901.289 3826048.127 907.67

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LOCATION L0000093 VOLUME 475901.366 3826028.127 908.78

LOCATION L0000094 VOLUME 475901.404 3826018.127 908.64

LOCATION L0000095 VOLUME 475901.442 3826008.127 907.82

LOCATION L0000096 VOLUME 475901.481 3825998.127 906.74

LOCATION L0000097 VOLUME 475901.519 3825988.127 906.46

LOCATION L0000098 VOLUME 475901.557 3825978.127 907.56

LOCATION L0000099 VOLUME 475901.595 3825968.128 910.30

LOCATION L0000100 VOLUME 475901.634 3825958.128 914.23

LOCATION L0000101 VOLUME 475901.672 3825948.128 916.63

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LOCATION L0000104 VOLUME 475901.787 3825918.128 916.79

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LOCATION L0000115 VOLUME 475873.185 3825837.640 914.83

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LOCATION L0000117 VOLUME 475853.190 3825838.050 914.42

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LOCATION L0000120 VOLUME 475823.196 3825838.665 913.58

LOCATION L0000121 VOLUME 475813.198 3825838.871 913.27

LOCATION L0000122 VOLUME 475803.200 3825839.076 912.79

LOCATION L0000123 VOLUME 475793.202 3825839.281 912.32

LOCATION L0000124 VOLUME 475783.204 3825839.486 911.69

LOCATION L0000125 VOLUME 475773.206 3825839.691 911.53

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LOCATION L0000127 VOLUME 475753.211 3825840.101 910.65

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LOCATION L0000134 VOLUME 475699.245 3825823.831 909.59

LOCATION L0000135 VOLUME 475699.128 3825813.832 909.69

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LOCATION L0000137 VOLUME 475698.896 3825793.834 910.71

LOCATION L0000138 VOLUME 475698.780 3825783.834 911.17

LOCATION L0000139 VOLUME 475698.664 3825773.835 911.34

LOCATION L0000140 VOLUME 475698.548 3825763.836 911.73

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LOCATION L0000143 VOLUME 475698.200 3825733.838 912.45

LOCATION L0000144 VOLUME 475698.084 3825723.838 912.81

LOCATION L0000145 VOLUME 475697.967 3825713.839 913.34

LOCATION L0000146 VOLUME 475697.851 3825703.840 914.29

LOCATION L0000147 VOLUME 475697.735 3825693.840 920.93

LOCATION L0000148 VOLUME 475697.619 3825683.841 922.24

LOCATION L0000149 VOLUME 475697.503 3825673.842 922.34

LOCATION L0000150 VOLUME 475697.387 3825663.842 922.47

LOCATION L0000151 VOLUME 475697.271 3825653.843 922.78

LOCATION L0000152 VOLUME 475697.155 3825643.844 923.05

LOCATION L0000153 VOLUME 475697.039 3825633.844 922.83

LOCATION L0000154 VOLUME 475696.923 3825623.845 922.95

LOCATION L0000155 VOLUME 475696.806 3825613.846 923.00

LOCATION L0000156 VOLUME 475695.883 3825604.665 923.03

LOCATION L0000157 VOLUME 475685.883 3825604.685 922.80

LOCATION L0000158 VOLUME 475675.883 3825604.705 922.62

LOCATION L0000159 VOLUME 475665.883 3825604.724 922.47

LOCATION L0000160 VOLUME 475655.883 3825604.744 922.31

LOCATION L0000161 VOLUME 475645.883 3825604.764 918.69

LOCATION L0000162 VOLUME 475635.883 3825604.784 914.65

LOCATION L0000163 VOLUME 475625.883 3825604.804 914.05

LOCATION L0000164 VOLUME 475615.883 3825604.824 913.68

LOCATION L0000165 VOLUME 475605.883 3825604.844 913.27

LOCATION L0000166 VOLUME 475595.883 3825604.864 912.78

LOCATION L0000167 VOLUME 475585.883 3825604.884 912.43

LOCATION L0000168 VOLUME 475575.883 3825604.904 912.03

LOCATION L0000169 VOLUME 475565.883 3825604.924 911.62

LOCATION L0000170 VOLUME 475555.883 3825604.944 911.24

LOCATION L0000171 VOLUME 475545.883 3825604.963 910.80

LOCATION L0000172 VOLUME 475535.883 3825604.983 910.49

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SRCPARAM L0002642	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002643	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002644	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002645	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002646	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002647	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002648	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002649	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002650	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002651	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002652	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002653	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002654	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002655	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002656	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002657	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002658	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002659	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002660	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002661	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002662	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002663	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002664	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002665	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002666	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002667	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002668	0.0003623188	5.00	4.65	4.65
SRCPARAM L0002669	0.0003623188	5.00	4.65	4.65

SRCPARAM L0002670 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002671 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002672 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002673 0.0003623188 5.00 4.65 4.65

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SRCPARAM L0002680 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002681 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002682 0.0003623188 5.00 4.65 4.65

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SRCPARAM L0002700 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002701 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002702 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002703 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002704 0.0003623188 5.00 4.65 4.65

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SRCPARAM L0002707 0.0003623188 5.00 4.65 4.65

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SRCPARAM L0002711 0.0003623188 5.00 4.65 4.65

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SRCPARAM L0002755 0.0003623188 5.00 4.65 4.65

SRCPARAM L0002756 0.0003623188 5.00 4.65 4.65

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  SRCPARAM L0002757    0.0003623188     5.00     4.65     4.65
  SRCPARAM L0002758    0.0003623188     5.00     4.65     4.65
  SRCPARAM L0002759    0.0003623188     5.00     4.65     4.65
  SRCPARAM L0002760    0.0003623188     5.00     4.65     4.65
** ----------------------------------------------------------------
  SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED "Apple Valley IENL Con HRA.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
  SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
  PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
  SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
  UAIRDATA 3120 2015
  PROFBASE 584.3 METERS
ME FINISHED
```

```
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 ALL 1ST "Apple Valley IENL Con HRA.AD\01H1GALL.PLT" 31
  PLOTFILE PERIOD ALL "Apple Valley IENL Con HRA.AD\PE00GALL.PLT" 32
  SUMMFILE "Apple Valley IENL Con HRA.sum"
OU FINISHED


 *** Message Summary For AERMOD Model Setup ***


 --------- Summary of Total Messages --------

A Total of         0 Fatal Error Message(s)
A Total of         2 Warning Message(s)
A Total of         0 Informational Message(s)


  ******** FATAL ERROR MESSAGES ********
          ***  NONE  ***
```

******** WARNING MESSAGES ********

ME W186 5712 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 5712 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

****

*** SETUP Finishes Successfully ***

****

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

* Model Uses Regulatory DEFAULT Options

* Model Is Setup For Calculation of Average CONCentration Values.

* NO GAS DEPOSITION Data Provided.

* NO PARTICLE DEPOSITION Data Provided.

* Model Uses NO DRY DEPLETION. DDPLETE = F

* Model Uses NO WET DEPLETION. WETDPLT = F

* Stack-tip Downwash.

* Model Accounts for ELEVated Terrain Effects.

* Use Calms Processing Routine.

* Use Missing Data Processing Routine.

* No Exponential Decay.

* Model Uses RURAL Dispersion Only.

* ADJ_U* - Use ADJ_U* option for SBL in AERMET

* CCVR_Sub - Meteorological data includes CCVR substitutions

* TEMP_Sub - Meteorological data includes TEMP substitutions

* Model Assumes No FLAGPOLE Receptor Heights.

* The User Specified a Pollutant Type of: PM_10

**Model Calculates 1 Short Term Average(s) of: 1-HR

and Calculates PERIOD Averages

**This Run Includes: 2760 Source(s); 1 Source Group(s); and 28 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 2760 VOLUME source(s)
and: 0 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 19191

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 584.30 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 4.7 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: Apple Valley IENL Con HRA.err

**File for Summary of Results: Apple Valley IENL Con HRA.sum

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.36232E-03	475353.5	3826405.6	882.9	5.00	4.65	4.65	NO	
L0000002	0	0.36232E-03	475352.4	3826395.7	883.7	5.00	4.65	4.65	NO	
L0000003	0	0.36232E-03	475351.2	3826385.8	884.3	5.00	4.65	4.65	NO	
L0000004	0	0.36232E-03	475350.0	3826375.8	885.2	5.00	4.65	4.65	NO	
L0000005	0	0.36232E-03	475348.9	3826365.9	886.1	5.00	4.65	4.65	NO	
L0000006	0	0.36232E-03	475352.7	3826360.4	886.5	5.00	4.65	4.65	NO	
L0000007	0	0.36232E-03	475362.7	3826360.2	886.1	5.00	4.65	4.65	NO	
L0000008	0	0.36232E-03	475372.7	3826360.0	885.0	5.00	4.65	4.65	NO	
L0000009	0	0.36232E-03	475382.7	3826359.8	884.6	5.00	4.65	4.65	NO	
L0000010	0	0.36232E-03	475392.7	3826359.6	885.8	5.00	4.65	4.65	NO	
L0000011	0	0.36232E-03	475402.7	3826359.5	886.5	5.00	4.65	4.65	NO	
L0000012	0	0.36232E-03	475412.7	3826359.3	886.0	5.00	4.65	4.65	NO	
L0000013	0	0.36232E-03	475422.7	3826359.1	885.7	5.00	4.65	4.65	NO	
L0000014	0	0.36232E-03	475432.7	3826358.9	885.3	5.00	4.65	4.65	NO	
L0000015	0	0.36232E-03	475442.7	3826358.8	885.6	5.00	4.65	4.65	NO	

L0000016	0	0.36232E-03	475452.7	3826358.6	885.9	5.00	4.65	4.65	NO
L0000017	0	0.36232E-03	475462.7	3826358.4	886.1	5.00	4.65	4.65	NO
L0000018	0	0.36232E-03	475472.7	3826358.2	886.8	5.00	4.65	4.65	NO
L0000019	0	0.36232E-03	475482.7	3826358.0	887.8	5.00	4.65	4.65	NO
L0000020	0	0.36232E-03	475492.7	3826357.9	888.3	5.00	4.65	4.65	NO
L0000021	0	0.36232E-03	475502.7	3826357.7	888.7	5.00	4.65	4.65	NO
L0000022	0	0.36232E-03	475512.7	3826357.5	889.1	5.00	4.65	4.65	NO
L0000023	0	0.36232E-03	475522.7	3826357.3	889.6	5.00	4.65	4.65	NO
L0000024	0	0.36232E-03	475532.7	3826357.1	889.9	5.00	4.65	4.65	NO
L0000025	0	0.36232E-03	475542.7	3826357.0	890.2	5.00	4.65	4.65	NO
L0000026	0	0.36232E-03	475552.7	3826356.8	890.8	5.00	4.65	4.65	NO
L0000027	0	0.36232E-03	475562.7	3826356.6	891.5	5.00	4.65	4.65	NO
L0000028	0	0.36232E-03	475572.7	3826356.4	892.0	5.00	4.65	4.65	NO
L0000029	0	0.36232E-03	475582.7	3826356.3	892.4	5.00	4.65	4.65	NO
L0000030	0	0.36232E-03	475592.7	3826356.1	892.9	5.00	4.65	4.65	NO
L0000031	0	0.36232E-03	475602.6	3826355.9	893.8	5.00	4.65	4.65	NO
L0000032	0	0.36232E-03	475612.6	3826355.7	894.8	5.00	4.65	4.65	NO
L0000033	0	0.36232E-03	475622.6	3826355.5	895.6	5.00	4.65	4.65	NO
L0000034	0	0.36232E-03	475632.6	3826355.4	896.2	5.00	4.65	4.65	NO
L0000035	0	0.36232E-03	475642.6	3826355.2	896.9	5.00	4.65	4.65	NO
L0000036	0	0.36232E-03	475652.6	3826355.0	897.4	5.00	4.65	4.65	NO
L0000037	0	0.36232E-03	475662.6	3826354.8	897.7	5.00	4.65	4.65	NO
L0000038	0	0.36232E-03	475672.6	3826354.7	898.2	5.00	4.65	4.65	NO
L0000039	0	0.36232E-03	475682.6	3826354.5	898.7	5.00	4.65	4.65	NO
L0000040	0	0.36232E-03	475692.6	3826354.3	899.0	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.36232E-03	475702.6	3826354.1	899.6	5.00	4.65	4.65	NO	
L0000042	0	0.36232E-03	475712.6	3826353.9	900.1	5.00	4.65	4.65	NO	
L0000043	0	0.36232E-03	475722.6	3826353.8	900.4	5.00	4.65	4.65	NO	
L0000044	0	0.36232E-03	475732.6	3826353.6	900.1	5.00	4.65	4.65	NO	
L0000045	0	0.36232E-03	475742.6	3826353.4	899.9	5.00	4.65	4.65	NO	
L0000046	0	0.36232E-03	475752.6	3826353.2	900.1	5.00	4.65	4.65	NO	
L0000047	0	0.36232E-03	475762.6	3826353.0	900.5	5.00	4.65	4.65	NO	
L0000048	0	0.36232E-03	475772.6	3826352.9	900.9	5.00	4.65	4.65	NO	
L0000049	0	0.36232E-03	475782.6	3826352.7	901.2	5.00	4.65	4.65	NO	
L0000050	0	0.36232E-03	475792.6	3826352.5	901.3	5.00	4.65	4.65	NO	
L0000051	0	0.36232E-03	475802.6	3826352.3	901.2	5.00	4.65	4.65	NO	
L0000052	0	0.36232E-03	475812.6	3826352.2	901.6	5.00	4.65	4.65	NO	
L0000053	0	0.36232E-03	475822.6	3826352.0	902.1	5.00	4.65	4.65	NO	
L0000054	0	0.36232E-03	475832.6	3826351.8	902.4	5.00	4.65	4.65	NO	
L0000055	0	0.36232E-03	475842.6	3826351.6	902.3	5.00	4.65	4.65	NO	

L0000056	0	0.36232E-03	475852.6	3826351.4	902.6	5.00	4.65	4.65	NO
L0000057	0	0.36232E-03	475862.6	3826351.3	902.8	5.00	4.65	4.65	NO
L0000058	0	0.36232E-03	475872.6	3826351.1	903.3	5.00	4.65	4.65	NO
L0000059	0	0.36232E-03	475882.6	3826350.9	903.7	5.00	4.65	4.65	NO
L0000060	0	0.36232E-03	475892.6	3826350.7	903.9	5.00	4.65	4.65	NO
L0000061	0	0.36232E-03	475900.1	3826348.1	904.3	5.00	4.65	4.65	NO
L0000062	0	0.36232E-03	475900.2	3826338.1	904.6	5.00	4.65	4.65	NO
L0000063	0	0.36232E-03	475900.2	3826328.1	904.9	5.00	4.65	4.65	NO
L0000064	0	0.36232E-03	475900.3	3826318.1	905.3	5.00	4.65	4.65	NO
L0000065	0	0.36232E-03	475900.3	3826308.1	905.6	5.00	4.65	4.65	NO
L0000066	0	0.36232E-03	475900.3	3826298.1	905.9	5.00	4.65	4.65	NO
L0000067	0	0.36232E-03	475900.4	3826288.1	906.1	5.00	4.65	4.65	NO
L0000068	0	0.36232E-03	475900.4	3826278.1	906.3	5.00	4.65	4.65	NO
L0000069	0	0.36232E-03	475900.4	3826268.1	906.4	5.00	4.65	4.65	NO
L0000070	0	0.36232E-03	475900.5	3826258.1	906.6	5.00	4.65	4.65	NO
L0000071	0	0.36232E-03	475900.5	3826248.1	906.7	5.00	4.65	4.65	NO
L0000072	0	0.36232E-03	475900.6	3826238.1	906.6	5.00	4.65	4.65	NO
L0000073	0	0.36232E-03	475900.6	3826228.1	906.8	5.00	4.65	4.65	NO
L0000074	0	0.36232E-03	475900.6	3826218.1	907.2	5.00	4.65	4.65	NO
L0000075	0	0.36232E-03	475900.7	3826208.1	907.6	5.00	4.65	4.65	NO
L0000076	0	0.36232E-03	475900.7	3826198.1	908.1	5.00	4.65	4.65	NO
L0000077	0	0.36232E-03	475900.8	3826188.1	908.3	5.00	4.65	4.65	NO
L0000078	0	0.36232E-03	475900.8	3826178.1	908.3	5.00	4.65	4.65	NO
L0000079	0	0.36232E-03	475900.8	3826168.1	908.2	5.00	4.65	4.65	NO
L0000080	0	0.36232E-03	475900.9	3826158.1	908.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000081	0	0.36232E-03	475900.9	3826148.1	907.7	5.00	4.65	4.65	NO	
L0000082	0	0.36232E-03	475900.9	3826138.1	907.0	5.00	4.65	4.65	NO	
L0000083	0	0.36232E-03	475901.0	3826128.1	907.0	5.00	4.65	4.65	NO	
L0000084	0	0.36232E-03	475901.0	3826118.1	907.5	5.00	4.65	4.65	NO	
L0000085	0	0.36232E-03	475901.1	3826108.1	908.1	5.00	4.65	4.65	NO	
L0000086	0	0.36232E-03	475901.1	3826098.1	908.2	5.00	4.65	4.65	NO	
L0000087	0	0.36232E-03	475901.1	3826088.1	908.0	5.00	4.65	4.65	NO	
L0000088	0	0.36232E-03	475901.2	3826078.1	907.8	5.00	4.65	4.65	NO	
L0000089	0	0.36232E-03	475901.2	3826068.1	907.8	5.00	4.65	4.65	NO	
L0000090	0	0.36232E-03	475901.3	3826058.1	907.6	5.00	4.65	4.65	NO	
L0000091	0	0.36232E-03	475901.3	3826048.1	907.7	5.00	4.65	4.65	NO	
L0000092	0	0.36232E-03	475901.3	3826038.1	908.3	5.00	4.65	4.65	NO	
L0000093	0	0.36232E-03	475901.4	3826028.1	908.8	5.00	4.65	4.65	NO	
L0000094	0	0.36232E-03	475901.4	3826018.1	908.6	5.00	4.65	4.65	NO	
L0000095	0	0.36232E-03	475901.4	3826008.1	907.8	5.00	4.65	4.65	NO	

L0000096	0	0.36232E-03	475901.5	3825998.1	906.7	5.00	4.65	4.65	NO
L0000097	0	0.36232E-03	475901.5	3825988.1	906.5	5.00	4.65	4.65	NO
L0000098	0	0.36232E-03	475901.6	3825978.1	907.6	5.00	4.65	4.65	NO
L0000099	0	0.36232E-03	475901.6	3825968.1	910.3	5.00	4.65	4.65	NO
L0000100	0	0.36232E-03	475901.6	3825958.1	914.2	5.00	4.65	4.65	NO
L0000101	0	0.36232E-03	475901.7	3825948.1	916.6	5.00	4.65	4.65	NO
L0000102	0	0.36232E-03	475901.7	3825938.1	916.7	5.00	4.65	4.65	NO
L0000103	0	0.36232E-03	475901.7	3825928.1	917.2	5.00	4.65	4.65	NO
L0000104	0	0.36232E-03	475901.8	3825918.1	916.8	5.00	4.65	4.65	NO
L0000105	0	0.36232E-03	475901.8	3825908.1	915.3	5.00	4.65	4.65	NO
L0000106	0	0.36232E-03	475901.9	3825898.1	915.2	5.00	4.65	4.65	NO
L0000107	0	0.36232E-03	475901.9	3825888.1	915.2	5.00	4.65	4.65	NO
L0000108	0	0.36232E-03	475901.9	3825878.1	915.1	5.00	4.65	4.65	NO
L0000109	0	0.36232E-03	475902.0	3825868.1	914.9	5.00	4.65	4.65	NO
L0000110	0	0.36232E-03	475902.0	3825858.1	915.1	5.00	4.65	4.65	NO
L0000111	0	0.36232E-03	475902.1	3825848.1	915.2	5.00	4.65	4.65	NO
L0000112	0	0.36232E-03	475902.1	3825838.1	915.2	5.00	4.65	4.65	NO
L0000113	0	0.36232E-03	475893.2	3825837.2	915.2	5.00	4.65	4.65	NO
L0000114	0	0.36232E-03	475883.2	3825837.4	915.0	5.00	4.65	4.65	NO
L0000115	0	0.36232E-03	475873.2	3825837.6	914.8	5.00	4.65	4.65	NO
L0000116	0	0.36232E-03	475863.2	3825837.8	914.6	5.00	4.65	4.65	NO
L0000117	0	0.36232E-03	475853.2	3825838.0	914.4	5.00	4.65	4.65	NO
L0000118	0	0.36232E-03	475843.2	3825838.3	914.1	5.00	4.65	4.65	NO
L0000119	0	0.36232E-03	475833.2	3825838.5	913.7	5.00	4.65	4.65	NO
L0000120	0	0.36232E-03	475823.2	3825838.7	913.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000121	0	0.36232E-03	475813.2	3825838.9	913.3	5.00	4.65	4.65	NO	
L0000122	0	0.36232E-03	475803.2	3825839.1	912.8	5.00	4.65	4.65	NO	
L0000123	0	0.36232E-03	475793.2	3825839.3	912.3	5.00	4.65	4.65	NO	
L0000124	0	0.36232E-03	475783.2	3825839.5	911.7	5.00	4.65	4.65	NO	
L0000125	0	0.36232E-03	475773.2	3825839.7	911.5	5.00	4.65	4.65	NO	
L0000126	0	0.36232E-03	475763.2	3825839.9	911.1	5.00	4.65	4.65	NO	
L0000127	0	0.36232E-03	475753.2	3825840.1	910.6	5.00	4.65	4.65	NO	
L0000128	0	0.36232E-03	475743.2	3825840.3	910.2	5.00	4.65	4.65	NO	
L0000129	0	0.36232E-03	475733.2	3825840.5	910.0	5.00	4.65	4.65	NO	
L0000130	0	0.36232E-03	475723.2	3825840.7	909.7	5.00	4.65	4.65	NO	
L0000131	0	0.36232E-03	475713.2	3825840.9	909.7	5.00	4.65	4.65	NO	
L0000132	0	0.36232E-03	475703.2	3825840.3	909.8	5.00	4.65	4.65	NO	
L0000133	0	0.36232E-03	475699.4	3825833.8	909.8	5.00	4.65	4.65	NO	
L0000134	0	0.36232E-03	475699.2	3825823.8	909.6	5.00	4.65	4.65	NO	
L0000135	0	0.36232E-03	475699.1	3825813.8	909.7	5.00	4.65	4.65	NO	

L0000136	0	0.36232E-03	475699.0	3825803.8	910.1	5.00	4.65	4.65	NO
L0000137	0	0.36232E-03	475698.9	3825793.8	910.7	5.00	4.65	4.65	NO
L0000138	0	0.36232E-03	475698.8	3825783.8	911.2	5.00	4.65	4.65	NO
L0000139	0	0.36232E-03	475698.7	3825773.8	911.3	5.00	4.65	4.65	NO
L0000140	0	0.36232E-03	475698.5	3825763.8	911.7	5.00	4.65	4.65	NO
L0000141	0	0.36232E-03	475698.4	3825753.8	912.2	5.00	4.65	4.65	NO
L0000142	0	0.36232E-03	475698.3	3825743.8	912.3	5.00	4.65	4.65	NO
L0000143	0	0.36232E-03	475698.2	3825733.8	912.4	5.00	4.65	4.65	NO
L0000144	0	0.36232E-03	475698.1	3825723.8	912.8	5.00	4.65	4.65	NO
L0000145	0	0.36232E-03	475698.0	3825713.8	913.3	5.00	4.65	4.65	NO
L0000146	0	0.36232E-03	475697.9	3825703.8	914.3	5.00	4.65	4.65	NO
L0000147	0	0.36232E-03	475697.7	3825693.8	920.9	5.00	4.65	4.65	NO
L0000148	0	0.36232E-03	475697.6	3825683.8	922.2	5.00	4.65	4.65	NO
L0000149	0	0.36232E-03	475697.5	3825673.8	922.3	5.00	4.65	4.65	NO
L0000150	0	0.36232E-03	475697.4	3825663.8	922.5	5.00	4.65	4.65	NO
L0000151	0	0.36232E-03	475697.3	3825653.8	922.8	5.00	4.65	4.65	NO
L0000152	0	0.36232E-03	475697.2	3825643.8	923.0	5.00	4.65	4.65	NO
L0000153	0	0.36232E-03	475697.0	3825633.8	922.8	5.00	4.65	4.65	NO
L0000154	0	0.36232E-03	475696.9	3825623.8	922.9	5.00	4.65	4.65	NO
L0000155	0	0.36232E-03	475696.8	3825613.8	923.0	5.00	4.65	4.65	NO
L0000156	0	0.36232E-03	475695.9	3825604.7	923.0	5.00	4.65	4.65	NO
L0000157	0	0.36232E-03	475685.9	3825604.7	922.8	5.00	4.65	4.65	NO
L0000158	0	0.36232E-03	475675.9	3825604.7	922.6	5.00	4.65	4.65	NO
L0000159	0	0.36232E-03	475665.9	3825604.7	922.5	5.00	4.65	4.65	NO
L0000160	0	0.36232E-03	475655.9	3825604.7	922.3	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000161	0	0.36232E-03	475645.9	3825604.8	918.7	5.00	4.65	4.65	NO	
L0000162	0	0.36232E-03	475635.9	3825604.8	914.6	5.00	4.65	4.65	NO	
L0000163	0	0.36232E-03	475625.9	3825604.8	914.0	5.00	4.65	4.65	NO	
L0000164	0	0.36232E-03	475615.9	3825604.8	913.7	5.00	4.65	4.65	NO	
L0000165	0	0.36232E-03	475605.9	3825604.8	913.3	5.00	4.65	4.65	NO	
L0000166	0	0.36232E-03	475595.9	3825604.9	912.8	5.00	4.65	4.65	NO	
L0000167	0	0.36232E-03	475585.9	3825604.9	912.4	5.00	4.65	4.65	NO	
L0000168	0	0.36232E-03	475575.9	3825604.9	912.0	5.00	4.65	4.65	NO	
L0000169	0	0.36232E-03	475565.9	3825604.9	911.6	5.00	4.65	4.65	NO	
L0000170	0	0.36232E-03	475555.9	3825604.9	911.2	5.00	4.65	4.65	NO	
L0000171	0	0.36232E-03	475545.9	3825605.0	910.8	5.00	4.65	4.65	NO	
L0000172	0	0.36232E-03	475535.9	3825605.0	910.5	5.00	4.65	4.65	NO	
L0000173	0	0.36232E-03	475525.9	3825605.0	909.9	5.00	4.65	4.65	NO	
L0000174	0	0.36232E-03	475515.9	3825605.0	909.4	5.00	4.65	4.65	NO	
L0000175	0	0.36232E-03	475505.9	3825605.0	909.0	5.00	4.65	4.65	NO	

L0000176	0	0.36232E-03	475495.9	3825605.1	908.6	5.00	4.65	4.65	NO
L0000177	0	0.36232E-03	475485.9	3825605.1	908.1	5.00	4.65	4.65	NO
L0000178	0	0.36232E-03	475475.9	3825605.1	907.8	5.00	4.65	4.65	NO
L0000179	0	0.36232E-03	475465.9	3825605.1	907.4	5.00	4.65	4.65	NO
L0000180	0	0.36232E-03	475455.9	3825605.1	907.0	5.00	4.65	4.65	NO
L0000181	0	0.36232E-03	475445.9	3825605.2	906.5	5.00	4.65	4.65	NO
L0000182	0	0.36232E-03	475435.9	3825605.2	906.0	5.00	4.65	4.65	NO
L0000183	0	0.36232E-03	475425.9	3825605.2	905.6	5.00	4.65	4.65	NO
L0000184	0	0.36232E-03	475415.9	3825605.2	905.3	5.00	4.65	4.65	NO
L0000185	0	0.36232E-03	475405.9	3825605.2	904.8	5.00	4.65	4.65	NO
L0000186	0	0.36232E-03	475395.9	3825605.3	904.4	5.00	4.65	4.65	NO
L0000187	0	0.36232E-03	475385.9	3825605.3	903.8	5.00	4.65	4.65	NO
L0000188	0	0.36232E-03	475375.9	3825605.3	903.4	5.00	4.65	4.65	NO
L0000189	0	0.36232E-03	475365.9	3825605.3	902.9	5.00	4.65	4.65	NO
L0000190	0	0.36232E-03	475355.9	3825605.3	902.6	5.00	4.65	4.65	NO
L0000191	0	0.36232E-03	475345.9	3825605.4	902.1	5.00	4.65	4.65	NO
L0000192	0	0.36232E-03	475335.9	3825605.4	901.7	5.00	4.65	4.65	NO
L0000193	0	0.36232E-03	475325.9	3825605.4	901.4	5.00	4.65	4.65	NO
L0000194	0	0.36232E-03	475315.9	3825605.4	901.1	5.00	4.65	4.65	NO
L0000195	0	0.36232E-03	475305.9	3825605.4	900.9	5.00	4.65	4.65	NO
L0000196	0	0.36232E-03	475295.9	3825605.5	900.5	5.00	4.65	4.65	NO
L0000197	0	0.36232E-03	475285.9	3825605.5	899.9	5.00	4.65	4.65	NO
L0000198	0	0.36232E-03	475275.9	3825605.5	899.5	5.00	4.65	4.65	NO
L0000199	0	0.36232E-03	475265.9	3825605.5	899.2	5.00	4.65	4.65	NO
L0000200	0	0.36232E-03	475255.9	3825605.5	898.7	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000201	0	0.36232E-03	475245.9	3825605.6	898.2	5.00	4.65	4.65	NO	
L0000202	0	0.36232E-03	475235.9	3825605.6	897.8	5.00	4.65	4.65	NO	
L0000203	0	0.36232E-03	475225.9	3825605.6	897.4	5.00	4.65	4.65	NO	
L0000204	0	0.36232E-03	475215.9	3825605.6	896.9	5.00	4.65	4.65	NO	
L0000205	0	0.36232E-03	475205.9	3825605.6	896.6	5.00	4.65	4.65	NO	
L0000206	0	0.36232E-03	475195.9	3825605.7	896.1	5.00	4.65	4.65	NO	
L0000207	0	0.36232E-03	475185.9	3825605.7	895.7	5.00	4.65	4.65	NO	
L0000208	0	0.36232E-03	475175.9	3825605.7	895.2	5.00	4.65	4.65	NO	
L0000209	0	0.36232E-03	475165.9	3825605.7	894.7	5.00	4.65	4.65	NO	
L0000210	0	0.36232E-03	475155.9	3825605.7	894.7	5.00	4.65	4.65	NO	
L0000211	0	0.36232E-03	475145.9	3825605.8	894.6	5.00	4.65	4.65	NO	
L0000212	0	0.36232E-03	475135.9	3825605.8	893.9	5.00	4.65	4.65	NO	
L0000213	0	0.36232E-03	475125.9	3825605.8	893.5	5.00	4.65	4.65	NO	
L0000214	0	0.36232E-03	475115.9	3825605.8	893.8	5.00	4.65	4.65	NO	
L0000215	0	0.36232E-03	475105.9	3825605.8	893.8	5.00	4.65	4.65	NO	

L0000216	0	0.36232E-03	475095.9	3825605.9	893.6	5.00	4.65	4.65	NO
L0000217	0	0.36232E-03	475085.9	3825605.9	893.0	5.00	4.65	4.65	NO
L0000218	0	0.36232E-03	475075.9	3825605.9	892.1	5.00	4.65	4.65	NO
L0000219	0	0.36232E-03	475065.9	3825605.9	891.3	5.00	4.65	4.65	NO
L0000220	0	0.36232E-03	475055.9	3825605.9	890.8	5.00	4.65	4.65	NO
L0000221	0	0.36232E-03	475045.9	3825606.0	890.6	5.00	4.65	4.65	NO
L0000222	0	0.36232E-03	475035.9	3825606.0	890.5	5.00	4.65	4.65	NO
L0000223	0	0.36232E-03	475025.9	3825606.0	890.4	5.00	4.65	4.65	NO
L0000224	0	0.36232E-03	475015.9	3825606.0	889.9	5.00	4.65	4.65	NO
L0000225	0	0.36232E-03	475005.9	3825606.0	889.5	5.00	4.65	4.65	NO
L0000226	0	0.36232E-03	474995.9	3825606.1	889.3	5.00	4.65	4.65	NO
L0000227	0	0.36232E-03	474985.9	3825606.1	888.8	5.00	4.65	4.65	NO
L0000228	0	0.36232E-03	474975.9	3825606.1	888.4	5.00	4.65	4.65	NO
L0000229	0	0.36232E-03	474965.9	3825606.1	887.9	5.00	4.65	4.65	NO
L0000230	0	0.36232E-03	474955.9	3825606.1	887.5	5.00	4.65	4.65	NO
L0000231	0	0.36232E-03	474945.9	3825606.2	887.1	5.00	4.65	4.65	NO
L0000232	0	0.36232E-03	474935.9	3825606.2	886.5	5.00	4.65	4.65	NO
L0000233	0	0.36232E-03	474925.9	3825606.2	886.1	5.00	4.65	4.65	NO
L0000234	0	0.36232E-03	474915.9	3825606.2	885.8	5.00	4.65	4.65	NO
L0000235	0	0.36232E-03	474905.9	3825606.2	885.7	5.00	4.65	4.65	NO
L0000236	0	0.36232E-03	474895.9	3825606.3	885.4	5.00	4.65	4.65	NO
L0000237	0	0.36232E-03	474885.9	3825606.3	884.8	5.00	4.65	4.65	NO
L0000238	0	0.36232E-03	474875.9	3825606.3	884.4	5.00	4.65	4.65	NO
L0000239	0	0.36232E-03	474865.9	3825606.3	884.8	5.00	4.65	4.65	NO
L0000240	0	0.36232E-03	474855.9	3825606.3	884.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000241	0	0.36232E-03	474845.9	3825606.4	884.1	5.00	4.65	4.65	NO	
L0000242	0	0.36232E-03	474835.9	3825606.4	883.9	5.00	4.65	4.65	NO	
L0000243	0	0.36232E-03	474825.9	3825606.4	883.8	5.00	4.65	4.65	NO	
L0000244	0	0.36232E-03	474815.9	3825606.4	884.4	5.00	4.65	4.65	NO	
L0000245	0	0.36232E-03	474805.9	3825606.4	884.4	5.00	4.65	4.65	NO	
L0000246	0	0.36232E-03	474795.9	3825606.5	884.3	5.00	4.65	4.65	NO	
L0000247	0	0.36232E-03	474785.9	3825606.5	884.2	5.00	4.65	4.65	NO	
L0000248	0	0.36232E-03	474775.9	3825606.5	884.3	5.00	4.65	4.65	NO	
L0000249	0	0.36232E-03	474765.9	3825606.5	883.3	5.00	4.65	4.65	NO	
L0000250	0	0.36232E-03	474755.9	3825606.5	882.8	5.00	4.65	4.65	NO	
L0000251	0	0.36232E-03	474745.9	3825606.6	883.0	5.00	4.65	4.65	NO	
L0000252	0	0.36232E-03	474735.9	3825606.6	882.4	5.00	4.65	4.65	NO	
L0000253	0	0.36232E-03	474725.9	3825606.6	882.0	5.00	4.65	4.65	NO	
L0000254	0	0.36232E-03	474715.9	3825606.6	882.2	5.00	4.65	4.65	NO	
L0000255	0	0.36232E-03	474710.8	3825609.1	881.6	5.00	4.65	4.65	NO	

L0000256	0	0.36232E-03	474716.8	3825617.0	881.3	5.00	4.65	4.65	NO
L0000257	0	0.36232E-03	474722.8	3825625.0	881.1	5.00	4.65	4.65	NO
L0000258	0	0.36232E-03	474728.9	3825633.0	880.5	5.00	4.65	4.65	NO
L0000259	0	0.36232E-03	474734.9	3825640.9	880.8	5.00	4.65	4.65	NO
L0000260	0	0.36232E-03	474740.9	3825648.9	881.2	5.00	4.65	4.65	NO
L0000261	0	0.36232E-03	474747.0	3825656.9	881.1	5.00	4.65	4.65	NO
L0000262	0	0.36232E-03	474753.0	3825664.9	880.3	5.00	4.65	4.65	NO
L0000263	0	0.36232E-03	474759.1	3825672.8	880.3	5.00	4.65	4.65	NO
L0000264	0	0.36232E-03	474765.1	3825680.8	880.1	5.00	4.65	4.65	NO
L0000265	0	0.36232E-03	474771.1	3825688.8	879.8	5.00	4.65	4.65	NO
L0000266	0	0.36232E-03	474777.2	3825696.7	880.0	5.00	4.65	4.65	NO
L0000267	0	0.36232E-03	474783.2	3825704.7	879.6	5.00	4.65	4.65	NO
L0000268	0	0.36232E-03	474789.2	3825712.7	879.4	5.00	4.65	4.65	NO
L0000269	0	0.36232E-03	474795.3	3825720.7	879.3	5.00	4.65	4.65	NO
L0000270	0	0.36232E-03	474801.3	3825728.6	879.1	5.00	4.65	4.65	NO
L0000271	0	0.36232E-03	474807.4	3825736.6	880.2	5.00	4.65	4.65	NO
L0000272	0	0.36232E-03	474813.4	3825744.6	880.1	5.00	4.65	4.65	NO
L0000273	0	0.36232E-03	474819.4	3825752.5	879.7	5.00	4.65	4.65	NO
L0000274	0	0.36232E-03	474825.5	3825760.5	879.5	5.00	4.65	4.65	NO
L0000275	0	0.36232E-03	474831.5	3825768.5	879.4	5.00	4.65	4.65	NO
L0000276	0	0.36232E-03	474837.5	3825776.5	880.0	5.00	4.65	4.65	NO
L0000277	0	0.36232E-03	474843.6	3825784.4	880.3	5.00	4.65	4.65	NO
L0000278	0	0.36232E-03	474849.6	3825792.4	880.2	5.00	4.65	4.65	NO
L0000279	0	0.36232E-03	474855.7	3825800.4	879.7	5.00	4.65	4.65	NO
L0000280	0	0.36232E-03	474861.7	3825808.3	880.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000281	0	0.36232E-03	474867.7	3825816.3	880.4	5.00	4.65	4.65	NO	
L0000282	0	0.36232E-03	474873.8	3825824.3	880.1	5.00	4.65	4.65	NO	
L0000283	0	0.36232E-03	474879.8	3825832.3	879.5	5.00	4.65	4.65	NO	
L0000284	0	0.36232E-03	474885.8	3825840.2	879.2	5.00	4.65	4.65	NO	
L0000285	0	0.36232E-03	474891.9	3825848.2	879.6	5.00	4.65	4.65	NO	
L0000286	0	0.36232E-03	474897.9	3825856.2	880.1	5.00	4.65	4.65	NO	
L0000287	0	0.36232E-03	474904.0	3825864.1	880.5	5.00	4.65	4.65	NO	
L0000288	0	0.36232E-03	474910.0	3825872.1	880.9	5.00	4.65	4.65	NO	
L0000289	0	0.36232E-03	474916.0	3825880.1	881.5	5.00	4.65	4.65	NO	
L0000290	0	0.36232E-03	474922.1	3825888.1	881.9	5.00	4.65	4.65	NO	
L0000291	0	0.36232E-03	474928.1	3825896.0	882.4	5.00	4.65	4.65	NO	
L0000292	0	0.36232E-03	474934.1	3825904.0	882.6	5.00	4.65	4.65	NO	
L0000293	0	0.36232E-03	474940.2	3825912.0	882.4	5.00	4.65	4.65	NO	
L0000294	0	0.36232E-03	474946.2	3825920.0	882.0	5.00	4.65	4.65	NO	
L0000295	0	0.36232E-03	474952.2	3825927.9	882.3	5.00	4.65	4.65	NO	

L0000296	0	0.36232E-03	474958.3	3825935.9	883.2	5.00	4.65	4.65	NO
L0000297	0	0.36232E-03	474964.3	3825943.9	883.6	5.00	4.65	4.65	NO
L0000298	0	0.36232E-03	474970.4	3825951.8	884.1	5.00	4.65	4.65	NO
L0000299	0	0.36232E-03	474976.4	3825959.8	884.0	5.00	4.65	4.65	NO
L0000300	0	0.36232E-03	474982.4	3825967.8	883.1	5.00	4.65	4.65	NO
L0000301	0	0.36232E-03	474988.5	3825975.8	882.3	5.00	4.65	4.65	NO
L0000302	0	0.36232E-03	474994.5	3825983.7	882.0	5.00	4.65	4.65	NO
L0000303	0	0.36232E-03	475000.5	3825991.7	881.7	5.00	4.65	4.65	NO
L0000304	0	0.36232E-03	475006.6	3825999.7	881.6	5.00	4.65	4.65	NO
L0000305	0	0.36232E-03	475012.6	3826007.6	881.1	5.00	4.65	4.65	NO
L0000306	0	0.36232E-03	475018.7	3826015.6	880.4	5.00	4.65	4.65	NO
L0000307	0	0.36232E-03	475024.7	3826023.6	882.5	5.00	4.65	4.65	NO
L0000308	0	0.36232E-03	475030.7	3826031.6	883.1	5.00	4.65	4.65	NO
L0000309	0	0.36232E-03	475036.8	3826039.5	883.2	5.00	4.65	4.65	NO
L0000310	0	0.36232E-03	475042.8	3826047.5	883.0	5.00	4.65	4.65	NO
L0000311	0	0.36232E-03	475048.8	3826055.5	882.9	5.00	4.65	4.65	NO
L0000312	0	0.36232E-03	475054.9	3826063.4	883.0	5.00	4.65	4.65	NO
L0000313	0	0.36232E-03	475060.9	3826071.4	883.1	5.00	4.65	4.65	NO
L0000314	0	0.36232E-03	475067.0	3826079.4	883.5	5.00	4.65	4.65	NO
L0000315	0	0.36232E-03	475073.0	3826087.4	884.4	5.00	4.65	4.65	NO
L0000316	0	0.36232E-03	475079.0	3826095.3	885.3	5.00	4.65	4.65	NO
L0000317	0	0.36232E-03	475085.1	3826103.3	884.5	5.00	4.65	4.65	NO
L0000318	0	0.36232E-03	475091.6	3826110.7	884.3	5.00	4.65	4.65	NO
L0000319	0	0.36232E-03	475099.9	3826116.3	885.0	5.00	4.65	4.65	NO
L0000320	0	0.36232E-03	475108.2	3826121.9	884.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000321	0	0.36232E-03	475116.5	3826127.5	884.4	5.00	4.65	4.65	NO	
L0000322	0	0.36232E-03	475124.8	3826133.1	884.1	5.00	4.65	4.65	NO	
L0000323	0	0.36232E-03	475133.1	3826138.7	885.0	5.00	4.65	4.65	NO	
L0000324	0	0.36232E-03	475141.4	3826144.3	885.1	5.00	4.65	4.65	NO	
L0000325	0	0.36232E-03	475149.6	3826149.9	884.5	5.00	4.65	4.65	NO	
L0000326	0	0.36232E-03	475157.9	3826155.5	884.1	5.00	4.65	4.65	NO	
L0000327	0	0.36232E-03	475166.2	3826161.1	883.6	5.00	4.65	4.65	NO	
L0000328	0	0.36232E-03	475174.5	3826166.7	883.8	5.00	4.65	4.65	NO	
L0000329	0	0.36232E-03	475182.8	3826172.3	883.6	5.00	4.65	4.65	NO	
L0000330	0	0.36232E-03	475191.1	3826177.9	883.4	5.00	4.65	4.65	NO	
L0000331	0	0.36232E-03	475199.3	3826183.5	882.1	5.00	4.65	4.65	NO	
L0000332	0	0.36232E-03	475207.6	3826189.1	881.1	5.00	4.65	4.65	NO	
L0000333	0	0.36232E-03	475215.9	3826194.7	882.6	5.00	4.65	4.65	NO	
L0000334	0	0.36232E-03	475224.2	3826200.3	882.8	5.00	4.65	4.65	NO	
L0000335	0	0.36232E-03	475232.5	3826205.9	883.4	5.00	4.65	4.65	NO	

L0000336	0	0.36232E-03	475240.8	3826211.5	884.6	5.00	4.65	4.65	NO
L0000337	0	0.36232E-03	475249.0	3826217.1	885.8	5.00	4.65	4.65	NO
L0000338	0	0.36232E-03	475257.3	3826222.7	886.3	5.00	4.65	4.65	NO
L0000339	0	0.36232E-03	475265.6	3826228.3	887.8	5.00	4.65	4.65	NO
L0000340	0	0.36232E-03	475272.6	3826235.2	886.6	5.00	4.65	4.65	NO
L0000341	0	0.36232E-03	475277.4	3826243.9	884.9	5.00	4.65	4.65	NO
L0000342	0	0.36232E-03	475282.2	3826252.7	883.4	5.00	4.65	4.65	NO
L0000343	0	0.36232E-03	475287.1	3826261.4	881.0	5.00	4.65	4.65	NO
L0000344	0	0.36232E-03	475291.9	3826270.2	880.8	5.00	4.65	4.65	NO
L0000345	0	0.36232E-03	475296.7	3826278.9	882.2	5.00	4.65	4.65	NO
L0000346	0	0.36232E-03	475301.6	3826287.7	881.7	5.00	4.65	4.65	NO
L0000347	0	0.36232E-03	475306.4	3826296.4	881.7	5.00	4.65	4.65	NO
L0000348	0	0.36232E-03	475311.3	3826305.2	880.8	5.00	4.65	4.65	NO
L0000349	0	0.36232E-03	475316.1	3826313.9	880.4	5.00	4.65	4.65	NO
L0000350	0	0.36232E-03	475320.9	3826322.7	880.9	5.00	4.65	4.65	NO
L0000351	0	0.36232E-03	475325.8	3826331.4	881.3	5.00	4.65	4.65	NO
L0000352	0	0.36232E-03	475330.6	3826340.2	881.9	5.00	4.65	4.65	NO
L0000353	0	0.36232E-03	475335.5	3826348.9	883.5	5.00	4.65	4.65	NO
L0000354	0	0.36232E-03	475343.3	3826352.4	885.4	5.00	4.65	4.65	NO
L0000355	0	0.36232E-03	475353.3	3826352.2	886.8	5.00	4.65	4.65	NO
L0000356	0	0.36232E-03	475363.3	3826352.0	886.7	5.00	4.65	4.65	NO
L0000357	0	0.36232E-03	475373.3	3826351.7	885.7	5.00	4.65	4.65	NO
L0000358	0	0.36232E-03	475383.3	3826351.5	884.9	5.00	4.65	4.65	NO
L0000359	0	0.36232E-03	475393.3	3826351.3	886.1	5.00	4.65	4.65	NO
L0000360	0	0.36232E-03	475403.3	3826351.0	887.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000361	0	0.36232E-03	475413.3	3826350.8	887.0	5.00	4.65	4.65	NO	
L0000362	0	0.36232E-03	475423.3	3826350.5	886.3	5.00	4.65	4.65	NO	
L0000363	0	0.36232E-03	475433.3	3826350.3	885.8	5.00	4.65	4.65	NO	
L0000364	0	0.36232E-03	475443.3	3826350.1	886.1	5.00	4.65	4.65	NO	
L0000365	0	0.36232E-03	475453.3	3826349.8	886.5	5.00	4.65	4.65	NO	
L0000366	0	0.36232E-03	475463.3	3826349.6	886.3	5.00	4.65	4.65	NO	
L0000367	0	0.36232E-03	475473.3	3826349.4	886.6	5.00	4.65	4.65	NO	
L0000368	0	0.36232E-03	475483.3	3826349.1	887.0	5.00	4.65	4.65	NO	
L0000369	0	0.36232E-03	475493.3	3826348.9	887.5	5.00	4.65	4.65	NO	
L0000370	0	0.36232E-03	475503.3	3826348.7	888.1	5.00	4.65	4.65	NO	
L0000371	0	0.36232E-03	475513.3	3826348.4	888.9	5.00	4.65	4.65	NO	
L0000372	0	0.36232E-03	475523.3	3826348.2	889.4	5.00	4.65	4.65	NO	
L0000373	0	0.36232E-03	475533.2	3826347.9	889.9	5.00	4.65	4.65	NO	
L0000374	0	0.36232E-03	475543.2	3826347.7	890.6	5.00	4.65	4.65	NO	
L0000375	0	0.36232E-03	475553.2	3826347.5	891.1	5.00	4.65	4.65	NO	

L0000376	0	0.36232E-03	475563.2	3826347.2	891.4	5.00	4.65	4.65	NO
L0000377	0	0.36232E-03	475573.2	3826347.0	892.2	5.00	4.65	4.65	NO
L0000378	0	0.36232E-03	475583.2	3826346.8	892.6	5.00	4.65	4.65	NO
L0000379	0	0.36232E-03	475593.2	3826346.5	892.7	5.00	4.65	4.65	NO
L0000380	0	0.36232E-03	475603.2	3826346.3	893.2	5.00	4.65	4.65	NO
L0000381	0	0.36232E-03	475613.2	3826346.0	894.1	5.00	4.65	4.65	NO
L0000382	0	0.36232E-03	475623.2	3826345.8	894.8	5.00	4.65	4.65	NO
L0000383	0	0.36232E-03	475633.2	3826345.6	895.4	5.00	4.65	4.65	NO
L0000384	0	0.36232E-03	475643.2	3826345.3	896.1	5.00	4.65	4.65	NO
L0000385	0	0.36232E-03	475653.2	3826345.1	896.8	5.00	4.65	4.65	NO
L0000386	0	0.36232E-03	475663.2	3826344.9	897.4	5.00	4.65	4.65	NO
L0000387	0	0.36232E-03	475673.2	3826344.6	897.7	5.00	4.65	4.65	NO
L0000388	0	0.36232E-03	475683.2	3826344.4	898.3	5.00	4.65	4.65	NO
L0000389	0	0.36232E-03	475693.2	3826344.1	898.8	5.00	4.65	4.65	NO
L0000390	0	0.36232E-03	475703.2	3826343.9	899.3	5.00	4.65	4.65	NO
L0000391	0	0.36232E-03	475713.2	3826343.7	899.9	5.00	4.65	4.65	NO
L0000392	0	0.36232E-03	475723.2	3826343.4	900.6	5.00	4.65	4.65	NO
L0000393	0	0.36232E-03	475733.2	3826343.2	900.6	5.00	4.65	4.65	NO
L0000394	0	0.36232E-03	475743.2	3826343.0	900.4	5.00	4.65	4.65	NO
L0000395	0	0.36232E-03	475753.2	3826342.7	900.3	5.00	4.65	4.65	NO
L0000396	0	0.36232E-03	475763.2	3826342.5	900.7	5.00	4.65	4.65	NO
L0000397	0	0.36232E-03	475773.2	3826342.3	901.3	5.00	4.65	4.65	NO
L0000398	0	0.36232E-03	475783.2	3826342.0	901.7	5.00	4.65	4.65	NO
L0000399	0	0.36232E-03	475793.2	3826341.8	901.9	5.00	4.65	4.65	NO
L0000400	0	0.36232E-03	475803.2	3826341.5	901.7	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000401	0	0.36232E-03	475813.2	3826341.3	902.0	5.00	4.65	4.65	NO	
L0000402	0	0.36232E-03	475823.2	3826341.1	902.3	5.00	4.65	4.65	NO	
L0000403	0	0.36232E-03	475833.2	3826340.8	902.9	5.00	4.65	4.65	NO	
L0000404	0	0.36232E-03	475843.2	3826340.6	902.8	5.00	4.65	4.65	NO	
L0000405	0	0.36232E-03	475853.2	3826340.4	902.9	5.00	4.65	4.65	NO	
L0000406	0	0.36232E-03	475863.2	3826340.1	903.2	5.00	4.65	4.65	NO	
L0000407	0	0.36232E-03	475873.2	3826339.9	903.5	5.00	4.65	4.65	NO	
L0000408	0	0.36232E-03	475876.9	3826333.7	903.8	5.00	4.65	4.65	NO	
L0000409	0	0.36232E-03	475876.8	3826323.7	904.1	5.00	4.65	4.65	NO	
L0000410	0	0.36232E-03	475876.7	3826313.7	904.4	5.00	4.65	4.65	NO	
L0000411	0	0.36232E-03	475876.6	3826303.7	904.7	5.00	4.65	4.65	NO	
L0000412	0	0.36232E-03	475876.4	3826293.7	905.1	5.00	4.65	4.65	NO	
L0000413	0	0.36232E-03	475876.3	3826283.7	905.3	5.00	4.65	4.65	NO	
L0000414	0	0.36232E-03	475876.2	3826273.7	905.4	5.00	4.65	4.65	NO	
L0000415	0	0.36232E-03	475876.0	3826263.7	905.6	5.00	4.65	4.65	NO	

L0000416	0	0.36232E-03	475875.9	3826253.7	905.7	5.00	4.65	4.65	NO
L0000417	0	0.36232E-03	475875.8	3826243.7	905.9	5.00	4.65	4.65	NO
L0000418	0	0.36232E-03	475875.6	3826233.7	906.3	5.00	4.65	4.65	NO
L0000419	0	0.36232E-03	475875.5	3826223.7	906.6	5.00	4.65	4.65	NO
L0000420	0	0.36232E-03	475875.4	3826213.7	906.9	5.00	4.65	4.65	NO
L0000421	0	0.36232E-03	475875.3	3826203.7	906.8	5.00	4.65	4.65	NO
L0000422	0	0.36232E-03	475875.1	3826193.7	906.9	5.00	4.65	4.65	NO
L0000423	0	0.36232E-03	475875.0	3826183.7	907.2	5.00	4.65	4.65	NO
L0000424	0	0.36232E-03	475874.9	3826173.7	907.4	5.00	4.65	4.65	NO
L0000425	0	0.36232E-03	475874.7	3826163.7	906.9	5.00	4.65	4.65	NO
L0000426	0	0.36232E-03	475874.6	3826153.7	906.3	5.00	4.65	4.65	NO
L0000427	0	0.36232E-03	475874.5	3826143.7	905.9	5.00	4.65	4.65	NO
L0000428	0	0.36232E-03	475874.3	3826133.7	906.3	5.00	4.65	4.65	NO
L0000429	0	0.36232E-03	475874.2	3826123.7	906.7	5.00	4.65	4.65	NO
L0000430	0	0.36232E-03	475874.1	3826113.7	907.2	5.00	4.65	4.65	NO
L0000431	0	0.36232E-03	475874.0	3826103.7	907.5	5.00	4.65	4.65	NO
L0000432	0	0.36232E-03	475873.8	3826093.7	907.2	5.00	4.65	4.65	NO
L0000433	0	0.36232E-03	475873.7	3826083.7	906.5	5.00	4.65	4.65	NO
L0000434	0	0.36232E-03	475873.6	3826073.7	906.1	5.00	4.65	4.65	NO
L0000435	0	0.36232E-03	475873.4	3826063.7	906.6	5.00	4.65	4.65	NO
L0000436	0	0.36232E-03	475873.3	3826053.7	907.4	5.00	4.65	4.65	NO
L0000437	0	0.36232E-03	475873.2	3826043.7	908.0	5.00	4.65	4.65	NO
L0000438	0	0.36232E-03	475873.0	3826033.7	907.7	5.00	4.65	4.65	NO
L0000439	0	0.36232E-03	475873.0	3826023.7	906.9	5.00	4.65	4.65	NO
L0000440	0	0.36232E-03	475873.0	3826013.7	905.7	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000441	0	0.36232E-03	475873.0	3826003.7	905.1	5.00	4.65	4.65	NO	
L0000442	0	0.36232E-03	475873.0	3825993.7	905.5	5.00	4.65	4.65	NO	
L0000443	0	0.36232E-03	475873.0	3825983.7	905.9	5.00	4.65	4.65	NO	
L0000444	0	0.36232E-03	475873.0	3825973.7	908.5	5.00	4.65	4.65	NO	
L0000445	0	0.36232E-03	475873.0	3825963.7	911.7	5.00	4.65	4.65	NO	
L0000446	0	0.36232E-03	475873.0	3825953.7	915.0	5.00	4.65	4.65	NO	
L0000447	0	0.36232E-03	475873.0	3825943.7	916.0	5.00	4.65	4.65	NO	
L0000448	0	0.36232E-03	475873.0	3825933.7	915.0	5.00	4.65	4.65	NO	
L0000449	0	0.36232E-03	475873.0	3825923.7	914.5	5.00	4.65	4.65	NO	
L0000450	0	0.36232E-03	475873.0	3825913.7	914.7	5.00	4.65	4.65	NO	
L0000451	0	0.36232E-03	475873.0	3825903.7	915.2	5.00	4.65	4.65	NO	
L0000452	0	0.36232E-03	475873.0	3825893.7	915.9	5.00	4.65	4.65	NO	
L0000453	0	0.36232E-03	475873.0	3825883.7	915.6	5.00	4.65	4.65	NO	
L0000454	0	0.36232E-03	475873.0	3825873.7	914.8	5.00	4.65	4.65	NO	
L0000455	0	0.36232E-03	475873.0	3825863.7	914.7	5.00	4.65	4.65	NO	

L0000456	0	0.36232E-03	475869.8	3825857.0	914.6	5.00	4.65	4.65	NO
L0000457	0	0.36232E-03	475859.8	3825857.2	914.4	5.00	4.65	4.65	NO
L0000458	0	0.36232E-03	475849.8	3825857.4	914.3	5.00	4.65	4.65	NO
L0000459	0	0.36232E-03	475839.8	3825857.6	914.2	5.00	4.65	4.65	NO
L0000460	0	0.36232E-03	475829.8	3825857.8	913.6	5.00	4.65	4.65	NO
L0000461	0	0.36232E-03	475819.8	3825858.0	913.0	5.00	4.65	4.65	NO
L0000462	0	0.36232E-03	475809.8	3825858.3	912.4	5.00	4.65	4.65	NO
L0000463	0	0.36232E-03	475799.8	3825858.5	912.0	5.00	4.65	4.65	NO
L0000464	0	0.36232E-03	475789.8	3825858.7	911.6	5.00	4.65	4.65	NO
L0000465	0	0.36232E-03	475779.8	3825858.9	911.2	5.00	4.65	4.65	NO
L0000466	0	0.36232E-03	475769.8	3825859.1	911.2	5.00	4.65	4.65	NO
L0000467	0	0.36232E-03	475759.8	3825859.3	911.0	5.00	4.65	4.65	NO
L0000468	0	0.36232E-03	475749.8	3825859.5	910.8	5.00	4.65	4.65	NO
L0000469	0	0.36232E-03	475739.8	3825859.8	910.5	5.00	4.65	4.65	NO
L0000470	0	0.36232E-03	475729.8	3825860.0	910.3	5.00	4.65	4.65	NO
L0000471	0	0.36232E-03	475719.8	3825860.2	909.8	5.00	4.65	4.65	NO
L0000472	0	0.36232E-03	475709.8	3825860.4	909.4	5.00	4.65	4.65	NO
L0000473	0	0.36232E-03	475699.8	3825860.6	909.1	5.00	4.65	4.65	NO
L0000474	0	0.36232E-03	475689.8	3825860.8	908.7	5.00	4.65	4.65	NO
L0000475	0	0.36232E-03	475679.8	3825861.0	908.6	5.00	4.65	4.65	NO
L0000476	0	0.36232E-03	475678.0	3825852.8	908.6	5.00	4.65	4.65	NO
L0000477	0	0.36232E-03	475677.9	3825842.8	908.8	5.00	4.65	4.65	NO
L0000478	0	0.36232E-03	475677.7	3825832.8	908.9	5.00	4.65	4.65	NO
L0000479	0	0.36232E-03	475677.5	3825822.8	909.1	5.00	4.65	4.65	NO
L0000480	0	0.36232E-03	475677.4	3825812.8	909.5	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000481	0	0.36232E-03	475677.2	3825802.8	909.7	5.00	4.65	4.65	NO	
L0000482	0	0.36232E-03	475677.1	3825792.8	909.9	5.00	4.65	4.65	NO	
L0000483	0	0.36232E-03	475676.9	3825782.8	910.2	5.00	4.65	4.65	NO	
L0000484	0	0.36232E-03	475676.8	3825772.8	910.5	5.00	4.65	4.65	NO	
L0000485	0	0.36232E-03	475676.6	3825762.8	910.8	5.00	4.65	4.65	NO	
L0000486	0	0.36232E-03	475676.4	3825752.8	911.1	5.00	4.65	4.65	NO	
L0000487	0	0.36232E-03	475676.3	3825742.8	911.4	5.00	4.65	4.65	NO	
L0000488	0	0.36232E-03	475676.1	3825732.8	911.9	5.00	4.65	4.65	NO	
L0000489	0	0.36232E-03	475676.0	3825722.8	912.1	5.00	4.65	4.65	NO	
L0000490	0	0.36232E-03	475675.8	3825712.8	912.5	5.00	4.65	4.65	NO	
L0000491	0	0.36232E-03	475675.7	3825702.8	913.2	5.00	4.65	4.65	NO	
L0000492	0	0.36232E-03	475675.5	3825692.8	916.4	5.00	4.65	4.65	NO	
L0000493	0	0.36232E-03	475675.3	3825682.8	922.1	5.00	4.65	4.65	NO	
L0000494	0	0.36232E-03	475675.2	3825672.8	921.8	5.00	4.65	4.65	NO	
L0000495	0	0.36232E-03	475675.0	3825662.8	921.8	5.00	4.65	4.65	NO	

L0000496	0	0.36232E-03	475674.9	3825652.8	922.2	5.00	4.65	4.65	NO
L0000497	0	0.36232E-03	475674.7	3825642.8	922.4	5.00	4.65	4.65	NO
L0000498	0	0.36232E-03	475674.6	3825632.8	922.5	5.00	4.65	4.65	NO
L0000499	0	0.36232E-03	475674.4	3825622.8	922.5	5.00	4.65	4.65	NO
L0000500	0	0.36232E-03	475666.5	3825620.7	922.3	5.00	4.65	4.65	NO
L0000501	0	0.36232E-03	475656.5	3825620.8	922.1	5.00	4.65	4.65	NO
L0000502	0	0.36232E-03	475646.5	3825620.8	921.1	5.00	4.65	4.65	NO
L0000503	0	0.36232E-03	475636.5	3825620.8	914.9	5.00	4.65	4.65	NO
L0000504	0	0.36232E-03	475626.5	3825620.8	913.4	5.00	4.65	4.65	NO
L0000505	0	0.36232E-03	475616.5	3825620.9	913.1	5.00	4.65	4.65	NO
L0000506	0	0.36232E-03	475606.5	3825620.9	912.6	5.00	4.65	4.65	NO
L0000507	0	0.36232E-03	475596.5	3825620.9	912.4	5.00	4.65	4.65	NO
L0000508	0	0.36232E-03	475586.5	3825620.9	912.0	5.00	4.65	4.65	NO
L0000509	0	0.36232E-03	475576.5	3825621.0	911.5	5.00	4.65	4.65	NO
L0000510	0	0.36232E-03	475566.5	3825621.0	911.1	5.00	4.65	4.65	NO
L0000511	0	0.36232E-03	475556.5	3825621.0	910.7	5.00	4.65	4.65	NO
L0000512	0	0.36232E-03	475546.5	3825621.1	910.4	5.00	4.65	4.65	NO
L0000513	0	0.36232E-03	475536.5	3825621.1	909.9	5.00	4.65	4.65	NO
L0000514	0	0.36232E-03	475526.5	3825621.1	909.5	5.00	4.65	4.65	NO
L0000515	0	0.36232E-03	475516.5	3825621.1	909.1	5.00	4.65	4.65	NO
L0000516	0	0.36232E-03	475506.5	3825621.2	908.6	5.00	4.65	4.65	NO
L0000517	0	0.36232E-03	475496.5	3825621.2	908.1	5.00	4.65	4.65	NO
L0000518	0	0.36232E-03	475486.5	3825621.2	907.8	5.00	4.65	4.65	NO
L0000519	0	0.36232E-03	475476.5	3825621.2	907.3	5.00	4.65	4.65	NO
L0000520	0	0.36232E-03	475466.5	3825621.3	906.9	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000521	0	0.36232E-03	475456.5	3825621.3	906.5	5.00	4.65	4.65	NO	
L0000522	0	0.36232E-03	475446.5	3825621.3	906.2	5.00	4.65	4.65	NO	
L0000523	0	0.36232E-03	475436.5	3825621.4	905.8	5.00	4.65	4.65	NO	
L0000524	0	0.36232E-03	475426.5	3825621.4	905.3	5.00	4.65	4.65	NO	
L0000525	0	0.36232E-03	475416.5	3825621.4	904.8	5.00	4.65	4.65	NO	
L0000526	0	0.36232E-03	475406.5	3825621.4	904.4	5.00	4.65	4.65	NO	
L0000527	0	0.36232E-03	475396.5	3825621.5	904.1	5.00	4.65	4.65	NO	
L0000528	0	0.36232E-03	475386.5	3825621.5	903.8	5.00	4.65	4.65	NO	
L0000529	0	0.36232E-03	475376.5	3825621.5	903.3	5.00	4.65	4.65	NO	
L0000530	0	0.36232E-03	475366.5	3825621.5	902.8	5.00	4.65	4.65	NO	
L0000531	0	0.36232E-03	475356.5	3825621.6	902.3	5.00	4.65	4.65	NO	
L0000532	0	0.36232E-03	475346.5	3825621.6	902.0	5.00	4.65	4.65	NO	
L0000533	0	0.36232E-03	475336.5	3825621.6	901.6	5.00	4.65	4.65	NO	
L0000534	0	0.36232E-03	475326.5	3825621.6	901.0	5.00	4.65	4.65	NO	
L0000535	0	0.36232E-03	475316.5	3825621.7	900.4	5.00	4.65	4.65	NO	

L0000536	0	0.36232E-03	475306.5	3825621.7	900.0	5.00	4.65	4.65	NO
L0000537	0	0.36232E-03	475296.5	3825621.7	900.0	5.00	4.65	4.65	NO
L0000538	0	0.36232E-03	475286.5	3825621.8	899.6	5.00	4.65	4.65	NO
L0000539	0	0.36232E-03	475276.5	3825621.8	899.4	5.00	4.65	4.65	NO
L0000540	0	0.36232E-03	475266.5	3825621.8	898.8	5.00	4.65	4.65	NO
L0000541	0	0.36232E-03	475256.5	3825621.8	898.3	5.00	4.65	4.65	NO
L0000542	0	0.36232E-03	475246.5	3825621.9	897.8	5.00	4.65	4.65	NO
L0000543	0	0.36232E-03	475236.5	3825621.9	897.7	5.00	4.65	4.65	NO
L0000544	0	0.36232E-03	475226.5	3825621.9	897.3	5.00	4.65	4.65	NO
L0000545	0	0.36232E-03	475216.5	3825621.9	896.7	5.00	4.65	4.65	NO
L0000546	0	0.36232E-03	475206.5	3825622.0	896.3	5.00	4.65	4.65	NO
L0000547	0	0.36232E-03	475196.5	3825622.0	895.9	5.00	4.65	4.65	NO
L0000548	0	0.36232E-03	475186.5	3825622.0	895.4	5.00	4.65	4.65	NO
L0000549	0	0.36232E-03	475176.5	3825622.0	895.0	5.00	4.65	4.65	NO
L0000550	0	0.36232E-03	475166.5	3825622.1	894.5	5.00	4.65	4.65	NO
L0000551	0	0.36232E-03	475156.5	3825622.1	894.0	5.00	4.65	4.65	NO
L0000552	0	0.36232E-03	475146.5	3825622.1	893.5	5.00	4.65	4.65	NO
L0000553	0	0.36232E-03	475136.5	3825622.2	893.6	5.00	4.65	4.65	NO
L0000554	0	0.36232E-03	475126.5	3825622.2	893.1	5.00	4.65	4.65	NO
L0000555	0	0.36232E-03	475116.5	3825622.2	892.7	5.00	4.65	4.65	NO
L0000556	0	0.36232E-03	475106.5	3825622.2	892.5	5.00	4.65	4.65	NO
L0000557	0	0.36232E-03	475096.5	3825622.3	892.3	5.00	4.65	4.65	NO
L0000558	0	0.36232E-03	475086.5	3825622.3	892.5	5.00	4.65	4.65	NO
L0000559	0	0.36232E-03	475076.5	3825622.3	892.5	5.00	4.65	4.65	NO
L0000560	0	0.36232E-03	475066.5	3825622.3	892.1	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000561	0	0.36232E-03	475056.5	3825622.4	891.3	5.00	4.65	4.65	NO	
L0000562	0	0.36232E-03	475046.5	3825622.4	890.5	5.00	4.65	4.65	NO	
L0000563	0	0.36232E-03	475036.5	3825622.4	889.8	5.00	4.65	4.65	NO	
L0000564	0	0.36232E-03	475026.5	3825622.5	889.4	5.00	4.65	4.65	NO	
L0000565	0	0.36232E-03	475016.5	3825622.5	889.2	5.00	4.65	4.65	NO	
L0000566	0	0.36232E-03	475006.5	3825622.5	889.0	5.00	4.65	4.65	NO	
L0000567	0	0.36232E-03	474996.5	3825622.5	888.8	5.00	4.65	4.65	NO	
L0000568	0	0.36232E-03	474986.5	3825622.6	888.6	5.00	4.65	4.65	NO	
L0000569	0	0.36232E-03	474976.5	3825622.6	888.3	5.00	4.65	4.65	NO	
L0000570	0	0.36232E-03	474966.5	3825622.6	887.9	5.00	4.65	4.65	NO	
L0000571	0	0.36232E-03	474956.5	3825622.6	887.5	5.00	4.65	4.65	NO	
L0000572	0	0.36232E-03	474946.5	3825622.7	887.1	5.00	4.65	4.65	NO	
L0000573	0	0.36232E-03	474936.5	3825622.7	886.8	5.00	4.65	4.65	NO	
L0000574	0	0.36232E-03	474926.5	3825622.7	886.1	5.00	4.65	4.65	NO	
L0000575	0	0.36232E-03	474916.5	3825622.7	885.5	5.00	4.65	4.65	NO	

L0000576	0	0.36232E-03	474906.5	3825622.8	885.0	5.00	4.65	4.65	NO
L0000577	0	0.36232E-03	474896.5	3825622.8	884.7	5.00	4.65	4.65	NO
L0000578	0	0.36232E-03	474886.5	3825622.8	884.3	5.00	4.65	4.65	NO
L0000579	0	0.36232E-03	474876.5	3825622.9	883.9	5.00	4.65	4.65	NO
L0000580	0	0.36232E-03	474866.5	3825622.9	883.7	5.00	4.65	4.65	NO
L0000581	0	0.36232E-03	474856.5	3825622.9	884.3	5.00	4.65	4.65	NO
L0000582	0	0.36232E-03	474846.5	3825622.9	883.8	5.00	4.65	4.65	NO
L0000583	0	0.36232E-03	474836.5	3825623.0	883.3	5.00	4.65	4.65	NO
L0000584	0	0.36232E-03	474826.5	3825623.0	883.1	5.00	4.65	4.65	NO
L0000585	0	0.36232E-03	474816.5	3825623.0	883.6	5.00	4.65	4.65	NO
L0000586	0	0.36232E-03	474806.5	3825623.0	883.4	5.00	4.65	4.65	NO
L0000587	0	0.36232E-03	474796.5	3825623.1	883.0	5.00	4.65	4.65	NO
L0000588	0	0.36232E-03	474786.5	3825623.1	883.1	5.00	4.65	4.65	NO
L0000589	0	0.36232E-03	474776.5	3825623.1	883.0	5.00	4.65	4.65	NO
L0000590	0	0.36232E-03	474766.5	3825623.2	883.0	5.00	4.65	4.65	NO
L0000591	0	0.36232E-03	474756.5	3825623.2	882.6	5.00	4.65	4.65	NO
L0000592	0	0.36232E-03	474746.5	3825623.2	881.4	5.00	4.65	4.65	NO
L0000593	0	0.36232E-03	474743.9	3825626.8	881.3	5.00	4.65	4.65	NO
L0000594	0	0.36232E-03	474750.0	3825634.7	882.3	5.00	4.65	4.65	NO
L0000595	0	0.36232E-03	474756.2	3825642.5	881.9	5.00	4.65	4.65	NO
L0000596	0	0.36232E-03	474762.4	3825650.4	881.0	5.00	4.65	4.65	NO
L0000597	0	0.36232E-03	474768.6	3825658.3	881.1	5.00	4.65	4.65	NO
L0000598	0	0.36232E-03	474774.7	3825666.1	880.8	5.00	4.65	4.65	NO
L0000599	0	0.36232E-03	474780.9	3825674.0	880.3	5.00	4.65	4.65	NO
L0000600	0	0.36232E-03	474787.1	3825681.9	880.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000601	0	0.36232E-03	474793.3	3825689.7	880.2	5.00	4.65	4.65	NO	
L0000602	0	0.36232E-03	474799.5	3825697.6	880.0	5.00	4.65	4.65	NO	
L0000603	0	0.36232E-03	474805.6	3825705.5	879.9	5.00	4.65	4.65	NO	
L0000604	0	0.36232E-03	474811.8	3825713.3	879.7	5.00	4.65	4.65	NO	
L0000605	0	0.36232E-03	474818.0	3825721.2	880.5	5.00	4.65	4.65	NO	
L0000606	0	0.36232E-03	474824.2	3825729.0	880.9	5.00	4.65	4.65	NO	
L0000607	0	0.36232E-03	474830.3	3825736.9	880.1	5.00	4.65	4.65	NO	
L0000608	0	0.36232E-03	474836.5	3825744.8	880.1	5.00	4.65	4.65	NO	
L0000609	0	0.36232E-03	474842.7	3825752.6	880.1	5.00	4.65	4.65	NO	
L0000610	0	0.36232E-03	474848.9	3825760.5	880.0	5.00	4.65	4.65	NO	
L0000611	0	0.36232E-03	474855.1	3825768.4	880.6	5.00	4.65	4.65	NO	
L0000612	0	0.36232E-03	474861.2	3825776.2	881.2	5.00	4.65	4.65	NO	
L0000613	0	0.36232E-03	474867.4	3825784.1	880.9	5.00	4.65	4.65	NO	
L0000614	0	0.36232E-03	474873.6	3825792.0	880.8	5.00	4.65	4.65	NO	
L0000615	0	0.36232E-03	474879.8	3825799.8	881.4	5.00	4.65	4.65	NO	

L0000616	0	0.36232E-03	474885.9	3825807.7	881.1	5.00	4.65	4.65	NO
L0000617	0	0.36232E-03	474892.1	3825815.5	880.4	5.00	4.65	4.65	NO
L0000618	0	0.36232E-03	474898.3	3825823.4	880.3	5.00	4.65	4.65	NO
L0000619	0	0.36232E-03	474904.5	3825831.3	880.8	5.00	4.65	4.65	NO
L0000620	0	0.36232E-03	474910.7	3825839.1	880.6	5.00	4.65	4.65	NO
L0000621	0	0.36232E-03	474916.8	3825847.0	880.8	5.00	4.65	4.65	NO
L0000622	0	0.36232E-03	474923.0	3825854.9	881.0	5.00	4.65	4.65	NO
L0000623	0	0.36232E-03	474929.2	3825862.7	881.5	5.00	4.65	4.65	NO
L0000624	0	0.36232E-03	474935.4	3825870.6	881.6	5.00	4.65	4.65	NO
L0000625	0	0.36232E-03	474941.5	3825878.5	882.1	5.00	4.65	4.65	NO
L0000626	0	0.36232E-03	474947.7	3825886.3	883.0	5.00	4.65	4.65	NO
L0000627	0	0.36232E-03	474953.9	3825894.2	883.8	5.00	4.65	4.65	NO
L0000628	0	0.36232E-03	474960.1	3825902.0	883.9	5.00	4.65	4.65	NO
L0000629	0	0.36232E-03	474966.3	3825909.9	883.0	5.00	4.65	4.65	NO
L0000630	0	0.36232E-03	474972.4	3825917.8	883.2	5.00	4.65	4.65	NO
L0000631	0	0.36232E-03	474978.6	3825925.6	883.8	5.00	4.65	4.65	NO
L0000632	0	0.36232E-03	474984.8	3825933.5	884.8	5.00	4.65	4.65	NO
L0000633	0	0.36232E-03	474991.0	3825941.4	885.0	5.00	4.65	4.65	NO
L0000634	0	0.36232E-03	474997.1	3825949.2	884.3	5.00	4.65	4.65	NO
L0000635	0	0.36232E-03	475003.3	3825957.1	883.5	5.00	4.65	4.65	NO
L0000636	0	0.36232E-03	475009.5	3825965.0	883.0	5.00	4.65	4.65	NO
L0000637	0	0.36232E-03	475015.7	3825972.8	882.9	5.00	4.65	4.65	NO
L0000638	0	0.36232E-03	475021.8	3825980.7	882.5	5.00	4.65	4.65	NO
L0000639	0	0.36232E-03	475028.0	3825988.5	882.6	5.00	4.65	4.65	NO
L0000640	0	0.36232E-03	475034.2	3825996.4	882.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000641	0	0.36232E-03	475040.4	3826004.3	883.0	5.00	4.65	4.65	NO	
L0000642	0	0.36232E-03	475046.6	3826012.1	883.4	5.00	4.65	4.65	NO	
L0000643	0	0.36232E-03	475052.7	3826020.0	884.0	5.00	4.65	4.65	NO	
L0000644	0	0.36232E-03	475058.9	3826027.9	884.4	5.00	4.65	4.65	NO	
L0000645	0	0.36232E-03	475065.1	3826035.7	884.0	5.00	4.65	4.65	NO	
L0000646	0	0.36232E-03	475071.3	3826043.6	883.9	5.00	4.65	4.65	NO	
L0000647	0	0.36232E-03	475077.4	3826051.5	883.9	5.00	4.65	4.65	NO	
L0000648	0	0.36232E-03	475083.6	3826059.3	884.0	5.00	4.65	4.65	NO	
L0000649	0	0.36232E-03	475089.8	3826067.2	884.6	5.00	4.65	4.65	NO	
L0000650	0	0.36232E-03	475096.0	3826075.0	884.8	5.00	4.65	4.65	NO	
L0000651	0	0.36232E-03	475102.2	3826082.9	885.4	5.00	4.65	4.65	NO	
L0000652	0	0.36232E-03	475109.3	3826089.7	886.2	5.00	4.65	4.65	NO	
L0000653	0	0.36232E-03	475117.6	3826095.2	887.4	5.00	4.65	4.65	NO	
L0000654	0	0.36232E-03	475126.0	3826100.7	887.3	5.00	4.65	4.65	NO	
L0000655	0	0.36232E-03	475134.4	3826106.2	886.2	5.00	4.65	4.65	NO	

L0000656	0	0.36232E-03	475142.7	3826111.7	886.3	5.00	4.65	4.65	NO
L0000657	0	0.36232E-03	475151.1	3826117.2	887.3	5.00	4.65	4.65	NO
L0000658	0	0.36232E-03	475159.4	3826122.7	886.4	5.00	4.65	4.65	NO
L0000659	0	0.36232E-03	475167.8	3826128.1	886.0	5.00	4.65	4.65	NO
L0000660	0	0.36232E-03	475176.2	3826133.6	886.3	5.00	4.65	4.65	NO
L0000661	0	0.36232E-03	475184.5	3826139.1	885.9	5.00	4.65	4.65	NO
L0000662	0	0.36232E-03	475192.9	3826144.6	885.0	5.00	4.65	4.65	NO
L0000663	0	0.36232E-03	475201.3	3826150.1	884.3	5.00	4.65	4.65	NO
L0000664	0	0.36232E-03	475209.6	3826155.6	884.6	5.00	4.65	4.65	NO
L0000665	0	0.36232E-03	475218.0	3826161.0	885.0	5.00	4.65	4.65	NO
L0000666	0	0.36232E-03	475226.3	3826166.5	884.6	5.00	4.65	4.65	NO
L0000667	0	0.36232E-03	475234.7	3826172.0	884.9	5.00	4.65	4.65	NO
L0000668	0	0.36232E-03	475243.1	3826177.5	886.1	5.00	4.65	4.65	NO
L0000669	0	0.36232E-03	475251.4	3826183.0	885.6	5.00	4.65	4.65	NO
L0000670	0	0.36232E-03	475259.8	3826188.5	885.8	5.00	4.65	4.65	NO
L0000671	0	0.36232E-03	475268.1	3826194.0	887.6	5.00	4.65	4.65	NO
L0000672	0	0.36232E-03	475276.5	3826199.4	889.0	5.00	4.65	4.65	NO
L0000673	0	0.36232E-03	475284.9	3826204.9	889.4	5.00	4.65	4.65	NO
L0000674	0	0.36232E-03	475290.6	3826212.7	888.3	5.00	4.65	4.65	NO
L0000675	0	0.36232E-03	475294.9	3826221.7	886.8	5.00	4.65	4.65	NO
L0000676	0	0.36232E-03	475299.1	3826230.8	886.5	5.00	4.65	4.65	NO
L0000677	0	0.36232E-03	475303.3	3826239.8	885.9	5.00	4.65	4.65	NO
L0000678	0	0.36232E-03	475307.6	3826248.9	882.4	5.00	4.65	4.65	NO
L0000679	0	0.36232E-03	475311.8	3826258.0	883.6	5.00	4.65	4.65	NO
L0000680	0	0.36232E-03	475316.0	3826267.0	884.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000681	0	0.36232E-03	475320.3	3826276.1	883.4	5.00	4.65	4.65	NO	
L0000682	0	0.36232E-03	475324.5	3826285.1	882.1	5.00	4.65	4.65	NO	
L0000683	0	0.36232E-03	475328.7	3826294.2	882.2	5.00	4.65	4.65	NO	
L0000684	0	0.36232E-03	475333.0	3826303.3	882.1	5.00	4.65	4.65	NO	
L0000685	0	0.36232E-03	475337.2	3826312.3	882.2	5.00	4.65	4.65	NO	
L0000686	0	0.36232E-03	475341.4	3826321.4	882.7	5.00	4.65	4.65	NO	
L0000687	0	0.36232E-03	475345.7	3826330.4	883.9	5.00	4.65	4.65	NO	
L0000688	0	0.36232E-03	475353.3	3826334.0	885.6	5.00	4.65	4.65	NO	
L0000689	0	0.36232E-03	475363.3	3826333.8	887.2	5.00	4.65	4.65	NO	
L0000690	0	0.36232E-03	475373.3	3826333.7	887.3	5.00	4.65	4.65	NO	
L0000691	0	0.36232E-03	475383.3	3826333.5	886.4	5.00	4.65	4.65	NO	
L0000692	0	0.36232E-03	475393.3	3826333.3	885.9	5.00	4.65	4.65	NO	
L0000693	0	0.36232E-03	475403.3	3826333.2	887.4	5.00	4.65	4.65	NO	
L0000694	0	0.36232E-03	475413.3	3826333.0	888.2	5.00	4.65	4.65	NO	
L0000695	0	0.36232E-03	475423.3	3826332.8	888.1	5.00	4.65	4.65	NO	

L0000696	0	0.36232E-03	475433.3	3826332.7	888.0	5.00	4.65	4.65	NO
L0000697	0	0.36232E-03	475443.3	3826332.5	887.1	5.00	4.65	4.65	NO
L0000698	0	0.36232E-03	475453.3	3826332.3	888.0	5.00	4.65	4.65	NO
L0000699	0	0.36232E-03	475463.3	3826332.1	887.9	5.00	4.65	4.65	NO
L0000700	0	0.36232E-03	475473.3	3826332.0	887.3	5.00	4.65	4.65	NO
L0000701	0	0.36232E-03	475483.3	3826331.8	887.7	5.00	4.65	4.65	NO
L0000702	0	0.36232E-03	475493.3	3826331.6	887.7	5.00	4.65	4.65	NO
L0000703	0	0.36232E-03	475503.3	3826331.5	888.0	5.00	4.65	4.65	NO
L0000704	0	0.36232E-03	475513.3	3826331.3	889.5	5.00	4.65	4.65	NO
L0000705	0	0.36232E-03	475523.3	3826331.1	890.7	5.00	4.65	4.65	NO
L0000706	0	0.36232E-03	475533.3	3826331.0	891.2	5.00	4.65	4.65	NO
L0000707	0	0.36232E-03	475543.3	3826330.8	891.9	5.00	4.65	4.65	NO
L0000708	0	0.36232E-03	475553.3	3826330.6	892.7	5.00	4.65	4.65	NO
L0000709	0	0.36232E-03	475563.3	3826330.5	893.4	5.00	4.65	4.65	NO
L0000710	0	0.36232E-03	475573.3	3826330.3	894.1	5.00	4.65	4.65	NO
L0000711	0	0.36232E-03	475583.3	3826330.1	894.8	5.00	4.65	4.65	NO
L0000712	0	0.36232E-03	475593.3	3826330.0	895.3	5.00	4.65	4.65	NO
L0000713	0	0.36232E-03	475603.3	3826329.8	895.3	5.00	4.65	4.65	NO
L0000714	0	0.36232E-03	475613.3	3826329.6	895.2	5.00	4.65	4.65	NO
L0000715	0	0.36232E-03	475623.3	3826329.5	895.3	5.00	4.65	4.65	NO
L0000716	0	0.36232E-03	475633.3	3826329.3	895.2	5.00	4.65	4.65	NO
L0000717	0	0.36232E-03	475643.3	3826329.1	895.1	5.00	4.65	4.65	NO
L0000718	0	0.36232E-03	475653.3	3826329.0	895.6	5.00	4.65	4.65	NO
L0000719	0	0.36232E-03	475663.3	3826328.8	896.3	5.00	4.65	4.65	NO
L0000720	0	0.36232E-03	475673.3	3826328.6	896.9	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000721	0	0.36232E-03	475683.3	3826328.5	897.4	5.00	4.65	4.65	NO	
L0000722	0	0.36232E-03	475693.3	3826328.3	898.0	5.00	4.65	4.65	NO	
L0000723	0	0.36232E-03	475703.3	3826328.1	898.8	5.00	4.65	4.65	NO	
L0000724	0	0.36232E-03	475713.3	3826328.0	899.6	5.00	4.65	4.65	NO	
L0000725	0	0.36232E-03	475723.3	3826327.8	900.4	5.00	4.65	4.65	NO	
L0000726	0	0.36232E-03	475733.3	3826327.6	901.0	5.00	4.65	4.65	NO	
L0000727	0	0.36232E-03	475743.3	3826327.5	901.2	5.00	4.65	4.65	NO	
L0000728	0	0.36232E-03	475753.3	3826327.3	901.2	5.00	4.65	4.65	NO	
L0000729	0	0.36232E-03	475763.3	3826327.1	901.0	5.00	4.65	4.65	NO	
L0000730	0	0.36232E-03	475773.3	3826327.0	901.1	5.00	4.65	4.65	NO	
L0000731	0	0.36232E-03	475783.3	3826326.8	901.6	5.00	4.65	4.65	NO	
L0000732	0	0.36232E-03	475793.3	3826326.6	902.4	5.00	4.65	4.65	NO	
L0000733	0	0.36232E-03	475803.3	3826326.5	902.6	5.00	4.65	4.65	NO	
L0000734	0	0.36232E-03	475813.3	3826326.3	902.4	5.00	4.65	4.65	NO	
L0000735	0	0.36232E-03	475823.3	3826326.1	902.5	5.00	4.65	4.65	NO	

L0000736	0	0.36232E-03	475833.3	3826326.0	902.8	5.00	4.65	4.65	NO
L0000737	0	0.36232E-03	475843.3	3826325.8	903.4	5.00	4.65	4.65	NO
L0000738	0	0.36232E-03	475846.7	3826319.1	903.6	5.00	4.65	4.65	NO
L0000739	0	0.36232E-03	475846.7	3826309.1	903.5	5.00	4.65	4.65	NO
L0000740	0	0.36232E-03	475846.7	3826299.1	903.9	5.00	4.65	4.65	NO
L0000741	0	0.36232E-03	475846.7	3826289.1	904.3	5.00	4.65	4.65	NO
L0000742	0	0.36232E-03	475846.7	3826279.1	904.7	5.00	4.65	4.65	NO
L0000743	0	0.36232E-03	475846.8	3826269.1	904.6	5.00	4.65	4.65	NO
L0000744	0	0.36232E-03	475846.8	3826259.1	904.5	5.00	4.65	4.65	NO
L0000745	0	0.36232E-03	475846.8	3826249.1	905.2	5.00	4.65	4.65	NO
L0000746	0	0.36232E-03	475846.8	3826239.1	905.7	5.00	4.65	4.65	NO
L0000747	0	0.36232E-03	475846.8	3826229.1	905.5	5.00	4.65	4.65	NO
L0000748	0	0.36232E-03	475846.8	3826219.1	905.3	5.00	4.65	4.65	NO
L0000749	0	0.36232E-03	475846.9	3826209.1	905.4	5.00	4.65	4.65	NO
L0000750	0	0.36232E-03	475846.9	3826199.1	906.1	5.00	4.65	4.65	NO
L0000751	0	0.36232E-03	475846.9	3826189.1	906.5	5.00	4.65	4.65	NO
L0000752	0	0.36232E-03	475846.9	3826179.1	906.4	5.00	4.65	4.65	NO
L0000753	0	0.36232E-03	475846.9	3826169.1	906.0	5.00	4.65	4.65	NO
L0000754	0	0.36232E-03	475847.0	3826159.1	905.0	5.00	4.65	4.65	NO
L0000755	0	0.36232E-03	475847.0	3826149.1	904.4	5.00	4.65	4.65	NO
L0000756	0	0.36232E-03	475847.0	3826139.1	905.1	5.00	4.65	4.65	NO
L0000757	0	0.36232E-03	475847.0	3826129.1	906.2	5.00	4.65	4.65	NO
L0000758	0	0.36232E-03	475847.0	3826119.1	906.9	5.00	4.65	4.65	NO
L0000759	0	0.36232E-03	475847.1	3826109.1	906.8	5.00	4.65	4.65	NO
L0000760	0	0.36232E-03	475847.1	3826099.1	906.3	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000761	0	0.36232E-03	475847.1	3826089.1	905.6	5.00	4.65	4.65	NO	
L0000762	0	0.36232E-03	475847.1	3826079.1	905.5	5.00	4.65	4.65	NO	
L0000763	0	0.36232E-03	475847.1	3826069.1	906.1	5.00	4.65	4.65	NO	
L0000764	0	0.36232E-03	475847.1	3826059.1	906.5	5.00	4.65	4.65	NO	
L0000765	0	0.36232E-03	475847.2	3826049.1	906.0	5.00	4.65	4.65	NO	
L0000766	0	0.36232E-03	475847.2	3826039.1	904.9	5.00	4.65	4.65	NO	
L0000767	0	0.36232E-03	475847.2	3826029.1	904.1	5.00	4.65	4.65	NO	
L0000768	0	0.36232E-03	475847.2	3826019.1	903.9	5.00	4.65	4.65	NO	
L0000769	0	0.36232E-03	475847.2	3826009.1	904.2	5.00	4.65	4.65	NO	
L0000770	0	0.36232E-03	475847.3	3825999.1	904.9	5.00	4.65	4.65	NO	
L0000771	0	0.36232E-03	475847.3	3825989.1	906.3	5.00	4.65	4.65	NO	
L0000772	0	0.36232E-03	475847.3	3825979.1	907.9	5.00	4.65	4.65	NO	
L0000773	0	0.36232E-03	475847.3	3825969.1	908.6	5.00	4.65	4.65	NO	
L0000774	0	0.36232E-03	475847.3	3825959.1	909.2	5.00	4.65	4.65	NO	
L0000775	0	0.36232E-03	475847.3	3825949.1	910.9	5.00	4.65	4.65	NO	

L0000776	0	0.36232E-03	475847.4	3825939.1	914.7	5.00	4.65	4.65	NO
L0000777	0	0.36232E-03	475847.4	3825929.1	914.0	5.00	4.65	4.65	NO
L0000778	0	0.36232E-03	475847.4	3825919.1	913.7	5.00	4.65	4.65	NO
L0000779	0	0.36232E-03	475847.4	3825909.1	914.0	5.00	4.65	4.65	NO
L0000780	0	0.36232E-03	475847.4	3825899.1	915.1	5.00	4.65	4.65	NO
L0000781	0	0.36232E-03	475847.5	3825889.1	915.4	5.00	4.65	4.65	NO
L0000782	0	0.36232E-03	475847.5	3825879.1	915.6	5.00	4.65	4.65	NO
L0000783	0	0.36232E-03	475840.0	3825876.8	914.6	5.00	4.65	4.65	NO
L0000784	0	0.36232E-03	475830.0	3825877.0	914.3	5.00	4.65	4.65	NO
L0000785	0	0.36232E-03	475820.0	3825877.2	913.2	5.00	4.65	4.65	NO
L0000786	0	0.36232E-03	475810.0	3825877.4	912.6	5.00	4.65	4.65	NO
L0000787	0	0.36232E-03	475800.0	3825877.6	912.1	5.00	4.65	4.65	NO
L0000788	0	0.36232E-03	475790.0	3825877.8	911.3	5.00	4.65	4.65	NO
L0000789	0	0.36232E-03	475780.0	3825878.0	910.6	5.00	4.65	4.65	NO
L0000790	0	0.36232E-03	475770.0	3825878.3	910.3	5.00	4.65	4.65	NO
L0000791	0	0.36232E-03	475760.0	3825878.5	910.0	5.00	4.65	4.65	NO
L0000792	0	0.36232E-03	475750.0	3825878.7	909.7	5.00	4.65	4.65	NO
L0000793	0	0.36232E-03	475740.0	3825878.9	909.7	5.00	4.65	4.65	NO
L0000794	0	0.36232E-03	475730.0	3825879.1	910.4	5.00	4.65	4.65	NO
L0000795	0	0.36232E-03	475720.0	3825879.3	910.4	5.00	4.65	4.65	NO
L0000796	0	0.36232E-03	475710.0	3825879.5	909.6	5.00	4.65	4.65	NO
L0000797	0	0.36232E-03	475700.0	3825879.7	909.3	5.00	4.65	4.65	NO
L0000798	0	0.36232E-03	475690.0	3825879.9	908.7	5.00	4.65	4.65	NO
L0000799	0	0.36232E-03	475680.0	3825880.2	908.1	5.00	4.65	4.65	NO
L0000800	0	0.36232E-03	475670.0	3825880.4	907.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000801	0	0.36232E-03	475660.0	3825880.6	907.5	5.00	4.65	4.65	NO	
L0000802	0	0.36232E-03	475650.0	3825880.8	907.3	5.00	4.65	4.65	NO	
L0000803	0	0.36232E-03	475649.2	3825871.5	907.5	5.00	4.65	4.65	NO	
L0000804	0	0.36232E-03	475649.1	3825861.5	907.3	5.00	4.65	4.65	NO	
L0000805	0	0.36232E-03	475649.0	3825851.5	907.3	5.00	4.65	4.65	NO	
L0000806	0	0.36232E-03	475648.9	3825841.5	907.5	5.00	4.65	4.65	NO	
L0000807	0	0.36232E-03	475648.7	3825831.5	907.8	5.00	4.65	4.65	NO	
L0000808	0	0.36232E-03	475648.6	3825821.5	908.2	5.00	4.65	4.65	NO	
L0000809	0	0.36232E-03	475648.5	3825811.5	908.4	5.00	4.65	4.65	NO	
L0000810	0	0.36232E-03	475648.4	3825801.5	908.5	5.00	4.65	4.65	NO	
L0000811	0	0.36232E-03	475648.3	3825791.6	908.8	5.00	4.65	4.65	NO	
L0000812	0	0.36232E-03	475648.2	3825781.6	909.2	5.00	4.65	4.65	NO	
L0000813	0	0.36232E-03	475648.1	3825771.6	909.4	5.00	4.65	4.65	NO	
L0000814	0	0.36232E-03	475648.0	3825761.6	909.8	5.00	4.65	4.65	NO	
L0000815	0	0.36232E-03	475647.9	3825751.6	910.3	5.00	4.65	4.65	NO	

L0000816	0	0.36232E-03	475647.8	3825741.6	910.5	5.00	4.65	4.65	NO
L0000817	0	0.36232E-03	475647.7	3825731.6	910.8	5.00	4.65	4.65	NO
L0000818	0	0.36232E-03	475647.6	3825721.6	911.2	5.00	4.65	4.65	NO
L0000819	0	0.36232E-03	475647.5	3825711.6	911.5	5.00	4.65	4.65	NO
L0000820	0	0.36232E-03	475647.3	3825701.6	911.7	5.00	4.65	4.65	NO
L0000821	0	0.36232E-03	475647.2	3825691.6	911.9	5.00	4.65	4.65	NO
L0000822	0	0.36232E-03	475647.1	3825681.6	912.4	5.00	4.65	4.65	NO
L0000823	0	0.36232E-03	475647.0	3825671.6	913.9	5.00	4.65	4.65	NO
L0000824	0	0.36232E-03	475646.9	3825661.6	916.6	5.00	4.65	4.65	NO
L0000825	0	0.36232E-03	475646.8	3825651.6	921.2	5.00	4.65	4.65	NO
L0000826	0	0.36232E-03	475645.2	3825643.1	920.1	5.00	4.65	4.65	NO
L0000827	0	0.36232E-03	475635.2	3825643.2	913.6	5.00	4.65	4.65	NO
L0000828	0	0.36232E-03	475625.2	3825643.2	912.5	5.00	4.65	4.65	NO
L0000829	0	0.36232E-03	475615.2	3825643.3	912.2	5.00	4.65	4.65	NO
L0000830	0	0.36232E-03	475605.2	3825643.3	911.9	5.00	4.65	4.65	NO
L0000831	0	0.36232E-03	475595.2	3825643.4	911.5	5.00	4.65	4.65	NO
L0000832	0	0.36232E-03	475585.2	3825643.4	911.2	5.00	4.65	4.65	NO
L0000833	0	0.36232E-03	475575.2	3825643.5	910.7	5.00	4.65	4.65	NO
L0000834	0	0.36232E-03	475565.2	3825643.6	910.3	5.00	4.65	4.65	NO
L0000835	0	0.36232E-03	475555.2	3825643.6	909.9	5.00	4.65	4.65	NO
L0000836	0	0.36232E-03	475545.2	3825643.7	909.5	5.00	4.65	4.65	NO
L0000837	0	0.36232E-03	475535.2	3825643.7	909.2	5.00	4.65	4.65	NO
L0000838	0	0.36232E-03	475525.2	3825643.8	908.8	5.00	4.65	4.65	NO
L0000839	0	0.36232E-03	475515.2	3825643.8	908.4	5.00	4.65	4.65	NO
L0000840	0	0.36232E-03	475505.2	3825643.9	908.1	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000841	0	0.36232E-03	475495.2	3825644.0	907.8	5.00	4.65	4.65	NO	
L0000842	0	0.36232E-03	475485.2	3825644.0	907.3	5.00	4.65	4.65	NO	
L0000843	0	0.36232E-03	475475.2	3825644.1	906.8	5.00	4.65	4.65	NO	
L0000844	0	0.36232E-03	475465.2	3825644.1	906.4	5.00	4.65	4.65	NO	
L0000845	0	0.36232E-03	475455.2	3825644.2	906.0	5.00	4.65	4.65	NO	
L0000846	0	0.36232E-03	475445.2	3825644.3	905.6	5.00	4.65	4.65	NO	
L0000847	0	0.36232E-03	475435.2	3825644.3	905.0	5.00	4.65	4.65	NO	
L0000848	0	0.36232E-03	475425.2	3825644.4	904.5	5.00	4.65	4.65	NO	
L0000849	0	0.36232E-03	475415.2	3825644.4	904.3	5.00	4.65	4.65	NO	
L0000850	0	0.36232E-03	475405.2	3825644.5	903.9	5.00	4.65	4.65	NO	
L0000851	0	0.36232E-03	475395.2	3825644.5	903.4	5.00	4.65	4.65	NO	
L0000852	0	0.36232E-03	475385.2	3825644.6	902.8	5.00	4.65	4.65	NO	
L0000853	0	0.36232E-03	475375.2	3825644.7	902.6	5.00	4.65	4.65	NO	
L0000854	0	0.36232E-03	475365.2	3825644.7	902.3	5.00	4.65	4.65	NO	
L0000855	0	0.36232E-03	475355.2	3825644.8	902.0	5.00	4.65	4.65	NO	

L0000856	0	0.36232E-03	475345.2	3825644.8	901.6	5.00	4.65	4.65	NO
L0000857	0	0.36232E-03	475335.2	3825644.9	901.1	5.00	4.65	4.65	NO
L0000858	0	0.36232E-03	475325.2	3825644.9	900.6	5.00	4.65	4.65	NO
L0000859	0	0.36232E-03	475315.2	3825645.0	900.4	5.00	4.65	4.65	NO
L0000860	0	0.36232E-03	475305.2	3825645.1	900.1	5.00	4.65	4.65	NO
L0000861	0	0.36232E-03	475295.2	3825645.1	899.6	5.00	4.65	4.65	NO
L0000862	0	0.36232E-03	475285.2	3825645.2	898.9	5.00	4.65	4.65	NO
L0000863	0	0.36232E-03	475275.2	3825645.2	898.2	5.00	4.65	4.65	NO
L0000864	0	0.36232E-03	475265.2	3825645.3	897.8	5.00	4.65	4.65	NO
L0000865	0	0.36232E-03	475255.2	3825645.3	897.9	5.00	4.65	4.65	NO
L0000866	0	0.36232E-03	475245.2	3825645.4	897.7	5.00	4.65	4.65	NO
L0000867	0	0.36232E-03	475235.2	3825645.5	897.0	5.00	4.65	4.65	NO
L0000868	0	0.36232E-03	475225.2	3825645.5	896.4	5.00	4.65	4.65	NO
L0000869	0	0.36232E-03	475215.2	3825645.6	896.0	5.00	4.65	4.65	NO
L0000870	0	0.36232E-03	475205.2	3825645.6	895.7	5.00	4.65	4.65	NO
L0000871	0	0.36232E-03	475195.2	3825645.7	895.2	5.00	4.65	4.65	NO
L0000872	0	0.36232E-03	475185.2	3825645.7	894.8	5.00	4.65	4.65	NO
L0000873	0	0.36232E-03	475175.2	3825645.8	894.6	5.00	4.65	4.65	NO
L0000874	0	0.36232E-03	475165.2	3825645.9	894.3	5.00	4.65	4.65	NO
L0000875	0	0.36232E-03	475155.2	3825645.9	894.0	5.00	4.65	4.65	NO
L0000876	0	0.36232E-03	475145.2	3825646.0	893.5	5.00	4.65	4.65	NO
L0000877	0	0.36232E-03	475135.2	3825646.0	892.8	5.00	4.65	4.65	NO
L0000878	0	0.36232E-03	475125.2	3825646.1	892.3	5.00	4.65	4.65	NO
L0000879	0	0.36232E-03	475115.2	3825646.1	892.0	5.00	4.65	4.65	NO
L0000880	0	0.36232E-03	475105.2	3825646.2	891.7	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000881	0	0.36232E-03	475095.2	3825646.3	891.3	5.00	4.65	4.65	NO	
L0000882	0	0.36232E-03	475085.2	3825646.3	890.8	5.00	4.65	4.65	NO	
L0000883	0	0.36232E-03	475075.2	3825646.4	890.9	5.00	4.65	4.65	NO	
L0000884	0	0.36232E-03	475065.2	3825646.4	891.2	5.00	4.65	4.65	NO	
L0000885	0	0.36232E-03	475055.2	3825646.5	891.3	5.00	4.65	4.65	NO	
L0000886	0	0.36232E-03	475045.2	3825646.6	890.8	5.00	4.65	4.65	NO	
L0000887	0	0.36232E-03	475035.2	3825646.6	890.1	5.00	4.65	4.65	NO	
L0000888	0	0.36232E-03	475025.2	3825646.7	889.5	5.00	4.65	4.65	NO	
L0000889	0	0.36232E-03	475015.2	3825646.7	889.1	5.00	4.65	4.65	NO	
L0000890	0	0.36232E-03	475005.2	3825646.8	888.6	5.00	4.65	4.65	NO	
L0000891	0	0.36232E-03	474995.2	3825646.8	888.0	5.00	4.65	4.65	NO	
L0000892	0	0.36232E-03	474985.2	3825646.9	887.5	5.00	4.65	4.65	NO	
L0000893	0	0.36232E-03	474975.2	3825647.0	887.4	5.00	4.65	4.65	NO	
L0000894	0	0.36232E-03	474965.2	3825647.0	887.2	5.00	4.65	4.65	NO	
L0000895	0	0.36232E-03	474955.2	3825647.1	886.8	5.00	4.65	4.65	NO	

L0000896	0	0.36232E-03	474945.2	3825647.1	886.6	5.00	4.65	4.65	NO
L0000897	0	0.36232E-03	474935.2	3825647.2	886.3	5.00	4.65	4.65	NO
L0000898	0	0.36232E-03	474925.2	3825647.2	885.8	5.00	4.65	4.65	NO
L0000899	0	0.36232E-03	474915.2	3825647.3	885.7	5.00	4.65	4.65	NO
L0000900	0	0.36232E-03	474905.2	3825647.4	885.4	5.00	4.65	4.65	NO
L0000901	0	0.36232E-03	474895.2	3825647.4	884.8	5.00	4.65	4.65	NO
L0000902	0	0.36232E-03	474885.2	3825647.5	884.2	5.00	4.65	4.65	NO
L0000903	0	0.36232E-03	474875.2	3825647.5	883.7	5.00	4.65	4.65	NO
L0000904	0	0.36232E-03	474865.2	3825647.6	883.2	5.00	4.65	4.65	NO
L0000905	0	0.36232E-03	474855.2	3825647.6	882.7	5.00	4.65	4.65	NO
L0000906	0	0.36232E-03	474845.2	3825647.7	882.6	5.00	4.65	4.65	NO
L0000907	0	0.36232E-03	474835.2	3825647.8	882.7	5.00	4.65	4.65	NO
L0000908	0	0.36232E-03	474825.2	3825647.8	882.3	5.00	4.65	4.65	NO
L0000909	0	0.36232E-03	474815.2	3825647.9	882.1	5.00	4.65	4.65	NO
L0000910	0	0.36232E-03	474805.2	3825647.9	882.4	5.00	4.65	4.65	NO
L0000911	0	0.36232E-03	474795.2	3825648.0	881.9	5.00	4.65	4.65	NO
L0000912	0	0.36232E-03	474794.1	3825652.4	881.7	5.00	4.65	4.65	NO
L0000913	0	0.36232E-03	474800.2	3825660.3	881.6	5.00	4.65	4.65	NO
L0000914	0	0.36232E-03	474806.3	3825668.2	881.1	5.00	4.65	4.65	NO
L0000915	0	0.36232E-03	474812.4	3825676.1	881.0	5.00	4.65	4.65	NO
L0000916	0	0.36232E-03	474818.5	3825684.0	880.8	5.00	4.65	4.65	NO
L0000917	0	0.36232E-03	474824.7	3825691.9	880.7	5.00	4.65	4.65	NO
L0000918	0	0.36232E-03	474830.8	3825699.9	880.7	5.00	4.65	4.65	NO
L0000919	0	0.36232E-03	474836.9	3825707.8	881.2	5.00	4.65	4.65	NO
L0000920	0	0.36232E-03	474843.0	3825715.7	881.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000921	0	0.36232E-03	474849.1	3825723.6	881.3	5.00	4.65	4.65	NO	
L0000922	0	0.36232E-03	474855.2	3825731.5	881.3	5.00	4.65	4.65	NO	
L0000923	0	0.36232E-03	474861.3	3825739.4	881.5	5.00	4.65	4.65	NO	
L0000924	0	0.36232E-03	474867.5	3825747.3	880.8	5.00	4.65	4.65	NO	
L0000925	0	0.36232E-03	474873.6	3825755.3	881.1	5.00	4.65	4.65	NO	
L0000926	0	0.36232E-03	474879.7	3825763.2	881.8	5.00	4.65	4.65	NO	
L0000927	0	0.36232E-03	474885.8	3825771.1	882.0	5.00	4.65	4.65	NO	
L0000928	0	0.36232E-03	474891.9	3825779.0	881.6	5.00	4.65	4.65	NO	
L0000929	0	0.36232E-03	474898.0	3825786.9	882.3	5.00	4.65	4.65	NO	
L0000930	0	0.36232E-03	474904.1	3825794.8	881.8	5.00	4.65	4.65	NO	
L0000931	0	0.36232E-03	474910.3	3825802.7	881.1	5.00	4.65	4.65	NO	
L0000932	0	0.36232E-03	474916.4	3825810.6	881.1	5.00	4.65	4.65	NO	
L0000933	0	0.36232E-03	474922.5	3825818.6	881.8	5.00	4.65	4.65	NO	
L0000934	0	0.36232E-03	474928.6	3825826.5	882.1	5.00	4.65	4.65	NO	
L0000935	0	0.36232E-03	474934.7	3825834.4	881.8	5.00	4.65	4.65	NO	

L0000936	0	0.36232E-03	474940.8	3825842.3	881.7	5.00	4.65	4.65	NO
L0000937	0	0.36232E-03	474946.9	3825850.2	882.1	5.00	4.65	4.65	NO
L0000938	0	0.36232E-03	474953.1	3825858.1	882.9	5.00	4.65	4.65	NO
L0000939	0	0.36232E-03	474959.2	3825866.0	883.0	5.00	4.65	4.65	NO
L0000940	0	0.36232E-03	474965.3	3825874.0	882.9	5.00	4.65	4.65	NO
L0000941	0	0.36232E-03	474971.4	3825881.9	883.3	5.00	4.65	4.65	NO
L0000942	0	0.36232E-03	474977.5	3825889.8	883.9	5.00	4.65	4.65	NO
L0000943	0	0.36232E-03	474983.6	3825897.7	884.0	5.00	4.65	4.65	NO
L0000944	0	0.36232E-03	474989.7	3825905.6	884.3	5.00	4.65	4.65	NO
L0000945	0	0.36232E-03	474995.9	3825913.5	884.8	5.00	4.65	4.65	NO
L0000946	0	0.36232E-03	475002.0	3825921.4	885.4	5.00	4.65	4.65	NO
L0000947	0	0.36232E-03	475008.1	3825929.3	885.4	5.00	4.65	4.65	NO
L0000948	0	0.36232E-03	475014.2	3825937.3	885.0	5.00	4.65	4.65	NO
L0000949	0	0.36232E-03	475020.3	3825945.2	884.6	5.00	4.65	4.65	NO
L0000950	0	0.36232E-03	475026.4	3825953.1	884.1	5.00	4.65	4.65	NO
L0000951	0	0.36232E-03	475032.5	3825961.0	883.5	5.00	4.65	4.65	NO
L0000952	0	0.36232E-03	475038.7	3825968.9	883.3	5.00	4.65	4.65	NO
L0000953	0	0.36232E-03	475044.8	3825976.8	883.4	5.00	4.65	4.65	NO
L0000954	0	0.36232E-03	475050.9	3825984.7	883.6	5.00	4.65	4.65	NO
L0000955	0	0.36232E-03	475057.0	3825992.7	883.9	5.00	4.65	4.65	NO
L0000956	0	0.36232E-03	475063.1	3826000.6	884.1	5.00	4.65	4.65	NO
L0000957	0	0.36232E-03	475069.2	3826008.5	884.5	5.00	4.65	4.65	NO
L0000958	0	0.36232E-03	475075.3	3826016.4	885.2	5.00	4.65	4.65	NO
L0000959	0	0.36232E-03	475081.5	3826024.3	884.8	5.00	4.65	4.65	NO
L0000960	0	0.36232E-03	475087.6	3826032.2	884.5	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000961	0	0.36232E-03	475093.7	3826040.1	884.6	5.00	4.65	4.65	NO	
L0000962	0	0.36232E-03	475099.8	3826048.0	884.8	5.00	4.65	4.65	NO	
L0000963	0	0.36232E-03	475105.9	3826056.0	885.2	5.00	4.65	4.65	NO	
L0000964	0	0.36232E-03	475112.0	3826063.9	885.8	5.00	4.65	4.65	NO	
L0000965	0	0.36232E-03	475118.1	3826071.8	886.7	5.00	4.65	4.65	NO	
L0000966	0	0.36232E-03	475126.6	3826077.1	887.4	5.00	4.65	4.65	NO	
L0000967	0	0.36232E-03	475135.1	3826082.3	888.0	5.00	4.65	4.65	NO	
L0000968	0	0.36232E-03	475143.7	3826087.4	888.3	5.00	4.65	4.65	NO	
L0000969	0	0.36232E-03	475152.2	3826092.6	887.9	5.00	4.65	4.65	NO	
L0000970	0	0.36232E-03	475160.8	3826097.8	888.6	5.00	4.65	4.65	NO	
L0000971	0	0.36232E-03	475169.4	3826103.0	888.6	5.00	4.65	4.65	NO	
L0000972	0	0.36232E-03	475177.9	3826108.2	887.8	5.00	4.65	4.65	NO	
L0000973	0	0.36232E-03	475186.5	3826113.3	886.6	5.00	4.65	4.65	NO	
L0000974	0	0.36232E-03	475195.0	3826118.5	885.8	5.00	4.65	4.65	NO	
L0000975	0	0.36232E-03	475203.6	3826123.7	885.9	5.00	4.65	4.65	NO	

L0000976	0	0.36232E-03	475212.1	3826128.9	886.4	5.00	4.65	4.65	NO
L0000977	0	0.36232E-03	475220.7	3826134.1	885.8	5.00	4.65	4.65	NO
L0000978	0	0.36232E-03	475229.2	3826139.3	884.8	5.00	4.65	4.65	NO
L0000979	0	0.36232E-03	475237.8	3826144.4	884.5	5.00	4.65	4.65	NO
L0000980	0	0.36232E-03	475246.3	3826149.6	885.4	5.00	4.65	4.65	NO
L0000981	0	0.36232E-03	475254.9	3826154.8	887.5	5.00	4.65	4.65	NO
L0000982	0	0.36232E-03	475263.4	3826160.0	888.3	5.00	4.65	4.65	NO
L0000983	0	0.36232E-03	475272.0	3826165.2	888.4	5.00	4.65	4.65	NO
L0000984	0	0.36232E-03	475280.5	3826170.4	888.2	5.00	4.65	4.65	NO
L0000985	0	0.36232E-03	475289.1	3826175.5	888.6	5.00	4.65	4.65	NO
L0000986	0	0.36232E-03	475297.6	3826180.7	889.8	5.00	4.65	4.65	NO
L0000987	0	0.36232E-03	475306.2	3826185.9	891.0	5.00	4.65	4.65	NO
L0000988	0	0.36232E-03	475313.8	3826191.9	890.9	5.00	4.65	4.65	NO
L0000989	0	0.36232E-03	475317.4	3826201.2	890.1	5.00	4.65	4.65	NO
L0000990	0	0.36232E-03	475321.0	3826210.5	889.0	5.00	4.65	4.65	NO
L0000991	0	0.36232E-03	475324.5	3826219.9	887.7	5.00	4.65	4.65	NO
L0000992	0	0.36232E-03	475328.1	3826229.2	884.8	5.00	4.65	4.65	NO
L0000993	0	0.36232E-03	475331.7	3826238.6	883.2	5.00	4.65	4.65	NO
L0000994	0	0.36232E-03	475335.2	3826247.9	885.9	5.00	4.65	4.65	NO
L0000995	0	0.36232E-03	475338.8	3826257.2	884.3	5.00	4.65	4.65	NO
L0000996	0	0.36232E-03	475342.4	3826266.6	882.8	5.00	4.65	4.65	NO
L0000997	0	0.36232E-03	475346.0	3826275.9	883.1	5.00	4.65	4.65	NO
L0000998	0	0.36232E-03	475349.5	3826285.3	883.2	5.00	4.65	4.65	NO
L0000999	0	0.36232E-03	475353.1	3826294.6	883.5	5.00	4.65	4.65	NO
L0001000	0	0.36232E-03	475356.7	3826303.9	884.3	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001001	0	0.36232E-03	475361.7	3826311.1	885.5	5.00	4.65	4.65	NO	
L0001002	0	0.36232E-03	475371.7	3826311.0	887.4	5.00	4.65	4.65	NO	
L0001003	0	0.36232E-03	475381.7	3826310.9	888.2	5.00	4.65	4.65	NO	
L0001004	0	0.36232E-03	475391.7	3826310.7	888.2	5.00	4.65	4.65	NO	
L0001005	0	0.36232E-03	475401.7	3826310.6	888.4	5.00	4.65	4.65	NO	
L0001006	0	0.36232E-03	475411.7	3826310.5	888.6	5.00	4.65	4.65	NO	
L0001007	0	0.36232E-03	475421.7	3826310.4	889.2	5.00	4.65	4.65	NO	
L0001008	0	0.36232E-03	475431.7	3826310.2	889.5	5.00	4.65	4.65	NO	
L0001009	0	0.36232E-03	475441.7	3826310.1	889.1	5.00	4.65	4.65	NO	
L0001010	0	0.36232E-03	475451.7	3826310.0	888.7	5.00	4.65	4.65	NO	
L0001011	0	0.36232E-03	475461.7	3826309.8	889.9	5.00	4.65	4.65	NO	
L0001012	0	0.36232E-03	475471.7	3826309.7	889.2	5.00	4.65	4.65	NO	
L0001013	0	0.36232E-03	475481.7	3826309.6	888.8	5.00	4.65	4.65	NO	
L0001014	0	0.36232E-03	475491.7	3826309.4	889.6	5.00	4.65	4.65	NO	
L0001015	0	0.36232E-03	475501.7	3826309.3	889.4	5.00	4.65	4.65	NO	

L0001016	0	0.36232E-03	475511.7	3826309.2	888.9	5.00	4.65	4.65	NO
L0001017	0	0.36232E-03	475521.7	3826309.1	889.3	5.00	4.65	4.65	NO
L0001018	0	0.36232E-03	475531.7	3826308.9	891.0	5.00	4.65	4.65	NO
L0001019	0	0.36232E-03	475541.7	3826308.8	892.0	5.00	4.65	4.65	NO
L0001020	0	0.36232E-03	475551.7	3826308.7	892.6	5.00	4.65	4.65	NO
L0001021	0	0.36232E-03	475561.7	3826308.5	893.2	5.00	4.65	4.65	NO
L0001022	0	0.36232E-03	475571.7	3826308.4	893.0	5.00	4.65	4.65	NO
L0001023	0	0.36232E-03	475581.7	3826308.3	893.6	5.00	4.65	4.65	NO
L0001024	0	0.36232E-03	475591.7	3826308.1	894.3	5.00	4.65	4.65	NO
L0001025	0	0.36232E-03	475601.7	3826308.0	895.4	5.00	4.65	4.65	NO
L0001026	0	0.36232E-03	475611.7	3826307.9	896.3	5.00	4.65	4.65	NO
L0001027	0	0.36232E-03	475621.7	3826307.7	897.1	5.00	4.65	4.65	NO
L0001028	0	0.36232E-03	475631.7	3826307.6	897.8	5.00	4.65	4.65	NO
L0001029	0	0.36232E-03	475641.7	3826307.5	897.9	5.00	4.65	4.65	NO
L0001030	0	0.36232E-03	475651.7	3826307.4	898.1	5.00	4.65	4.65	NO
L0001031	0	0.36232E-03	475661.7	3826307.2	898.2	5.00	4.65	4.65	NO
L0001032	0	0.36232E-03	475671.7	3826307.1	898.4	5.00	4.65	4.65	NO
L0001033	0	0.36232E-03	475681.7	3826307.0	898.8	5.00	4.65	4.65	NO
L0001034	0	0.36232E-03	475691.7	3826306.8	898.5	5.00	4.65	4.65	NO
L0001035	0	0.36232E-03	475701.7	3826306.7	898.6	5.00	4.65	4.65	NO
L0001036	0	0.36232E-03	475711.7	3826306.6	898.5	5.00	4.65	4.65	NO
L0001037	0	0.36232E-03	475721.7	3826306.4	899.1	5.00	4.65	4.65	NO
L0001038	0	0.36232E-03	475731.7	3826306.3	899.7	5.00	4.65	4.65	NO
L0001039	0	0.36232E-03	475741.7	3826306.2	900.5	5.00	4.65	4.65	NO
L0001040	0	0.36232E-03	475751.7	3826306.1	901.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001041	0	0.36232E-03	475761.7	3826305.9	902.0	5.00	4.65	4.65	NO	
L0001042	0	0.36232E-03	475771.7	3826305.8	902.0	5.00	4.65	4.65	NO	
L0001043	0	0.36232E-03	475781.7	3826305.7	902.0	5.00	4.65	4.65	NO	
L0001044	0	0.36232E-03	475791.7	3826305.5	902.1	5.00	4.65	4.65	NO	
L0001045	0	0.36232E-03	475801.7	3826305.4	902.5	5.00	4.65	4.65	NO	
L0001046	0	0.36232E-03	475811.7	3826305.3	903.2	5.00	4.65	4.65	NO	
L0001047	0	0.36232E-03	475811.9	3826295.6	903.1	5.00	4.65	4.65	NO	
L0001048	0	0.36232E-03	475811.8	3826285.6	903.1	5.00	4.65	4.65	NO	
L0001049	0	0.36232E-03	475811.6	3826275.6	903.3	5.00	4.65	4.65	NO	
L0001050	0	0.36232E-03	475811.5	3826265.6	903.9	5.00	4.65	4.65	NO	
L0001051	0	0.36232E-03	475811.4	3826255.6	904.2	5.00	4.65	4.65	NO	
L0001052	0	0.36232E-03	475811.3	3826245.6	904.1	5.00	4.65	4.65	NO	
L0001053	0	0.36232E-03	475811.1	3826235.6	903.8	5.00	4.65	4.65	NO	
L0001054	0	0.36232E-03	475811.0	3826225.6	903.8	5.00	4.65	4.65	NO	
L0001055	0	0.36232E-03	475810.9	3826215.6	904.8	5.00	4.65	4.65	NO	

L0001056	0	0.36232E-03	475810.8	3826205.6	905.0	5.00	4.65	4.65	NO
L0001057	0	0.36232E-03	475810.6	3826195.6	904.8	5.00	4.65	4.65	NO
L0001058	0	0.36232E-03	475810.5	3826185.6	904.8	5.00	4.65	4.65	NO
L0001059	0	0.36232E-03	475810.4	3826175.6	904.7	5.00	4.65	4.65	NO
L0001060	0	0.36232E-03	475810.3	3826165.6	903.3	5.00	4.65	4.65	NO
L0001061	0	0.36232E-03	475810.1	3826155.6	902.9	5.00	4.65	4.65	NO
L0001062	0	0.36232E-03	475810.0	3826145.6	904.1	5.00	4.65	4.65	NO
L0001063	0	0.36232E-03	475809.9	3826135.6	905.2	5.00	4.65	4.65	NO
L0001064	0	0.36232E-03	475809.8	3826125.6	905.6	5.00	4.65	4.65	NO
L0001065	0	0.36232E-03	475809.6	3826115.6	905.3	5.00	4.65	4.65	NO
L0001066	0	0.36232E-03	475809.5	3826105.6	904.6	5.00	4.65	4.65	NO
L0001067	0	0.36232E-03	475809.4	3826095.6	903.6	5.00	4.65	4.65	NO
L0001068	0	0.36232E-03	475809.3	3826085.6	904.3	5.00	4.65	4.65	NO
L0001069	0	0.36232E-03	475809.1	3826075.6	904.0	5.00	4.65	4.65	NO
L0001070	0	0.36232E-03	475809.0	3826065.6	902.1	5.00	4.65	4.65	NO
L0001071	0	0.36232E-03	475808.9	3826055.6	901.9	5.00	4.65	4.65	NO
L0001072	0	0.36232E-03	475808.8	3826045.6	903.3	5.00	4.65	4.65	NO
L0001073	0	0.36232E-03	475808.6	3826035.6	905.1	5.00	4.65	4.65	NO
L0001074	0	0.36232E-03	475808.5	3826025.7	906.3	5.00	4.65	4.65	NO
L0001075	0	0.36232E-03	475808.4	3826015.7	906.6	5.00	4.65	4.65	NO
L0001076	0	0.36232E-03	475808.3	3826005.7	906.7	5.00	4.65	4.65	NO
L0001077	0	0.36232E-03	475808.1	3825995.7	906.4	5.00	4.65	4.65	NO
L0001078	0	0.36232E-03	475808.0	3825985.7	906.2	5.00	4.65	4.65	NO
L0001079	0	0.36232E-03	475807.9	3825975.7	906.5	5.00	4.65	4.65	NO
L0001080	0	0.36232E-03	475807.8	3825965.7	907.3	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001081	0	0.36232E-03	475807.6	3825955.7	908.1	5.00	4.65	4.65	NO	
L0001082	0	0.36232E-03	475807.5	3825945.7	908.9	5.00	4.65	4.65	NO	
L0001083	0	0.36232E-03	475807.4	3825935.7	910.4	5.00	4.65	4.65	NO	
L0001084	0	0.36232E-03	475807.3	3825925.7	911.9	5.00	4.65	4.65	NO	
L0001085	0	0.36232E-03	475807.1	3825915.7	912.1	5.00	4.65	4.65	NO	
L0001086	0	0.36232E-03	475800.1	3825912.8	911.8	5.00	4.65	4.65	NO	
L0001087	0	0.36232E-03	475790.1	3825912.9	911.1	5.00	4.65	4.65	NO	
L0001088	0	0.36232E-03	475780.1	3825913.0	910.0	5.00	4.65	4.65	NO	
L0001089	0	0.36232E-03	475770.1	3825913.1	909.3	5.00	4.65	4.65	NO	
L0001090	0	0.36232E-03	475760.1	3825913.2	909.1	5.00	4.65	4.65	NO	
L0001091	0	0.36232E-03	475750.1	3825913.3	909.0	5.00	4.65	4.65	NO	
L0001092	0	0.36232E-03	475740.1	3825913.4	908.8	5.00	4.65	4.65	NO	
L0001093	0	0.36232E-03	475730.1	3825913.5	908.7	5.00	4.65	4.65	NO	
L0001094	0	0.36232E-03	475720.1	3825913.6	908.5	5.00	4.65	4.65	NO	
L0001095	0	0.36232E-03	475710.1	3825913.7	908.2	5.00	4.65	4.65	NO	

L0001096	0	0.36232E-03	475700.1	3825913.8	908.0	5.00	4.65	4.65	NO
L0001097	0	0.36232E-03	475690.1	3825913.9	907.7	5.00	4.65	4.65	NO
L0001098	0	0.36232E-03	475680.1	3825914.0	907.3	5.00	4.65	4.65	NO
L0001099	0	0.36232E-03	475670.1	3825914.1	907.0	5.00	4.65	4.65	NO
L0001100	0	0.36232E-03	475660.1	3825914.2	906.9	5.00	4.65	4.65	NO
L0001101	0	0.36232E-03	475650.1	3825914.3	906.7	5.00	4.65	4.65	NO
L0001102	0	0.36232E-03	475640.1	3825914.4	906.2	5.00	4.65	4.65	NO
L0001103	0	0.36232E-03	475630.1	3825914.5	905.9	5.00	4.65	4.65	NO
L0001104	0	0.36232E-03	475620.1	3825914.6	905.4	5.00	4.65	4.65	NO
L0001105	0	0.36232E-03	475614.3	3825910.5	904.4	5.00	4.65	4.65	NO
L0001106	0	0.36232E-03	475614.4	3825900.5	905.2	5.00	4.65	4.65	NO
L0001107	0	0.36232E-03	475614.4	3825890.5	905.4	5.00	4.65	4.65	NO
L0001108	0	0.36232E-03	475614.5	3825880.5	905.6	5.00	4.65	4.65	NO
L0001109	0	0.36232E-03	475614.6	3825870.5	906.1	5.00	4.65	4.65	NO
L0001110	0	0.36232E-03	475614.7	3825860.5	906.7	5.00	4.65	4.65	NO
L0001111	0	0.36232E-03	475614.8	3825850.5	906.7	5.00	4.65	4.65	NO
L0001112	0	0.36232E-03	475614.9	3825840.5	906.8	5.00	4.65	4.65	NO
L0001113	0	0.36232E-03	475614.9	3825830.5	906.8	5.00	4.65	4.65	NO
L0001114	0	0.36232E-03	475615.0	3825820.5	906.9	5.00	4.65	4.65	NO
L0001115	0	0.36232E-03	475615.1	3825810.5	906.9	5.00	4.65	4.65	NO
L0001116	0	0.36232E-03	475615.2	3825800.5	907.2	5.00	4.65	4.65	NO
L0001117	0	0.36232E-03	475615.3	3825790.5	907.8	5.00	4.65	4.65	NO
L0001118	0	0.36232E-03	475615.3	3825780.5	908.3	5.00	4.65	4.65	NO
L0001119	0	0.36232E-03	475615.4	3825770.5	908.5	5.00	4.65	4.65	NO
L0001120	0	0.36232E-03	475615.5	3825760.5	908.7	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001121	0	0.36232E-03	475615.6	3825750.5	909.0	5.00	4.65	4.65	NO	
L0001122	0	0.36232E-03	475615.7	3825740.5	909.3	5.00	4.65	4.65	NO	
L0001123	0	0.36232E-03	475615.7	3825730.5	909.6	5.00	4.65	4.65	NO	
L0001124	0	0.36232E-03	475615.8	3825720.5	909.9	5.00	4.65	4.65	NO	
L0001125	0	0.36232E-03	475615.9	3825710.5	910.2	5.00	4.65	4.65	NO	
L0001126	0	0.36232E-03	475616.0	3825700.5	910.5	5.00	4.65	4.65	NO	
L0001127	0	0.36232E-03	475616.1	3825690.5	910.9	5.00	4.65	4.65	NO	
L0001128	0	0.36232E-03	475616.1	3825680.5	911.1	5.00	4.65	4.65	NO	
L0001129	0	0.36232E-03	475615.1	3825671.6	911.3	5.00	4.65	4.65	NO	
L0001130	0	0.36232E-03	475605.1	3825671.7	910.8	5.00	4.65	4.65	NO	
L0001131	0	0.36232E-03	475595.1	3825671.7	910.6	5.00	4.65	4.65	NO	
L0001132	0	0.36232E-03	475585.1	3825671.8	910.1	5.00	4.65	4.65	NO	
L0001133	0	0.36232E-03	475575.1	3825671.8	909.8	5.00	4.65	4.65	NO	
L0001134	0	0.36232E-03	475565.1	3825671.9	909.4	5.00	4.65	4.65	NO	
L0001135	0	0.36232E-03	475555.1	3825671.9	908.9	5.00	4.65	4.65	NO	

L0001136	0	0.36232E-03	475545.1	3825672.0	908.7	5.00	4.65	4.65	NO
L0001137	0	0.36232E-03	475535.1	3825672.0	908.1	5.00	4.65	4.65	NO
L0001138	0	0.36232E-03	475525.1	3825672.1	907.7	5.00	4.65	4.65	NO
L0001139	0	0.36232E-03	475515.1	3825672.1	907.4	5.00	4.65	4.65	NO
L0001140	0	0.36232E-03	475505.1	3825672.2	907.1	5.00	4.65	4.65	NO
L0001141	0	0.36232E-03	475495.1	3825672.2	906.8	5.00	4.65	4.65	NO
L0001142	0	0.36232E-03	475485.1	3825672.3	906.4	5.00	4.65	4.65	NO
L0001143	0	0.36232E-03	475475.1	3825672.3	906.0	5.00	4.65	4.65	NO
L0001144	0	0.36232E-03	475465.1	3825672.4	905.7	5.00	4.65	4.65	NO
L0001145	0	0.36232E-03	475455.1	3825672.4	905.4	5.00	4.65	4.65	NO
L0001146	0	0.36232E-03	475445.1	3825672.5	905.0	5.00	4.65	4.65	NO
L0001147	0	0.36232E-03	475435.1	3825672.5	904.6	5.00	4.65	4.65	NO
L0001148	0	0.36232E-03	475425.1	3825672.6	904.3	5.00	4.65	4.65	NO
L0001149	0	0.36232E-03	475415.1	3825672.7	903.9	5.00	4.65	4.65	NO
L0001150	0	0.36232E-03	475405.1	3825672.7	903.4	5.00	4.65	4.65	NO
L0001151	0	0.36232E-03	475395.1	3825672.8	902.8	5.00	4.65	4.65	NO
L0001152	0	0.36232E-03	475385.1	3825672.8	902.3	5.00	4.65	4.65	NO
L0001153	0	0.36232E-03	475375.1	3825672.9	901.8	5.00	4.65	4.65	NO
L0001154	0	0.36232E-03	475365.1	3825672.9	901.5	5.00	4.65	4.65	NO
L0001155	0	0.36232E-03	475355.1	3825673.0	901.0	5.00	4.65	4.65	NO
L0001156	0	0.36232E-03	475345.1	3825673.0	900.8	5.00	4.65	4.65	NO
L0001157	0	0.36232E-03	475335.1	3825673.1	900.6	5.00	4.65	4.65	NO
L0001158	0	0.36232E-03	475325.1	3825673.1	900.1	5.00	4.65	4.65	NO
L0001159	0	0.36232E-03	475315.1	3825673.2	899.6	5.00	4.65	4.65	NO
L0001160	0	0.36232E-03	475305.1	3825673.2	899.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001161	0	0.36232E-03	475295.1	3825673.3	898.9	5.00	4.65	4.65	NO	
L0001162	0	0.36232E-03	475285.1	3825673.3	898.5	5.00	4.65	4.65	NO	
L0001163	0	0.36232E-03	475275.1	3825673.4	898.1	5.00	4.65	4.65	NO	
L0001164	0	0.36232E-03	475265.1	3825673.4	897.8	5.00	4.65	4.65	NO	
L0001165	0	0.36232E-03	475255.1	3825673.5	897.4	5.00	4.65	4.65	NO	
L0001166	0	0.36232E-03	475245.1	3825673.5	897.0	5.00	4.65	4.65	NO	
L0001167	0	0.36232E-03	475235.1	3825673.6	896.3	5.00	4.65	4.65	NO	
L0001168	0	0.36232E-03	475225.1	3825673.6	895.7	5.00	4.65	4.65	NO	
L0001169	0	0.36232E-03	475215.1	3825673.7	895.3	5.00	4.65	4.65	NO	
L0001170	0	0.36232E-03	475205.1	3825673.7	895.0	5.00	4.65	4.65	NO	
L0001171	0	0.36232E-03	475195.1	3825673.8	894.6	5.00	4.65	4.65	NO	
L0001172	0	0.36232E-03	475185.1	3825673.8	894.1	5.00	4.65	4.65	NO	
L0001173	0	0.36232E-03	475175.1	3825673.9	893.9	5.00	4.65	4.65	NO	
L0001174	0	0.36232E-03	475165.1	3825673.9	893.9	5.00	4.65	4.65	NO	
L0001175	0	0.36232E-03	475155.1	3825674.0	893.6	5.00	4.65	4.65	NO	

L0001176	0	0.36232E-03	475145.1	3825674.0	892.9	5.00	4.65	4.65	NO
L0001177	0	0.36232E-03	475135.1	3825674.1	892.3	5.00	4.65	4.65	NO
L0001178	0	0.36232E-03	475125.1	3825674.1	891.8	5.00	4.65	4.65	NO
L0001179	0	0.36232E-03	475115.1	3825674.2	891.3	5.00	4.65	4.65	NO
L0001180	0	0.36232E-03	475105.1	3825674.2	890.8	5.00	4.65	4.65	NO
L0001181	0	0.36232E-03	475095.1	3825674.3	890.4	5.00	4.65	4.65	NO
L0001182	0	0.36232E-03	475085.1	3825674.3	890.2	5.00	4.65	4.65	NO
L0001183	0	0.36232E-03	475075.1	3825674.4	890.0	5.00	4.65	4.65	NO
L0001184	0	0.36232E-03	475065.1	3825674.4	889.4	5.00	4.65	4.65	NO
L0001185	0	0.36232E-03	475055.1	3825674.5	889.3	5.00	4.65	4.65	NO
L0001186	0	0.36232E-03	475045.1	3825674.5	889.4	5.00	4.65	4.65	NO
L0001187	0	0.36232E-03	475035.1	3825674.6	889.7	5.00	4.65	4.65	NO
L0001188	0	0.36232E-03	475025.1	3825674.6	889.4	5.00	4.65	4.65	NO
L0001189	0	0.36232E-03	475015.1	3825674.7	888.6	5.00	4.65	4.65	NO
L0001190	0	0.36232E-03	475005.1	3825674.7	888.0	5.00	4.65	4.65	NO
L0001191	0	0.36232E-03	474995.1	3825674.8	887.3	5.00	4.65	4.65	NO
L0001192	0	0.36232E-03	474985.1	3825674.8	887.0	5.00	4.65	4.65	NO
L0001193	0	0.36232E-03	474975.1	3825674.9	887.1	5.00	4.65	4.65	NO
L0001194	0	0.36232E-03	474965.1	3825674.9	886.6	5.00	4.65	4.65	NO
L0001195	0	0.36232E-03	474955.1	3825675.0	885.9	5.00	4.65	4.65	NO
L0001196	0	0.36232E-03	474945.1	3825675.0	885.5	5.00	4.65	4.65	NO
L0001197	0	0.36232E-03	474935.1	3825675.1	885.1	5.00	4.65	4.65	NO
L0001198	0	0.36232E-03	474925.1	3825675.1	884.9	5.00	4.65	4.65	NO
L0001199	0	0.36232E-03	474915.1	3825675.2	884.7	5.00	4.65	4.65	NO
L0001200	0	0.36232E-03	474905.1	3825675.3	884.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001201	0	0.36232E-03	474895.1	3825675.3	884.1	5.00	4.65	4.65	NO	
L0001202	0	0.36232E-03	474885.1	3825675.4	883.8	5.00	4.65	4.65	NO	
L0001203	0	0.36232E-03	474875.1	3825675.4	883.1	5.00	4.65	4.65	NO	
L0001204	0	0.36232E-03	474865.1	3825675.5	882.4	5.00	4.65	4.65	NO	
L0001205	0	0.36232E-03	474855.1	3825675.5	882.5	5.00	4.65	4.65	NO	
L0001206	0	0.36232E-03	474845.1	3825675.6	881.8	5.00	4.65	4.65	NO	
L0001207	0	0.36232E-03	474849.2	3825682.5	881.8	5.00	4.65	4.65	NO	
L0001208	0	0.36232E-03	474855.4	3825690.3	881.8	5.00	4.65	4.65	NO	
L0001209	0	0.36232E-03	474861.6	3825698.2	882.1	5.00	4.65	4.65	NO	
L0001210	0	0.36232E-03	474867.7	3825706.1	882.4	5.00	4.65	4.65	NO	
L0001211	0	0.36232E-03	474873.9	3825714.0	882.3	5.00	4.65	4.65	NO	
L0001212	0	0.36232E-03	474880.0	3825721.9	882.5	5.00	4.65	4.65	NO	
L0001213	0	0.36232E-03	474886.2	3825729.7	882.7	5.00	4.65	4.65	NO	
L0001214	0	0.36232E-03	474892.3	3825737.6	882.3	5.00	4.65	4.65	NO	
L0001215	0	0.36232E-03	474898.5	3825745.5	882.1	5.00	4.65	4.65	NO	

L0001216	0	0.36232E-03	474904.6	3825753.4	882.5	5.00	4.65	4.65	NO
L0001217	0	0.36232E-03	474910.8	3825761.3	882.9	5.00	4.65	4.65	NO
L0001218	0	0.36232E-03	474917.0	3825769.1	883.4	5.00	4.65	4.65	NO
L0001219	0	0.36232E-03	474923.1	3825777.0	883.1	5.00	4.65	4.65	NO
L0001220	0	0.36232E-03	474929.3	3825784.9	882.4	5.00	4.65	4.65	NO
L0001221	0	0.36232E-03	474935.4	3825792.8	882.2	5.00	4.65	4.65	NO
L0001222	0	0.36232E-03	474941.6	3825800.7	882.3	5.00	4.65	4.65	NO
L0001223	0	0.36232E-03	474947.7	3825808.5	882.8	5.00	4.65	4.65	NO
L0001224	0	0.36232E-03	474953.9	3825816.4	882.8	5.00	4.65	4.65	NO
L0001225	0	0.36232E-03	474960.1	3825824.3	882.8	5.00	4.65	4.65	NO
L0001226	0	0.36232E-03	474966.2	3825832.2	883.0	5.00	4.65	4.65	NO
L0001227	0	0.36232E-03	474972.4	3825840.1	883.4	5.00	4.65	4.65	NO
L0001228	0	0.36232E-03	474978.5	3825847.9	884.7	5.00	4.65	4.65	NO
L0001229	0	0.36232E-03	474984.7	3825855.8	884.5	5.00	4.65	4.65	NO
L0001230	0	0.36232E-03	474990.8	3825863.7	884.3	5.00	4.65	4.65	NO
L0001231	0	0.36232E-03	474997.0	3825871.6	885.0	5.00	4.65	4.65	NO
L0001232	0	0.36232E-03	475003.2	3825879.5	884.7	5.00	4.65	4.65	NO
L0001233	0	0.36232E-03	475009.3	3825887.3	884.9	5.00	4.65	4.65	NO
L0001234	0	0.36232E-03	475015.5	3825895.2	885.4	5.00	4.65	4.65	NO
L0001235	0	0.36232E-03	475021.6	3825903.1	886.0	5.00	4.65	4.65	NO
L0001236	0	0.36232E-03	475027.8	3825911.0	886.6	5.00	4.65	4.65	NO
L0001237	0	0.36232E-03	475033.9	3825918.9	886.0	5.00	4.65	4.65	NO
L0001238	0	0.36232E-03	475040.1	3825926.8	885.6	5.00	4.65	4.65	NO
L0001239	0	0.36232E-03	475046.2	3825934.6	885.6	5.00	4.65	4.65	NO
L0001240	0	0.36232E-03	475052.4	3825942.5	884.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001241	0	0.36232E-03	475058.6	3825950.4	884.6	5.00	4.65	4.65	NO	
L0001242	0	0.36232E-03	475064.7	3825958.3	884.8	5.00	4.65	4.65	NO	
L0001243	0	0.36232E-03	475070.9	3825966.2	884.8	5.00	4.65	4.65	NO	
L0001244	0	0.36232E-03	475077.0	3825974.0	884.9	5.00	4.65	4.65	NO	
L0001245	0	0.36232E-03	475083.2	3825981.9	885.1	5.00	4.65	4.65	NO	
L0001246	0	0.36232E-03	475089.3	3825989.8	885.3	5.00	4.65	4.65	NO	
L0001247	0	0.36232E-03	475095.5	3825997.7	885.8	5.00	4.65	4.65	NO	
L0001248	0	0.36232E-03	475101.7	3826005.6	885.9	5.00	4.65	4.65	NO	
L0001249	0	0.36232E-03	475107.8	3826013.4	885.5	5.00	4.65	4.65	NO	
L0001250	0	0.36232E-03	475114.0	3826021.3	885.6	5.00	4.65	4.65	NO	
L0001251	0	0.36232E-03	475120.1	3826029.2	885.6	5.00	4.65	4.65	NO	
L0001252	0	0.36232E-03	475126.3	3826037.1	885.9	5.00	4.65	4.65	NO	
L0001253	0	0.36232E-03	475132.4	3826045.0	887.0	5.00	4.65	4.65	NO	
L0001254	0	0.36232E-03	475138.6	3826052.8	887.6	5.00	4.65	4.65	NO	
L0001255	0	0.36232E-03	475146.9	3826058.3	888.1	5.00	4.65	4.65	NO	

L0001256	0	0.36232E-03	475155.4	3826063.5	888.8	5.00	4.65	4.65	NO
L0001257	0	0.36232E-03	475164.0	3826068.8	889.1	5.00	4.65	4.65	NO
L0001258	0	0.36232E-03	475172.5	3826074.0	889.4	5.00	4.65	4.65	NO
L0001259	0	0.36232E-03	475181.0	3826079.3	889.4	5.00	4.65	4.65	NO
L0001260	0	0.36232E-03	475189.5	3826084.5	888.5	5.00	4.65	4.65	NO
L0001261	0	0.36232E-03	475198.0	3826089.8	887.6	5.00	4.65	4.65	NO
L0001262	0	0.36232E-03	475206.5	3826095.0	888.7	5.00	4.65	4.65	NO
L0001263	0	0.36232E-03	475215.0	3826100.3	888.7	5.00	4.65	4.65	NO
L0001264	0	0.36232E-03	475223.5	3826105.5	887.5	5.00	4.65	4.65	NO
L0001265	0	0.36232E-03	475232.0	3826110.8	886.2	5.00	4.65	4.65	NO
L0001266	0	0.36232E-03	475240.5	3826116.1	885.8	5.00	4.65	4.65	NO
L0001267	0	0.36232E-03	475249.0	3826121.3	885.9	5.00	4.65	4.65	NO
L0001268	0	0.36232E-03	475257.6	3826126.6	885.0	5.00	4.65	4.65	NO
L0001269	0	0.36232E-03	475266.1	3826131.8	886.1	5.00	4.65	4.65	NO
L0001270	0	0.36232E-03	475274.6	3826137.1	886.8	5.00	4.65	4.65	NO
L0001271	0	0.36232E-03	475283.1	3826142.3	888.5	5.00	4.65	4.65	NO
L0001272	0	0.36232E-03	475291.6	3826147.6	888.9	5.00	4.65	4.65	NO
L0001273	0	0.36232E-03	475300.1	3826152.8	890.2	5.00	4.65	4.65	NO
L0001274	0	0.36232E-03	475308.6	3826158.1	891.0	5.00	4.65	4.65	NO
L0001275	0	0.36232E-03	475317.1	3826163.3	890.8	5.00	4.65	4.65	NO
L0001276	0	0.36232E-03	475325.6	3826168.6	891.4	5.00	4.65	4.65	NO
L0001277	0	0.36232E-03	475332.7	3826175.0	891.8	5.00	4.65	4.65	NO
L0001278	0	0.36232E-03	475335.6	3826184.5	890.9	5.00	4.65	4.65	NO
L0001279	0	0.36232E-03	475338.6	3826194.1	889.6	5.00	4.65	4.65	NO
L0001280	0	0.36232E-03	475341.6	3826203.6	888.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001281	0	0.36232E-03	475344.6	3826213.2	886.6	5.00	4.65	4.65	NO	
L0001282	0	0.36232E-03	475347.5	3826222.7	884.4	5.00	4.65	4.65	NO	
L0001283	0	0.36232E-03	475350.5	3826232.3	884.6	5.00	4.65	4.65	NO	
L0001284	0	0.36232E-03	475353.5	3826241.8	885.0	5.00	4.65	4.65	NO	
L0001285	0	0.36232E-03	475356.5	3826251.4	883.9	5.00	4.65	4.65	NO	
L0001286	0	0.36232E-03	475359.4	3826260.9	883.8	5.00	4.65	4.65	NO	
L0001287	0	0.36232E-03	475362.4	3826270.5	883.9	5.00	4.65	4.65	NO	
L0001288	0	0.36232E-03	475365.4	3826280.0	884.2	5.00	4.65	4.65	NO	
L0001289	0	0.36232E-03	475368.3	3826289.6	885.0	5.00	4.65	4.65	NO	
L0001290	0	0.36232E-03	475376.2	3826292.4	886.2	5.00	4.65	4.65	NO	
L0001291	0	0.36232E-03	475386.2	3826292.2	887.4	5.00	4.65	4.65	NO	
L0001292	0	0.36232E-03	475396.2	3826292.1	887.9	5.00	4.65	4.65	NO	
L0001293	0	0.36232E-03	475406.2	3826291.9	888.7	5.00	4.65	4.65	NO	
L0001294	0	0.36232E-03	475416.2	3826291.8	889.1	5.00	4.65	4.65	NO	
L0001295	0	0.36232E-03	475426.2	3826291.6	889.8	5.00	4.65	4.65	NO	

L0001296	0	0.36232E-03	475436.2	3826291.5	890.3	5.00	4.65	4.65	NO
L0001297	0	0.36232E-03	475446.2	3826291.4	890.3	5.00	4.65	4.65	NO
L0001298	0	0.36232E-03	475456.2	3826291.2	890.3	5.00	4.65	4.65	NO
L0001299	0	0.36232E-03	475466.2	3826291.1	891.0	5.00	4.65	4.65	NO
L0001300	0	0.36232E-03	475476.2	3826290.9	890.6	5.00	4.65	4.65	NO
L0001301	0	0.36232E-03	475486.2	3826290.8	890.3	5.00	4.65	4.65	NO
L0001302	0	0.36232E-03	475496.2	3826290.6	890.3	5.00	4.65	4.65	NO
L0001303	0	0.36232E-03	475506.2	3826290.5	891.0	5.00	4.65	4.65	NO
L0001304	0	0.36232E-03	475516.2	3826290.3	890.1	5.00	4.65	4.65	NO
L0001305	0	0.36232E-03	475526.2	3826290.2	889.6	5.00	4.65	4.65	NO
L0001306	0	0.36232E-03	475536.2	3826290.0	890.4	5.00	4.65	4.65	NO
L0001307	0	0.36232E-03	475546.2	3826289.9	891.5	5.00	4.65	4.65	NO
L0001308	0	0.36232E-03	475556.2	3826289.8	893.1	5.00	4.65	4.65	NO
L0001309	0	0.36232E-03	475566.2	3826289.6	894.0	5.00	4.65	4.65	NO
L0001310	0	0.36232E-03	475576.2	3826289.5	894.9	5.00	4.65	4.65	NO
L0001311	0	0.36232E-03	475586.2	3826289.3	895.5	5.00	4.65	4.65	NO
L0001312	0	0.36232E-03	475596.2	3826289.2	896.0	5.00	4.65	4.65	NO
L0001313	0	0.36232E-03	475606.2	3826289.0	896.4	5.00	4.65	4.65	NO
L0001314	0	0.36232E-03	475616.2	3826288.9	896.8	5.00	4.65	4.65	NO
L0001315	0	0.36232E-03	475626.2	3826288.7	897.2	5.00	4.65	4.65	NO
L0001316	0	0.36232E-03	475636.2	3826288.6	897.7	5.00	4.65	4.65	NO
L0001317	0	0.36232E-03	475646.2	3826288.5	898.1	5.00	4.65	4.65	NO
L0001318	0	0.36232E-03	475656.2	3826288.3	898.5	5.00	4.65	4.65	NO
L0001319	0	0.36232E-03	475666.2	3826288.2	898.9	5.00	4.65	4.65	NO
L0001320	0	0.36232E-03	475676.2	3826288.0	899.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001321	0	0.36232E-03	475686.2	3826287.9	899.8	5.00	4.65	4.65	NO	
L0001322	0	0.36232E-03	475696.2	3826287.7	900.0	5.00	4.65	4.65	NO	
L0001323	0	0.36232E-03	475706.2	3826287.6	900.3	5.00	4.65	4.65	NO	
L0001324	0	0.36232E-03	475716.2	3826287.4	900.1	5.00	4.65	4.65	NO	
L0001325	0	0.36232E-03	475726.2	3826287.3	900.4	5.00	4.65	4.65	NO	
L0001326	0	0.36232E-03	475736.2	3826287.1	899.9	5.00	4.65	4.65	NO	
L0001327	0	0.36232E-03	475746.2	3826287.0	900.2	5.00	4.65	4.65	NO	
L0001328	0	0.36232E-03	475756.2	3826286.9	901.0	5.00	4.65	4.65	NO	
L0001329	0	0.36232E-03	475766.2	3826286.7	902.0	5.00	4.65	4.65	NO	
L0001330	0	0.36232E-03	475775.6	3826286.0	902.6	5.00	4.65	4.65	NO	
L0001331	0	0.36232E-03	475775.3	3826276.0	902.1	5.00	4.65	4.65	NO	
L0001332	0	0.36232E-03	475775.0	3826266.0	901.6	5.00	4.65	4.65	NO	
L0001333	0	0.36232E-03	475774.6	3826256.0	902.0	5.00	4.65	4.65	NO	
L0001334	0	0.36232E-03	475774.3	3826246.0	903.0	5.00	4.65	4.65	NO	
L0001335	0	0.36232E-03	475774.0	3826236.0	903.4	5.00	4.65	4.65	NO	

L0001336	0	0.36232E-03	475773.7	3826226.1	903.7	5.00	4.65	4.65	NO
L0001337	0	0.36232E-03	475773.4	3826216.1	903.7	5.00	4.65	4.65	NO
L0001338	0	0.36232E-03	475773.0	3826206.1	903.5	5.00	4.65	4.65	NO
L0001339	0	0.36232E-03	475772.7	3826196.1	903.3	5.00	4.65	4.65	NO
L0001340	0	0.36232E-03	475772.4	3826186.1	902.6	5.00	4.65	4.65	NO
L0001341	0	0.36232E-03	475772.1	3826176.1	901.6	5.00	4.65	4.65	NO
L0001342	0	0.36232E-03	475771.8	3826166.1	900.9	5.00	4.65	4.65	NO
L0001343	0	0.36232E-03	475771.4	3826156.1	902.1	5.00	4.65	4.65	NO
L0001344	0	0.36232E-03	475771.1	3826146.1	903.6	5.00	4.65	4.65	NO
L0001345	0	0.36232E-03	475770.8	3826136.1	903.9	5.00	4.65	4.65	NO
L0001346	0	0.36232E-03	475770.5	3826126.1	903.4	5.00	4.65	4.65	NO
L0001347	0	0.36232E-03	475770.2	3826116.1	902.7	5.00	4.65	4.65	NO
L0001348	0	0.36232E-03	475769.8	3826106.1	902.0	5.00	4.65	4.65	NO
L0001349	0	0.36232E-03	475769.5	3826096.1	901.4	5.00	4.65	4.65	NO
L0001350	0	0.36232E-03	475769.2	3826086.1	900.2	5.00	4.65	4.65	NO
L0001351	0	0.36232E-03	475768.9	3826076.1	899.9	5.00	4.65	4.65	NO
L0001352	0	0.36232E-03	475768.6	3826066.1	901.8	5.00	4.65	4.65	NO
L0001353	0	0.36232E-03	475768.2	3826056.1	902.2	5.00	4.65	4.65	NO
L0001354	0	0.36232E-03	475767.9	3826046.1	903.0	5.00	4.65	4.65	NO
L0001355	0	0.36232E-03	475767.6	3826036.2	903.9	5.00	4.65	4.65	NO
L0001356	0	0.36232E-03	475767.3	3826026.2	904.6	5.00	4.65	4.65	NO
L0001357	0	0.36232E-03	475767.0	3826016.2	905.3	5.00	4.65	4.65	NO
L0001358	0	0.36232E-03	475766.6	3826006.2	905.8	5.00	4.65	4.65	NO
L0001359	0	0.36232E-03	475766.3	3825996.2	906.0	5.00	4.65	4.65	NO
L0001360	0	0.36232E-03	475766.0	3825986.2	906.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001361	0	0.36232E-03	475765.7	3825976.2	906.4	5.00	4.65	4.65	NO	
L0001362	0	0.36232E-03	475765.4	3825966.2	906.8	5.00	4.65	4.65	NO	
L0001363	0	0.36232E-03	475765.0	3825956.2	907.4	5.00	4.65	4.65	NO	
L0001364	0	0.36232E-03	475762.9	3825948.1	907.7	5.00	4.65	4.65	NO	
L0001365	0	0.36232E-03	475752.9	3825948.1	907.4	5.00	4.65	4.65	NO	
L0001366	0	0.36232E-03	475742.9	3825948.1	906.8	5.00	4.65	4.65	NO	
L0001367	0	0.36232E-03	475732.9	3825948.1	906.2	5.00	4.65	4.65	NO	
L0001368	0	0.36232E-03	475722.9	3825948.1	906.0	5.00	4.65	4.65	NO	
L0001369	0	0.36232E-03	475712.9	3825948.1	905.8	5.00	4.65	4.65	NO	
L0001370	0	0.36232E-03	475702.9	3825948.1	905.5	5.00	4.65	4.65	NO	
L0001371	0	0.36232E-03	475692.9	3825948.1	905.9	5.00	4.65	4.65	NO	
L0001372	0	0.36232E-03	475682.9	3825948.1	905.7	5.00	4.65	4.65	NO	
L0001373	0	0.36232E-03	475672.9	3825948.1	905.5	5.00	4.65	4.65	NO	
L0001374	0	0.36232E-03	475662.9	3825948.1	905.2	5.00	4.65	4.65	NO	
L0001375	0	0.36232E-03	475652.9	3825948.1	904.5	5.00	4.65	4.65	NO	

L0001376	0	0.36232E-03	475642.9	3825948.1	905.2	5.00	4.65	4.65	NO
L0001377	0	0.36232E-03	475632.9	3825948.1	905.5	5.00	4.65	4.65	NO
L0001378	0	0.36232E-03	475622.9	3825948.1	905.4	5.00	4.65	4.65	NO
L0001379	0	0.36232E-03	475612.9	3825948.1	905.2	5.00	4.65	4.65	NO
L0001380	0	0.36232E-03	475602.9	3825948.1	904.7	5.00	4.65	4.65	NO
L0001381	0	0.36232E-03	475592.9	3825948.1	904.0	5.00	4.65	4.65	NO
L0001382	0	0.36232E-03	475587.6	3825943.3	902.8	5.00	4.65	4.65	NO
L0001383	0	0.36232E-03	475587.3	3825933.3	902.6	5.00	4.65	4.65	NO
L0001384	0	0.36232E-03	475587.1	3825923.3	902.9	5.00	4.65	4.65	NO
L0001385	0	0.36232E-03	475586.9	3825913.3	903.6	5.00	4.65	4.65	NO
L0001386	0	0.36232E-03	475586.6	3825903.3	904.4	5.00	4.65	4.65	NO
L0001387	0	0.36232E-03	475586.4	3825893.3	904.5	5.00	4.65	4.65	NO
L0001388	0	0.36232E-03	475586.1	3825883.3	904.5	5.00	4.65	4.65	NO
L0001389	0	0.36232E-03	475585.9	3825873.3	904.7	5.00	4.65	4.65	NO
L0001390	0	0.36232E-03	475585.7	3825863.3	904.8	5.00	4.65	4.65	NO
L0001391	0	0.36232E-03	475585.4	3825853.3	905.0	5.00	4.65	4.65	NO
L0001392	0	0.36232E-03	475585.2	3825843.3	905.3	5.00	4.65	4.65	NO
L0001393	0	0.36232E-03	475585.0	3825833.3	905.6	5.00	4.65	4.65	NO
L0001394	0	0.36232E-03	475584.7	3825823.3	905.8	5.00	4.65	4.65	NO
L0001395	0	0.36232E-03	475584.5	3825813.3	906.0	5.00	4.65	4.65	NO
L0001396	0	0.36232E-03	475584.2	3825803.3	906.3	5.00	4.65	4.65	NO
L0001397	0	0.36232E-03	475584.0	3825793.3	906.6	5.00	4.65	4.65	NO
L0001398	0	0.36232E-03	475583.8	3825783.3	906.8	5.00	4.65	4.65	NO
L0001399	0	0.36232E-03	475583.5	3825773.3	907.1	5.00	4.65	4.65	NO
L0001400	0	0.36232E-03	475583.3	3825763.4	907.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001401	0	0.36232E-03	475583.0	3825753.4	907.8	5.00	4.65	4.65	NO	
L0001402	0	0.36232E-03	475582.8	3825743.4	908.1	5.00	4.65	4.65	NO	
L0001403	0	0.36232E-03	475582.6	3825733.4	908.2	5.00	4.65	4.65	NO	
L0001404	0	0.36232E-03	475582.3	3825723.4	908.5	5.00	4.65	4.65	NO	
L0001405	0	0.36232E-03	475582.1	3825713.4	908.8	5.00	4.65	4.65	NO	
L0001406	0	0.36232E-03	475581.9	3825703.4	909.0	5.00	4.65	4.65	NO	
L0001407	0	0.36232E-03	475575.0	3825700.2	908.8	5.00	4.65	4.65	NO	
L0001408	0	0.36232E-03	475565.0	3825700.2	908.5	5.00	4.65	4.65	NO	
L0001409	0	0.36232E-03	475555.0	3825700.2	908.3	5.00	4.65	4.65	NO	
L0001410	0	0.36232E-03	475545.0	3825700.2	907.9	5.00	4.65	4.65	NO	
L0001411	0	0.36232E-03	475535.0	3825700.2	907.5	5.00	4.65	4.65	NO	
L0001412	0	0.36232E-03	475525.0	3825700.2	907.0	5.00	4.65	4.65	NO	
L0001413	0	0.36232E-03	475515.0	3825700.2	906.5	5.00	4.65	4.65	NO	
L0001414	0	0.36232E-03	475505.0	3825700.2	906.2	5.00	4.65	4.65	NO	
L0001415	0	0.36232E-03	475495.0	3825700.2	905.8	5.00	4.65	4.65	NO	

L0001416	0	0.36232E-03	475485.0	3825700.2	905.5	5.00	4.65	4.65	NO
L0001417	0	0.36232E-03	475475.0	3825700.2	905.2	5.00	4.65	4.65	NO
L0001418	0	0.36232E-03	475465.0	3825700.2	904.8	5.00	4.65	4.65	NO
L0001419	0	0.36232E-03	475455.0	3825700.2	904.5	5.00	4.65	4.65	NO
L0001420	0	0.36232E-03	475445.0	3825700.2	904.2	5.00	4.65	4.65	NO
L0001421	0	0.36232E-03	475435.0	3825700.2	903.8	5.00	4.65	4.65	NO
L0001422	0	0.36232E-03	475425.0	3825700.2	903.5	5.00	4.65	4.65	NO
L0001423	0	0.36232E-03	475415.0	3825700.2	903.1	5.00	4.65	4.65	NO
L0001424	0	0.36232E-03	475405.0	3825700.2	902.9	5.00	4.65	4.65	NO
L0001425	0	0.36232E-03	475395.0	3825700.2	902.6	5.00	4.65	4.65	NO
L0001426	0	0.36232E-03	475385.0	3825700.2	902.3	5.00	4.65	4.65	NO
L0001427	0	0.36232E-03	475375.0	3825700.2	902.0	5.00	4.65	4.65	NO
L0001428	0	0.36232E-03	475365.0	3825700.2	901.3	5.00	4.65	4.65	NO
L0001429	0	0.36232E-03	475355.0	3825700.2	900.8	5.00	4.65	4.65	NO
L0001430	0	0.36232E-03	475345.0	3825700.2	900.4	5.00	4.65	4.65	NO
L0001431	0	0.36232E-03	475335.0	3825700.2	899.8	5.00	4.65	4.65	NO
L0001432	0	0.36232E-03	475325.0	3825700.2	899.3	5.00	4.65	4.65	NO
L0001433	0	0.36232E-03	475315.0	3825700.2	899.0	5.00	4.65	4.65	NO
L0001434	0	0.36232E-03	475305.0	3825700.2	898.6	5.00	4.65	4.65	NO
L0001435	0	0.36232E-03	475295.0	3825700.2	898.1	5.00	4.65	4.65	NO
L0001436	0	0.36232E-03	475285.0	3825700.2	897.8	5.00	4.65	4.65	NO
L0001437	0	0.36232E-03	475275.0	3825700.2	897.5	5.00	4.65	4.65	NO
L0001438	0	0.36232E-03	475265.0	3825700.2	897.1	5.00	4.65	4.65	NO
L0001439	0	0.36232E-03	475255.0	3825700.2	896.6	5.00	4.65	4.65	NO
L0001440	0	0.36232E-03	475245.0	3825700.2	896.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001441	0	0.36232E-03	475235.0	3825700.2	895.9	5.00	4.65	4.65	NO	
L0001442	0	0.36232E-03	475225.0	3825700.2	895.7	5.00	4.65	4.65	NO	
L0001443	0	0.36232E-03	475215.0	3825700.2	895.5	5.00	4.65	4.65	NO	
L0001444	0	0.36232E-03	475205.0	3825700.2	895.0	5.00	4.65	4.65	NO	
L0001445	0	0.36232E-03	475195.0	3825700.2	894.5	5.00	4.65	4.65	NO	
L0001446	0	0.36232E-03	475185.0	3825700.2	893.9	5.00	4.65	4.65	NO	
L0001447	0	0.36232E-03	475175.0	3825700.2	893.3	5.00	4.65	4.65	NO	
L0001448	0	0.36232E-03	475165.0	3825700.2	892.9	5.00	4.65	4.65	NO	
L0001449	0	0.36232E-03	475155.0	3825700.2	892.6	5.00	4.65	4.65	NO	
L0001450	0	0.36232E-03	475145.0	3825700.2	892.1	5.00	4.65	4.65	NO	
L0001451	0	0.36232E-03	475135.0	3825700.2	891.8	5.00	4.65	4.65	NO	
L0001452	0	0.36232E-03	475125.0	3825700.2	891.4	5.00	4.65	4.65	NO	
L0001453	0	0.36232E-03	475115.0	3825700.2	890.9	5.00	4.65	4.65	NO	
L0001454	0	0.36232E-03	475105.0	3825700.2	890.6	5.00	4.65	4.65	NO	
L0001455	0	0.36232E-03	475095.0	3825700.2	890.0	5.00	4.65	4.65	NO	

L0001456	0	0.36232E-03	475085.0	3825700.2	889.6	5.00	4.65	4.65	NO
L0001457	0	0.36232E-03	475075.0	3825700.2	889.2	5.00	4.65	4.65	NO
L0001458	0	0.36232E-03	475065.0	3825700.2	888.8	5.00	4.65	4.65	NO
L0001459	0	0.36232E-03	475055.0	3825700.2	888.7	5.00	4.65	4.65	NO
L0001460	0	0.36232E-03	475045.0	3825700.2	888.3	5.00	4.65	4.65	NO
L0001461	0	0.36232E-03	475035.0	3825700.2	887.8	5.00	4.65	4.65	NO
L0001462	0	0.36232E-03	475025.0	3825700.2	887.9	5.00	4.65	4.65	NO
L0001463	0	0.36232E-03	475015.0	3825700.2	887.7	5.00	4.65	4.65	NO
L0001464	0	0.36232E-03	475005.0	3825700.2	887.2	5.00	4.65	4.65	NO
L0001465	0	0.36232E-03	474995.0	3825700.2	887.2	5.00	4.65	4.65	NO
L0001466	0	0.36232E-03	474985.0	3825700.2	886.9	5.00	4.65	4.65	NO
L0001467	0	0.36232E-03	474975.0	3825700.2	886.4	5.00	4.65	4.65	NO
L0001468	0	0.36232E-03	474965.0	3825700.2	885.8	5.00	4.65	4.65	NO
L0001469	0	0.36232E-03	474955.0	3825700.2	885.2	5.00	4.65	4.65	NO
L0001470	0	0.36232E-03	474945.0	3825700.2	884.8	5.00	4.65	4.65	NO
L0001471	0	0.36232E-03	474935.0	3825700.2	884.6	5.00	4.65	4.65	NO
L0001472	0	0.36232E-03	474925.0	3825700.2	884.7	5.00	4.65	4.65	NO
L0001473	0	0.36232E-03	474915.0	3825700.2	884.3	5.00	4.65	4.65	NO
L0001474	0	0.36232E-03	474905.0	3825700.2	883.6	5.00	4.65	4.65	NO
L0001475	0	0.36232E-03	474898.2	3825701.7	883.2	5.00	4.65	4.65	NO
L0001476	0	0.36232E-03	474904.5	3825709.5	883.7	5.00	4.65	4.65	NO
L0001477	0	0.36232E-03	474910.8	3825717.3	883.6	5.00	4.65	4.65	NO
L0001478	0	0.36232E-03	474917.1	3825725.1	883.1	5.00	4.65	4.65	NO
L0001479	0	0.36232E-03	474923.3	3825732.9	883.2	5.00	4.65	4.65	NO
L0001480	0	0.36232E-03	474929.6	3825740.6	883.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001481	0	0.36232E-03	474935.9	3825748.4	884.0	5.00	4.65	4.65	NO	
L0001482	0	0.36232E-03	474942.2	3825756.2	884.5	5.00	4.65	4.65	NO	
L0001483	0	0.36232E-03	474948.4	3825764.0	883.7	5.00	4.65	4.65	NO	
L0001484	0	0.36232E-03	474954.7	3825771.8	883.5	5.00	4.65	4.65	NO	
L0001485	0	0.36232E-03	474961.0	3825779.6	883.6	5.00	4.65	4.65	NO	
L0001486	0	0.36232E-03	474967.3	3825787.4	883.8	5.00	4.65	4.65	NO	
L0001487	0	0.36232E-03	474973.5	3825795.1	883.8	5.00	4.65	4.65	NO	
L0001488	0	0.36232E-03	474979.8	3825802.9	884.0	5.00	4.65	4.65	NO	
L0001489	0	0.36232E-03	474986.1	3825810.7	884.4	5.00	4.65	4.65	NO	
L0001490	0	0.36232E-03	474992.4	3825818.5	884.2	5.00	4.65	4.65	NO	
L0001491	0	0.36232E-03	474998.6	3825826.3	884.5	5.00	4.65	4.65	NO	
L0001492	0	0.36232E-03	475004.9	3825834.1	885.4	5.00	4.65	4.65	NO	
L0001493	0	0.36232E-03	475011.2	3825841.9	886.0	5.00	4.65	4.65	NO	
L0001494	0	0.36232E-03	475017.5	3825849.6	885.5	5.00	4.65	4.65	NO	
L0001495	0	0.36232E-03	475023.7	3825857.4	886.3	5.00	4.65	4.65	NO	

L0001496	0	0.36232E-03	475030.0	3825865.2	886.6	5.00	4.65	4.65	NO
L0001497	0	0.36232E-03	475036.3	3825873.0	886.3	5.00	4.65	4.65	NO
L0001498	0	0.36232E-03	475042.6	3825880.8	886.3	5.00	4.65	4.65	NO
L0001499	0	0.36232E-03	475048.8	3825888.6	887.0	5.00	4.65	4.65	NO
L0001500	0	0.36232E-03	475055.1	3825896.4	887.6	5.00	4.65	4.65	NO
L0001501	0	0.36232E-03	475061.4	3825904.2	887.2	5.00	4.65	4.65	NO
L0001502	0	0.36232E-03	475067.6	3825911.9	886.4	5.00	4.65	4.65	NO
L0001503	0	0.36232E-03	475073.9	3825919.7	886.0	5.00	4.65	4.65	NO
L0001504	0	0.36232E-03	475080.2	3825927.5	885.9	5.00	4.65	4.65	NO
L0001505	0	0.36232E-03	475086.5	3825935.3	886.1	5.00	4.65	4.65	NO
L0001506	0	0.36232E-03	475092.8	3825943.1	886.7	5.00	4.65	4.65	NO
L0001507	0	0.36232E-03	475099.0	3825950.9	886.1	5.00	4.65	4.65	NO
L0001508	0	0.36232E-03	475105.3	3825958.7	886.2	5.00	4.65	4.65	NO
L0001509	0	0.36232E-03	475111.6	3825966.4	886.3	5.00	4.65	4.65	NO
L0001510	0	0.36232E-03	475117.8	3825974.2	886.4	5.00	4.65	4.65	NO
L0001511	0	0.36232E-03	475124.1	3825982.0	886.8	5.00	4.65	4.65	NO
L0001512	0	0.36232E-03	475130.4	3825989.8	886.9	5.00	4.65	4.65	NO
L0001513	0	0.36232E-03	475136.7	3825997.6	886.9	5.00	4.65	4.65	NO
L0001514	0	0.36232E-03	475142.9	3826005.4	886.8	5.00	4.65	4.65	NO
L0001515	0	0.36232E-03	475149.2	3826013.2	886.8	5.00	4.65	4.65	NO
L0001516	0	0.36232E-03	475155.5	3826020.9	887.4	5.00	4.65	4.65	NO
L0001517	0	0.36232E-03	475161.8	3826028.7	887.8	5.00	4.65	4.65	NO
L0001518	0	0.36232E-03	475168.6	3826035.9	887.7	5.00	4.65	4.65	NO
L0001519	0	0.36232E-03	475177.1	3826041.1	888.2	5.00	4.65	4.65	NO
L0001520	0	0.36232E-03	475185.6	3826046.3	888.7	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001521	0	0.36232E-03	475194.2	3826051.6	889.6	5.00	4.65	4.65	NO	
L0001522	0	0.36232E-03	475202.7	3826056.8	890.3	5.00	4.65	4.65	NO	
L0001523	0	0.36232E-03	475211.2	3826062.0	890.4	5.00	4.65	4.65	NO	
L0001524	0	0.36232E-03	475219.8	3826067.2	889.6	5.00	4.65	4.65	NO	
L0001525	0	0.36232E-03	475228.3	3826072.4	888.7	5.00	4.65	4.65	NO	
L0001526	0	0.36232E-03	475236.8	3826077.6	888.9	5.00	4.65	4.65	NO	
L0001527	0	0.36232E-03	475245.4	3826082.8	889.0	5.00	4.65	4.65	NO	
L0001528	0	0.36232E-03	475253.9	3826088.1	888.0	5.00	4.65	4.65	NO	
L0001529	0	0.36232E-03	475262.4	3826093.3	887.2	5.00	4.65	4.65	NO	
L0001530	0	0.36232E-03	475271.0	3826098.5	886.8	5.00	4.65	4.65	NO	
L0001531	0	0.36232E-03	475279.5	3826103.7	886.9	5.00	4.65	4.65	NO	
L0001532	0	0.36232E-03	475288.0	3826108.9	887.2	5.00	4.65	4.65	NO	
L0001533	0	0.36232E-03	475296.6	3826114.1	888.1	5.00	4.65	4.65	NO	
L0001534	0	0.36232E-03	475305.1	3826119.3	889.5	5.00	4.65	4.65	NO	
L0001535	0	0.36232E-03	475313.6	3826124.6	890.4	5.00	4.65	4.65	NO	

L0001536	0	0.36232E-03	475322.2	3826129.8	890.3	5.00	4.65	4.65	NO
L0001537	0	0.36232E-03	475330.7	3826135.0	889.9	5.00	4.65	4.65	NO
L0001538	0	0.36232E-03	475339.2	3826140.2	891.1	5.00	4.65	4.65	NO
L0001539	0	0.36232E-03	475345.2	3826147.5	893.1	5.00	4.65	4.65	NO
L0001540	0	0.36232E-03	475348.4	3826156.9	892.5	5.00	4.65	4.65	NO
L0001541	0	0.36232E-03	475351.6	3826166.4	892.3	5.00	4.65	4.65	NO
L0001542	0	0.36232E-03	475354.8	3826175.9	891.5	5.00	4.65	4.65	NO
L0001543	0	0.36232E-03	475358.0	3826185.3	890.3	5.00	4.65	4.65	NO
L0001544	0	0.36232E-03	475361.2	3826194.8	889.2	5.00	4.65	4.65	NO
L0001545	0	0.36232E-03	475364.4	3826204.3	886.5	5.00	4.65	4.65	NO
L0001546	0	0.36232E-03	475367.7	3826213.8	885.3	5.00	4.65	4.65	NO
L0001547	0	0.36232E-03	475370.9	3826223.2	885.2	5.00	4.65	4.65	NO
L0001548	0	0.36232E-03	475374.1	3826232.7	884.9	5.00	4.65	4.65	NO
L0001549	0	0.36232E-03	475377.3	3826242.2	884.5	5.00	4.65	4.65	NO
L0001550	0	0.36232E-03	475380.5	3826251.7	884.9	5.00	4.65	4.65	NO
L0001551	0	0.36232E-03	475383.7	3826261.1	885.3	5.00	4.65	4.65	NO
L0001552	0	0.36232E-03	475386.9	3826270.6	885.3	5.00	4.65	4.65	NO
L0001553	0	0.36232E-03	475396.7	3826270.6	885.9	5.00	4.65	4.65	NO
L0001554	0	0.36232E-03	475406.7	3826270.4	886.3	5.00	4.65	4.65	NO
L0001555	0	0.36232E-03	475416.7	3826270.2	887.2	5.00	4.65	4.65	NO
L0001556	0	0.36232E-03	475426.7	3826270.0	888.2	5.00	4.65	4.65	NO
L0001557	0	0.36232E-03	475436.7	3826269.8	889.6	5.00	4.65	4.65	NO
L0001558	0	0.36232E-03	475446.7	3826269.6	890.6	5.00	4.65	4.65	NO
L0001559	0	0.36232E-03	475456.7	3826269.4	891.1	5.00	4.65	4.65	NO
L0001560	0	0.36232E-03	475466.7	3826269.2	891.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001561	0	0.36232E-03	475476.7	3826269.0	892.0	5.00	4.65	4.65	NO	
L0001562	0	0.36232E-03	475486.7	3826268.8	892.2	5.00	4.65	4.65	NO	
L0001563	0	0.36232E-03	475496.7	3826268.7	891.8	5.00	4.65	4.65	NO	
L0001564	0	0.36232E-03	475506.7	3826268.5	892.0	5.00	4.65	4.65	NO	
L0001565	0	0.36232E-03	475516.7	3826268.3	892.1	5.00	4.65	4.65	NO	
L0001566	0	0.36232E-03	475526.7	3826268.1	891.9	5.00	4.65	4.65	NO	
L0001567	0	0.36232E-03	475536.7	3826267.9	891.3	5.00	4.65	4.65	NO	
L0001568	0	0.36232E-03	475546.7	3826267.7	891.0	5.00	4.65	4.65	NO	
L0001569	0	0.36232E-03	475556.7	3826267.5	891.2	5.00	4.65	4.65	NO	
L0001570	0	0.36232E-03	475566.7	3826267.3	891.9	5.00	4.65	4.65	NO	
L0001571	0	0.36232E-03	475576.7	3826267.1	892.8	5.00	4.65	4.65	NO	
L0001572	0	0.36232E-03	475586.7	3826266.9	893.5	5.00	4.65	4.65	NO	
L0001573	0	0.36232E-03	475596.7	3826266.7	893.8	5.00	4.65	4.65	NO	
L0001574	0	0.36232E-03	475606.7	3826266.5	894.1	5.00	4.65	4.65	NO	
L0001575	0	0.36232E-03	475616.7	3826266.3	894.6	5.00	4.65	4.65	NO	

L0001576	0	0.36232E-03	475626.7	3826266.1	895.1	5.00	4.65	4.65	NO
L0001577	0	0.36232E-03	475636.7	3826265.9	895.4	5.00	4.65	4.65	NO
L0001578	0	0.36232E-03	475646.7	3826265.7	896.1	5.00	4.65	4.65	NO
L0001579	0	0.36232E-03	475656.7	3826265.5	897.0	5.00	4.65	4.65	NO
L0001580	0	0.36232E-03	475666.7	3826265.3	897.6	5.00	4.65	4.65	NO
L0001581	0	0.36232E-03	475676.7	3826265.1	898.3	5.00	4.65	4.65	NO
L0001582	0	0.36232E-03	475686.7	3826264.9	899.2	5.00	4.65	4.65	NO
L0001583	0	0.36232E-03	475696.7	3826264.7	899.8	5.00	4.65	4.65	NO
L0001584	0	0.36232E-03	475706.7	3826264.5	900.5	5.00	4.65	4.65	NO
L0001585	0	0.36232E-03	475716.7	3826264.3	901.0	5.00	4.65	4.65	NO
L0001586	0	0.36232E-03	475726.7	3826264.1	901.4	5.00	4.65	4.65	NO
L0001587	0	0.36232E-03	475734.2	3826261.6	901.7	5.00	4.65	4.65	NO
L0001588	0	0.36232E-03	475733.9	3826251.6	901.5	5.00	4.65	4.65	NO
L0001589	0	0.36232E-03	475733.6	3826241.6	901.6	5.00	4.65	4.65	NO
L0001590	0	0.36232E-03	475733.3	3826231.6	902.0	5.00	4.65	4.65	NO
L0001591	0	0.36232E-03	475732.9	3826221.6	902.2	5.00	4.65	4.65	NO
L0001592	0	0.36232E-03	475732.6	3826211.6	902.0	5.00	4.65	4.65	NO
L0001593	0	0.36232E-03	475732.3	3826201.6	900.7	5.00	4.65	4.65	NO
L0001594	0	0.36232E-03	475732.0	3826191.6	899.6	5.00	4.65	4.65	NO
L0001595	0	0.36232E-03	475731.7	3826181.6	899.8	5.00	4.65	4.65	NO
L0001596	0	0.36232E-03	475731.4	3826171.6	900.8	5.00	4.65	4.65	NO
L0001597	0	0.36232E-03	475731.0	3826161.6	901.7	5.00	4.65	4.65	NO
L0001598	0	0.36232E-03	475730.7	3826151.6	901.9	5.00	4.65	4.65	NO
L0001599	0	0.36232E-03	475730.4	3826141.6	901.2	5.00	4.65	4.65	NO
L0001600	0	0.36232E-03	475730.1	3826131.6	900.1	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001601	0	0.36232E-03	475729.8	3826121.6	899.7	5.00	4.65	4.65	NO	
L0001602	0	0.36232E-03	475729.5	3826111.6	899.2	5.00	4.65	4.65	NO	
L0001603	0	0.36232E-03	475729.1	3826101.7	898.6	5.00	4.65	4.65	NO	
L0001604	0	0.36232E-03	475728.8	3826091.7	900.0	5.00	4.65	4.65	NO	
L0001605	0	0.36232E-03	475728.5	3826081.7	901.5	5.00	4.65	4.65	NO	
L0001606	0	0.36232E-03	475728.2	3826071.7	902.4	5.00	4.65	4.65	NO	
L0001607	0	0.36232E-03	475727.9	3826061.7	902.8	5.00	4.65	4.65	NO	
L0001608	0	0.36232E-03	475727.6	3826051.7	903.0	5.00	4.65	4.65	NO	
L0001609	0	0.36232E-03	475727.2	3826041.7	903.3	5.00	4.65	4.65	NO	
L0001610	0	0.36232E-03	475726.9	3826031.7	903.5	5.00	4.65	4.65	NO	
L0001611	0	0.36232E-03	475726.6	3826021.7	903.4	5.00	4.65	4.65	NO	
L0001612	0	0.36232E-03	475726.3	3826011.7	903.4	5.00	4.65	4.65	NO	
L0001613	0	0.36232E-03	475726.0	3826001.7	904.1	5.00	4.65	4.65	NO	
L0001614	0	0.36232E-03	475725.7	3825991.7	904.8	5.00	4.65	4.65	NO	
L0001615	0	0.36232E-03	475722.6	3825984.5	904.9	5.00	4.65	4.65	NO	

L0001616	0	0.36232E-03	475712.6	3825984.4	904.0	5.00	4.65	4.65	NO
L0001617	0	0.36232E-03	475702.6	3825984.4	902.7	5.00	4.65	4.65	NO
L0001618	0	0.36232E-03	475692.6	3825984.3	902.7	5.00	4.65	4.65	NO
L0001619	0	0.36232E-03	475682.6	3825984.3	903.4	5.00	4.65	4.65	NO
L0001620	0	0.36232E-03	475672.6	3825984.2	903.8	5.00	4.65	4.65	NO
L0001621	0	0.36232E-03	475662.6	3825984.1	904.1	5.00	4.65	4.65	NO
L0001622	0	0.36232E-03	475652.6	3825984.1	903.6	5.00	4.65	4.65	NO
L0001623	0	0.36232E-03	475642.6	3825984.0	902.3	5.00	4.65	4.65	NO
L0001624	0	0.36232E-03	475632.6	3825984.0	901.4	5.00	4.65	4.65	NO
L0001625	0	0.36232E-03	475622.6	3825983.9	902.6	5.00	4.65	4.65	NO
L0001626	0	0.36232E-03	475612.6	3825983.9	903.3	5.00	4.65	4.65	NO
L0001627	0	0.36232E-03	475602.6	3825983.8	903.5	5.00	4.65	4.65	NO
L0001628	0	0.36232E-03	475592.6	3825983.7	903.1	5.00	4.65	4.65	NO
L0001629	0	0.36232E-03	475582.6	3825983.7	902.9	5.00	4.65	4.65	NO
L0001630	0	0.36232E-03	475572.6	3825983.6	902.2	5.00	4.65	4.65	NO
L0001631	0	0.36232E-03	475562.6	3825983.6	901.6	5.00	4.65	4.65	NO
L0001632	0	0.36232E-03	475554.2	3825981.9	902.3	5.00	4.65	4.65	NO
L0001633	0	0.36232E-03	475554.0	3825971.9	901.8	5.00	4.65	4.65	NO
L0001634	0	0.36232E-03	475553.8	3825961.9	900.8	5.00	4.65	4.65	NO
L0001635	0	0.36232E-03	475553.6	3825951.9	901.0	5.00	4.65	4.65	NO
L0001636	0	0.36232E-03	475553.4	3825941.9	902.1	5.00	4.65	4.65	NO
L0001637	0	0.36232E-03	475553.2	3825931.9	902.6	5.00	4.65	4.65	NO
L0001638	0	0.36232E-03	475553.0	3825921.9	903.1	5.00	4.65	4.65	NO
L0001639	0	0.36232E-03	475552.8	3825911.9	903.2	5.00	4.65	4.65	NO
L0001640	0	0.36232E-03	475552.6	3825901.9	903.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001641	0	0.36232E-03	475552.4	3825891.9	903.3	5.00	4.65	4.65	NO	
L0001642	0	0.36232E-03	475552.2	3825881.9	903.1	5.00	4.65	4.65	NO	
L0001643	0	0.36232E-03	475552.0	3825871.9	903.5	5.00	4.65	4.65	NO	
L0001644	0	0.36232E-03	475551.8	3825862.0	903.9	5.00	4.65	4.65	NO	
L0001645	0	0.36232E-03	475551.7	3825852.0	904.1	5.00	4.65	4.65	NO	
L0001646	0	0.36232E-03	475551.5	3825842.0	904.2	5.00	4.65	4.65	NO	
L0001647	0	0.36232E-03	475551.3	3825832.0	904.3	5.00	4.65	4.65	NO	
L0001648	0	0.36232E-03	475551.1	3825822.0	904.7	5.00	4.65	4.65	NO	
L0001649	0	0.36232E-03	475550.9	3825812.0	904.9	5.00	4.65	4.65	NO	
L0001650	0	0.36232E-03	475550.7	3825802.0	905.1	5.00	4.65	4.65	NO	
L0001651	0	0.36232E-03	475550.5	3825792.0	905.5	5.00	4.65	4.65	NO	
L0001652	0	0.36232E-03	475550.3	3825782.0	905.8	5.00	4.65	4.65	NO	
L0001653	0	0.36232E-03	475550.1	3825772.0	906.0	5.00	4.65	4.65	NO	
L0001654	0	0.36232E-03	475549.9	3825762.0	906.2	5.00	4.65	4.65	NO	
L0001655	0	0.36232E-03	475549.7	3825752.0	906.5	5.00	4.65	4.65	NO	

L0001656	0	0.36232E-03	475549.5	3825742.0	906.7	5.00	4.65	4.65	NO
L0001657	0	0.36232E-03	475548.7	3825732.6	906.9	5.00	4.65	4.65	NO
L0001658	0	0.36232E-03	475538.7	3825732.5	906.6	5.00	4.65	4.65	NO
L0001659	0	0.36232E-03	475528.7	3825732.5	906.3	5.00	4.65	4.65	NO
L0001660	0	0.36232E-03	475518.7	3825732.4	905.9	5.00	4.65	4.65	NO
L0001661	0	0.36232E-03	475508.7	3825732.3	905.5	5.00	4.65	4.65	NO
L0001662	0	0.36232E-03	475498.7	3825732.2	905.1	5.00	4.65	4.65	NO
L0001663	0	0.36232E-03	475488.7	3825732.1	904.8	5.00	4.65	4.65	NO
L0001664	0	0.36232E-03	475478.7	3825732.0	904.4	5.00	4.65	4.65	NO
L0001665	0	0.36232E-03	475468.7	3825732.0	904.0	5.00	4.65	4.65	NO
L0001666	0	0.36232E-03	475458.7	3825731.9	903.7	5.00	4.65	4.65	NO
L0001667	0	0.36232E-03	475448.7	3825731.8	903.3	5.00	4.65	4.65	NO
L0001668	0	0.36232E-03	475438.7	3825731.7	902.9	5.00	4.65	4.65	NO
L0001669	0	0.36232E-03	475428.7	3825731.6	902.6	5.00	4.65	4.65	NO
L0001670	0	0.36232E-03	475418.7	3825731.5	902.4	5.00	4.65	4.65	NO
L0001671	0	0.36232E-03	475408.7	3825731.5	902.1	5.00	4.65	4.65	NO
L0001672	0	0.36232E-03	475398.7	3825731.4	901.8	5.00	4.65	4.65	NO
L0001673	0	0.36232E-03	475388.7	3825731.3	901.4	5.00	4.65	4.65	NO
L0001674	0	0.36232E-03	475378.7	3825731.2	901.1	5.00	4.65	4.65	NO
L0001675	0	0.36232E-03	475368.7	3825731.1	900.9	5.00	4.65	4.65	NO
L0001676	0	0.36232E-03	475358.7	3825731.1	900.5	5.00	4.65	4.65	NO
L0001677	0	0.36232E-03	475348.7	3825731.0	900.1	5.00	4.65	4.65	NO
L0001678	0	0.36232E-03	475338.7	3825730.9	899.7	5.00	4.65	4.65	NO
L0001679	0	0.36232E-03	475328.7	3825730.8	899.4	5.00	4.65	4.65	NO
L0001680	0	0.36232E-03	475318.7	3825730.7	899.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001681	0	0.36232E-03	475308.7	3825730.6	898.9	5.00	4.65	4.65	NO	
L0001682	0	0.36232E-03	475298.7	3825730.6	898.3	5.00	4.65	4.65	NO	
L0001683	0	0.36232E-03	475288.7	3825730.5	898.3	5.00	4.65	4.65	NO	
L0001684	0	0.36232E-03	475278.7	3825730.4	898.1	5.00	4.65	4.65	NO	
L0001685	0	0.36232E-03	475268.7	3825730.3	897.8	5.00	4.65	4.65	NO	
L0001686	0	0.36232E-03	475258.7	3825730.2	897.2	5.00	4.65	4.65	NO	
L0001687	0	0.36232E-03	475248.7	3825730.1	896.6	5.00	4.65	4.65	NO	
L0001688	0	0.36232E-03	475238.7	3825730.1	895.9	5.00	4.65	4.65	NO	
L0001689	0	0.36232E-03	475228.7	3825730.0	895.4	5.00	4.65	4.65	NO	
L0001690	0	0.36232E-03	475218.7	3825729.9	894.9	5.00	4.65	4.65	NO	
L0001691	0	0.36232E-03	475208.7	3825729.8	894.4	5.00	4.65	4.65	NO	
L0001692	0	0.36232E-03	475198.7	3825729.7	893.9	5.00	4.65	4.65	NO	
L0001693	0	0.36232E-03	475188.7	3825729.6	893.4	5.00	4.65	4.65	NO	
L0001694	0	0.36232E-03	475178.7	3825729.6	893.0	5.00	4.65	4.65	NO	
L0001695	0	0.36232E-03	475168.7	3825729.5	892.7	5.00	4.65	4.65	NO	

L0001696	0	0.36232E-03	475158.7	3825729.4	892.5	5.00	4.65	4.65	NO
L0001697	0	0.36232E-03	475148.7	3825729.3	892.0	5.00	4.65	4.65	NO
L0001698	0	0.36232E-03	475138.7	3825729.2	891.3	5.00	4.65	4.65	NO
L0001699	0	0.36232E-03	475128.7	3825729.2	890.8	5.00	4.65	4.65	NO
L0001700	0	0.36232E-03	475118.7	3825729.1	890.4	5.00	4.65	4.65	NO
L0001701	0	0.36232E-03	475108.7	3825729.0	890.3	5.00	4.65	4.65	NO
L0001702	0	0.36232E-03	475098.7	3825728.9	890.3	5.00	4.65	4.65	NO
L0001703	0	0.36232E-03	475088.7	3825728.8	889.8	5.00	4.65	4.65	NO
L0001704	0	0.36232E-03	475078.7	3825728.7	889.1	5.00	4.65	4.65	NO
L0001705	0	0.36232E-03	475068.7	3825728.7	888.6	5.00	4.65	4.65	NO
L0001706	0	0.36232E-03	475058.7	3825728.6	888.1	5.00	4.65	4.65	NO
L0001707	0	0.36232E-03	475048.7	3825728.5	887.6	5.00	4.65	4.65	NO
L0001708	0	0.36232E-03	475038.7	3825728.4	887.2	5.00	4.65	4.65	NO
L0001709	0	0.36232E-03	475028.7	3825728.3	886.8	5.00	4.65	4.65	NO
L0001710	0	0.36232E-03	475018.7	3825728.2	886.4	5.00	4.65	4.65	NO
L0001711	0	0.36232E-03	475008.7	3825728.2	886.4	5.00	4.65	4.65	NO
L0001712	0	0.36232E-03	474998.7	3825728.1	886.3	5.00	4.65	4.65	NO
L0001713	0	0.36232E-03	474988.7	3825728.0	886.1	5.00	4.65	4.65	NO
L0001714	0	0.36232E-03	474978.7	3825727.9	885.6	5.00	4.65	4.65	NO
L0001715	0	0.36232E-03	474968.7	3825727.8	885.2	5.00	4.65	4.65	NO
L0001716	0	0.36232E-03	474958.7	3825727.7	884.6	5.00	4.65	4.65	NO
L0001717	0	0.36232E-03	474957.4	3825731.9	884.8	5.00	4.65	4.65	NO
L0001718	0	0.36232E-03	474963.6	3825739.7	885.3	5.00	4.65	4.65	NO
L0001719	0	0.36232E-03	474969.9	3825747.5	884.6	5.00	4.65	4.65	NO
L0001720	0	0.36232E-03	474976.1	3825755.3	884.5	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001721	0	0.36232E-03	474982.4	3825763.1	884.7	5.00	4.65	4.65	NO	
L0001722	0	0.36232E-03	474988.6	3825770.9	885.2	5.00	4.65	4.65	NO	
L0001723	0	0.36232E-03	474994.9	3825778.8	885.1	5.00	4.65	4.65	NO	
L0001724	0	0.36232E-03	475001.1	3825786.6	884.9	5.00	4.65	4.65	NO	
L0001725	0	0.36232E-03	475007.4	3825794.4	885.5	5.00	4.65	4.65	NO	
L0001726	0	0.36232E-03	475013.6	3825802.2	885.8	5.00	4.65	4.65	NO	
L0001727	0	0.36232E-03	475019.9	3825810.0	885.6	5.00	4.65	4.65	NO	
L0001728	0	0.36232E-03	475026.1	3825817.8	885.6	5.00	4.65	4.65	NO	
L0001729	0	0.36232E-03	475032.4	3825825.6	886.4	5.00	4.65	4.65	NO	
L0001730	0	0.36232E-03	475038.6	3825833.4	886.9	5.00	4.65	4.65	NO	
L0001731	0	0.36232E-03	475044.9	3825841.2	887.6	5.00	4.65	4.65	NO	
L0001732	0	0.36232E-03	475051.1	3825849.0	887.9	5.00	4.65	4.65	NO	
L0001733	0	0.36232E-03	475057.4	3825856.8	887.9	5.00	4.65	4.65	NO	
L0001734	0	0.36232E-03	475063.6	3825864.6	887.7	5.00	4.65	4.65	NO	
L0001735	0	0.36232E-03	475069.8	3825872.5	887.9	5.00	4.65	4.65	NO	

L0001736	0	0.36232E-03	475076.1	3825880.3	888.5	5.00	4.65	4.65	NO
L0001737	0	0.36232E-03	475082.3	3825888.1	888.0	5.00	4.65	4.65	NO
L0001738	0	0.36232E-03	475088.6	3825895.9	887.8	5.00	4.65	4.65	NO
L0001739	0	0.36232E-03	475094.8	3825903.7	887.2	5.00	4.65	4.65	NO
L0001740	0	0.36232E-03	475101.1	3825911.5	887.1	5.00	4.65	4.65	NO
L0001741	0	0.36232E-03	475107.3	3825919.3	887.1	5.00	4.65	4.65	NO
L0001742	0	0.36232E-03	475113.6	3825927.1	887.7	5.00	4.65	4.65	NO
L0001743	0	0.36232E-03	475119.8	3825934.9	888.2	5.00	4.65	4.65	NO
L0001744	0	0.36232E-03	475126.1	3825942.7	887.6	5.00	4.65	4.65	NO
L0001745	0	0.36232E-03	475132.3	3825950.5	887.3	5.00	4.65	4.65	NO
L0001746	0	0.36232E-03	475138.6	3825958.4	887.5	5.00	4.65	4.65	NO
L0001747	0	0.36232E-03	475144.8	3825966.2	887.8	5.00	4.65	4.65	NO
L0001748	0	0.36232E-03	475151.1	3825974.0	888.1	5.00	4.65	4.65	NO
L0001749	0	0.36232E-03	475157.3	3825981.8	887.8	5.00	4.65	4.65	NO
L0001750	0	0.36232E-03	475163.5	3825989.6	887.8	5.00	4.65	4.65	NO
L0001751	0	0.36232E-03	475169.8	3825997.4	887.8	5.00	4.65	4.65	NO
L0001752	0	0.36232E-03	475176.6	3826004.5	887.9	5.00	4.65	4.65	NO
L0001753	0	0.36232E-03	475185.2	3826009.7	888.7	5.00	4.65	4.65	NO
L0001754	0	0.36232E-03	475193.8	3826014.8	889.4	5.00	4.65	4.65	NO
L0001755	0	0.36232E-03	475202.4	3826020.0	890.1	5.00	4.65	4.65	NO
L0001756	0	0.36232E-03	475210.9	3826025.1	890.6	5.00	4.65	4.65	NO
L0001757	0	0.36232E-03	475219.5	3826030.3	891.1	5.00	4.65	4.65	NO
L0001758	0	0.36232E-03	475228.1	3826035.4	891.4	5.00	4.65	4.65	NO
L0001759	0	0.36232E-03	475236.6	3826040.6	891.7	5.00	4.65	4.65	NO
L0001760	0	0.36232E-03	475245.2	3826045.7	891.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001761	0	0.36232E-03	475253.8	3826050.9	890.5	5.00	4.65	4.65	NO	
L0001762	0	0.36232E-03	475262.3	3826056.0	889.5	5.00	4.65	4.65	NO	
L0001763	0	0.36232E-03	475270.9	3826061.2	889.7	5.00	4.65	4.65	NO	
L0001764	0	0.36232E-03	475279.5	3826066.3	889.9	5.00	4.65	4.65	NO	
L0001765	0	0.36232E-03	475288.1	3826071.5	888.7	5.00	4.65	4.65	NO	
L0001766	0	0.36232E-03	475296.6	3826076.7	888.1	5.00	4.65	4.65	NO	
L0001767	0	0.36232E-03	475305.2	3826081.8	889.1	5.00	4.65	4.65	NO	
L0001768	0	0.36232E-03	475313.8	3826087.0	889.5	5.00	4.65	4.65	NO	
L0001769	0	0.36232E-03	475322.3	3826092.1	889.5	5.00	4.65	4.65	NO	
L0001770	0	0.36232E-03	475330.9	3826097.3	890.6	5.00	4.65	4.65	NO	
L0001771	0	0.36232E-03	475339.5	3826102.4	892.1	5.00	4.65	4.65	NO	
L0001772	0	0.36232E-03	475348.1	3826107.6	892.6	5.00	4.65	4.65	NO	
L0001773	0	0.36232E-03	475352.5	3826116.2	891.2	5.00	4.65	4.65	NO	
L0001774	0	0.36232E-03	475356.0	3826125.5	890.6	5.00	4.65	4.65	NO	
L0001775	0	0.36232E-03	475359.5	3826134.9	891.9	5.00	4.65	4.65	NO	

L0001776	0	0.36232E-03	475363.0	3826144.3	893.2	5.00	4.65	4.65	NO
L0001777	0	0.36232E-03	475366.5	3826153.6	892.9	5.00	4.65	4.65	NO
L0001778	0	0.36232E-03	475370.0	3826163.0	892.0	5.00	4.65	4.65	NO
L0001779	0	0.36232E-03	475373.5	3826172.4	891.2	5.00	4.65	4.65	NO
L0001780	0	0.36232E-03	475377.0	3826181.7	890.6	5.00	4.65	4.65	NO
L0001781	0	0.36232E-03	475380.5	3826191.1	888.1	5.00	4.65	4.65	NO
L0001782	0	0.36232E-03	475384.0	3826200.5	886.3	5.00	4.65	4.65	NO
L0001783	0	0.36232E-03	475387.5	3826209.8	885.9	5.00	4.65	4.65	NO
L0001784	0	0.36232E-03	475391.0	3826219.2	885.3	5.00	4.65	4.65	NO
L0001785	0	0.36232E-03	475394.5	3826228.6	885.7	5.00	4.65	4.65	NO
L0001786	0	0.36232E-03	475398.0	3826237.9	886.5	5.00	4.65	4.65	NO
L0001787	0	0.36232E-03	475402.9	3826245.2	887.6	5.00	4.65	4.65	NO
L0001788	0	0.36232E-03	475412.9	3826245.1	889.0	5.00	4.65	4.65	NO
L0001789	0	0.36232E-03	475422.9	3826245.0	889.2	5.00	4.65	4.65	NO
L0001790	0	0.36232E-03	475432.9	3826244.9	888.9	5.00	4.65	4.65	NO
L0001791	0	0.36232E-03	475442.9	3826244.8	888.9	5.00	4.65	4.65	NO
L0001792	0	0.36232E-03	475452.9	3826244.7	889.9	5.00	4.65	4.65	NO
L0001793	0	0.36232E-03	475462.9	3826244.6	891.3	5.00	4.65	4.65	NO
L0001794	0	0.36232E-03	475472.9	3826244.5	891.9	5.00	4.65	4.65	NO
L0001795	0	0.36232E-03	475482.9	3826244.4	892.3	5.00	4.65	4.65	NO
L0001796	0	0.36232E-03	475492.9	3826244.3	892.9	5.00	4.65	4.65	NO
L0001797	0	0.36232E-03	475502.9	3826244.2	893.4	5.00	4.65	4.65	NO
L0001798	0	0.36232E-03	475512.9	3826244.1	893.7	5.00	4.65	4.65	NO
L0001799	0	0.36232E-03	475522.9	3826244.0	893.9	5.00	4.65	4.65	NO
L0001800	0	0.36232E-03	475532.9	3826243.9	893.9	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001801	0	0.36232E-03	475542.9	3826243.8	893.5	5.00	4.65	4.65	NO	
L0001802	0	0.36232E-03	475552.9	3826243.7	892.9	5.00	4.65	4.65	NO	
L0001803	0	0.36232E-03	475562.9	3826243.7	892.5	5.00	4.65	4.65	NO	
L0001804	0	0.36232E-03	475572.9	3826243.6	892.8	5.00	4.65	4.65	NO	
L0001805	0	0.36232E-03	475582.9	3826243.5	893.6	5.00	4.65	4.65	NO	
L0001806	0	0.36232E-03	475592.9	3826243.4	894.8	5.00	4.65	4.65	NO	
L0001807	0	0.36232E-03	475602.9	3826243.3	895.7	5.00	4.65	4.65	NO	
L0001808	0	0.36232E-03	475612.9	3826243.2	896.1	5.00	4.65	4.65	NO	
L0001809	0	0.36232E-03	475622.9	3826243.1	896.8	5.00	4.65	4.65	NO	
L0001810	0	0.36232E-03	475632.9	3826243.0	897.4	5.00	4.65	4.65	NO	
L0001811	0	0.36232E-03	475642.9	3826242.9	898.0	5.00	4.65	4.65	NO	
L0001812	0	0.36232E-03	475652.9	3826242.8	898.5	5.00	4.65	4.65	NO	
L0001813	0	0.36232E-03	475662.9	3826242.7	899.0	5.00	4.65	4.65	NO	
L0001814	0	0.36232E-03	475672.9	3826242.6	899.4	5.00	4.65	4.65	NO	
L0001815	0	0.36232E-03	475682.9	3826242.5	899.5	5.00	4.65	4.65	NO	

L0001816	0	0.36232E-03	475692.9	3826242.4	899.8	5.00	4.65	4.65	NO
L0001817	0	0.36232E-03	475700.7	3826240.2	900.3	5.00	4.65	4.65	NO
L0001818	0	0.36232E-03	475700.0	3826230.2	901.0	5.00	4.65	4.65	NO
L0001819	0	0.36232E-03	475699.4	3826220.2	900.9	5.00	4.65	4.65	NO
L0001820	0	0.36232E-03	475698.7	3826210.3	900.3	5.00	4.65	4.65	NO
L0001821	0	0.36232E-03	475698.1	3826200.3	899.1	5.00	4.65	4.65	NO
L0001822	0	0.36232E-03	475697.4	3826190.3	897.7	5.00	4.65	4.65	NO
L0001823	0	0.36232E-03	475696.8	3826180.3	898.9	5.00	4.65	4.65	NO
L0001824	0	0.36232E-03	475696.1	3826170.4	900.2	5.00	4.65	4.65	NO
L0001825	0	0.36232E-03	475695.4	3826160.4	900.8	5.00	4.65	4.65	NO
L0001826	0	0.36232E-03	475694.8	3826150.4	901.4	5.00	4.65	4.65	NO
L0001827	0	0.36232E-03	475694.1	3826140.4	901.0	5.00	4.65	4.65	NO
L0001828	0	0.36232E-03	475693.5	3826130.4	899.6	5.00	4.65	4.65	NO
L0001829	0	0.36232E-03	475692.8	3826120.5	897.9	5.00	4.65	4.65	NO
L0001830	0	0.36232E-03	475692.2	3826110.5	897.4	5.00	4.65	4.65	NO
L0001831	0	0.36232E-03	475691.5	3826100.5	898.3	5.00	4.65	4.65	NO
L0001832	0	0.36232E-03	475690.9	3826090.5	899.4	5.00	4.65	4.65	NO
L0001833	0	0.36232E-03	475690.2	3826080.6	900.5	5.00	4.65	4.65	NO
L0001834	0	0.36232E-03	475689.5	3826070.6	901.0	5.00	4.65	4.65	NO
L0001835	0	0.36232E-03	475688.9	3826060.6	900.8	5.00	4.65	4.65	NO
L0001836	0	0.36232E-03	475688.2	3826050.6	900.4	5.00	4.65	4.65	NO
L0001837	0	0.36232E-03	475687.6	3826040.6	901.1	5.00	4.65	4.65	NO
L0001838	0	0.36232E-03	475686.9	3826030.7	901.7	5.00	4.65	4.65	NO
L0001839	0	0.36232E-03	475686.3	3826020.7	901.1	5.00	4.65	4.65	NO
L0001840	0	0.36232E-03	475678.8	3826017.9	900.5	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001841	0	0.36232E-03	475668.8	3826017.8	900.8	5.00	4.65	4.65	NO	
L0001842	0	0.36232E-03	475658.8	3826017.6	901.3	5.00	4.65	4.65	NO	
L0001843	0	0.36232E-03	475648.8	3826017.5	902.0	5.00	4.65	4.65	NO	
L0001844	0	0.36232E-03	475638.8	3826017.4	902.2	5.00	4.65	4.65	NO	
L0001845	0	0.36232E-03	475628.8	3826017.3	900.6	5.00	4.65	4.65	NO	
L0001846	0	0.36232E-03	475618.8	3826017.1	899.2	5.00	4.65	4.65	NO	
L0001847	0	0.36232E-03	475608.8	3826017.0	900.4	5.00	4.65	4.65	NO	
L0001848	0	0.36232E-03	475598.8	3826016.9	901.6	5.00	4.65	4.65	NO	
L0001849	0	0.36232E-03	475588.8	3826016.8	902.3	5.00	4.65	4.65	NO	
L0001850	0	0.36232E-03	475578.8	3826016.6	902.1	5.00	4.65	4.65	NO	
L0001851	0	0.36232E-03	475568.8	3826016.5	901.6	5.00	4.65	4.65	NO	
L0001852	0	0.36232E-03	475558.8	3826016.4	900.8	5.00	4.65	4.65	NO	
L0001853	0	0.36232E-03	475548.8	3826016.3	900.4	5.00	4.65	4.65	NO	
L0001854	0	0.36232E-03	475538.8	3826016.2	900.4	5.00	4.65	4.65	NO	
L0001855	0	0.36232E-03	475528.8	3826016.0	900.5	5.00	4.65	4.65	NO	

L0001856	0	0.36232E-03	475525.5	3826009.1	900.5	5.00	4.65	4.65	NO
L0001857	0	0.36232E-03	475525.2	3825999.1	900.7	5.00	4.65	4.65	NO
L0001858	0	0.36232E-03	475524.9	3825989.1	900.8	5.00	4.65	4.65	NO
L0001859	0	0.36232E-03	475524.6	3825979.1	899.8	5.00	4.65	4.65	NO
L0001860	0	0.36232E-03	475524.3	3825969.1	899.1	5.00	4.65	4.65	NO
L0001861	0	0.36232E-03	475524.0	3825959.1	900.2	5.00	4.65	4.65	NO
L0001862	0	0.36232E-03	475523.7	3825949.1	900.6	5.00	4.65	4.65	NO
L0001863	0	0.36232E-03	475523.4	3825939.1	901.1	5.00	4.65	4.65	NO
L0001864	0	0.36232E-03	475523.1	3825929.1	901.0	5.00	4.65	4.65	NO
L0001865	0	0.36232E-03	475522.8	3825919.2	901.7	5.00	4.65	4.65	NO
L0001866	0	0.36232E-03	475522.5	3825909.2	902.2	5.00	4.65	4.65	NO
L0001867	0	0.36232E-03	475522.2	3825899.2	902.0	5.00	4.65	4.65	NO
L0001868	0	0.36232E-03	475521.9	3825889.2	902.1	5.00	4.65	4.65	NO
L0001869	0	0.36232E-03	475521.6	3825879.2	902.3	5.00	4.65	4.65	NO
L0001870	0	0.36232E-03	475521.3	3825869.2	902.7	5.00	4.65	4.65	NO
L0001871	0	0.36232E-03	475521.0	3825859.2	902.7	5.00	4.65	4.65	NO
L0001872	0	0.36232E-03	475520.7	3825849.2	902.9	5.00	4.65	4.65	NO
L0001873	0	0.36232E-03	475520.4	3825839.2	903.1	5.00	4.65	4.65	NO
L0001874	0	0.36232E-03	475520.1	3825829.2	903.5	5.00	4.65	4.65	NO
L0001875	0	0.36232E-03	475519.8	3825819.2	903.7	5.00	4.65	4.65	NO
L0001876	0	0.36232E-03	475519.5	3825809.2	903.9	5.00	4.65	4.65	NO
L0001877	0	0.36232E-03	475519.2	3825799.2	904.2	5.00	4.65	4.65	NO
L0001878	0	0.36232E-03	475518.9	3825789.2	904.4	5.00	4.65	4.65	NO
L0001879	0	0.36232E-03	475518.6	3825779.2	904.7	5.00	4.65	4.65	NO
L0001880	0	0.36232E-03	475518.3	3825769.2	904.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001881	0	0.36232E-03	475518.0	3825759.2	905.1	5.00	4.65	4.65	NO	
L0001882	0	0.36232E-03	475513.8	3825753.3	905.3	5.00	4.65	4.65	NO	
L0001883	0	0.36232E-03	475503.8	3825753.3	904.8	5.00	4.65	4.65	NO	
L0001884	0	0.36232E-03	475493.8	3825753.3	904.5	5.00	4.65	4.65	NO	
L0001885	0	0.36232E-03	475483.8	3825753.4	904.0	5.00	4.65	4.65	NO	
L0001886	0	0.36232E-03	475473.8	3825753.4	903.7	5.00	4.65	4.65	NO	
L0001887	0	0.36232E-03	475463.8	3825753.4	903.4	5.00	4.65	4.65	NO	
L0001888	0	0.36232E-03	475453.8	3825753.4	903.0	5.00	4.65	4.65	NO	
L0001889	0	0.36232E-03	475443.8	3825753.4	902.6	5.00	4.65	4.65	NO	
L0001890	0	0.36232E-03	475433.8	3825753.5	902.2	5.00	4.65	4.65	NO	
L0001891	0	0.36232E-03	475423.8	3825753.5	901.9	5.00	4.65	4.65	NO	
L0001892	0	0.36232E-03	475413.8	3825753.5	901.6	5.00	4.65	4.65	NO	
L0001893	0	0.36232E-03	475403.8	3825753.5	901.3	5.00	4.65	4.65	NO	
L0001894	0	0.36232E-03	475393.8	3825753.5	901.0	5.00	4.65	4.65	NO	
L0001895	0	0.36232E-03	475383.8	3825753.6	900.6	5.00	4.65	4.65	NO	

L0001896	0	0.36232E-03	475373.8	3825753.6	900.3	5.00	4.65	4.65	NO
L0001897	0	0.36232E-03	475363.8	3825753.6	900.0	5.00	4.65	4.65	NO
L0001898	0	0.36232E-03	475353.8	3825753.6	899.7	5.00	4.65	4.65	NO
L0001899	0	0.36232E-03	475343.8	3825753.6	899.5	5.00	4.65	4.65	NO
L0001900	0	0.36232E-03	475333.8	3825753.7	899.1	5.00	4.65	4.65	NO
L0001901	0	0.36232E-03	475323.8	3825753.7	898.7	5.00	4.65	4.65	NO
L0001902	0	0.36232E-03	475313.8	3825753.7	898.3	5.00	4.65	4.65	NO
L0001903	0	0.36232E-03	475303.8	3825753.7	898.0	5.00	4.65	4.65	NO
L0001904	0	0.36232E-03	475293.8	3825753.7	897.7	5.00	4.65	4.65	NO
L0001905	0	0.36232E-03	475283.8	3825753.7	897.2	5.00	4.65	4.65	NO
L0001906	0	0.36232E-03	475273.8	3825753.8	897.0	5.00	4.65	4.65	NO
L0001907	0	0.36232E-03	475263.8	3825753.8	897.0	5.00	4.65	4.65	NO
L0001908	0	0.36232E-03	475253.8	3825753.8	896.8	5.00	4.65	4.65	NO
L0001909	0	0.36232E-03	475243.8	3825753.8	896.2	5.00	4.65	4.65	NO
L0001910	0	0.36232E-03	475233.8	3825753.8	895.6	5.00	4.65	4.65	NO
L0001911	0	0.36232E-03	475223.8	3825753.9	895.1	5.00	4.65	4.65	NO
L0001912	0	0.36232E-03	475213.8	3825753.9	894.6	5.00	4.65	4.65	NO
L0001913	0	0.36232E-03	475203.8	3825753.9	894.2	5.00	4.65	4.65	NO
L0001914	0	0.36232E-03	475193.8	3825753.9	893.8	5.00	4.65	4.65	NO
L0001915	0	0.36232E-03	475183.8	3825753.9	893.3	5.00	4.65	4.65	NO
L0001916	0	0.36232E-03	475173.8	3825754.0	892.7	5.00	4.65	4.65	NO
L0001917	0	0.36232E-03	475163.8	3825754.0	892.1	5.00	4.65	4.65	NO
L0001918	0	0.36232E-03	475153.8	3825754.0	891.7	5.00	4.65	4.65	NO
L0001919	0	0.36232E-03	475143.8	3825754.0	891.2	5.00	4.65	4.65	NO
L0001920	0	0.36232E-03	475133.8	3825754.0	890.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001921	0	0.36232E-03	475123.8	3825754.1	890.3	5.00	4.65	4.65	NO	
L0001922	0	0.36232E-03	475113.8	3825754.1	889.9	5.00	4.65	4.65	NO	
L0001923	0	0.36232E-03	475103.8	3825754.1	889.6	5.00	4.65	4.65	NO	
L0001924	0	0.36232E-03	475093.8	3825754.1	889.0	5.00	4.65	4.65	NO	
L0001925	0	0.36232E-03	475083.8	3825754.1	888.7	5.00	4.65	4.65	NO	
L0001926	0	0.36232E-03	475073.8	3825754.2	888.3	5.00	4.65	4.65	NO	
L0001927	0	0.36232E-03	475063.8	3825754.2	887.9	5.00	4.65	4.65	NO	
L0001928	0	0.36232E-03	475053.8	3825754.2	887.4	5.00	4.65	4.65	NO	
L0001929	0	0.36232E-03	475043.8	3825754.2	887.1	5.00	4.65	4.65	NO	
L0001930	0	0.36232E-03	475033.8	3825754.2	886.9	5.00	4.65	4.65	NO	
L0001931	0	0.36232E-03	475023.8	3825754.3	886.9	5.00	4.65	4.65	NO	
L0001932	0	0.36232E-03	475014.3	3825754.5	886.6	5.00	4.65	4.65	NO	
L0001933	0	0.36232E-03	475020.6	3825762.2	886.5	5.00	4.65	4.65	NO	
L0001934	0	0.36232E-03	475027.0	3825769.9	886.0	5.00	4.65	4.65	NO	
L0001935	0	0.36232E-03	475033.3	3825777.7	886.3	5.00	4.65	4.65	NO	

L0001936	0	0.36232E-03	475039.7	3825785.4	886.7	5.00	4.65	4.65	NO
L0001937	0	0.36232E-03	475046.1	3825793.1	887.1	5.00	4.65	4.65	NO
L0001938	0	0.36232E-03	475052.4	3825800.8	887.0	5.00	4.65	4.65	NO
L0001939	0	0.36232E-03	475058.8	3825808.5	887.1	5.00	4.65	4.65	NO
L0001940	0	0.36232E-03	475065.2	3825816.2	887.5	5.00	4.65	4.65	NO
L0001941	0	0.36232E-03	475071.5	3825823.9	888.2	5.00	4.65	4.65	NO
L0001942	0	0.36232E-03	475077.9	3825831.7	888.7	5.00	4.65	4.65	NO
L0001943	0	0.36232E-03	475084.2	3825839.4	889.2	5.00	4.65	4.65	NO
L0001944	0	0.36232E-03	475090.6	3825847.1	889.2	5.00	4.65	4.65	NO
L0001945	0	0.36232E-03	475097.0	3825854.8	889.3	5.00	4.65	4.65	NO
L0001946	0	0.36232E-03	475103.3	3825862.5	889.9	5.00	4.65	4.65	NO
L0001947	0	0.36232E-03	475109.7	3825870.2	889.6	5.00	4.65	4.65	NO
L0001948	0	0.36232E-03	475116.0	3825878.0	889.2	5.00	4.65	4.65	NO
L0001949	0	0.36232E-03	475122.4	3825885.7	888.8	5.00	4.65	4.65	NO
L0001950	0	0.36232E-03	475128.8	3825893.4	888.4	5.00	4.65	4.65	NO
L0001951	0	0.36232E-03	475135.1	3825901.1	888.5	5.00	4.65	4.65	NO
L0001952	0	0.36232E-03	475141.5	3825908.8	889.2	5.00	4.65	4.65	NO
L0001953	0	0.36232E-03	475147.9	3825916.5	889.5	5.00	4.65	4.65	NO
L0001954	0	0.36232E-03	475154.2	3825924.2	889.1	5.00	4.65	4.65	NO
L0001955	0	0.36232E-03	475160.6	3825932.0	888.8	5.00	4.65	4.65	NO
L0001956	0	0.36232E-03	475166.9	3825939.7	888.9	5.00	4.65	4.65	NO
L0001957	0	0.36232E-03	475173.3	3825947.4	889.4	5.00	4.65	4.65	NO
L0001958	0	0.36232E-03	475179.7	3825955.1	889.3	5.00	4.65	4.65	NO
L0001959	0	0.36232E-03	475186.0	3825962.8	889.0	5.00	4.65	4.65	NO
L0001960	0	0.36232E-03	475192.4	3825970.5	889.1	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001961	0	0.36232E-03	475198.8	3825978.3	889.4	5.00	4.65	4.65	NO	
L0001962	0	0.36232E-03	475207.0	3825983.8	889.6	5.00	4.65	4.65	NO	
L0001963	0	0.36232E-03	475215.4	3825989.3	889.7	5.00	4.65	4.65	NO	
L0001964	0	0.36232E-03	475223.8	3825994.7	890.5	5.00	4.65	4.65	NO	
L0001965	0	0.36232E-03	475232.2	3826000.1	890.9	5.00	4.65	4.65	NO	
L0001966	0	0.36232E-03	475240.6	3826005.6	891.6	5.00	4.65	4.65	NO	
L0001967	0	0.36232E-03	475249.0	3826011.0	892.3	5.00	4.65	4.65	NO	
L0001968	0	0.36232E-03	475257.4	3826016.5	892.7	5.00	4.65	4.65	NO	
L0001969	0	0.36232E-03	475265.7	3826021.9	892.5	5.00	4.65	4.65	NO	
L0001970	0	0.36232E-03	475274.1	3826027.4	892.0	5.00	4.65	4.65	NO	
L0001971	0	0.36232E-03	475282.5	3826032.8	892.2	5.00	4.65	4.65	NO	
L0001972	0	0.36232E-03	475290.9	3826038.3	891.2	5.00	4.65	4.65	NO	
L0001973	0	0.36232E-03	475299.3	3826043.7	889.8	5.00	4.65	4.65	NO	
L0001974	0	0.36232E-03	475307.7	3826049.2	889.4	5.00	4.65	4.65	NO	
L0001975	0	0.36232E-03	475316.1	3826054.6	888.8	5.00	4.65	4.65	NO	

L0001976	0	0.36232E-03	475324.4	3826060.1	890.1	5.00	4.65	4.65	NO
L0001977	0	0.36232E-03	475332.8	3826065.5	891.3	5.00	4.65	4.65	NO
L0001978	0	0.36232E-03	475341.2	3826071.0	890.9	5.00	4.65	4.65	NO
L0001979	0	0.36232E-03	475349.6	3826076.4	890.9	5.00	4.65	4.65	NO
L0001980	0	0.36232E-03	475355.7	3826083.8	892.0	5.00	4.65	4.65	NO
L0001981	0	0.36232E-03	475359.7	3826093.0	893.3	5.00	4.65	4.65	NO
L0001982	0	0.36232E-03	475363.8	3826102.1	892.8	5.00	4.65	4.65	NO
L0001983	0	0.36232E-03	475367.8	3826111.3	891.2	5.00	4.65	4.65	NO
L0001984	0	0.36232E-03	475371.9	3826120.4	891.4	5.00	4.65	4.65	NO
L0001985	0	0.36232E-03	475375.9	3826129.6	893.0	5.00	4.65	4.65	NO
L0001986	0	0.36232E-03	475380.0	3826138.7	893.8	5.00	4.65	4.65	NO
L0001987	0	0.36232E-03	475384.0	3826147.8	893.0	5.00	4.65	4.65	NO
L0001988	0	0.36232E-03	475388.1	3826157.0	891.2	5.00	4.65	4.65	NO
L0001989	0	0.36232E-03	475392.1	3826166.1	889.0	5.00	4.65	4.65	NO
L0001990	0	0.36232E-03	475396.2	3826175.3	888.1	5.00	4.65	4.65	NO
L0001991	0	0.36232E-03	475400.2	3826184.4	887.7	5.00	4.65	4.65	NO
L0001992	0	0.36232E-03	475404.3	3826193.6	887.2	5.00	4.65	4.65	NO
L0001993	0	0.36232E-03	475408.3	3826202.7	886.3	5.00	4.65	4.65	NO
L0001994	0	0.36232E-03	475412.4	3826211.8	886.4	5.00	4.65	4.65	NO
L0001995	0	0.36232E-03	475416.4	3826221.0	887.4	5.00	4.65	4.65	NO
L0001996	0	0.36232E-03	475423.4	3826225.4	888.9	5.00	4.65	4.65	NO
L0001997	0	0.36232E-03	475433.4	3826225.2	890.0	5.00	4.65	4.65	NO
L0001998	0	0.36232E-03	475443.4	3826225.0	890.9	5.00	4.65	4.65	NO
L0001999	0	0.36232E-03	475453.4	3826224.7	890.5	5.00	4.65	4.65	NO
L0002000	0	0.36232E-03	475463.4	3826224.5	890.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002001	0	0.36232E-03	475473.4	3826224.3	890.9	5.00	4.65	4.65	NO	
L0002002	0	0.36232E-03	475483.4	3826224.0	891.3	5.00	4.65	4.65	NO	
L0002003	0	0.36232E-03	475493.4	3826223.8	891.9	5.00	4.65	4.65	NO	
L0002004	0	0.36232E-03	475503.4	3826223.6	892.7	5.00	4.65	4.65	NO	
L0002005	0	0.36232E-03	475513.4	3826223.3	892.9	5.00	4.65	4.65	NO	
L0002006	0	0.36232E-03	475523.4	3826223.1	893.7	5.00	4.65	4.65	NO	
L0002007	0	0.36232E-03	475533.4	3826222.8	894.5	5.00	4.65	4.65	NO	
L0002008	0	0.36232E-03	475543.4	3826222.6	894.9	5.00	4.65	4.65	NO	
L0002009	0	0.36232E-03	475553.4	3826222.4	895.2	5.00	4.65	4.65	NO	
L0002010	0	0.36232E-03	475563.4	3826222.1	895.3	5.00	4.65	4.65	NO	
L0002011	0	0.36232E-03	475573.4	3826221.9	894.8	5.00	4.65	4.65	NO	
L0002012	0	0.36232E-03	475583.4	3826221.7	893.9	5.00	4.65	4.65	NO	
L0002013	0	0.36232E-03	475593.4	3826221.4	893.8	5.00	4.65	4.65	NO	
L0002014	0	0.36232E-03	475603.4	3826221.2	894.7	5.00	4.65	4.65	NO	
L0002015	0	0.36232E-03	475613.4	3826220.9	896.0	5.00	4.65	4.65	NO	

L0002016	0	0.36232E-03	475623.4	3826220.7	896.9	5.00	4.65	4.65	NO
L0002017	0	0.36232E-03	475633.4	3826220.5	897.6	5.00	4.65	4.65	NO
L0002018	0	0.36232E-03	475643.4	3826220.2	898.2	5.00	4.65	4.65	NO
L0002019	0	0.36232E-03	475653.4	3826220.0	898.8	5.00	4.65	4.65	NO
L0002020	0	0.36232E-03	475663.4	3826219.8	899.3	5.00	4.65	4.65	NO
L0002021	0	0.36232E-03	475667.0	3826213.7	899.1	5.00	4.65	4.65	NO
L0002022	0	0.36232E-03	475666.4	3826203.7	897.6	5.00	4.65	4.65	NO
L0002023	0	0.36232E-03	475665.7	3826193.7	896.7	5.00	4.65	4.65	NO
L0002024	0	0.36232E-03	475665.1	3826183.7	897.8	5.00	4.65	4.65	NO
L0002025	0	0.36232E-03	475664.5	3826173.8	898.7	5.00	4.65	4.65	NO
L0002026	0	0.36232E-03	475663.8	3826163.8	899.2	5.00	4.65	4.65	NO
L0002027	0	0.36232E-03	475663.2	3826153.8	899.9	5.00	4.65	4.65	NO
L0002028	0	0.36232E-03	475662.6	3826143.8	900.0	5.00	4.65	4.65	NO
L0002029	0	0.36232E-03	475662.0	3826133.8	899.2	5.00	4.65	4.65	NO
L0002030	0	0.36232E-03	475661.3	3826123.9	897.6	5.00	4.65	4.65	NO
L0002031	0	0.36232E-03	475660.7	3826113.9	896.2	5.00	4.65	4.65	NO
L0002032	0	0.36232E-03	475660.1	3826103.9	895.6	5.00	4.65	4.65	NO
L0002033	0	0.36232E-03	475659.4	3826093.9	897.2	5.00	4.65	4.65	NO
L0002034	0	0.36232E-03	475658.8	3826083.9	898.3	5.00	4.65	4.65	NO
L0002035	0	0.36232E-03	475658.2	3826074.0	899.2	5.00	4.65	4.65	NO
L0002036	0	0.36232E-03	475657.5	3826064.0	899.8	5.00	4.65	4.65	NO
L0002037	0	0.36232E-03	475656.9	3826054.0	899.5	5.00	4.65	4.65	NO
L0002038	0	0.36232E-03	475652.1	3826048.3	898.4	5.00	4.65	4.65	NO
L0002039	0	0.36232E-03	475642.1	3826047.9	898.2	5.00	4.65	4.65	NO
L0002040	0	0.36232E-03	475632.1	3826047.5	898.8	5.00	4.65	4.65	NO

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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002041	0	0.36232E-03	475622.1	3826047.2	898.4	5.00	4.65	4.65	NO	
L0002042	0	0.36232E-03	475612.1	3826046.8	897.0	5.00	4.65	4.65	NO	
L0002043	0	0.36232E-03	475602.1	3826046.4	898.8	5.00	4.65	4.65	NO	
L0002044	0	0.36232E-03	475592.2	3826046.0	899.9	5.00	4.65	4.65	NO	
L0002045	0	0.36232E-03	475582.2	3826045.6	899.9	5.00	4.65	4.65	NO	
L0002046	0	0.36232E-03	475572.2	3826045.3	899.4	5.00	4.65	4.65	NO	
L0002047	0	0.36232E-03	475562.2	3826044.9	899.9	5.00	4.65	4.65	NO	
L0002048	0	0.36232E-03	475552.2	3826044.5	899.6	5.00	4.65	4.65	NO	
L0002049	0	0.36232E-03	475542.2	3826044.1	899.2	5.00	4.65	4.65	NO	
L0002050	0	0.36232E-03	475532.2	3826043.7	898.9	5.00	4.65	4.65	NO	
L0002051	0	0.36232E-03	475522.2	3826043.4	898.8	5.00	4.65	4.65	NO	
L0002052	0	0.36232E-03	475512.2	3826043.0	898.7	5.00	4.65	4.65	NO	
L0002053	0	0.36232E-03	475502.2	3826042.6	898.5	5.00	4.65	4.65	NO	
L0002054	0	0.36232E-03	475500.4	3826033.7	899.5	5.00	4.65	4.65	NO	
L0002055	0	0.36232E-03	475499.7	3826023.7	899.4	5.00	4.65	4.65	NO	

L0002056	0	0.36232E-03	475498.9	3826013.8	898.8	5.00	4.65	4.65	NO
L0002057	0	0.36232E-03	475498.2	3826003.8	899.2	5.00	4.65	4.65	NO
L0002058	0	0.36232E-03	475497.4	3825993.8	899.3	5.00	4.65	4.65	NO
L0002059	0	0.36232E-03	475496.7	3825983.8	898.2	5.00	4.65	4.65	NO
L0002060	0	0.36232E-03	475495.9	3825973.9	898.1	5.00	4.65	4.65	NO
L0002061	0	0.36232E-03	475495.2	3825963.9	898.4	5.00	4.65	4.65	NO
L0002062	0	0.36232E-03	475494.4	3825953.9	899.1	5.00	4.65	4.65	NO
L0002063	0	0.36232E-03	475493.7	3825944.0	900.2	5.00	4.65	4.65	NO
L0002064	0	0.36232E-03	475492.9	3825934.0	900.8	5.00	4.65	4.65	NO
L0002065	0	0.36232E-03	475492.2	3825924.0	901.0	5.00	4.65	4.65	NO
L0002066	0	0.36232E-03	475491.4	3825914.0	901.0	5.00	4.65	4.65	NO
L0002067	0	0.36232E-03	475490.6	3825904.1	900.8	5.00	4.65	4.65	NO
L0002068	0	0.36232E-03	475489.9	3825894.1	900.8	5.00	4.65	4.65	NO
L0002069	0	0.36232E-03	475489.1	3825884.1	901.0	5.00	4.65	4.65	NO
L0002070	0	0.36232E-03	475488.4	3825874.2	901.3	5.00	4.65	4.65	NO
L0002071	0	0.36232E-03	475487.6	3825864.2	901.4	5.00	4.65	4.65	NO
L0002072	0	0.36232E-03	475486.9	3825854.2	901.6	5.00	4.65	4.65	NO
L0002073	0	0.36232E-03	475486.1	3825844.2	901.8	5.00	4.65	4.65	NO
L0002074	0	0.36232E-03	475485.4	3825834.3	902.1	5.00	4.65	4.65	NO
L0002075	0	0.36232E-03	475484.6	3825824.3	902.3	5.00	4.65	4.65	NO
L0002076	0	0.36232E-03	475483.9	3825814.3	902.5	5.00	4.65	4.65	NO
L0002077	0	0.36232E-03	475483.1	3825804.4	902.7	5.00	4.65	4.65	NO
L0002078	0	0.36232E-03	475482.4	3825794.4	902.9	5.00	4.65	4.65	NO
L0002079	0	0.36232E-03	475481.6	3825784.4	903.2	5.00	4.65	4.65	NO
L0002080	0	0.36232E-03	475474.0	3825781.8	902.9	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002081	0	0.36232E-03	475464.0	3825781.7	902.6	5.00	4.65	4.65	NO	
L0002082	0	0.36232E-03	475454.0	3825781.6	902.2	5.00	4.65	4.65	NO	
L0002083	0	0.36232E-03	475444.0	3825781.6	901.9	5.00	4.65	4.65	NO	
L0002084	0	0.36232E-03	475434.0	3825781.5	901.5	5.00	4.65	4.65	NO	
L0002085	0	0.36232E-03	475424.0	3825781.4	901.3	5.00	4.65	4.65	NO	
L0002086	0	0.36232E-03	475414.0	3825781.4	900.9	5.00	4.65	4.65	NO	
L0002087	0	0.36232E-03	475404.0	3825781.3	900.6	5.00	4.65	4.65	NO	
L0002088	0	0.36232E-03	475394.0	3825781.2	900.3	5.00	4.65	4.65	NO	
L0002089	0	0.36232E-03	475384.0	3825781.1	899.9	5.00	4.65	4.65	NO	
L0002090	0	0.36232E-03	475374.0	3825781.1	899.6	5.00	4.65	4.65	NO	
L0002091	0	0.36232E-03	475364.0	3825781.0	899.2	5.00	4.65	4.65	NO	
L0002092	0	0.36232E-03	475354.0	3825780.9	898.9	5.00	4.65	4.65	NO	
L0002093	0	0.36232E-03	475344.0	3825780.9	898.6	5.00	4.65	4.65	NO	
L0002094	0	0.36232E-03	475334.0	3825780.8	898.3	5.00	4.65	4.65	NO	
L0002095	0	0.36232E-03	475324.0	3825780.7	898.1	5.00	4.65	4.65	NO	

L0002096	0	0.36232E-03	475314.0	3825780.7	897.8	5.00	4.65	4.65	NO
L0002097	0	0.36232E-03	475304.0	3825780.6	897.6	5.00	4.65	4.65	NO
L0002098	0	0.36232E-03	475294.0	3825780.5	897.1	5.00	4.65	4.65	NO
L0002099	0	0.36232E-03	475284.0	3825780.4	896.7	5.00	4.65	4.65	NO
L0002100	0	0.36232E-03	475274.0	3825780.4	896.4	5.00	4.65	4.65	NO
L0002101	0	0.36232E-03	475264.0	3825780.3	895.9	5.00	4.65	4.65	NO
L0002102	0	0.36232E-03	475254.0	3825780.2	895.8	5.00	4.65	4.65	NO
L0002103	0	0.36232E-03	475244.0	3825780.2	895.8	5.00	4.65	4.65	NO
L0002104	0	0.36232E-03	475234.0	3825780.1	895.8	5.00	4.65	4.65	NO
L0002105	0	0.36232E-03	475224.0	3825780.0	895.6	5.00	4.65	4.65	NO
L0002106	0	0.36232E-03	475214.0	3825780.0	895.1	5.00	4.65	4.65	NO
L0002107	0	0.36232E-03	475204.0	3825779.9	894.6	5.00	4.65	4.65	NO
L0002108	0	0.36232E-03	475194.0	3825779.8	894.1	5.00	4.65	4.65	NO
L0002109	0	0.36232E-03	475184.0	3825779.8	893.8	5.00	4.65	4.65	NO
L0002110	0	0.36232E-03	475174.0	3825779.7	893.4	5.00	4.65	4.65	NO
L0002111	0	0.36232E-03	475164.0	3825779.6	893.1	5.00	4.65	4.65	NO
L0002112	0	0.36232E-03	475154.0	3825779.5	892.5	5.00	4.65	4.65	NO
L0002113	0	0.36232E-03	475144.0	3825779.5	891.8	5.00	4.65	4.65	NO
L0002114	0	0.36232E-03	475134.0	3825779.4	891.5	5.00	4.65	4.65	NO
L0002115	0	0.36232E-03	475124.0	3825779.3	891.0	5.00	4.65	4.65	NO
L0002116	0	0.36232E-03	475114.0	3825779.3	890.8	5.00	4.65	4.65	NO
L0002117	0	0.36232E-03	475104.0	3825779.2	890.3	5.00	4.65	4.65	NO
L0002118	0	0.36232E-03	475094.0	3825779.1	889.8	5.00	4.65	4.65	NO
L0002119	0	0.36232E-03	475084.0	3825779.1	888.8	5.00	4.65	4.65	NO
L0002120	0	0.36232E-03	475074.0	3825779.0	888.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002121	0	0.36232E-03	475064.0	3825778.9	887.6	5.00	4.65	4.65	NO	
L0002122	0	0.36232E-03	475061.1	3825782.2	887.7	5.00	4.65	4.65	NO	
L0002123	0	0.36232E-03	475067.6	3825789.8	888.5	5.00	4.65	4.65	NO	
L0002124	0	0.36232E-03	475074.1	3825797.4	888.8	5.00	4.65	4.65	NO	
L0002125	0	0.36232E-03	475080.5	3825805.0	888.3	5.00	4.65	4.65	NO	
L0002126	0	0.36232E-03	475087.0	3825812.7	888.4	5.00	4.65	4.65	NO	
L0002127	0	0.36232E-03	475093.5	3825820.3	889.0	5.00	4.65	4.65	NO	
L0002128	0	0.36232E-03	475100.0	3825827.9	889.4	5.00	4.65	4.65	NO	
L0002129	0	0.36232E-03	475106.4	3825835.5	890.2	5.00	4.65	4.65	NO	
L0002130	0	0.36232E-03	475112.9	3825843.1	890.6	5.00	4.65	4.65	NO	
L0002131	0	0.36232E-03	475119.4	3825850.8	890.8	5.00	4.65	4.65	NO	
L0002132	0	0.36232E-03	475125.9	3825858.4	890.6	5.00	4.65	4.65	NO	
L0002133	0	0.36232E-03	475132.3	3825866.0	890.0	5.00	4.65	4.65	NO	
L0002134	0	0.36232E-03	475138.8	3825873.6	889.5	5.00	4.65	4.65	NO	
L0002135	0	0.36232E-03	475145.3	3825881.3	889.2	5.00	4.65	4.65	NO	

L0002136	0	0.36232E-03	475151.7	3825888.9	889.6	5.00	4.65	4.65	NO
L0002137	0	0.36232E-03	475158.2	3825896.5	890.0	5.00	4.65	4.65	NO
L0002138	0	0.36232E-03	475164.7	3825904.1	890.1	5.00	4.65	4.65	NO
L0002139	0	0.36232E-03	475171.2	3825911.8	889.8	5.00	4.65	4.65	NO
L0002140	0	0.36232E-03	475177.6	3825919.4	889.7	5.00	4.65	4.65	NO
L0002141	0	0.36232E-03	475184.1	3825927.0	889.8	5.00	4.65	4.65	NO
L0002142	0	0.36232E-03	475190.6	3825934.6	890.1	5.00	4.65	4.65	NO
L0002143	0	0.36232E-03	475197.0	3825942.2	889.9	5.00	4.65	4.65	NO
L0002144	0	0.36232E-03	475203.5	3825949.9	889.8	5.00	4.65	4.65	NO
L0002145	0	0.36232E-03	475210.0	3825957.5	889.9	5.00	4.65	4.65	NO
L0002146	0	0.36232E-03	475216.5	3825965.1	890.1	5.00	4.65	4.65	NO
L0002147	0	0.36232E-03	475224.3	3825971.1	890.5	5.00	4.65	4.65	NO
L0002148	0	0.36232E-03	475232.9	3825976.2	890.5	5.00	4.65	4.65	NO
L0002149	0	0.36232E-03	475241.5	3825981.4	890.9	5.00	4.65	4.65	NO
L0002150	0	0.36232E-03	475250.1	3825986.5	891.5	5.00	4.65	4.65	NO
L0002151	0	0.36232E-03	475258.7	3825991.6	892.2	5.00	4.65	4.65	NO
L0002152	0	0.36232E-03	475267.3	3825996.7	892.9	5.00	4.65	4.65	NO
L0002153	0	0.36232E-03	475275.8	3826001.8	893.5	5.00	4.65	4.65	NO
L0002154	0	0.36232E-03	475284.4	3826007.0	893.6	5.00	4.65	4.65	NO
L0002155	0	0.36232E-03	475293.0	3826012.1	892.8	5.00	4.65	4.65	NO
L0002156	0	0.36232E-03	475301.6	3826017.2	892.1	5.00	4.65	4.65	NO
L0002157	0	0.36232E-03	475310.2	3826022.3	892.6	5.00	4.65	4.65	NO
L0002158	0	0.36232E-03	475318.8	3826027.4	891.8	5.00	4.65	4.65	NO
L0002159	0	0.36232E-03	475327.4	3826032.6	890.9	5.00	4.65	4.65	NO
L0002160	0	0.36232E-03	475336.0	3826037.7	890.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002161	0	0.36232E-03	475344.6	3826042.8	890.5	5.00	4.65	4.65	NO	
L0002162	0	0.36232E-03	475353.2	3826047.9	891.2	5.00	4.65	4.65	NO	
L0002163	0	0.36232E-03	475361.7	3826053.0	892.6	5.00	4.65	4.65	NO	
L0002164	0	0.36232E-03	475368.7	3826059.6	892.4	5.00	4.65	4.65	NO	
L0002165	0	0.36232E-03	475372.6	3826068.8	892.3	5.00	4.65	4.65	NO	
L0002166	0	0.36232E-03	475376.6	3826078.0	893.4	5.00	4.65	4.65	NO	
L0002167	0	0.36232E-03	475380.6	3826087.1	894.1	5.00	4.65	4.65	NO	
L0002168	0	0.36232E-03	475384.5	3826096.3	893.0	5.00	4.65	4.65	NO	
L0002169	0	0.36232E-03	475388.5	3826105.5	891.8	5.00	4.65	4.65	NO	
L0002170	0	0.36232E-03	475392.4	3826114.7	893.7	5.00	4.65	4.65	NO	
L0002171	0	0.36232E-03	475396.4	3826123.9	894.2	5.00	4.65	4.65	NO	
L0002172	0	0.36232E-03	475400.3	3826133.1	893.4	5.00	4.65	4.65	NO	
L0002173	0	0.36232E-03	475404.3	3826142.3	891.5	5.00	4.65	4.65	NO	
L0002174	0	0.36232E-03	475408.2	3826151.4	890.2	5.00	4.65	4.65	NO	
L0002175	0	0.36232E-03	475412.2	3826160.6	890.4	5.00	4.65	4.65	NO	

L0002176	0	0.36232E-03	475416.1	3826169.8	889.4	5.00	4.65	4.65	NO
L0002177	0	0.36232E-03	475420.1	3826179.0	888.6	5.00	4.65	4.65	NO
L0002178	0	0.36232E-03	475424.0	3826188.2	887.0	5.00	4.65	4.65	NO
L0002179	0	0.36232E-03	475428.0	3826197.4	887.0	5.00	4.65	4.65	NO
L0002180	0	0.36232E-03	475433.0	3826204.8	887.4	5.00	4.65	4.65	NO
L0002181	0	0.36232E-03	475443.0	3826204.5	888.6	5.00	4.65	4.65	NO
L0002182	0	0.36232E-03	475453.0	3826204.1	889.9	5.00	4.65	4.65	NO
L0002183	0	0.36232E-03	475463.0	3826203.7	890.7	5.00	4.65	4.65	NO
L0002184	0	0.36232E-03	475473.0	3826203.4	891.3	5.00	4.65	4.65	NO
L0002185	0	0.36232E-03	475483.0	3826203.0	891.6	5.00	4.65	4.65	NO
L0002186	0	0.36232E-03	475493.0	3826202.6	892.5	5.00	4.65	4.65	NO
L0002187	0	0.36232E-03	475503.0	3826202.2	893.2	5.00	4.65	4.65	NO
L0002188	0	0.36232E-03	475513.0	3826201.9	893.9	5.00	4.65	4.65	NO
L0002189	0	0.36232E-03	475523.0	3826201.5	894.1	5.00	4.65	4.65	NO
L0002190	0	0.36232E-03	475533.0	3826201.1	894.4	5.00	4.65	4.65	NO
L0002191	0	0.36232E-03	475543.0	3826200.7	894.7	5.00	4.65	4.65	NO
L0002192	0	0.36232E-03	475553.0	3826200.4	894.9	5.00	4.65	4.65	NO
L0002193	0	0.36232E-03	475563.0	3826200.0	895.5	5.00	4.65	4.65	NO
L0002194	0	0.36232E-03	475572.9	3826199.6	896.1	5.00	4.65	4.65	NO
L0002195	0	0.36232E-03	475582.9	3826199.3	896.5	5.00	4.65	4.65	NO
L0002196	0	0.36232E-03	475592.9	3826198.9	896.3	5.00	4.65	4.65	NO
L0002197	0	0.36232E-03	475602.9	3826198.5	895.4	5.00	4.65	4.65	NO
L0002198	0	0.36232E-03	475612.9	3826198.1	894.7	5.00	4.65	4.65	NO
L0002199	0	0.36232E-03	475622.9	3826197.8	894.9	5.00	4.65	4.65	NO
L0002200	0	0.36232E-03	475632.9	3826197.4	895.0	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002201	0	0.36232E-03	475642.8	3826196.9	895.3	5.00	4.65	4.65	NO	
L0002202	0	0.36232E-03	475641.6	3826187.0	896.4	5.00	4.65	4.65	NO	
L0002203	0	0.36232E-03	475640.3	3826177.1	897.5	5.00	4.65	4.65	NO	
L0002204	0	0.36232E-03	475639.1	3826167.1	898.5	5.00	4.65	4.65	NO	
L0002205	0	0.36232E-03	475637.9	3826157.2	898.9	5.00	4.65	4.65	NO	
L0002206	0	0.36232E-03	475636.7	3826147.3	898.9	5.00	4.65	4.65	NO	
L0002207	0	0.36232E-03	475635.5	3826137.4	898.3	5.00	4.65	4.65	NO	
L0002208	0	0.36232E-03	475634.3	3826127.4	897.5	5.00	4.65	4.65	NO	
L0002209	0	0.36232E-03	475633.1	3826117.5	896.1	5.00	4.65	4.65	NO	
L0002210	0	0.36232E-03	475631.9	3826107.6	894.9	5.00	4.65	4.65	NO	
L0002211	0	0.36232E-03	475630.6	3826097.7	896.3	5.00	4.65	4.65	NO	
L0002212	0	0.36232E-03	475629.4	3826087.7	897.5	5.00	4.65	4.65	NO	
L0002213	0	0.36232E-03	475628.2	3826077.8	897.2	5.00	4.65	4.65	NO	
L0002214	0	0.36232E-03	475626.8	3826068.1	896.4	5.00	4.65	4.65	NO	
L0002215	0	0.36232E-03	475616.8	3826068.1	895.7	5.00	4.65	4.65	NO	

L0002216	0	0.36232E-03	475606.8	3826068.0	896.5	5.00	4.65	4.65	NO
L0002217	0	0.36232E-03	475596.8	3826067.9	898.3	5.00	4.65	4.65	NO
L0002218	0	0.36232E-03	475586.8	3826067.9	899.0	5.00	4.65	4.65	NO
L0002219	0	0.36232E-03	475576.8	3826067.8	898.5	5.00	4.65	4.65	NO
L0002220	0	0.36232E-03	475566.8	3826067.8	897.1	5.00	4.65	4.65	NO
L0002221	0	0.36232E-03	475556.8	3826067.7	896.8	5.00	4.65	4.65	NO
L0002222	0	0.36232E-03	475546.8	3826067.6	898.3	5.00	4.65	4.65	NO
L0002223	0	0.36232E-03	475536.8	3826067.6	898.8	5.00	4.65	4.65	NO
L0002224	0	0.36232E-03	475526.8	3826067.5	897.6	5.00	4.65	4.65	NO
L0002225	0	0.36232E-03	475516.8	3826067.4	897.2	5.00	4.65	4.65	NO
L0002226	0	0.36232E-03	475506.8	3826067.4	897.0	5.00	4.65	4.65	NO
L0002227	0	0.36232E-03	475496.8	3826067.3	897.1	5.00	4.65	4.65	NO
L0002228	0	0.36232E-03	475486.8	3826067.2	897.3	5.00	4.65	4.65	NO
L0002229	0	0.36232E-03	475476.8	3826067.2	897.0	5.00	4.65	4.65	NO
L0002230	0	0.36232E-03	475473.8	3826059.4	897.4	5.00	4.65	4.65	NO
L0002231	0	0.36232E-03	475472.9	3826049.5	898.2	5.00	4.65	4.65	NO
L0002232	0	0.36232E-03	475472.0	3826039.5	898.5	5.00	4.65	4.65	NO
L0002233	0	0.36232E-03	475471.1	3826029.6	897.7	5.00	4.65	4.65	NO
L0002234	0	0.36232E-03	475470.1	3826019.6	897.3	5.00	4.65	4.65	NO
L0002235	0	0.36232E-03	475469.2	3826009.7	897.8	5.00	4.65	4.65	NO
L0002236	0	0.36232E-03	475468.3	3825999.7	897.2	5.00	4.65	4.65	NO
L0002237	0	0.36232E-03	475467.4	3825989.7	896.5	5.00	4.65	4.65	NO
L0002238	0	0.36232E-03	475466.5	3825979.8	896.8	5.00	4.65	4.65	NO
L0002239	0	0.36232E-03	475465.6	3825969.8	898.2	5.00	4.65	4.65	NO
L0002240	0	0.36232E-03	475464.6	3825959.9	899.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002241	0	0.36232E-03	475463.7	3825949.9	899.4	5.00	4.65	4.65	NO	
L0002242	0	0.36232E-03	475462.8	3825939.9	898.9	5.00	4.65	4.65	NO	
L0002243	0	0.36232E-03	475461.9	3825930.0	899.1	5.00	4.65	4.65	NO	
L0002244	0	0.36232E-03	475461.0	3825920.0	899.8	5.00	4.65	4.65	NO	
L0002245	0	0.36232E-03	475460.0	3825910.1	899.4	5.00	4.65	4.65	NO	
L0002246	0	0.36232E-03	475459.1	3825900.1	899.6	5.00	4.65	4.65	NO	
L0002247	0	0.36232E-03	475458.2	3825890.2	900.0	5.00	4.65	4.65	NO	
L0002248	0	0.36232E-03	475457.3	3825880.2	900.0	5.00	4.65	4.65	NO	
L0002249	0	0.36232E-03	475456.4	3825870.2	900.2	5.00	4.65	4.65	NO	
L0002250	0	0.36232E-03	475455.4	3825860.3	900.4	5.00	4.65	4.65	NO	
L0002251	0	0.36232E-03	475454.5	3825850.3	900.6	5.00	4.65	4.65	NO	
L0002252	0	0.36232E-03	475453.6	3825840.4	900.7	5.00	4.65	4.65	NO	
L0002253	0	0.36232E-03	475452.7	3825830.4	900.9	5.00	4.65	4.65	NO	
L0002254	0	0.36232E-03	475451.8	3825820.5	901.1	5.00	4.65	4.65	NO	
L0002255	0	0.36232E-03	475450.1	3825811.3	901.3	5.00	4.65	4.65	NO	

L0002256	0	0.36232E-03	475440.1	3825811.2	901.0	5.00	4.65	4.65	NO
L0002257	0	0.36232E-03	475430.1	3825811.1	900.6	5.00	4.65	4.65	NO
L0002258	0	0.36232E-03	475420.1	3825811.0	900.3	5.00	4.65	4.65	NO
L0002259	0	0.36232E-03	475410.1	3825810.9	900.0	5.00	4.65	4.65	NO
L0002260	0	0.36232E-03	475400.1	3825810.7	899.6	5.00	4.65	4.65	NO
L0002261	0	0.36232E-03	475390.1	3825810.6	899.2	5.00	4.65	4.65	NO
L0002262	0	0.36232E-03	475380.1	3825810.5	898.9	5.00	4.65	4.65	NO
L0002263	0	0.36232E-03	475370.1	3825810.4	898.6	5.00	4.65	4.65	NO
L0002264	0	0.36232E-03	475360.1	3825810.3	898.3	5.00	4.65	4.65	NO
L0002265	0	0.36232E-03	475350.1	3825810.2	898.0	5.00	4.65	4.65	NO
L0002266	0	0.36232E-03	475340.1	3825810.0	897.7	5.00	4.65	4.65	NO
L0002267	0	0.36232E-03	475330.1	3825809.9	897.4	5.00	4.65	4.65	NO
L0002268	0	0.36232E-03	475320.1	3825809.8	897.0	5.00	4.65	4.65	NO
L0002269	0	0.36232E-03	475310.1	3825809.7	896.7	5.00	4.65	4.65	NO
L0002270	0	0.36232E-03	475300.1	3825809.6	896.5	5.00	4.65	4.65	NO
L0002271	0	0.36232E-03	475290.1	3825809.5	896.3	5.00	4.65	4.65	NO
L0002272	0	0.36232E-03	475280.1	3825809.3	896.1	5.00	4.65	4.65	NO
L0002273	0	0.36232E-03	475270.1	3825809.2	895.5	5.00	4.65	4.65	NO
L0002274	0	0.36232E-03	475260.1	3825809.1	895.1	5.00	4.65	4.65	NO
L0002275	0	0.36232E-03	475250.1	3825809.0	894.8	5.00	4.65	4.65	NO
L0002276	0	0.36232E-03	475240.1	3825808.9	894.6	5.00	4.65	4.65	NO
L0002277	0	0.36232E-03	475230.1	3825808.8	894.4	5.00	4.65	4.65	NO
L0002278	0	0.36232E-03	475220.1	3825808.6	894.2	5.00	4.65	4.65	NO
L0002279	0	0.36232E-03	475210.1	3825808.5	894.0	5.00	4.65	4.65	NO
L0002280	0	0.36232E-03	475200.1	3825808.4	893.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002281	0	0.36232E-03	475190.1	3825808.3	893.5	5.00	4.65	4.65	NO	
L0002282	0	0.36232E-03	475180.1	3825808.2	893.2	5.00	4.65	4.65	NO	
L0002283	0	0.36232E-03	475170.1	3825808.1	892.7	5.00	4.65	4.65	NO	
L0002284	0	0.36232E-03	475160.1	3825808.0	891.9	5.00	4.65	4.65	NO	
L0002285	0	0.36232E-03	475150.1	3825807.8	891.4	5.00	4.65	4.65	NO	
L0002286	0	0.36232E-03	475140.1	3825807.7	890.9	5.00	4.65	4.65	NO	
L0002287	0	0.36232E-03	475130.1	3825807.6	890.3	5.00	4.65	4.65	NO	
L0002288	0	0.36232E-03	475120.1	3825807.5	889.9	5.00	4.65	4.65	NO	
L0002289	0	0.36232E-03	475115.6	3825810.0	889.7	5.00	4.65	4.65	NO	
L0002290	0	0.36232E-03	475122.0	3825817.6	890.2	5.00	4.65	4.65	NO	
L0002291	0	0.36232E-03	475128.4	3825825.3	890.9	5.00	4.65	4.65	NO	
L0002292	0	0.36232E-03	475134.8	3825833.0	891.5	5.00	4.65	4.65	NO	
L0002293	0	0.36232E-03	475141.2	3825840.7	891.4	5.00	4.65	4.65	NO	
L0002294	0	0.36232E-03	475147.6	3825848.3	891.0	5.00	4.65	4.65	NO	
L0002295	0	0.36232E-03	475154.1	3825856.0	890.7	5.00	4.65	4.65	NO	

L0002296	0	0.36232E-03	475160.5	3825863.7	890.4	5.00	4.65	4.65	NO
L0002297	0	0.36232E-03	475166.9	3825871.4	890.7	5.00	4.65	4.65	NO
L0002298	0	0.36232E-03	475173.3	3825879.0	891.2	5.00	4.65	4.65	NO
L0002299	0	0.36232E-03	475179.7	3825886.7	890.9	5.00	4.65	4.65	NO
L0002300	0	0.36232E-03	475186.1	3825894.4	890.7	5.00	4.65	4.65	NO
L0002301	0	0.36232E-03	475192.5	3825902.1	890.5	5.00	4.65	4.65	NO
L0002302	0	0.36232E-03	475198.9	3825909.7	890.6	5.00	4.65	4.65	NO
L0002303	0	0.36232E-03	475205.4	3825917.4	891.0	5.00	4.65	4.65	NO
L0002304	0	0.36232E-03	475211.8	3825925.1	891.2	5.00	4.65	4.65	NO
L0002305	0	0.36232E-03	475218.2	3825932.8	890.8	5.00	4.65	4.65	NO
L0002306	0	0.36232E-03	475224.6	3825940.4	890.6	5.00	4.65	4.65	NO
L0002307	0	0.36232E-03	475231.0	3825948.1	890.8	5.00	4.65	4.65	NO
L0002308	0	0.36232E-03	475238.8	3825954.1	891.1	5.00	4.65	4.65	NO
L0002309	0	0.36232E-03	475247.4	3825959.2	891.7	5.00	4.65	4.65	NO
L0002310	0	0.36232E-03	475256.1	3825964.2	891.9	5.00	4.65	4.65	NO
L0002311	0	0.36232E-03	475264.7	3825969.3	891.8	5.00	4.65	4.65	NO
L0002312	0	0.36232E-03	475273.3	3825974.3	892.6	5.00	4.65	4.65	NO
L0002313	0	0.36232E-03	475282.0	3825979.3	893.2	5.00	4.65	4.65	NO
L0002314	0	0.36232E-03	475290.6	3825984.4	893.9	5.00	4.65	4.65	NO
L0002315	0	0.36232E-03	475299.3	3825989.4	894.2	5.00	4.65	4.65	NO
L0002316	0	0.36232E-03	475307.9	3825994.4	894.5	5.00	4.65	4.65	NO
L0002317	0	0.36232E-03	475316.5	3825999.5	894.1	5.00	4.65	4.65	NO
L0002318	0	0.36232E-03	475325.2	3826004.5	893.2	5.00	4.65	4.65	NO
L0002319	0	0.36232E-03	475333.8	3826009.5	893.0	5.00	4.65	4.65	NO
L0002320	0	0.36232E-03	475342.5	3826014.6	892.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002321	0	0.36232E-03	475351.1	3826019.6	892.0	5.00	4.65	4.65	NO	
L0002322	0	0.36232E-03	475359.7	3826024.6	891.9	5.00	4.65	4.65	NO	
L0002323	0	0.36232E-03	475368.4	3826029.7	892.2	5.00	4.65	4.65	NO	
L0002324	0	0.36232E-03	475373.5	3826037.9	892.0	5.00	4.65	4.65	NO	
L0002325	0	0.36232E-03	475377.7	3826047.0	892.9	5.00	4.65	4.65	NO	
L0002326	0	0.36232E-03	475381.9	3826056.1	893.3	5.00	4.65	4.65	NO	
L0002327	0	0.36232E-03	475386.0	3826065.2	892.8	5.00	4.65	4.65	NO	
L0002328	0	0.36232E-03	475390.2	3826074.2	894.3	5.00	4.65	4.65	NO	
L0002329	0	0.36232E-03	475394.4	3826083.3	894.4	5.00	4.65	4.65	NO	
L0002330	0	0.36232E-03	475398.5	3826092.4	892.7	5.00	4.65	4.65	NO	
L0002331	0	0.36232E-03	475402.7	3826101.5	892.9	5.00	4.65	4.65	NO	
L0002332	0	0.36232E-03	475406.9	3826110.6	894.1	5.00	4.65	4.65	NO	
L0002333	0	0.36232E-03	475411.0	3826119.7	894.4	5.00	4.65	4.65	NO	
L0002334	0	0.36232E-03	475415.2	3826128.8	893.4	5.00	4.65	4.65	NO	
L0002335	0	0.36232E-03	475419.4	3826137.9	891.7	5.00	4.65	4.65	NO	

L0002336	0	0.36232E-03	475423.5	3826147.0	892.3	5.00	4.65	4.65	NO
L0002337	0	0.36232E-03	475427.7	3826156.1	890.4	5.00	4.65	4.65	NO
L0002338	0	0.36232E-03	475431.9	3826165.1	890.2	5.00	4.65	4.65	NO
L0002339	0	0.36232E-03	475436.0	3826174.2	888.5	5.00	4.65	4.65	NO
L0002340	0	0.36232E-03	475440.2	3826183.3	887.8	5.00	4.65	4.65	NO
L0002341	0	0.36232E-03	475449.0	3826184.8	887.9	5.00	4.65	4.65	NO
L0002342	0	0.36232E-03	475459.0	3826184.3	888.2	5.00	4.65	4.65	NO
L0002343	0	0.36232E-03	475469.0	3826183.8	888.6	5.00	4.65	4.65	NO
L0002344	0	0.36232E-03	475478.9	3826183.3	889.1	5.00	4.65	4.65	NO
L0002345	0	0.36232E-03	475488.9	3826182.8	889.3	5.00	4.65	4.65	NO
L0002346	0	0.36232E-03	475498.9	3826182.3	889.9	5.00	4.65	4.65	NO
L0002347	0	0.36232E-03	475508.9	3826181.8	890.9	5.00	4.65	4.65	NO
L0002348	0	0.36232E-03	475518.9	3826181.3	891.8	5.00	4.65	4.65	NO
L0002349	0	0.36232E-03	475528.9	3826180.8	893.2	5.00	4.65	4.65	NO
L0002350	0	0.36232E-03	475538.9	3826180.3	893.8	5.00	4.65	4.65	NO
L0002351	0	0.36232E-03	475548.9	3826179.8	894.9	5.00	4.65	4.65	NO
L0002352	0	0.36232E-03	475558.8	3826179.3	895.6	5.00	4.65	4.65	NO
L0002353	0	0.36232E-03	475568.8	3826178.8	896.2	5.00	4.65	4.65	NO
L0002354	0	0.36232E-03	475578.8	3826178.3	896.6	5.00	4.65	4.65	NO
L0002355	0	0.36232E-03	475588.8	3826177.8	896.9	5.00	4.65	4.65	NO
L0002356	0	0.36232E-03	475598.8	3826177.3	897.3	5.00	4.65	4.65	NO
L0002357	0	0.36232E-03	475608.8	3826176.7	897.5	5.00	4.65	4.65	NO
L0002358	0	0.36232E-03	475615.8	3826173.9	897.6	5.00	4.65	4.65	NO
L0002359	0	0.36232E-03	475614.2	3826164.0	898.0	5.00	4.65	4.65	NO
L0002360	0	0.36232E-03	475612.6	3826154.1	897.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002361	0	0.36232E-03	475610.9	3826144.3	897.1	5.00	4.65	4.65	NO	
L0002362	0	0.36232E-03	475609.3	3826134.4	896.4	5.00	4.65	4.65	NO	
L0002363	0	0.36232E-03	475607.7	3826124.5	895.0	5.00	4.65	4.65	NO	
L0002364	0	0.36232E-03	475606.1	3826114.7	894.2	5.00	4.65	4.65	NO	
L0002365	0	0.36232E-03	475604.4	3826104.8	893.8	5.00	4.65	4.65	NO	
L0002366	0	0.36232E-03	475602.8	3826094.9	894.5	5.00	4.65	4.65	NO	
L0002367	0	0.36232E-03	475594.7	3826092.7	895.4	5.00	4.65	4.65	NO	
L0002368	0	0.36232E-03	475584.7	3826092.6	896.5	5.00	4.65	4.65	NO	
L0002369	0	0.36232E-03	475574.7	3826092.5	896.9	5.00	4.65	4.65	NO	
L0002370	0	0.36232E-03	475564.7	3826092.5	896.8	5.00	4.65	4.65	NO	
L0002371	0	0.36232E-03	475554.7	3826092.4	895.3	5.00	4.65	4.65	NO	
L0002372	0	0.36232E-03	475544.7	3826092.3	894.6	5.00	4.65	4.65	NO	
L0002373	0	0.36232E-03	475534.7	3826092.3	895.6	5.00	4.65	4.65	NO	
L0002374	0	0.36232E-03	475524.7	3826092.2	896.9	5.00	4.65	4.65	NO	
L0002375	0	0.36232E-03	475514.7	3826092.1	897.2	5.00	4.65	4.65	NO	

L0002376	0	0.36232E-03	475504.7	3826092.1	896.7	5.00	4.65	4.65	NO
L0002377	0	0.36232E-03	475494.7	3826092.0	895.3	5.00	4.65	4.65	NO
L0002378	0	0.36232E-03	475484.7	3826091.9	895.3	5.00	4.65	4.65	NO
L0002379	0	0.36232E-03	475474.7	3826091.9	896.3	5.00	4.65	4.65	NO
L0002380	0	0.36232E-03	475464.7	3826091.8	897.0	5.00	4.65	4.65	NO
L0002381	0	0.36232E-03	475459.2	3826086.7	896.5	5.00	4.65	4.65	NO
L0002382	0	0.36232E-03	475457.9	3826076.7	895.9	5.00	4.65	4.65	NO
L0002383	0	0.36232E-03	475456.7	3826066.8	896.6	5.00	4.65	4.65	NO
L0002384	0	0.36232E-03	475455.5	3826056.9	897.5	5.00	4.65	4.65	NO
L0002385	0	0.36232E-03	475454.3	3826047.0	897.8	5.00	4.65	4.65	NO
L0002386	0	0.36232E-03	475453.1	3826037.0	897.3	5.00	4.65	4.65	NO
L0002387	0	0.36232E-03	475451.9	3826027.1	896.1	5.00	4.65	4.65	NO
L0002388	0	0.36232E-03	475450.7	3826017.2	896.1	5.00	4.65	4.65	NO
L0002389	0	0.36232E-03	475449.5	3826007.3	895.8	5.00	4.65	4.65	NO
L0002390	0	0.36232E-03	475448.2	3825997.3	895.7	5.00	4.65	4.65	NO
L0002391	0	0.36232E-03	475447.0	3825987.4	896.8	5.00	4.65	4.65	NO
L0002392	0	0.36232E-03	475445.8	3825977.5	898.1	5.00	4.65	4.65	NO
L0002393	0	0.36232E-03	475444.6	3825967.6	898.2	5.00	4.65	4.65	NO
L0002394	0	0.36232E-03	475443.4	3825957.6	897.7	5.00	4.65	4.65	NO
L0002395	0	0.36232E-03	475442.2	3825947.7	897.9	5.00	4.65	4.65	NO
L0002396	0	0.36232E-03	475441.0	3825937.8	898.7	5.00	4.65	4.65	NO
L0002397	0	0.36232E-03	475439.8	3825927.9	899.1	5.00	4.65	4.65	NO
L0002398	0	0.36232E-03	475438.5	3825917.9	898.8	5.00	4.65	4.65	NO
L0002399	0	0.36232E-03	475437.3	3825908.0	898.7	5.00	4.65	4.65	NO
L0002400	0	0.36232E-03	475436.1	3825898.1	898.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002401	0	0.36232E-03	475434.9	3825888.1	899.1	5.00	4.65	4.65	NO	
L0002402	0	0.36232E-03	475433.7	3825878.2	899.2	5.00	4.65	4.65	NO	
L0002403	0	0.36232E-03	475432.5	3825868.3	899.4	5.00	4.65	4.65	NO	
L0002404	0	0.36232E-03	475431.3	3825858.4	899.4	5.00	4.65	4.65	NO	
L0002405	0	0.36232E-03	475430.1	3825848.4	899.6	5.00	4.65	4.65	NO	
L0002406	0	0.36232E-03	475428.8	3825838.5	899.8	5.00	4.65	4.65	NO	
L0002407	0	0.36232E-03	475422.9	3825833.9	899.8	5.00	4.65	4.65	NO	
L0002408	0	0.36232E-03	475412.9	3825833.8	899.4	5.00	4.65	4.65	NO	
L0002409	0	0.36232E-03	475402.9	3825833.7	899.1	5.00	4.65	4.65	NO	
L0002410	0	0.36232E-03	475392.9	3825833.6	898.8	5.00	4.65	4.65	NO	
L0002411	0	0.36232E-03	475382.9	3825833.5	898.5	5.00	4.65	4.65	NO	
L0002412	0	0.36232E-03	475372.9	3825833.4	898.1	5.00	4.65	4.65	NO	
L0002413	0	0.36232E-03	475362.9	3825833.3	897.7	5.00	4.65	4.65	NO	
L0002414	0	0.36232E-03	475352.9	3825833.2	897.4	5.00	4.65	4.65	NO	
L0002415	0	0.36232E-03	475342.9	3825833.1	897.1	5.00	4.65	4.65	NO	

L0002416	0	0.36232E-03	475332.9	3825832.9	896.8	5.00	4.65	4.65	NO
L0002417	0	0.36232E-03	475322.9	3825832.8	896.5	5.00	4.65	4.65	NO
L0002418	0	0.36232E-03	475312.9	3825832.7	896.4	5.00	4.65	4.65	NO
L0002419	0	0.36232E-03	475302.9	3825832.6	896.0	5.00	4.65	4.65	NO
L0002420	0	0.36232E-03	475292.9	3825832.5	895.6	5.00	4.65	4.65	NO
L0002421	0	0.36232E-03	475282.9	3825832.4	895.3	5.00	4.65	4.65	NO
L0002422	0	0.36232E-03	475272.9	3825832.3	895.1	5.00	4.65	4.65	NO
L0002423	0	0.36232E-03	475262.9	3825832.2	894.8	5.00	4.65	4.65	NO
L0002424	0	0.36232E-03	475252.9	3825832.1	894.4	5.00	4.65	4.65	NO
L0002425	0	0.36232E-03	475242.9	3825832.0	894.0	5.00	4.65	4.65	NO
L0002426	0	0.36232E-03	475232.9	3825831.9	893.7	5.00	4.65	4.65	NO
L0002427	0	0.36232E-03	475222.9	3825831.8	893.5	5.00	4.65	4.65	NO
L0002428	0	0.36232E-03	475212.9	3825831.7	893.3	5.00	4.65	4.65	NO
L0002429	0	0.36232E-03	475202.9	3825831.5	893.2	5.00	4.65	4.65	NO
L0002430	0	0.36232E-03	475192.9	3825831.4	892.8	5.00	4.65	4.65	NO
L0002431	0	0.36232E-03	475182.9	3825831.3	892.1	5.00	4.65	4.65	NO
L0002432	0	0.36232E-03	475172.9	3825831.2	892.1	5.00	4.65	4.65	NO
L0002433	0	0.36232E-03	475162.9	3825831.1	892.3	5.00	4.65	4.65	NO
L0002434	0	0.36232E-03	475154.3	3825831.7	892.2	5.00	4.65	4.65	NO
L0002435	0	0.36232E-03	475160.7	3825839.5	891.6	5.00	4.65	4.65	NO
L0002436	0	0.36232E-03	475167.0	3825847.2	891.1	5.00	4.65	4.65	NO
L0002437	0	0.36232E-03	475173.3	3825854.9	891.2	5.00	4.65	4.65	NO
L0002438	0	0.36232E-03	475179.7	3825862.7	891.6	5.00	4.65	4.65	NO
L0002439	0	0.36232E-03	475186.0	3825870.4	891.8	5.00	4.65	4.65	NO
L0002440	0	0.36232E-03	475192.3	3825878.2	891.4	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002441	0	0.36232E-03	475198.6	3825885.9	891.2	5.00	4.65	4.65	NO	
L0002442	0	0.36232E-03	475205.0	3825893.7	891.2	5.00	4.65	4.65	NO	
L0002443	0	0.36232E-03	475211.3	3825901.4	891.2	5.00	4.65	4.65	NO	
L0002444	0	0.36232E-03	475217.6	3825909.1	891.4	5.00	4.65	4.65	NO	
L0002445	0	0.36232E-03	475224.0	3825916.9	891.7	5.00	4.65	4.65	NO	
L0002446	0	0.36232E-03	475230.3	3825924.6	891.5	5.00	4.65	4.65	NO	
L0002447	0	0.36232E-03	475236.6	3825932.4	891.2	5.00	4.65	4.65	NO	
L0002448	0	0.36232E-03	475242.9	3825940.1	891.2	5.00	4.65	4.65	NO	
L0002449	0	0.36232E-03	475250.5	3825946.3	891.5	5.00	4.65	4.65	NO	
L0002450	0	0.36232E-03	475259.5	3825950.7	892.3	5.00	4.65	4.65	NO	
L0002451	0	0.36232E-03	475268.5	3825955.1	892.4	5.00	4.65	4.65	NO	
L0002452	0	0.36232E-03	475277.4	3825959.5	892.5	5.00	4.65	4.65	NO	
L0002453	0	0.36232E-03	475286.4	3825963.9	892.8	5.00	4.65	4.65	NO	
L0002454	0	0.36232E-03	475295.4	3825968.4	893.4	5.00	4.65	4.65	NO	
L0002455	0	0.36232E-03	475304.4	3825972.8	894.2	5.00	4.65	4.65	NO	

L0002456	0	0.36232E-03	475313.3	3825977.2	894.7	5.00	4.65	4.65	NO
L0002457	0	0.36232E-03	475322.3	3825981.6	895.1	5.00	4.65	4.65	NO
L0002458	0	0.36232E-03	475331.3	3825986.0	895.1	5.00	4.65	4.65	NO
L0002459	0	0.36232E-03	475340.2	3825990.5	895.0	5.00	4.65	4.65	NO
L0002460	0	0.36232E-03	475349.2	3825994.9	894.2	5.00	4.65	4.65	NO
L0002461	0	0.36232E-03	475358.2	3825999.3	893.4	5.00	4.65	4.65	NO
L0002462	0	0.36232E-03	475367.2	3826003.7	893.3	5.00	4.65	4.65	NO
L0002463	0	0.36232E-03	475376.1	3826008.1	893.5	5.00	4.65	4.65	NO
L0002464	0	0.36232E-03	475381.4	3826016.1	894.1	5.00	4.65	4.65	NO
L0002465	0	0.36232E-03	475385.7	3826025.2	893.1	5.00	4.65	4.65	NO
L0002466	0	0.36232E-03	475390.0	3826034.2	892.3	5.00	4.65	4.65	NO
L0002467	0	0.36232E-03	475394.2	3826043.3	894.1	5.00	4.65	4.65	NO
L0002468	0	0.36232E-03	475398.5	3826052.3	893.8	5.00	4.65	4.65	NO
L0002469	0	0.36232E-03	475402.8	3826061.4	894.3	5.00	4.65	4.65	NO
L0002470	0	0.36232E-03	475407.0	3826070.4	895.3	5.00	4.65	4.65	NO
L0002471	0	0.36232E-03	475411.3	3826079.4	895.2	5.00	4.65	4.65	NO
L0002472	0	0.36232E-03	475415.6	3826088.5	894.1	5.00	4.65	4.65	NO
L0002473	0	0.36232E-03	475419.9	3826097.5	893.6	5.00	4.65	4.65	NO
L0002474	0	0.36232E-03	475424.1	3826106.6	894.8	5.00	4.65	4.65	NO
L0002475	0	0.36232E-03	475428.4	3826115.6	894.8	5.00	4.65	4.65	NO
L0002476	0	0.36232E-03	475432.7	3826124.7	893.9	5.00	4.65	4.65	NO
L0002477	0	0.36232E-03	475436.9	3826133.7	893.9	5.00	4.65	4.65	NO
L0002478	0	0.36232E-03	475441.2	3826142.8	891.8	5.00	4.65	4.65	NO
L0002479	0	0.36232E-03	475445.5	3826151.8	891.4	5.00	4.65	4.65	NO
L0002480	0	0.36232E-03	475449.7	3826160.8	889.8	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002481	0	0.36232E-03	475455.5	3826167.4	888.7	5.00	4.65	4.65	NO	
L0002482	0	0.36232E-03	475465.5	3826166.9	888.9	5.00	4.65	4.65	NO	
L0002483	0	0.36232E-03	475475.5	3826166.4	889.1	5.00	4.65	4.65	NO	
L0002484	0	0.36232E-03	475485.5	3826165.9	889.2	5.00	4.65	4.65	NO	
L0002485	0	0.36232E-03	475495.5	3826165.4	889.7	5.00	4.65	4.65	NO	
L0002486	0	0.36232E-03	475505.4	3826165.0	890.1	5.00	4.65	4.65	NO	
L0002487	0	0.36232E-03	475515.4	3826164.5	890.4	5.00	4.65	4.65	NO	
L0002488	0	0.36232E-03	475525.4	3826164.0	890.7	5.00	4.65	4.65	NO	
L0002489	0	0.36232E-03	475535.4	3826163.5	891.8	5.00	4.65	4.65	NO	
L0002490	0	0.36232E-03	475545.4	3826163.0	892.6	5.00	4.65	4.65	NO	
L0002491	0	0.36232E-03	475555.4	3826162.5	893.4	5.00	4.65	4.65	NO	
L0002492	0	0.36232E-03	475565.4	3826162.0	895.0	5.00	4.65	4.65	NO	
L0002493	0	0.36232E-03	475575.4	3826161.6	895.7	5.00	4.65	4.65	NO	
L0002494	0	0.36232E-03	475585.3	3826161.1	896.4	5.00	4.65	4.65	NO	
L0002495	0	0.36232E-03	475594.4	3826159.9	897.0	5.00	4.65	4.65	NO	

L0002496	0	0.36232E-03	475591.7	3826150.2	896.3	5.00	4.65	4.65	NO
L0002497	0	0.36232E-03	475589.1	3826140.6	895.1	5.00	4.65	4.65	NO
L0002498	0	0.36232E-03	475586.4	3826131.0	893.7	5.00	4.65	4.65	NO
L0002499	0	0.36232E-03	475583.8	3826121.3	892.9	5.00	4.65	4.65	NO
L0002500	0	0.36232E-03	475581.1	3826111.7	893.3	5.00	4.65	4.65	NO
L0002501	0	0.36232E-03	475572.1	3826110.5	894.1	5.00	4.65	4.65	NO
L0002502	0	0.36232E-03	475562.1	3826110.6	894.7	5.00	4.65	4.65	NO
L0002503	0	0.36232E-03	475552.1	3826110.7	894.5	5.00	4.65	4.65	NO
L0002504	0	0.36232E-03	475542.1	3826110.7	893.5	5.00	4.65	4.65	NO
L0002505	0	0.36232E-03	475532.1	3826110.8	893.9	5.00	4.65	4.65	NO
L0002506	0	0.36232E-03	475522.1	3826110.9	894.8	5.00	4.65	4.65	NO
L0002507	0	0.36232E-03	475512.1	3826111.0	894.9	5.00	4.65	4.65	NO
L0002508	0	0.36232E-03	475502.1	3826111.1	894.0	5.00	4.65	4.65	NO
L0002509	0	0.36232E-03	475492.1	3826111.1	894.4	5.00	4.65	4.65	NO
L0002510	0	0.36232E-03	475482.1	3826111.2	894.4	5.00	4.65	4.65	NO
L0002511	0	0.36232E-03	475472.1	3826111.3	893.9	5.00	4.65	4.65	NO
L0002512	0	0.36232E-03	475462.1	3826111.4	894.7	5.00	4.65	4.65	NO
L0002513	0	0.36232E-03	475452.1	3826111.4	896.2	5.00	4.65	4.65	NO
L0002514	0	0.36232E-03	475450.1	3826101.8	896.4	5.00	4.65	4.65	NO
L0002515	0	0.36232E-03	475448.3	3826091.9	895.9	5.00	4.65	4.65	NO
L0002516	0	0.36232E-03	475446.4	3826082.1	895.6	5.00	4.65	4.65	NO
L0002517	0	0.36232E-03	475444.6	3826072.3	896.2	5.00	4.65	4.65	NO
L0002518	0	0.36232E-03	475442.8	3826062.4	897.2	5.00	4.65	4.65	NO
L0002519	0	0.36232E-03	475440.9	3826052.6	897.2	5.00	4.65	4.65	NO
L0002520	0	0.36232E-03	475439.1	3826042.8	896.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002521	0	0.36232E-03	475437.3	3826033.0	896.4	5.00	4.65	4.65	NO	
L0002522	0	0.36232E-03	475435.5	3826023.1	895.0	5.00	4.65	4.65	NO	
L0002523	0	0.36232E-03	475433.6	3826013.3	894.2	5.00	4.65	4.65	NO	
L0002524	0	0.36232E-03	475431.8	3826003.5	894.8	5.00	4.65	4.65	NO	
L0002525	0	0.36232E-03	475430.0	3825993.6	896.6	5.00	4.65	4.65	NO	
L0002526	0	0.36232E-03	475428.1	3825983.8	897.6	5.00	4.65	4.65	NO	
L0002527	0	0.36232E-03	475426.3	3825974.0	897.2	5.00	4.65	4.65	NO	
L0002528	0	0.36232E-03	475424.5	3825964.1	896.4	5.00	4.65	4.65	NO	
L0002529	0	0.36232E-03	475422.6	3825954.3	897.2	5.00	4.65	4.65	NO	
L0002530	0	0.36232E-03	475420.8	3825944.5	898.1	5.00	4.65	4.65	NO	
L0002531	0	0.36232E-03	475419.0	3825934.6	898.4	5.00	4.65	4.65	NO	
L0002532	0	0.36232E-03	475417.1	3825924.8	898.0	5.00	4.65	4.65	NO	
L0002533	0	0.36232E-03	475415.3	3825915.0	897.8	5.00	4.65	4.65	NO	
L0002534	0	0.36232E-03	475413.5	3825905.2	897.9	5.00	4.65	4.65	NO	
L0002535	0	0.36232E-03	475411.6	3825895.3	898.1	5.00	4.65	4.65	NO	

L0002536	0	0.36232E-03	475409.8	3825885.5	898.2	5.00	4.65	4.65	NO
L0002537	0	0.36232E-03	475408.0	3825875.7	898.3	5.00	4.65	4.65	NO
L0002538	0	0.36232E-03	475406.1	3825865.8	898.4	5.00	4.65	4.65	NO
L0002539	0	0.36232E-03	475404.3	3825856.0	898.5	5.00	4.65	4.65	NO
L0002540	0	0.36232E-03	475397.1	3825852.5	898.3	5.00	4.65	4.65	NO
L0002541	0	0.36232E-03	475387.1	3825852.4	898.1	5.00	4.65	4.65	NO
L0002542	0	0.36232E-03	475377.1	3825852.2	897.8	5.00	4.65	4.65	NO
L0002543	0	0.36232E-03	475367.1	3825852.0	897.4	5.00	4.65	4.65	NO
L0002544	0	0.36232E-03	475357.1	3825851.8	897.0	5.00	4.65	4.65	NO
L0002545	0	0.36232E-03	475347.1	3825851.6	896.6	5.00	4.65	4.65	NO
L0002546	0	0.36232E-03	475337.1	3825851.4	896.4	5.00	4.65	4.65	NO
L0002547	0	0.36232E-03	475327.1	3825851.3	896.2	5.00	4.65	4.65	NO
L0002548	0	0.36232E-03	475317.1	3825851.1	895.9	5.00	4.65	4.65	NO
L0002549	0	0.36232E-03	475307.1	3825850.9	895.7	5.00	4.65	4.65	NO
L0002550	0	0.36232E-03	475297.1	3825850.7	895.3	5.00	4.65	4.65	NO
L0002551	0	0.36232E-03	475287.1	3825850.5	895.0	5.00	4.65	4.65	NO
L0002552	0	0.36232E-03	475277.1	3825850.4	894.7	5.00	4.65	4.65	NO
L0002553	0	0.36232E-03	475267.1	3825850.2	894.4	5.00	4.65	4.65	NO
L0002554	0	0.36232E-03	475257.1	3825850.0	894.2	5.00	4.65	4.65	NO
L0002555	0	0.36232E-03	475247.1	3825849.8	893.8	5.00	4.65	4.65	NO
L0002556	0	0.36232E-03	475237.1	3825849.6	893.4	5.00	4.65	4.65	NO
L0002557	0	0.36232E-03	475227.1	3825849.4	893.2	5.00	4.65	4.65	NO
L0002558	0	0.36232E-03	475217.1	3825849.3	892.9	5.00	4.65	4.65	NO
L0002559	0	0.36232E-03	475207.1	3825849.1	892.6	5.00	4.65	4.65	NO
L0002560	0	0.36232E-03	475197.1	3825848.9	892.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002561	0	0.36232E-03	475188.9	3825849.6	892.3	5.00	4.65	4.65	NO	
L0002562	0	0.36232E-03	475195.1	3825857.4	892.3	5.00	4.65	4.65	NO	
L0002563	0	0.36232E-03	475201.3	3825865.3	892.0	5.00	4.65	4.65	NO	
L0002564	0	0.36232E-03	475207.5	3825873.1	891.9	5.00	4.65	4.65	NO	
L0002565	0	0.36232E-03	475213.7	3825880.9	891.9	5.00	4.65	4.65	NO	
L0002566	0	0.36232E-03	475220.0	3825888.8	891.8	5.00	4.65	4.65	NO	
L0002567	0	0.36232E-03	475226.2	3825896.6	891.9	5.00	4.65	4.65	NO	
L0002568	0	0.36232E-03	475232.4	3825904.4	892.1	5.00	4.65	4.65	NO	
L0002569	0	0.36232E-03	475238.6	3825912.3	892.2	5.00	4.65	4.65	NO	
L0002570	0	0.36232E-03	475244.8	3825920.1	891.8	5.00	4.65	4.65	NO	
L0002571	0	0.36232E-03	475251.0	3825928.0	891.6	5.00	4.65	4.65	NO	
L0002572	0	0.36232E-03	475259.7	3825932.5	891.8	5.00	4.65	4.65	NO	
L0002573	0	0.36232E-03	475268.9	3825936.3	892.2	5.00	4.65	4.65	NO	
L0002574	0	0.36232E-03	475278.2	3825940.2	892.7	5.00	4.65	4.65	NO	
L0002575	0	0.36232E-03	475287.4	3825944.0	893.1	5.00	4.65	4.65	NO	

L0002576	0	0.36232E-03	475296.7	3825947.8	893.4	5.00	4.65	4.65	NO
L0002577	0	0.36232E-03	475305.9	3825951.6	894.0	5.00	4.65	4.65	NO
L0002578	0	0.36232E-03	475315.1	3825955.5	894.2	5.00	4.65	4.65	NO
L0002579	0	0.36232E-03	475324.4	3825959.3	894.6	5.00	4.65	4.65	NO
L0002580	0	0.36232E-03	475333.6	3825963.1	895.2	5.00	4.65	4.65	NO
L0002581	0	0.36232E-03	475342.9	3825966.9	895.7	5.00	4.65	4.65	NO
L0002582	0	0.36232E-03	475352.1	3825970.7	895.9	5.00	4.65	4.65	NO
L0002583	0	0.36232E-03	475361.4	3825974.6	895.8	5.00	4.65	4.65	NO
L0002584	0	0.36232E-03	475370.6	3825978.4	895.5	5.00	4.65	4.65	NO
L0002585	0	0.36232E-03	475379.8	3825982.2	894.5	5.00	4.65	4.65	NO
L0002586	0	0.36232E-03	475385.8	3825989.5	894.2	5.00	4.65	4.65	NO
L0002587	0	0.36232E-03	475389.9	3825998.6	894.9	5.00	4.65	4.65	NO
L0002588	0	0.36232E-03	475394.1	3826007.6	895.2	5.00	4.65	4.65	NO
L0002589	0	0.36232E-03	475398.3	3826016.7	893.9	5.00	4.65	4.65	NO
L0002590	0	0.36232E-03	475402.5	3826025.8	893.0	5.00	4.65	4.65	NO
L0002591	0	0.36232E-03	475406.6	3826034.9	894.1	5.00	4.65	4.65	NO
L0002592	0	0.36232E-03	475410.8	3826044.0	894.8	5.00	4.65	4.65	NO
L0002593	0	0.36232E-03	475415.0	3826053.1	895.0	5.00	4.65	4.65	NO
L0002594	0	0.36232E-03	475419.2	3826062.2	895.8	5.00	4.65	4.65	NO
L0002595	0	0.36232E-03	475423.4	3826071.2	896.2	5.00	4.65	4.65	NO
L0002596	0	0.36232E-03	475427.5	3826080.3	895.5	5.00	4.65	4.65	NO
L0002597	0	0.36232E-03	475431.7	3826089.4	894.7	5.00	4.65	4.65	NO
L0002598	0	0.36232E-03	475435.9	3826098.5	895.3	5.00	4.65	4.65	NO
L0002599	0	0.36232E-03	475440.1	3826107.6	895.8	5.00	4.65	4.65	NO
L0002600	0	0.36232E-03	475444.2	3826116.7	895.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002601	0	0.36232E-03	475448.4	3826125.8	894.3	5.00	4.65	4.65	NO	
L0002602	0	0.36232E-03	475452.6	3826134.8	892.3	5.00	4.65	4.65	NO	
L0002603	0	0.36232E-03	475456.8	3826143.9	892.0	5.00	4.65	4.65	NO	
L0002604	0	0.36232E-03	475461.0	3826153.0	890.8	5.00	4.65	4.65	NO	
L0002605	0	0.36232E-03	475469.8	3826154.4	890.5	5.00	4.65	4.65	NO	
L0002606	0	0.36232E-03	475479.8	3826154.1	890.0	5.00	4.65	4.65	NO	
L0002607	0	0.36232E-03	475489.8	3826153.7	890.0	5.00	4.65	4.65	NO	
L0002608	0	0.36232E-03	475499.8	3826153.3	890.3	5.00	4.65	4.65	NO	
L0002609	0	0.36232E-03	475509.8	3826153.0	890.4	5.00	4.65	4.65	NO	
L0002610	0	0.36232E-03	475519.8	3826152.6	890.7	5.00	4.65	4.65	NO	
L0002611	0	0.36232E-03	475529.8	3826152.3	890.9	5.00	4.65	4.65	NO	
L0002612	0	0.36232E-03	475539.8	3826151.9	891.2	5.00	4.65	4.65	NO	
L0002613	0	0.36232E-03	475549.8	3826151.5	892.0	5.00	4.65	4.65	NO	
L0002614	0	0.36232E-03	475559.8	3826151.2	892.9	5.00	4.65	4.65	NO	
L0002615	0	0.36232E-03	475569.8	3826150.8	894.0	5.00	4.65	4.65	NO	

L0002616	0	0.36232E-03	475567.1	3826141.4	892.8	5.00	4.65	4.65	NO
L0002617	0	0.36232E-03	475564.1	3826131.9	892.2	5.00	4.65	4.65	NO
L0002618	0	0.36232E-03	475559.1	3826125.5	892.1	5.00	4.65	4.65	NO
L0002619	0	0.36232E-03	475549.1	3826126.6	892.6	5.00	4.65	4.65	NO
L0002620	0	0.36232E-03	475545.8	3826132.2	891.9	5.00	4.65	4.65	NO
L0002621	0	0.36232E-03	475547.4	3826141.0	891.6	5.00	4.65	4.65	NO
L0002622	0	0.36232E-03	475537.5	3826141.9	891.2	5.00	4.65	4.65	NO
L0002623	0	0.36232E-03	475527.5	3826142.7	891.3	5.00	4.65	4.65	NO
L0002624	0	0.36232E-03	475522.4	3826136.1	891.6	5.00	4.65	4.65	NO
L0002625	0	0.36232E-03	475518.2	3826128.4	892.8	5.00	4.65	4.65	NO
L0002626	0	0.36232E-03	475508.2	3826129.7	892.6	5.00	4.65	4.65	NO
L0002627	0	0.36232E-03	475498.3	3826131.0	892.0	5.00	4.65	4.65	NO
L0002628	0	0.36232E-03	475497.8	3826139.9	891.2	5.00	4.65	4.65	NO
L0002629	0	0.36232E-03	475492.2	3826143.7	890.8	5.00	4.65	4.65	NO
L0002630	0	0.36232E-03	475482.2	3826143.3	890.9	5.00	4.65	4.65	NO
L0002631	0	0.36232E-03	475472.2	3826143.0	891.6	5.00	4.65	4.65	NO
L0002632	0	0.36232E-03	475470.1	3826134.5	892.6	5.00	4.65	4.65	NO
L0002633	0	0.36232E-03	475468.3	3826125.1	893.3	5.00	4.65	4.65	NO
L0002634	0	0.36232E-03	475460.6	3826118.8	893.7	5.00	4.65	4.65	NO
L0002635	0	0.36232E-03	475452.9	3826112.4	896.1	5.00	4.65	4.65	NO
L0002636	0	0.36232E-03	475445.1	3826106.1	896.3	5.00	4.65	4.65	NO
L0002637	0	0.36232E-03	475440.7	3826097.7	895.5	5.00	4.65	4.65	NO
L0002638	0	0.36232E-03	475438.4	3826088.0	894.9	5.00	4.65	4.65	NO
L0002639	0	0.36232E-03	475436.1	3826078.2	895.6	5.00	4.65	4.65	NO
L0002640	0	0.36232E-03	475433.7	3826068.5	896.6	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002641	0	0.36232E-03	475431.4	3826058.8	896.7	5.00	4.65	4.65	NO	
L0002642	0	0.36232E-03	475429.1	3826049.1	896.1	5.00	4.65	4.65	NO	
L0002643	0	0.36232E-03	475426.8	3826039.3	895.6	5.00	4.65	4.65	NO	
L0002644	0	0.36232E-03	475424.5	3826029.6	895.2	5.00	4.65	4.65	NO	
L0002645	0	0.36232E-03	475422.2	3826019.9	894.1	5.00	4.65	4.65	NO	
L0002646	0	0.36232E-03	475419.9	3826010.1	894.3	5.00	4.65	4.65	NO	
L0002647	0	0.36232E-03	475417.6	3826000.4	895.5	5.00	4.65	4.65	NO	
L0002648	0	0.36232E-03	475415.3	3825990.7	896.8	5.00	4.65	4.65	NO	
L0002649	0	0.36232E-03	475412.9	3825981.0	896.0	5.00	4.65	4.65	NO	
L0002650	0	0.36232E-03	475410.6	3825971.2	895.6	5.00	4.65	4.65	NO	
L0002651	0	0.36232E-03	475408.3	3825961.5	896.5	5.00	4.65	4.65	NO	
L0002652	0	0.36232E-03	475406.0	3825951.8	897.6	5.00	4.65	4.65	NO	
L0002653	0	0.36232E-03	475403.7	3825942.0	898.0	5.00	4.65	4.65	NO	
L0002654	0	0.36232E-03	475401.4	3825932.3	897.6	5.00	4.65	4.65	NO	
L0002655	0	0.36232E-03	475399.1	3825922.6	896.9	5.00	4.65	4.65	NO	

L0002656	0	0.36232E-03	475396.8	3825912.8	897.1	5.00	4.65	4.65	NO
L0002657	0	0.36232E-03	475394.5	3825903.1	897.3	5.00	4.65	4.65	NO
L0002658	0	0.36232E-03	475392.2	3825893.4	897.4	5.00	4.65	4.65	NO
L0002659	0	0.36232E-03	475389.8	3825883.7	897.5	5.00	4.65	4.65	NO
L0002660	0	0.36232E-03	475387.5	3825873.9	897.5	5.00	4.65	4.65	NO
L0002661	0	0.36232E-03	475382.7	3825867.3	897.6	5.00	4.65	4.65	NO
L0002662	0	0.36232E-03	475372.7	3825867.1	897.1	5.00	4.65	4.65	NO
L0002663	0	0.36232E-03	475362.7	3825866.9	896.8	5.00	4.65	4.65	NO
L0002664	0	0.36232E-03	475352.7	3825866.6	896.4	5.00	4.65	4.65	NO
L0002665	0	0.36232E-03	475342.7	3825866.4	896.0	5.00	4.65	4.65	NO
L0002666	0	0.36232E-03	475332.7	3825866.2	896.0	5.00	4.65	4.65	NO
L0002667	0	0.36232E-03	475322.7	3825866.0	895.7	5.00	4.65	4.65	NO
L0002668	0	0.36232E-03	475312.7	3825865.7	895.3	5.00	4.65	4.65	NO
L0002669	0	0.36232E-03	475302.7	3825865.5	895.0	5.00	4.65	4.65	NO
L0002670	0	0.36232E-03	475292.7	3825865.3	894.8	5.00	4.65	4.65	NO
L0002671	0	0.36232E-03	475282.7	3825865.0	894.6	5.00	4.65	4.65	NO
L0002672	0	0.36232E-03	475272.7	3825864.8	894.2	5.00	4.65	4.65	NO
L0002673	0	0.36232E-03	475262.7	3825864.6	893.9	5.00	4.65	4.65	NO
L0002674	0	0.36232E-03	475252.7	3825864.3	893.7	5.00	4.65	4.65	NO
L0002675	0	0.36232E-03	475242.7	3825864.1	893.3	5.00	4.65	4.65	NO
L0002676	0	0.36232E-03	475232.7	3825863.9	893.0	5.00	4.65	4.65	NO
L0002677	0	0.36232E-03	475222.7	3825863.6	892.6	5.00	4.65	4.65	NO
L0002678	0	0.36232E-03	475219.3	3825866.6	892.4	5.00	4.65	4.65	NO
L0002679	0	0.36232E-03	475225.6	3825874.4	892.4	5.00	4.65	4.65	NO
L0002680	0	0.36232E-03	475232.0	3825882.1	892.5	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002681	0	0.36232E-03	475238.3	3825889.8	892.6	5.00	4.65	4.65	NO	
L0002682	0	0.36232E-03	475244.6	3825897.6	892.6	5.00	4.65	4.65	NO	
L0002683	0	0.36232E-03	475251.0	3825905.3	892.6	5.00	4.65	4.65	NO	
L0002684	0	0.36232E-03	475257.3	3825913.0	892.3	5.00	4.65	4.65	NO	
L0002685	0	0.36232E-03	475264.8	3825919.1	892.2	5.00	4.65	4.65	NO	
L0002686	0	0.36232E-03	475274.1	3825922.8	892.4	5.00	4.65	4.65	NO	
L0002687	0	0.36232E-03	475283.4	3825926.6	892.6	5.00	4.65	4.65	NO	
L0002688	0	0.36232E-03	475292.7	3825930.3	893.0	5.00	4.65	4.65	NO	
L0002689	0	0.36232E-03	475302.0	3825934.0	893.4	5.00	4.65	4.65	NO	
L0002690	0	0.36232E-03	475311.3	3825937.7	893.7	5.00	4.65	4.65	NO	
L0002691	0	0.36232E-03	475320.6	3825941.4	894.0	5.00	4.65	4.65	NO	
L0002692	0	0.36232E-03	475329.8	3825945.1	894.5	5.00	4.65	4.65	NO	
L0002693	0	0.36232E-03	475339.1	3825948.8	895.0	5.00	4.65	4.65	NO	
L0002694	0	0.36232E-03	475348.4	3825952.6	895.4	5.00	4.65	4.65	NO	
L0002695	0	0.36232E-03	475357.7	3825956.3	896.1	5.00	4.65	4.65	NO	

L0002696	0	0.36232E-03	475367.0	3825960.0	896.5	5.00	4.65	4.65	NO
L0002697	0	0.36232E-03	475376.7	3825959.7	896.7	5.00	4.65	4.65	NO
L0002698	0	0.36232E-03	475386.6	3825958.1	896.5	5.00	4.65	4.65	NO
L0002699	0	0.36232E-03	475392.9	3825954.5	896.8	5.00	4.65	4.65	NO
L0002700	0	0.36232E-03	475389.4	3825945.1	897.3	5.00	4.65	4.65	NO
L0002701	0	0.36232E-03	475385.9	3825935.8	896.9	5.00	4.65	4.65	NO
L0002702	0	0.36232E-03	475382.4	3825926.4	896.6	5.00	4.65	4.65	NO
L0002703	0	0.36232E-03	475378.9	3825917.0	896.5	5.00	4.65	4.65	NO
L0002704	0	0.36232E-03	475375.4	3825907.7	896.4	5.00	4.65	4.65	NO
L0002705	0	0.36232E-03	475371.9	3825898.3	896.5	5.00	4.65	4.65	NO
L0002706	0	0.36232E-03	475368.4	3825888.9	896.6	5.00	4.65	4.65	NO
L0002707	0	0.36232E-03	475364.8	3825879.6	896.6	5.00	4.65	4.65	NO
L0002708	0	0.36232E-03	475355.8	3825878.1	896.3	5.00	4.65	4.65	NO
L0002709	0	0.36232E-03	475345.8	3825877.9	895.8	5.00	4.65	4.65	NO
L0002710	0	0.36232E-03	475335.8	3825877.8	895.5	5.00	4.65	4.65	NO
L0002711	0	0.36232E-03	475325.8	3825877.6	895.2	5.00	4.65	4.65	NO
L0002712	0	0.36232E-03	475315.8	3825877.4	895.1	5.00	4.65	4.65	NO
L0002713	0	0.36232E-03	475305.8	3825877.3	894.7	5.00	4.65	4.65	NO
L0002714	0	0.36232E-03	475295.8	3825877.1	894.5	5.00	4.65	4.65	NO
L0002715	0	0.36232E-03	475285.8	3825876.9	894.2	5.00	4.65	4.65	NO
L0002716	0	0.36232E-03	475275.8	3825876.8	894.0	5.00	4.65	4.65	NO
L0002717	0	0.36232E-03	475265.8	3825876.6	893.7	5.00	4.65	4.65	NO
L0002718	0	0.36232E-03	475255.8	3825876.4	893.4	5.00	4.65	4.65	NO
L0002719	0	0.36232E-03	475246.6	3825876.6	893.1	5.00	4.65	4.65	NO
L0002720	0	0.36232E-03	475253.5	3825883.8	893.2	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002721	0	0.36232E-03	475260.5	3825891.0	893.3	5.00	4.65	4.65	NO	
L0002722	0	0.36232E-03	475267.4	3825898.2	893.1	5.00	4.65	4.65	NO	
L0002723	0	0.36232E-03	475275.1	3825904.4	893.0	5.00	4.65	4.65	NO	
L0002724	0	0.36232E-03	475284.1	3825908.7	893.0	5.00	4.65	4.65	NO	
L0002725	0	0.36232E-03	475293.2	3825912.9	893.2	5.00	4.65	4.65	NO	
L0002726	0	0.36232E-03	475302.2	3825917.2	893.5	5.00	4.65	4.65	NO	
L0002727	0	0.36232E-03	475311.3	3825921.5	893.7	5.00	4.65	4.65	NO	
L0002728	0	0.36232E-03	475320.3	3825925.8	894.1	5.00	4.65	4.65	NO	
L0002729	0	0.36232E-03	475329.3	3825930.0	894.3	5.00	4.65	4.65	NO	
L0002730	0	0.36232E-03	475338.4	3825934.3	894.8	5.00	4.65	4.65	NO	
L0002731	0	0.36232E-03	475347.4	3825938.6	895.3	5.00	4.65	4.65	NO	
L0002732	0	0.36232E-03	475356.5	3825942.9	895.8	5.00	4.65	4.65	NO	
L0002733	0	0.36232E-03	475365.7	3825945.7	896.3	5.00	4.65	4.65	NO	
L0002734	0	0.36232E-03	475373.6	3825942.9	896.7	5.00	4.65	4.65	NO	
L0002735	0	0.36232E-03	475369.6	3825933.8	896.1	5.00	4.65	4.65	NO	

L0002736	0	0.36232E-03	475365.5	3825924.6	895.9	5.00	4.65	4.65	NO
L0002737	0	0.36232E-03	475361.4	3825915.5	895.8	5.00	4.65	4.65	NO
L0002738	0	0.36232E-03	475357.4	3825906.4	895.8	5.00	4.65	4.65	NO
L0002739	0	0.36232E-03	475353.3	3825897.2	895.9	5.00	4.65	4.65	NO
L0002740	0	0.36232E-03	475347.3	3825891.0	895.7	5.00	4.65	4.65	NO
L0002741	0	0.36232E-03	475337.3	3825890.9	895.3	5.00	4.65	4.65	NO
L0002742	0	0.36232E-03	475327.3	3825890.7	894.9	5.00	4.65	4.65	NO
L0002743	0	0.36232E-03	475317.3	3825890.6	894.6	5.00	4.65	4.65	NO
L0002744	0	0.36232E-03	475307.3	3825890.5	894.3	5.00	4.65	4.65	NO
L0002745	0	0.36232E-03	475297.3	3825890.3	894.1	5.00	4.65	4.65	NO
L0002746	0	0.36232E-03	475287.3	3825890.2	893.8	5.00	4.65	4.65	NO
L0002747	0	0.36232E-03	475278.1	3825890.2	893.5	5.00	4.65	4.65	NO
L0002748	0	0.36232E-03	475287.0	3825894.9	893.6	5.00	4.65	4.65	NO
L0002749	0	0.36232E-03	475295.9	3825899.5	893.7	5.00	4.65	4.65	NO
L0002750	0	0.36232E-03	475304.7	3825904.1	893.9	5.00	4.65	4.65	NO
L0002751	0	0.36232E-03	475313.6	3825908.7	894.3	5.00	4.65	4.65	NO
L0002752	0	0.36232E-03	475322.5	3825913.3	894.5	5.00	4.65	4.65	NO
L0002753	0	0.36232E-03	475331.4	3825917.9	894.6	5.00	4.65	4.65	NO
L0002754	0	0.36232E-03	475340.2	3825922.5	894.7	5.00	4.65	4.65	NO
L0002755	0	0.36232E-03	475349.1	3825927.2	895.2	5.00	4.65	4.65	NO
L0002756	0	0.36232E-03	475348.6	3825921.8	895.2	5.00	4.65	4.65	NO
L0002757	0	0.36232E-03	475344.5	3825912.7	895.1	5.00	4.65	4.65	NO
L0002758	0	0.36232E-03	475340.4	3825903.6	895.5	5.00	4.65	4.65	NO
L0002759	0	0.36232E-03	475332.8	3825899.9	895.3	5.00	4.65	4.65	NO
L0002760	0	0.36232E-03	475322.8	3825899.9	894.7	5.00	4.65	4.65	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0001761 , L0001762 , L0001763 , L0001764 , L0001765 , L0001766 , L0001767 , L0001768 ,

L0001769 , L0001770 , L0001771 , L0001772 , L0001773 , L0001774 , L0001775 , L0001776 ,

L0001777 , L0001778 , L0001779 , L0001780 , L0001781 , L0001782 , L0001783 , L0001784 ,

L0001785 , L0001786 , L0001787 , L0001788 , L0001789 , L0001790 , L0001791 , L0001792 ,

L0001793 , L0001794 , L0001795 , L0001796 , L0001797 , L0001798 , L0001799 , L0001800 ,

L0001801 , L0001802 , L0001803 , L0001804 , L0001805 , L0001806 , L0001807 , L0001808 ,

L0001809 , L0001810 , L0001811 , L0001812 , L0001813 , L0001814 , L0001815 , L0001816 ,

L0001817 , L0001818 , L0001819 , L0001820 , L0001821 , L0001822 , L0001823 , L0001824 ,

L0001825 , L0001826 , L0001827 , L0001828 , L0001829 , L0001830 , L0001831 , L0001832 ,

L0001833 , L0001834 , L0001835 , L0001836 , L0001837 , L0001838 , L0001839 , L0001840 ,

L0001841 , L0001842 , L0001843 , L0001844 , L0001845 , L0001846 , L0001847 , L0001848 ,

L0001849 , L0001850 , L0001851 , L0001852 , L0001853 , L0001854 , L0001855 , L0001856 ,

L0001857 , L0001858 , L0001859 , L0001860 , L0001861 , L0001862 , L0001863 , L0001864 ,

L0001865 , L0001866 , L0001867 , L0001868 , L0001869 , L0001870 , L0001871 , L0001872 ,

L0001873 , L0001874 , L0001875 , L0001876 , L0001877 , L0001878 , L0001879 , L0001880 ,

L0001881 , L0001882 , L0001883 , L0001884 , L0001885 , L0001886 , L0001887 , L0001888 ,

L0001889 , L0001890 , L0001891 , L0001892 , L0001893 , L0001894 , L0001895 , L0001896 ,

L0001897 , L0001898 , L0001899 , L0001900 , L0001901 , L0001902 , L0001903 , L0001904 ,

L0001905 , L0001906 , L0001907 , L0001908 , L0001909 , L0001910 , L0001911 , L0001912 ,

L0001913 , L0001914 , L0001915 , L0001916 , L0001917 , L0001918 , L0001919 , L0001920 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0001921 , L0001922 , L0001923 , L0001924 , L0001925 , L0001926 , L0001927 , L0001928 ,

L0001929 , L0001930 , L0001931 , L0001932 , L0001933 , L0001934 , L0001935 , L0001936 ,

L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 ,

L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 ,

L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , L0001960 ,

L0001961 , L0001962 , L0001963 , L0001964 , L0001965 , L0001966 , L0001967 , L0001968 ,

L0001969 , L0001970 , L0001971 , L0001972 , L0001973 , L0001974 , L0001975 , L0001976 ,

L0001977 , L0001978 , L0001979 , L0001980 , L0001981 , L0001982 , L0001983 , L0001984 ,

L0001985 , L0001986 , L0001987 , L0001988 , L0001989 , L0001990 , L0001991 , L0001992 ,

L0001993 , L0001994 , L0001995 , L0001996 , L0001997 , L0001998 , L0001999 , L0002000 ,

L0002001 , L0002002 , L0002003 , L0002004 , L0002005 , L0002006 , L0002007 , L0002008 ,

L0002009 , L0002010 , L0002011 , L0002012 , L0002013 , L0002014 , L0002015 , L0002016 ,

L0002017 , L0002018 , L0002019 , L0002020 , L0002021 , L0002022 , L0002023 , L0002024 ,

L0002025 , L0002026 , L0002027 , L0002028 , L0002029 , L0002030 , L0002031 , L0002032 ,

L0002033 , L0002034 , L0002035 , L0002036 , L0002037 , L0002038 , L0002039 , L0002040 ,

L0002041 , L0002042 , L0002043 , L0002044 , L0002045 , L0002046 , L0002047 , L0002048 ,

L0002049 , L0002050 , L0002051 , L0002052 , L0002053 , L0002054 , L0002055 , L0002056 ,

L0002057 , L0002058 , L0002059 , L0002060 , L0002061 , L0002062 , L0002063 , L0002064 ,

L0002065 , L0002066 , L0002067 , L0002068 , L0002069 , L0002070 , L0002071 , L0002072 ,

L0002073 , L0002074 , L0002075 , L0002076 , L0002077 , L0002078 , L0002079 , L0002080 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0002081 , L0002082 , L0002083 , L0002084 , L0002085 , L0002086 , L0002087 , L0002088 ,

L0002089 , L0002090 , L0002091 , L0002092 , L0002093 , L0002094 , L0002095 , L0002096 ,

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L0002105 , L0002106 , L0002107 , L0002108 , L0002109 , L0002110 , L0002111 , L0002112 ,

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L0002121 , L0002122 , L0002123 , L0002124 , L0002125 , L0002126 , L0002127 , L0002128 ,

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L0002177 , L0002178 , L0002179 , L0002180 , L0002181 , L0002182 , L0002183 , L0002184 ,

L0002185 , L0002186 , L0002187 , L0002188 , L0002189 , L0002190 , L0002191 , L0002192 ,

L0002193 , L0002194 , L0002195 , L0002196 , L0002197 , L0002198 , L0002199 , L0002200 ,

L0002201 , L0002202 , L0002203 , L0002204 , L0002205 , L0002206 , L0002207 , L0002208 ,

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L0002225 , L0002226 , L0002227 , L0002228 , L0002229 , L0002230 , L0002231 , L0002232 ,

L0002233 , L0002234 , L0002235 , L0002236 , L0002237 , L0002238 , L0002239 , L0002240 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0002241 , L0002242 , L0002243 , L0002244 , L0002245 , L0002246 , L0002247 , L0002248 ,

L0002249 , L0002250 , L0002251 , L0002252 , L0002253 , L0002254 , L0002255 , L0002256 ,

L0002257 , L0002258 , L0002259 , L0002260 , L0002261 , L0002262 , L0002263 , L0002264 ,

L0002265 , L0002266 , L0002267 , L0002268 , L0002269 , L0002270 , L0002271 , L0002272 ,

L0002273 , L0002274 , L0002275 , L0002276 , L0002277 , L0002278 , L0002279 , L0002280 ,

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L0002289 , L0002290 , L0002291 , L0002292 , L0002293 , L0002294 , L0002295 , L0002296 ,

L0002297 , L0002298 , L0002299 , L0002300 , L0002301 , L0002302 , L0002303 , L0002304 ,

L0002305 , L0002306 , L0002307 , L0002308 , L0002309 , L0002310 , L0002311 , L0002312 ,

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L0002321 , L0002322 , L0002323 , L0002324 , L0002325 , L0002326 , L0002327 , L0002328 ,

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L0002369 , L0002370 , L0002371 , L0002372 , L0002373 , L0002374 , L0002375 , L0002376 ,

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L0002393 , L0002394 , L0002395 , L0002396 , L0002397 , L0002398 , L0002399 , L0002400 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0002401 , L0002402 , L0002403 , L0002404 , L0002405 , L0002406 , L0002407 , L0002408 ,

L0002409 , L0002410 , L0002411 , L0002412 , L0002413 , L0002414 , L0002415 , L0002416 ,

L0002417 , L0002418 , L0002419 , L0002420 , L0002421 , L0002422 , L0002423 , L0002424 ,

L0002425 , L0002426 , L0002427 , L0002428 , L0002429 , L0002430 , L0002431 , L0002432 ,

L0002433 , L0002434 , L0002435 , L0002436 , L0002437 , L0002438 , L0002439 , L0002440 ,

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L0002457 , L0002458 , L0002459 , L0002460 , L0002461 , L0002462 , L0002463 , L0002464 ,

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L0002473 , L0002474 , L0002475 , L0002476 , L0002477 , L0002478 , L0002479 , L0002480 ,

L0002481 , L0002482 , L0002483 , L0002484 , L0002485 , L0002486 , L0002487 , L0002488 ,

L0002489 , L0002490 , L0002491 , L0002492 , L0002493 , L0002494 , L0002495 , L0002496 ,

L0002497 , L0002498 , L0002499 , L0002500 , L0002501 , L0002502 , L0002503 , L0002504 ,

L0002505 , L0002506 , L0002507 , L0002508 , L0002509 , L0002510 , L0002511 , L0002512 ,

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L0002553 , L0002554 , L0002555 , L0002556 , L0002557 , L0002558 , L0002559 , L0002560 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0002561 , L0002562 , L0002563 , L0002564 , L0002565 , L0002566 , L0002567 , L0002568 ,

L0002569 , L0002570 , L0002571 , L0002572 , L0002573 , L0002574 , L0002575 , L0002576 ,

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L0002593 , L0002594 , L0002595 , L0002596 , L0002597 , L0002598 , L0002599 , L0002600 ,

L0002601 , L0002602 , L0002603 , L0002604 , L0002605 , L0002606 , L0002607 , L0002608 ,

L0002609 , L0002610 , L0002611 , L0002612 , L0002613 , L0002614 , L0002615 , L0002616 ,

L0002617 , L0002618 , L0002619 , L0002620 , L0002621 , L0002622 , L0002623 , L0002624 ,

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L0002713 , L0002714 , L0002715 , L0002716 , L0002717 , L0002718 , L0002719 , L0002720 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0002721 , L0002722 , L0002723 , L0002724 , L0002725 , L0002726 , L0002727 , L0002728 ,

L0002729 , L0002730 , L0002731 , L0002732 , L0002733 , L0002734 , L0002735 , L0002736 ,

L0002737 , L0002738 , L0002739 , L0002740 , L0002741 , L0002742 , L0002743 , L0002744 ,

L0002745 , L0002746 , L0002747 , L0002748 , L0002749 , L0002750 , L0002751 , L0002752 ,

L0002753 , L0002754 , L0002755 , L0002756 , L0002757 , L0002758 , L0002759 , L0002760 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

(473454.8, 3825060.1, 853.0, 1379.8, 0.0); (473496.2, 3825039.1, 852.7, 1379.8, 0.0);

(473472.2, 3825010.8, 851.8, 1379.8, 0.0); (473515.8, 3824987.5, 851.8, 1379.8, 0.0);

(473547.0, 3824962.9, 852.4, 1379.8, 0.0); (473593.4, 3824860.5, 849.5, 1379.8, 0.0);

(473626.8, 3824854.0, 850.2, 1379.8, 0.0); (473652.2, 3824861.3, 851.2, 1379.8, 0.0);

(473691.4, 3824863.4, 852.4, 1379.8, 0.0); (473710.2, 3824860.5, 853.5, 1379.8, 0.0);

(473711.0, 3824814.1, 852.6, 1379.8, 0.0); (473703.0, 3824830.8, 852.7, 1379.8, 0.0);

(473734.2, 3824759.7, 851.8, 1379.8, 0.0); (473731.3, 3824716.9, 852.1, 1379.8, 0.0);

(473730.5, 3824672.6, 851.5, 1379.8, 0.0); (473695.0, 3824608.8, 850.3, 1378.9, 0.0);

(473660.2, 3824617.5, 849.3, 1379.8, 0.0); (473651.5, 3824664.6, 849.2, 1379.8, 0.0);

(473660.2, 3824722.7, 850.3, 1379.8, 0.0); (473648.5, 3824756.1, 850.5, 1379.8, 0.0);

(473460.6, 3824880.9, 847.8, 1379.8, 0.0); (473502.7, 3824916.4, 849.9, 1379.8, 0.0);

(473523.0, 3824933.8, 851.2, 1379.8, 0.0); (473507.8, 3824861.3, 848.0, 1379.8, 0.0);

(473535.3, 3824865.6, 847.9, 1379.8, 0.0); (473537.5, 3824812.7, 847.2, 1379.8, 0.0);

(473435.9, 3825035.4, 852.0, 1379.8, 0.0); (473489.6, 3824967.2, 850.4, 1379.8, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

1 1 1

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC Met Version: 19191

Profile file: KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 23161 Upper air station no.: 3120

Name: DAGGETT/FAA_AIRPORT Name: UNKNOWN

Year: 2015 Year: 2015

First 24 hours of scalar data

YR MO DY JDY HR H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS WD HT REF TA HT

- -

15 01 01 1 01 -24.9 0.256 -9.000 -9.000 -999. 311. 72.1 0.02 4.18 1.00 4.27 251. 10.0 272.5 2.0

15 01 01 1 02 -24.3 0.250 -9.000 -9.000 -999. 300. 68.6 0.02 4.18 1.00 4.17 240. 10.0 272.5 2.0

15 01 01 1 03 -28.4 0.292 -9.000 -9.000 -999. 379. 94.0 0.02 4.18 1.00 4.85 255. 10.0 273.1 2.0

15 01 01 1 04 -26.1 0.266 -9.000 -9.000 -999. 329. 77.8 0.02 4.18 1.00 4.51 274. 10.0 270.4 2.0

15 01 01 1 05 -32.2 0.328 -9.000 -9.000 -999. 450. 118.0 0.02 4.18 1.00 5.51 275. 10.0 270.4 2.0

15 01 01 1 06 -34.9 0.355 -9.000 -9.000 -999. 507. 138.4 0.02 4.18 1.00 5.84 252. 10.0 270.4 2.0

15 01 01 1 07 -34.8 0.355 -9.000 -9.000 -999. 508. 138.9 0.02 4.18 1.00 5.85 251. 10.0 271.4 2.0

15 01 01 1 08 -19.3 0.250 -9.000 -9.000 -999. 306. 68.6 0.02 4.18 0.57 4.15 266. 10.0 270.9 2.0

15 01 01 1 09 31.4 0.236 0.499 0.005 134. 276. -35.7 0.02 4.18 0.36 3.40 255. 10.0 273.1 2.0

15 01 01 1 10 103.0 0.183 1.101 0.005 441. 188. -5.0 0.02 4.18 0.29 2.15 300. 10.0 277.0 2.0

15 01 01 1 11 152.0 0.131 1.445 0.005 675. 114. -1.3 0.04 4.18 0.26 1.08 230. 10.0 278.8 2.0

15 01 01 1 12 175.1 0.131 2.058 0.006 1692. 114. -1.1 0.02 4.18 0.25 1.31 109. 10.0 280.4 2.0

15 01 01 1 13 171.2 0.143 2.108 0.011 1860. 130. -1.4 0.01 4.18 0.26 1.55 35. 10.0 281.4 2.0

15 01 01 1 14 140.5 0.177 1.982 0.011 1882. 179. -3.4 0.01 4.18 0.27 2.16 55. 10.0 282.0 2.0

15 01 01 1 15 84.4 0.150 1.677 0.011 1895. 139. -3.4 0.02 4.18 0.30 1.77 64. 10.0 282.5 2.0

15 01 01 1 16 8.8 0.148 0.789 0.010 1896. 136. -31.1 0.02 4.18 0.40 2.15 70. 10.0 282.5 2.0

15 01 01 1 17 -7.9 0.117 -9.000 -9.000 -999. 96. 17.3 0.02 4.18 0.70 2.08 75. 10.0 279.9 2.0

15 01 01 1 18 -3.9 0.085 -9.000 -9.000 -999. 60. 13.5 0.05 4.18 1.00 1.24 196. 10.0 277.0 2.0

15 01 01 1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 4.18 1.00 0.00 0. 10.0 274.9 2.0

15 01 01 1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 4.18 1.00 0.00 0. 10.0 274.9 2.0

15 01 01 1 21 -10.8 0.137 -9.000 -9.000 -999. 121. 20.5 0.02 4.18 1.00 2.36 260. 10.0 274.2 2.0

15 01 01 1 22 -19.5 0.199 -9.000 -9.000 -999. 214. 43.7 0.02 4.18 1.00 3.36 262. 10.0 272.0 2.0

15 01 01 1 23 -18.8 0.192 -9.000 -9.000 -999. 202. 40.5 0.04 4.18 1.00 2.86 230. 10.0 272.0 2.0

15 01 01 1 24 -28.1 0.287 -9.000 -9.000 -999. 370. 90.9 0.02 4.18 1.00 4.86 270. 10.0 272.0 2.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV

15 01 01 01 10.0 1 251. 4.27 272.6 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473454.80	3825060.10	0.16251	473496.16	3825039.06	0.16355
473472.22	3825010.76	0.15763	473515.75	3824987.54	0.15864
473546.96	3824962.86	0.15855	473593.40	3824860.55	0.14887
473626.78	3824854.02	0.15065	473652.17	3824861.27	0.15369
473691.36	3824863.45	0.15732	473710.22	3824860.55	0.15881
473710.95	3824814.11	0.15271	473702.97	3824830.80	0.15416
473734.17	3824759.69	0.14805	473731.27	3824716.87	0.14348
473730.54	3824672.61	0.13900	473694.99	3824608.75	0.13052

473660.16	3824617.46	0.12856	473651.45	3824664.63	0.13193
473660.16	3824722.68	0.13827	473648.55	3824756.06	0.14097
473460.61	3824880.87	0.14144	473502.69	3824916.42	0.14883
473523.01	3824933.84	0.15275	473507.77	3824861.27	0.14265
473535.35	3824865.63	0.14501	473537.52	3824812.66	0.13917
473435.93	3825035.43	0.15750	473489.63	3824967.22	0.15364

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
473454.80	3825060.10	37.76891 (16011621)	473496.16	3825039.06	39.50031 (16022324)
473472.22	3825010.76	39.41838 (16022324)	473515.75	3824987.54	40.87269 (16022324)
473546.96	3824962.86	40.91597 (16022324)	473593.40	3824860.55	41.73912 (15010817)
473626.78	3824854.02	41.73476 (15010817)	473652.17	3824861.27	42.12239 (18120322)

473691.36	3824863.45	42.58142	(18120322)	473710.22	3824860.55	42.55662 (18120322)
473710.95	3824814.11	41.82598	(16010222)	473702.97	3824830.80	42.11553 (16010222)
473734.17	3824759.69	39.56259	(15021705)	473731.27	3824716.87	40.84456 (15021705)
473730.54	3824672.61	41.28824	(15021705)	473694.99	3824608.75	40.12910 (15021705)
473660.16	3824617.46	39.43125	(15021705)	473651.45	3824664.63	38.32944 (15021705)
473660.16	3824722.68	38.41631	(16010222)	473648.55	3824756.06	39.88593 (16010222)
473460.61	3824880.87	37.74911	(16031818)	473502.69	3824916.42	39.08959 (16022324)
473523.01	3824933.84	39.80693	(16022324)	473507.77	3824861.27	39.88014 (15010817)
473535.35	3824865.63	40.63817	(15010817)	473537.52	3824812.66	40.14412 (15010817)
473435.93	3825035.43	37.21639	(16011621)	473489.63	3824967.22	40.21207 (16022324)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.16355 AT (473496.16, 3825039.06, 852.73, 1379.79, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.16251 AT (473454.80, 3825060.10, 852.97, 1379.79, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.15881 AT (473710.22, 3824860.55, 853.47, 1379.79, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.15864 AT (473515.75, 3824987.54, 851.78, 1379.79, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.15855 AT (473546.96, 3824962.86, 852.42, 1379.79, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.15763 AT (473472.22, 3825010.76, 851.75, 1379.79, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.15750 AT (473435.93, 3825035.43, 852.04, 1379.79, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.15732 AT (473691.36, 3824863.45, 852.36, 1379.79, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.15416 AT (473702.97, 3824830.80, 852.66, 1379.79, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.15369 AT (473652.17, 3824861.27, 851.19, 1379.79, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE	GRID-ID
ALL	1ST HIGH	42.58142	ON 18120322: AT (473691.36, 3824863.45, 852.36, 1379.79, 0.00) DC	

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)

A Total of 4 Warning Message(s)

A Total of 637 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 191 Calm Hours Identified

A Total of 446 Missing Hours Identified (1.02 Percent)

******** FATAL ERROR MESSAGES ********

*** NONE ***

******** WARNING MESSAGES ********

ME W186 5712 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 5712 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 18010101

MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 1 year gap

****

*** AERMOD Finishes Successfully ***

****

*HARP - HRACalc v22118 10/12/2023 9:53:58 AM - Cancer Risk - Input File: C:\Users\tlenihan\Documents

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK
1	ALL		473454.8	3825060	1.43E-07	1.69YrCanc	1.43E-07	0.00E+00
2	ALL		473496.2	3825039	1.44E-07	1.69YrCanc	1.44E-07	0.00E+00
3	ALL		473472.2	3825011	1.39E-07	1.69YrCanc	1.39E-07	0.00E+00
4	ALL		473515.8	3824988	1.40E-07	1.69YrCanc	1.40E-07	0.00E+00
5	ALL		473547	3824963	1.40E-07	1.69YrCanc	1.40E-07	0.00E+00
6	ALL		473593.4	3824861	1.31E-07	1.69YrCanc	1.31E-07	0.00E+00
7	ALL		473626.8	3824854	1.33E-07	1.69YrCanc	1.33E-07	0.00E+00
8	ALL		473652.2	3824861	1.36E-07	1.69YrCanc	1.36E-07	0.00E+00
9	ALL		473691.4	3824863	1.39E-07	1.69YrCanc	1.39E-07	0.00E+00
10	ALL		473710.2	3824861	1.40E-07	1.69YrCanc	1.40E-07	0.00E+00
11	ALL		473711	3824814	1.35E-07	1.69YrCanc	1.35E-07	0.00E+00
12	ALL		473703	3824831	1.36E-07	1.69YrCanc	1.36E-07	0.00E+00
13	ALL		473734.2	3824760	1.31E-07	1.69YrCanc	1.31E-07	0.00E+00
14	ALL		473731.3	3824717	1.27E-07	1.69YrCanc	1.27E-07	0.00E+00
15	ALL		473730.5	3824673	1.23E-07	1.69YrCanc	1.23E-07	0.00E+00
16	ALL		473695	3824609	1.15E-07	1.69YrCanc	1.15E-07	0.00E+00
17	ALL		473660.2	3824617	1.13E-07	1.69YrCanc	1.13E-07	0.00E+00
18	ALL		473651.5	3824665	1.16E-07	1.69YrCanc	1.16E-07	0.00E+00
19	ALL		473660.2	3824723	1.22E-07	1.69YrCanc	1.22E-07	0.00E+00
20	ALL		473648.6	3824756	1.24E-07	1.69YrCanc	1.24E-07	0.00E+00
21	ALL		473460.6	3824881	1.25E-07	1.69YrCanc	1.25E-07	0.00E+00
22	ALL		473502.7	3824916	1.31E-07	1.69YrCanc	1.31E-07	0.00E+00
23	ALL		473523	3824934	1.35E-07	1.69YrCanc	1.35E-07	0.00E+00
24	ALL		473507.8	3824861	1.26E-07	1.69YrCanc	1.26E-07	0.00E+00
25	ALL		473535.4	3824866	1.28E-07	1.69YrCanc	1.28E-07	0.00E+00
26	ALL		473537.5	3824813	1.23E-07	1.69YrCanc	1.23E-07	0.00E+00
27	ALL		473435.9	3825035	1.39E-07	1.69YrCanc	1.39E-07	0.00E+00
28	ALL		473489.6	3824967	1.36E-07	1.69YrCanc	1.36E-07	0.00E+00

s\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-War

DERMAL_RI	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_F
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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EGG_RISK
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*HARP - HRACalc v22118 10/12/2023 9:53:58 AM - Chronic Risk - Input File: C:\Users\tlenihan\Documents

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN
1	ALL		473454.8	3825060	NonCancer	0.00E+00	0.00E+00	0.00E+00
2	ALL		473496.2	3825039	NonCancer	0.00E+00	0.00E+00	0.00E+00
3	ALL		473472.2	3825011	NonCancer	0.00E+00	0.00E+00	0.00E+00
4	ALL		473515.8	3824988	NonCancer	0.00E+00	0.00E+00	0.00E+00
5	ALL		473547	3824963	NonCancer	0.00E+00	0.00E+00	0.00E+00
6	ALL		473593.4	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00
7	ALL		473626.8	3824854	NonCancer	0.00E+00	0.00E+00	0.00E+00
8	ALL		473652.2	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00
9	ALL		473691.4	3824863	NonCancer	0.00E+00	0.00E+00	0.00E+00
10	ALL		473710.2	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00
11	ALL		473711	3824814	NonCancer	0.00E+00	0.00E+00	0.00E+00
12	ALL		473703	3824831	NonCancer	0.00E+00	0.00E+00	0.00E+00
13	ALL		473734.2	3824760	NonCancer	0.00E+00	0.00E+00	0.00E+00
14	ALL		473731.3	3824717	NonCancer	0.00E+00	0.00E+00	0.00E+00
15	ALL		473730.5	3824673	NonCancer	0.00E+00	0.00E+00	0.00E+00
16	ALL		473695	3824609	NonCancer	0.00E+00	0.00E+00	0.00E+00
17	ALL		473660.2	3824617	NonCancer	0.00E+00	0.00E+00	0.00E+00
18	ALL		473651.5	3824665	NonCancer	0.00E+00	0.00E+00	0.00E+00
19	ALL		473660.2	3824723	NonCancer	0.00E+00	0.00E+00	0.00E+00
20	ALL		473648.6	3824756	NonCancer	0.00E+00	0.00E+00	0.00E+00
21	ALL		473460.6	3824881	NonCancer	0.00E+00	0.00E+00	0.00E+00
22	ALL		473502.7	3824916	NonCancer	0.00E+00	0.00E+00	0.00E+00
23	ALL		473523	3824934	NonCancer	0.00E+00	0.00E+00	0.00E+00
24	ALL		473507.8	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00
25	ALL		473535.4	3824866	NonCancer	0.00E+00	0.00E+00	0.00E+00
26	ALL		473537.5	3824813	NonCancer	0.00E+00	0.00E+00	0.00E+00
27	ALL		473435.9	3825035	NonCancer	0.00E+00	0.00E+00	0.00E+00
28	ALL		473489.6	3824967	NonCancer	0.00E+00	0.00E+00	0.00E+00

s\AERMOD\HARP II\Apple Valley IENL Con HRA\APPLE VALLEY CONSTRUCTION HRA\hra\Apple-Valley-War

KIDNEY	GILV	REPRO/DE\	RESP	SKIN	EYE	BONE/TEET	ENDO	BLOOD
0.00E+00	0.00E+00	0.00E+00	9.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.91E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	7.91E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	7.79E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.79E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	8.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	9.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ehouse-Construction-DefaultHRAInput.hra

ODOR	GENERAL	MAXHI
0.00E+00	0.00E+00	9.85E-05
0.00E+00	0.00E+00	9.91E-05
0.00E+00	0.00E+00	9.55E-05
0.00E+00	0.00E+00	9.62E-05
0.00E+00	0.00E+00	9.61E-05
0.00E+00	0.00E+00	9.02E-05
0.00E+00	0.00E+00	9.13E-05
0.00E+00	0.00E+00	9.32E-05
0.00E+00	0.00E+00	9.54E-05
0.00E+00	0.00E+00	9.63E-05
0.00E+00	0.00E+00	9.26E-05
0.00E+00	0.00E+00	9.34E-05
0.00E+00	0.00E+00	8.97E-05
0.00E+00	0.00E+00	8.70E-05
0.00E+00	0.00E+00	8.43E-05
0.00E+00	0.00E+00	7.91E-05
0.00E+00	0.00E+00	7.79E-05
0.00E+00	0.00E+00	8.00E-05
0.00E+00	0.00E+00	8.38E-05
0.00E+00	0.00E+00	8.55E-05
0.00E+00	0.00E+00	8.57E-05
0.00E+00	0.00E+00	9.02E-05
0.00E+00	0.00E+00	9.26E-05
0.00E+00	0.00E+00	8.65E-05
0.00E+00	0.00E+00	8.79E-05
0.00E+00	0.00E+00	8.44E-05
0.00E+00	0.00E+00	9.55E-05
0.00E+00	0.00E+00	9.31E-05

Inland Empire North Logistics Center Apple Valley
Operational HRA
Diesel Truck Travel, Truck Idling (Line Volume Sources):

AERMOD Source Name	Description	Release Height (m)	Plume Height (m)	Plume Width (m)	Length of Source (m)	Distance (mi)	% of Trucks	Avg. Daily Trips (trips/day)	Annual Trips (trips/year)	Annual VMT (VMT/year)	Idling Minutes per Day (min/day)	Running PM10 Exhaust (lb/mile)	Idling PM10 (g/min/vehicle)	DPM (lb/hr)	DPM (lb/yr)
TRUCK1	Truck traffic to/from south and west (I-15)	3.4	6.8	9.7	8,028.30	4.99	80%	1,267	462,513.73	2,307,274.88	--	0.00006	--	0.0151	132.36
TRUCK2	Truck traffic to/from north and east (I-15)	3.4	6.8	9.7	6,711.10	4.17	20%	317	115,628.43	482,180.30	--	0.00006	--	0.0032	27.66
IDLE1	Trucks idling in loading docks	3.4	6.8	9.7	--	--	--	--	--	--	15.00	--	0.000007	0.0005	4.50
IDLE2	Trucks idling in loading docks	3.4	6.8	9.7	--	--	--	--	--	--	15.00	--	0.000007	0.0005	4.50
IDLE3	Trucks idling in loading docks	3.4	6.8	9.7	--	--	--	--	--	--	15.00	--	0.000007	0.0005	4.50
IDLE4	Trucks idling in loading docks	3.4	6.8	9.7	--	--	--	--	--	--	15.00	--	0.000007	0.0005	4.50
YTRK1	Yard trucks around buildings	3.4	6.8	9.7	--	--	--	--	--	--	--	--	--	0.0064	56.06
YTRK2	Yard trucks around buildings	3.4	6.8	9.7	--	--	--	--	--	--	--	--	--	0.0044	38.54
ALLLIFT	Diesel cargo handling equipment	3.4	6.8	3.7	--	--		--	--	--				1.2443	10900.00

Notes: For all trucks, release parameters based on EPA PM Hotspots Guidance (2021). Idling truck plume width assumes one loading bay/truck width.
Mitigation includes all electric cargo handling equipment

MEIR Risk	Unmitigated	Mitigated
Cancer (persons in a million)	**5.60**	**0.89**
Chronic	**0.0055**	**0.0009**

CalEEMod Results			CalEEMod Results (unmitigated)			CalEEMod Results		
Trucks	Exhaust PM10		Forklifts	Exhaust PM10		YrdTruck	Exhaust PM10	
1.0306	TPY		5.4500	TPY		0.0473	TPY	
2061.20	lb/yr		10900.00	lb/yr		94.60	lb/yr	
35930491	VMT/yr		1.24E+00	lb/hr		1.08E-02	lb/hr	
5.74E-05	lb/mile							

Conversions:

1 lb =	453.6	g
1 m =	3.28	feet
1 mile =	1609.344	m
1 yr =	8,760	hours

Meteorological Data

Station Name		Years	Lat	Long	Elev (m)
KDAG	BARSTOW-DAGGETT AIRPORT	2015-2020	34.854	-116.787	584.3

http://www.aqmd.gov/home/air-quality/meteorological-data/data-for-aermod

Other Model Assumption

Rural or Urban	RURAL
Terrain Data	NED 1
Lakes Version	11.2.0
AERMOD Version	22112

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 11/7/2023
** File: C:\Users\tlenihan\Documents\AERMOD\HARP II\IENL AV Op HRA\IENL AV Op HRA.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
  TITLEONE C:\Users\tlenihan\Documents\AERMOD\HARP II\IENL AV Op HRA\IENL AV Op
  MODELOPT CONC
  AVERTIME 1 PERIOD
  POLLUTID PM_10
  RUNORNOT RUN
  ERRORFIL "IENL AV Op HRA.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
```

**

**

SO STARTING

** Source Location **

** Source ID - Type - X Coord. - Y Coord. **

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = TRUCK1

** DESCRSRC Southbound/Westbound truck trips

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.8

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 12

** 475267.695, 3826339.242, 878.60, 3.40, 4.51

** 474341.258, 3825203.350, 877.25, 3.40, 4.51

** 474126.213, 3824940.390, 871.05, 3.40, 4.51

** 473737.047, 3824358.827, 852.90, 3.40, 4.51

** 473509.669, 3823794.755, 831.12, 3.40, 4.51

** 473264.801, 3823296.273, 825.13, 3.40, 4.51

** 472420.879, 3822692.847, 824.07, 3.40, 4.51

** 471611.938, 3822085.048, 874.58, 3.40, 4.51

** 471506.995, 3821949.496, 881.44, 3.40, 4.51

** 471371.442, 3821665.274, 883.88, 3.40, 4.51

** 471126.574, 3821096.829, 885.09, 3.40, 4.51

** 470680.564, 3819977.430, 895.72, 3.40, 4.51

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LOCATION L0000001 VOLUME 475264.630 3826335.484 878.59

LOCATION L0000002 VOLUME 475258.499 3826327.967 878.30

LOCATION L0000003 VOLUME 475252.368 3826320.450 877.77

LOCATION L0000004 VOLUME 475246.238 3826312.933 877.37

LOCATION L0000005 VOLUME 475240.107 3826305.416 877.47

LOCATION L0000006 VOLUME 475233.976 3826297.899 878.03

LOCATION L0000007 VOLUME 475227.845 3826290.382 878.84

LOCATION L0000008 VOLUME 475221.715 3826282.865 879.36

LOCATION L0000009 VOLUME 475215.584 3826275.349 879.64

LOCATION L0000010 VOLUME 475209.453 3826267.832 879.78

LOCATION L0000011 VOLUME 475203.322 3826260.315 879.88

LOCATION L0000012 VOLUME 475197.191 3826252.798 879.98

LOCATION L0000013 VOLUME 475191.061 3826245.281 880.04

LOCATION L0000014 VOLUME 475184.930 3826237.764 880.05

LOCATION L0000015 VOLUME 475178.799 3826230.247 879.99

LOCATION L0000016 VOLUME 475172.668 3826222.730 879.80

LOCATION L0000017 VOLUME 475166.537 3826215.214 879.65

LOCATION L0000018 VOLUME 475160.407 3826207.697 879.56

LOCATION L0000019 VOLUME 475154.276 3826200.180 880.07

LOCATION L0000020 VOLUME 475148.145 3826192.663 880.59

LOCATION L0000021 VOLUME 475142.014 3826185.146 880.94

LOCATION L0000022 VOLUME 475135.883 3826177.629 880.98

LOCATION L0000023 VOLUME 475129.753 3826170.112 881.17

LOCATION L0000024 VOLUME 475123.622 3826162.595 881.17

LOCATION L0000025 VOLUME 475117.491 3826155.079 881.42

LOCATION L0000026 VOLUME 475111.360 3826147.562 881.87

LOCATION L0000027 VOLUME 475105.230 3826140.045 882.36

LOCATION L0000028 VOLUME 475099.099 3826132.528 882.67

LOCATION L0000029 VOLUME 475092.968 3826125.011 882.82

LOCATION L0000030 VOLUME 475086.837 3826117.494 883.00

LOCATION L0000031 VOLUME 475080.706 3826109.977 883.20

LOCATION L0000032 VOLUME 475074.576 3826102.460 883.38

LOCATION L0000033 VOLUME 475068.445 3826094.943 883.45

LOCATION L0000034 VOLUME 475062.314 3826087.427 883.35

LOCATION L0000035 VOLUME 475056.183 3826079.910 882.99

LOCATION L0000036 VOLUME 475050.052 3826072.393 882.70

LOCATION L0000037 VOLUME 475043.922 3826064.876 882.55

LOCATION L0000038 VOLUME 475037.791 3826057.359 882.49

LOCATION L0000039 VOLUME 475031.660 3826049.842 882.41

LOCATION L0000040 VOLUME 475025.529 3826042.325 882.29

LOCATION L0000041 VOLUME 475019.399 3826034.808 882.12

LOCATION L0000042 VOLUME 475013.268 3826027.292 882.02

LOCATION L0000043 VOLUME 475007.137 3826019.775 881.88

LOCATION L0000044 VOLUME 475001.006 3826012.258 881.74

LOCATION L0000045 VOLUME 474994.875 3826004.741 881.66

LOCATION L0000046 VOLUME 474988.745 3825997.224 881.54

LOCATION L0000047 VOLUME 474982.614 3825989.707 881.52

LOCATION L0000048 VOLUME 474976.483 3825982.190 881.57

LOCATION L0000049 VOLUME 474970.352 3825974.673 881.59

LOCATION L0000050 VOLUME 474964.221 3825967.157 881.56

LOCATION L0000051 VOLUME 474958.091 3825959.640 881.43

LOCATION L0000052 VOLUME 474951.960 3825952.123 881.24

LOCATION L0000053 VOLUME 474945.829 3825944.606 880.96

LOCATION L0000054 VOLUME 474939.698 3825937.089 880.73

LOCATION L0000055 VOLUME 474933.568 3825929.572 880.78

LOCATION L0000056 VOLUME 474927.437 3825922.055 880.86

LOCATION L0000057 VOLUME 474921.306 3825914.538 880.66

LOCATION L0000058 VOLUME 474915.175 3825907.022 880.30

LOCATION L0000059 VOLUME 474909.044 3825899.505 880.18

LOCATION L0000060 VOLUME 474902.914 3825891.988 880.14

LOCATION L0000061 VOLUME 474896.783 3825884.471 880.13

LOCATION L0000062 VOLUME 474890.652 3825876.954 880.15

LOCATION L0000063 VOLUME 474884.521 3825869.437 880.18

LOCATION L0000064 VOLUME 474878.390 3825861.920 880.03

LOCATION L0000065 VOLUME 474872.260 3825854.403 880.01

LOCATION L0000066 VOLUME 474866.129 3825846.887 880.12

LOCATION L0000067 VOLUME 474859.998 3825839.370 880.14

LOCATION L0000068 VOLUME 474853.867 3825831.853 880.17

LOCATION L0000069 VOLUME 474847.737 3825824.336 880.16

LOCATION L0000070 VOLUME 474841.606 3825816.819 880.10

LOCATION L0000071 VOLUME 474835.475 3825809.302 880.07

LOCATION L0000072 VOLUME 474829.344 3825801.785 880.05

LOCATION L0000073 VOLUME 474823.213 3825794.268 880.03

LOCATION L0000074 VOLUME 474817.083 3825786.752 880.01

LOCATION L0000075 VOLUME 474810.952 3825779.235 880.00

LOCATION L0000076 VOLUME 474804.821 3825771.718 879.92

LOCATION L0000077 VOLUME 474798.690 3825764.201 879.89

LOCATION L0000078 VOLUME 474792.559 3825756.684 879.93

LOCATION L0000079 VOLUME 474786.429 3825749.167 879.97

LOCATION L0000080 VOLUME 474780.298 3825741.650 879.84

LOCATION L0000081 VOLUME 474774.167 3825734.133 879.78

LOCATION L0000082 VOLUME 474768.036 3825726.616 879.80

LOCATION L0000083 VOLUME 474761.905 3825719.100 879.88

LOCATION L0000084 VOLUME 474755.775 3825711.583 879.85

LOCATION L0000085 VOLUME 474749.644 3825704.066 879.82

LOCATION L0000086 VOLUME 474743.513 3825696.549 879.78

LOCATION L0000087 VOLUME 474737.382 3825689.032 879.74

LOCATION L0000088 VOLUME 474731.252 3825681.515 879.83

LOCATION L0000089 VOLUME 474725.121 3825673.998 879.87

LOCATION L0000090 VOLUME 474718.990 3825666.481 879.79

LOCATION L0000091 VOLUME 474712.859 3825658.965 879.59

LOCATION L0000092 VOLUME 474706.728 3825651.448 879.57

LOCATION L0000093 VOLUME 474700.598 3825643.931 879.53

LOCATION L0000094 VOLUME 474694.467 3825636.414 879.42

LOCATION L0000095 VOLUME 474688.336 3825628.897 879.25

LOCATION L0000096 VOLUME 474682.205 3825621.380 879.23

LOCATION L0000097 VOLUME 474676.074 3825613.863 879.26

LOCATION L0000098 VOLUME 474669.944 3825606.346 879.21

LOCATION L0000099 VOLUME 474663.813 3825598.830 879.07

LOCATION L0000100 VOLUME 474657.682 3825591.313 879.01

LOCATION L0000101 VOLUME 474651.551 3825583.796 879.05

LOCATION L0000102 VOLUME 474645.421 3825576.279 879.02

LOCATION L0000103 VOLUME 474639.290 3825568.762 878.91

LOCATION L0000104 VOLUME 474633.159 3825561.245 878.86

LOCATION L0000105 VOLUME 474627.028 3825553.728 878.96

LOCATION L0000106 VOLUME 474620.897 3825546.211 878.99

LOCATION L0000107 VOLUME 474614.767 3825538.695 878.93

LOCATION L0000108 VOLUME 474608.636 3825531.178 878.84

LOCATION L0000109 VOLUME 474602.505 3825523.661 878.91

LOCATION L0000110 VOLUME 474596.374 3825516.144 878.91

LOCATION L0000111 VOLUME 474590.243 3825508.627 878.87

LOCATION L0000112 VOLUME 474584.113 3825501.110 878.78

LOCATION L0000113 VOLUME 474577.982 3825493.593 878.81

LOCATION L0000114 VOLUME 474571.851 3825486.076 878.81

LOCATION L0000115 VOLUME 474565.720 3825478.560 878.77

LOCATION L0000116 VOLUME 474559.590 3825471.043 878.70

LOCATION L0000117 VOLUME 474553.459 3825463.526 878.71

LOCATION L0000118 VOLUME 474547.328 3825456.009 878.70

LOCATION L0000119 VOLUME 474541.197 3825448.492 878.67

LOCATION L0000120 VOLUME 474535.066 3825440.975 878.60

LOCATION L0000121 VOLUME 474528.936 3825433.458 878.63

LOCATION L0000122 VOLUME 474522.805 3825425.941 878.66

LOCATION L0000123 VOLUME 474516.674 3825418.424 878.65

LOCATION L0000124 VOLUME 474510.543 3825410.908 878.63

LOCATION L0000125 VOLUME 474504.412 3825403.391 878.62

LOCATION L0000126 VOLUME 474498.282 3825395.874 878.62

LOCATION L0000127 VOLUME 474492.151 3825388.357 878.61

LOCATION L0000128 VOLUME 474486.020 3825380.840 878.59

LOCATION L0000129 VOLUME 474479.889 3825373.323 878.55

LOCATION L0000130 VOLUME 474473.759 3825365.806 878.51

LOCATION L0000131 VOLUME 474467.628 3825358.289 878.48

LOCATION L0000132 VOLUME 474461.497 3825350.773 878.48

LOCATION L0000133 VOLUME 474455.366 3825343.256 878.42

LOCATION L0000134 VOLUME 474449.235 3825335.739 878.34

LOCATION L0000135 VOLUME 474443.105 3825328.222 878.31

LOCATION L0000136 VOLUME 474436.974 3825320.705 878.34

LOCATION L0000137 VOLUME 474430.843 3825313.188 878.32

LOCATION L0000138 VOLUME 474424.712 3825305.671 878.18

LOCATION L0000139 VOLUME 474418.581 3825298.154 878.13

LOCATION L0000140 VOLUME 474412.451 3825290.638 878.15

LOCATION L0000141 VOLUME 474406.320 3825283.121 878.15

LOCATION L0000142 VOLUME 474400.189 3825275.604 878.01

LOCATION L0000143 VOLUME 474394.058 3825268.087 877.93

LOCATION L0000144 VOLUME 474387.927 3825260.570 877.94

LOCATION L0000145 VOLUME 474381.797 3825253.053 877.98

LOCATION L0000146 VOLUME 474375.666 3825245.536 877.83

LOCATION L0000147 VOLUME 474369.535 3825238.019 877.70

LOCATION L0000148 VOLUME 474363.404 3825230.503 877.67

LOCATION L0000149 VOLUME 474357.274 3825222.986 877.67

LOCATION L0000150 VOLUME 474351.143 3825215.469 877.52

LOCATION L0000151 VOLUME 474345.012 3825207.952 877.36

LOCATION L0000152 VOLUME 474338.877 3825200.438 877.27

LOCATION L0000153 VOLUME 474332.737 3825192.929 877.22

LOCATION L0000154 VOLUME 474326.596 3825185.420 877.06

LOCATION L0000155 VOLUME 474320.455 3825177.912 876.87

LOCATION L0000156 VOLUME 474314.315 3825170.403 876.72

LOCATION L0000157 VOLUME 474308.174 3825162.894 876.63

LOCATION L0000158 VOLUME 474302.034 3825155.385 876.46

LOCATION L0000159 VOLUME 474295.893 3825147.876 876.25

LOCATION L0000160 VOLUME 474289.752 3825140.367 876.09

LOCATION L0000161 VOLUME 474283.612 3825132.859 875.96

LOCATION L0000162 VOLUME 474277.471 3825125.350 875.80

LOCATION L0000163 VOLUME 474271.330 3825117.841 875.57

LOCATION L0000164 VOLUME 474265.190 3825110.332 875.40

LOCATION L0000165 VOLUME 474259.049 3825102.823 875.26

LOCATION L0000166 VOLUME 474252.908 3825095.314 875.11

LOCATION L0000167 VOLUME 474246.768 3825087.806 874.89

LOCATION L0000168 VOLUME 474240.627 3825080.297 874.71

LOCATION L0000169 VOLUME 474234.487 3825072.788 874.57

LOCATION L0000170 VOLUME 474228.346 3825065.279 874.42

LOCATION L0000171 VOLUME 474222.205 3825057.770 874.22

LOCATION L0000172 VOLUME 474216.065 3825050.261 874.03

LOCATION L0000173 VOLUME 474209.924 3825042.753 873.86

LOCATION L0000174 VOLUME 474203.783 3825035.244 873.69

LOCATION L0000175 VOLUME 474197.643 3825027.735 873.52

LOCATION L0000176 VOLUME 474191.502 3825020.226 873.33

LOCATION L0000177 VOLUME 474185.362 3825012.717 873.14

LOCATION L0000178 VOLUME 474179.221 3825005.208 872.93

LOCATION L0000179 VOLUME 474173.080 3824997.700 872.73

LOCATION L0000180 VOLUME 474166.940 3824990.191 872.48

LOCATION L0000181 VOLUME 474160.799 3824982.682 872.27

LOCATION L0000182 VOLUME 474154.658 3824975.173 872.04

LOCATION L0000183 VOLUME 474148.518 3824967.664 871.82

LOCATION L0000184 VOLUME 474142.377 3824960.155 871.53

LOCATION L0000185 VOLUME 474136.236 3824952.647 871.32

LOCATION L0000186 VOLUME 474130.096 3824945.138 871.09

LOCATION L0000187 VOLUME 474124.230 3824937.426 870.87

LOCATION L0000188 VOLUME 474118.835 3824929.364 870.52

LOCATION L0000189 VOLUME 474113.440 3824921.303 870.28

LOCATION L0000190 VOLUME 474108.046 3824913.241 870.04

LOCATION L0000191 VOLUME 474102.651 3824905.179 869.82

LOCATION L0000192 VOLUME 474097.257 3824897.118 869.63

LOCATION L0000193 VOLUME 474091.862 3824889.056 869.29

LOCATION L0000194 VOLUME 474086.468 3824880.995 868.89

LOCATION L0000195 VOLUME 474081.073 3824872.933 868.63

LOCATION L0000196 VOLUME 474075.678 3824864.872 868.54

LOCATION L0000197 VOLUME 474070.284 3824856.810 868.37

LOCATION L0000198 VOLUME 474064.889 3824848.749 867.85

LOCATION L0000199 VOLUME 474059.495 3824840.687 867.56

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LOCATION L0000526 VOLUME 472108.210 3822457.923 846.09

LOCATION L0000527 VOLUME 472100.455 3822452.096 846.45

LOCATION L0000528 VOLUME 472092.700 3822446.269 846.88

LOCATION L0000529 VOLUME 472084.945 3822440.443 847.36

LOCATION L0000530 VOLUME 472077.190 3822434.616 847.90

LOCATION L0000531 VOLUME 472069.435 3822428.789 848.29

LOCATION L0000532 VOLUME 472061.680 3822422.963 848.60

LOCATION L0000533 VOLUME 472053.925 3822417.136 849.04

LOCATION L0000534 VOLUME 472046.170 3822411.309 849.54

LOCATION L0000535 VOLUME 472038.415 3822405.482 850.05

LOCATION L0000536 VOLUME 472030.660 3822399.656 850.57

LOCATION L0000537 VOLUME 472022.905 3822393.829 850.94

LOCATION L0000538 VOLUME 472015.151 3822388.002 851.32

LOCATION L0000539 VOLUME 472007.396 3822382.176 851.78

LOCATION L0000540 VOLUME 471999.641 3822376.349 852.30

LOCATION L0000541 VOLUME 471991.886 3822370.522 852.74

LOCATION L0000542 VOLUME 471984.131 3822364.696 853.12

LOCATION L0000543 VOLUME 471976.376 3822358.869 853.50

LOCATION L0000544 VOLUME 471968.621 3822353.042 853.92

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LOCATION L0000547 VOLUME 471945.356 3822335.562 855.40

LOCATION L0000548 VOLUME 471937.601 3822329.735 855.73

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LOCATION L0000578 VOLUME 471704.952 3822154.934 869.22

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LOCATION L0000827 VOLUME 470684.741 3819987.914 895.67

LOCATION L0000828 VOLUME 470681.150 3819978.903 895.67

** End of LINE VOLUME Source ID = TRUCK1

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = TRUCK2

** DESCRSRC Northbound/Eastbound trucks

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.2

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 6

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** 475669.156, 3826990.957, 885.02, 3.40, 4.51

** 476377.536, 3828001.054, 892.49, 3.40, 4.51

** 476897.890, 3828761.907, 915.31, 3.40, 4.51

** 477921.106, 3830344.831, 949.92, 3.40, 4.51

** 478979.303, 3831962.736, 966.78, 3.40, 4.51

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LOCATION L0000831 VOLUME 475284.323 3826390.448 879.45

LOCATION L0000832 VOLUME 475289.557 3826398.615 879.62

LOCATION L0000833 VOLUME 475294.791 3826406.782 879.79

LOCATION L0000834 VOLUME 475300.024 3826414.949 879.88

LOCATION L0000835 VOLUME 475305.258 3826423.116 880.07

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LOCATION L0001495 VOLUME 478844.640 3831756.846 966.25

LOCATION L0001496 VOLUME 478849.949 3831764.964 966.34

LOCATION L0001497 VOLUME 478855.259 3831773.082 966.47

LOCATION L0001498 VOLUME 478860.568 3831781.199 966.40

LOCATION L0001499 VOLUME 478865.878 3831789.317 966.36

LOCATION L0001500 VOLUME 478871.187 3831797.435 966.42

LOCATION L0001501 VOLUME 478876.497 3831805.553 966.56

LOCATION L0001502 VOLUME 478881.806 3831813.671 966.49

LOCATION L0001503 VOLUME 478887.116 3831821.789 966.39

LOCATION L0001504 VOLUME 478892.425 3831829.906 966.34

LOCATION L0001505 VOLUME 478897.735 3831838.024 966.37

LOCATION L0001506 VOLUME 478903.044 3831846.142 966.42

LOCATION L0001507 VOLUME 478908.354 3831854.260 966.40

LOCATION L0001508 VOLUME 478913.663 3831862.378 966.38

LOCATION L0001509 VOLUME 478918.973 3831870.496 966.43

LOCATION L0001510 VOLUME 478924.282 3831878.613 966.52

LOCATION L0001511 VOLUME 478929.592 3831886.731 966.50

LOCATION L0001512 VOLUME 478934.901 3831894.849 966.53

LOCATION L0001513 VOLUME 478940.211 3831902.967 966.63

LOCATION L0001514 VOLUME 478945.520 3831911.085 966.70

LOCATION L0001515 VOLUME 478950.830 3831919.203 966.72

LOCATION L0001516 VOLUME 478956.139 3831927.320 966.69

LOCATION L0001517 VOLUME 478961.449 3831935.438 966.58

LOCATION L0001518 VOLUME 478966.758 3831943.556 966.53

LOCATION L0001519 VOLUME 478972.068 3831951.674 966.57

LOCATION L0001520 VOLUME 478977.377 3831959.792 966.71

** End of LINE VOLUME Source ID = TRUCK2

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = ALLLIFT

** DESCRSRC diesel cargo handling equipment

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 1.0

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 14

** 475224.039, 3825725.702, 895.04, 3.40, 4.51

** 475574.158, 3826168.937, 894.28, 3.40, 4.51

** 475726.869, 3826187.560, 900.52, 3.40, 4.51

** 475451.244, 3825839.304, 900.65, 3.40, 4.51

** 475397.236, 3825777.847, 900.63, 3.40, 4.51

** 475589.056, 3825653.071, 910.73, 3.40, 4.51

** 475883.305, 3826038.573, 907.50, 3.40, 4.51

** 475920.551, 3826096.306, 908.64, 3.40, 4.51

** 475914.964, 3826141.002, 908.27, 3.40, 4.51

** 475760.391, 3826237.843, 903.02, 3.40, 4.51

** 475613.267, 3826215.495, 894.90, 3.40, 4.51

** 475432.621, 3826334.684, 888.07, 3.40, 4.51

** 475408.410, 3826332.822, 887.37, 3.40, 4.51

** 475032.219, 3825861.652, 886.58, 3.40, 4.51

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LOCATION L0001522 VOLUME 475233.058 3825737.119 895.73

LOCATION L0001523 VOLUME 475239.071 3825744.731 896.10

LOCATION L0001524 VOLUME 475245.084 3825752.343 896.29

LOCATION L0001525 VOLUME 475251.096 3825759.954 896.34

LOCATION L0001526 VOLUME 475257.109 3825767.566 896.34

LOCATION L0001527 VOLUME 475263.121 3825775.178 896.31

LOCATION L0001528 VOLUME 475269.134 3825782.790 896.24

LOCATION L0001529 VOLUME 475275.147 3825790.401 896.22

LOCATION L0001530 VOLUME 475281.159 3825798.013 896.22

LOCATION L0001531 VOLUME 475287.172 3825805.625 896.22

LOCATION L0001532 VOLUME 475293.185 3825813.237 896.21

LOCATION L0001533 VOLUME 475299.197 3825820.848 896.18

LOCATION L0001534 VOLUME 475305.210 3825828.460 896.13

LOCATION L0001535 VOLUME 475311.222 3825836.072 896.10

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LOCATION L0001537 VOLUME 475323.248 3825851.295 896.05

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LOCATION L0001539 VOLUME 475335.273 3825866.519 895.96

LOCATION L0001540 VOLUME 475341.286 3825874.130 895.93

LOCATION L0001541 VOLUME 475347.298 3825881.742 895.97

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LOCATION L0001543 VOLUME 475359.323 3825896.966 896.15

LOCATION L0001544 VOLUME 475365.336 3825904.577 896.24

LOCATION L0001545 VOLUME 475371.349 3825912.189 896.36

LOCATION L0001546 VOLUME 475377.361 3825919.801 896.53

LOCATION L0001547 VOLUME 475383.374 3825927.412 896.74

LOCATION L0001548 VOLUME 475389.387 3825935.024 896.96

LOCATION L0001549 VOLUME 475395.399 3825942.636 897.08

LOCATION L0001550 VOLUME 475401.412 3825950.248 897.06

LOCATION L0001551 VOLUME 475407.424 3825957.859 896.83

LOCATION L0001552 VOLUME 475413.437 3825965.471 896.57

LOCATION L0001553 VOLUME 475419.450 3825973.083 896.58

LOCATION L0001554 VOLUME 475425.462 3825980.694 896.75

LOCATION L0001555 VOLUME 475431.475 3825988.306 896.78

LOCATION L0001556 VOLUME 475437.488 3825995.918 896.32

LOCATION L0001557 VOLUME 475443.500 3826003.530 895.86

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LOCATION L0001563 VOLUME 475479.576 3826049.200 897.82

LOCATION L0001564 VOLUME 475485.589 3826056.812 897.85

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LOCATION L0001572 VOLUME 475533.690 3826117.706 893.66

LOCATION L0001573 VOLUME 475539.702 3826125.317 893.17

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LOCATION L0001575 VOLUME 475551.727 3826140.541 892.24

LOCATION L0001576 VOLUME 475557.740 3826148.152 892.39

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LOCATION L0001578 VOLUME 475569.765 3826163.376 894.91

LOCATION L0001579 VOLUME 475576.752 3826169.253 895.94

LOCATION L0001580 VOLUME 475586.381 3826170.427 896.52

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LOCATION L0001591 VOLUME 475692.296 3826183.344 899.54

LOCATION L0001592 VOLUME 475701.925 3826184.518 899.86

LOCATION L0001593 VOLUME 475711.554 3826185.692 900.17

LOCATION L0001594 VOLUME 475721.182 3826186.866 900.47

LOCATION L0001595 VOLUME 475724.404 3826184.446 900.45

LOCATION L0001596 VOLUME 475718.385 3826176.840 900.03

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LOCATION L0001598 VOLUME 475706.345 3826161.628 900.73

LOCATION L0001599 VOLUME 475700.325 3826154.022 901.02

LOCATION L0001600 VOLUME 475694.306 3826146.416 901.32

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LOCATION L0001603 VOLUME 475676.246 3826123.597 897.37

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LOCATION L0001605 VOLUME 475664.207 3826108.385 896.84

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LOCATION L0001607 VOLUME 475652.167 3826093.173 897.83

LOCATION L0001608 VOLUME 475646.147 3826085.567 898.24

LOCATION L0001609 VOLUME 475640.128 3826077.961 898.23

LOCATION L0001610 VOLUME 475634.108 3826070.355 898.06

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LOCATION L0001614 VOLUME 475610.029 3826039.931 899.06

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LOCATION L0001621 VOLUME 475567.890 3825986.688 901.90

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LOCATION L0001628 VOLUME 475525.752 3825933.446 901.41

LOCATION L0001629 VOLUME 475519.732 3825925.840 901.52

LOCATION L0001630 VOLUME 475513.712 3825918.234 901.51

LOCATION L0001631 VOLUME 475507.692 3825910.628 901.44

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LOCATION L0001636 VOLUME 475477.594 3825872.597 900.90

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LOCATION L0001638 VOLUME 475465.554 3825857.385 900.79

LOCATION L0001639 VOLUME 475459.534 3825849.779 900.73

LOCATION L0001640 VOLUME 475453.515 3825842.173 900.65

LOCATION L0001641 VOLUME 475447.256 3825834.766 900.59

LOCATION L0001642 VOLUME 475440.853 3825827.480 900.55

LOCATION L0001643 VOLUME 475434.450 3825820.193 900.53

LOCATION L0001644 VOLUME 475428.047 3825812.907 900.51

LOCATION L0001645 VOLUME 475421.644 3825805.621 900.50

LOCATION L0001646 VOLUME 475415.240 3825798.334 900.50

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LOCATION L0001655 VOLUME 475447.553 3825745.117 902.99

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LOCATION L0001678 VOLUME 475621.998 3825696.229 910.83

LOCATION L0001679 VOLUME 475627.884 3825703.940 910.83

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LOCATION L0001681 VOLUME 475639.654 3825719.361 910.89

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LOCATION L0001685 VOLUME 475663.196 3825750.203 910.77

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LOCATION L0001688 VOLUME 475680.852 3825773.334 910.74

LOCATION L0001689 VOLUME 475686.737 3825781.045 910.77

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LOCATION L0001695 VOLUME 475722.049 3825827.308 910.00

LOCATION L0001696 VOLUME 475727.935 3825835.019 909.97

LOCATION L0001697 VOLUME 475733.820 3825842.729 910.20

LOCATION L0001698 VOLUME 475739.705 3825850.440 910.49

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LOCATION L0001702 VOLUME 475763.247 3825881.282 910.05

LOCATION L0001703 VOLUME 475769.132 3825888.993 909.92

LOCATION L0001704 VOLUME 475775.018 3825896.703 909.84

LOCATION L0001705 VOLUME 475780.903 3825904.414 909.91

LOCATION L0001706 VOLUME 475786.788 3825912.124 910.19

LOCATION L0001707 VOLUME 475792.674 3825919.835 910.60

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LOCATION L0001741 VOLUME 475858.461 3826176.401 906.87

LOCATION L0001742 VOLUME 475850.241 3826181.551 906.36

LOCATION L0001743 VOLUME 475842.021 3826186.701 905.92

LOCATION L0001744 VOLUME 475833.801 3826191.851 905.57

LOCATION L0001745 VOLUME 475825.581 3826197.001 905.30

LOCATION L0001746 VOLUME 475817.361 3826202.151 905.11

LOCATION L0001747 VOLUME 475809.141 3826207.301 904.98

LOCATION L0001748 VOLUME 475800.921 3826212.451 904.53

LOCATION L0001749 VOLUME 475792.701 3826217.601 904.12

LOCATION L0001750 VOLUME 475784.481 3826222.750 903.76

LOCATION L0001751 VOLUME 475776.261 3826227.900 903.42

LOCATION L0001752 VOLUME 475768.041 3826233.050 903.18

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LOCATION L0001755 VOLUME 475740.546 3826234.828 902.05

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LOCATION L0001780 VOLUME 475518.312 3826278.146 891.26

LOCATION L0001781 VOLUME 475510.215 3826283.488 891.04

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LOCATION L0001783 VOLUME 475494.022 3826294.172 890.39

LOCATION L0001784 VOLUME 475485.926 3826299.514 889.75

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LOCATION L0001788 VOLUME 475453.540 3826320.882 888.47

LOCATION L0001789 VOLUME 475445.443 3826326.224 888.29

LOCATION L0001790 VOLUME 475437.347 3826331.566 888.03

LOCATION L0001791 VOLUME 475428.595 3826334.374 887.76

LOCATION L0001792 VOLUME 475418.923 3826333.630 887.61

LOCATION L0001793 VOLUME 475409.252 3826332.887 887.39

LOCATION L0001794 VOLUME 475402.885 3826325.901 887.56

LOCATION L0001795 VOLUME 475396.833 3826318.321 887.85

LOCATION L0001796 VOLUME 475390.780 3826310.741 888.00

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LOCATION L0001798 VOLUME 475378.676 3826295.580 887.30

LOCATION L0001799 VOLUME 475372.624 3826288.000 886.02

LOCATION L0001800 VOLUME 475366.571 3826280.420 884.82

LOCATION L0001801 VOLUME 475360.519 3826272.839 883.95

LOCATION L0001802 VOLUME 475354.467 3826265.259 883.82

LOCATION L0001803 VOLUME 475348.415 3826257.679 884.22

LOCATION L0001804 VOLUME 475342.362 3826250.099 884.37

LOCATION L0001805 VOLUME 475336.310 3826242.518 884.17

LOCATION L0001806 VOLUME 475330.258 3826234.938 884.37

LOCATION L0001807 VOLUME 475324.206 3826227.358 885.53

LOCATION L0001808 VOLUME 475318.154 3826219.777 887.19

LOCATION L0001809 VOLUME 475312.101 3826212.197 888.32

LOCATION L0001810 VOLUME 475306.049 3826204.617 888.77

LOCATION L0001811 VOLUME 475299.997 3826197.037 888.84

LOCATION L0001812 VOLUME 475293.945 3826189.456 888.81

LOCATION L0001813 VOLUME 475287.892 3826181.876 888.32

LOCATION L0001814 VOLUME 475281.840 3826174.296 887.64

LOCATION L0001815 VOLUME 475275.788 3826166.716 887.35

LOCATION L0001816 VOLUME 475269.736 3826159.135 887.26

LOCATION L0001817 VOLUME 475263.683 3826151.555 886.85

LOCATION L0001818 VOLUME 475257.631 3826143.975 886.14

LOCATION L0001819 VOLUME 475251.579 3826136.394 885.74

LOCATION L0001820 VOLUME 475245.527 3826128.814 885.96

LOCATION L0001821 VOLUME 475239.475 3826121.234 886.56

LOCATION L0001822 VOLUME 475233.422 3826113.654 887.21

LOCATION L0001823 VOLUME 475227.370 3826106.073 887.67

LOCATION L0001824 VOLUME 475221.318 3826098.493 887.93

LOCATION L0001825 VOLUME 475215.266 3826090.913 887.99

LOCATION L0001826 VOLUME 475209.213 3826083.333 888.21

LOCATION L0001827 VOLUME 475203.161 3826075.752 888.63

LOCATION L0001828 VOLUME 475197.109 3826068.172 889.07

LOCATION L0001829 VOLUME 475191.057 3826060.592 889.49

LOCATION L0001830 VOLUME 475185.004 3826053.012 889.49

LOCATION L0001831 VOLUME 475178.952 3826045.431 889.18

LOCATION L0001832 VOLUME 475172.900 3826037.851 888.90

LOCATION L0001833 VOLUME 475166.848 3826030.271 888.49

LOCATION L0001834 VOLUME 475160.795 3826022.690 887.91

LOCATION L0001835 VOLUME 475154.743 3826015.110 887.40

LOCATION L0001836 VOLUME 475148.691 3826007.530 887.08

LOCATION L0001837 VOLUME 475142.639 3825999.950 887.00

LOCATION L0001838 VOLUME 475136.587 3825992.369 887.03

LOCATION L0001839 VOLUME 475130.534 3825984.789 886.96

LOCATION L0001840 VOLUME 475124.482 3825977.209 886.83

LOCATION L0001841 VOLUME 475118.430 3825969.629 886.64

LOCATION L0001842 VOLUME 475112.378 3825962.048 886.44

LOCATION L0001843 VOLUME 475106.325 3825954.468 886.49

LOCATION L0001844 VOLUME 475100.273 3825946.888 886.43

LOCATION L0001845 VOLUME 475094.221 3825939.307 886.28

LOCATION L0001846 VOLUME 475088.169 3825931.727 886.21

LOCATION L0001847 VOLUME 475082.116 3825924.147 886.32

LOCATION L0001848 VOLUME 475076.064 3825916.567 886.54

LOCATION L0001849 VOLUME 475070.012 3825908.986 886.89

LOCATION L0001850 VOLUME 475063.960 3825901.406 887.36

LOCATION L0001851 VOLUME 475057.908 3825893.826 887.33

LOCATION L0001852 VOLUME 475051.855 3825886.246 887.15

LOCATION L0001853 VOLUME 475045.803 3825878.665 886.82

LOCATION L0001854 VOLUME 475039.751 3825871.085 886.46

LOCATION L0001855 VOLUME 475033.699 3825863.505 886.49

** End of LINE VOLUME Source ID = ALLLIFT

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = IDLE1

** DESCRSRC Truck idling in loading docks

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.25

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 2

** 475397.973, 3826289.765, 886.44, 3.40, 4.51

** 475059.209, 3825867.102, 887.54, 3.40, 4.51

** ----------

LOCATION L0001856 VOLUME 475394.940 3826285.981 887.19

LOCATION L0001857 VOLUME 475388.873 3826278.412 886.22

LOCATION L0001858 VOLUME 475382.807 3826270.843 885.26

LOCATION L0001859 VOLUME 475376.741 3826263.274 884.80

LOCATION L0001860 VOLUME 475370.674 3826255.705 884.61

LOCATION L0001861 VOLUME 475364.608 3826248.136 884.81

LOCATION L0001862 VOLUME 475358.541 3826240.567 885.40

LOCATION L0001863 VOLUME 475352.475 3826232.999 886.36

LOCATION L0001864 VOLUME 475346.408 3826225.430 886.89

LOCATION L0001865 VOLUME 475340.342 3826217.861 887.59

LOCATION L0001866 VOLUME 475334.275 3826210.292 888.75

LOCATION L0001867 VOLUME 475328.209 3826202.723 889.75

LOCATION L0001868 VOLUME 475322.142 3826195.154 890.29

LOCATION L0001869 VOLUME 475316.076 3826187.585 890.46

LOCATION L0001870 VOLUME 475310.010 3826180.016 890.49

LOCATION L0001871 VOLUME 475303.943 3826172.447 890.06

LOCATION L0001872 VOLUME 475297.877 3826164.879 889.43

LOCATION L0001873 VOLUME 475291.810 3826157.310 888.95

LOCATION L0001874 VOLUME 475285.744 3826149.741 888.73

LOCATION L0001875 VOLUME 475279.677 3826142.172 888.26

LOCATION L0001876 VOLUME 475273.611 3826134.603 887.44

LOCATION L0001877 VOLUME 475267.544 3826127.034 886.72

LOCATION L0001878 VOLUME 475261.478 3826119.465 886.45

LOCATION L0001879 VOLUME 475255.411 3826111.896 886.84

LOCATION L0001880 VOLUME 475249.345 3826104.327 887.51

LOCATION L0001881 VOLUME 475243.279 3826096.758 888.08

LOCATION L0001882 VOLUME 475237.212 3826089.190 888.51

LOCATION L0001883 VOLUME 475231.146 3826081.621 888.90

LOCATION L0001884 VOLUME 475225.079 3826074.052 889.41

LOCATION L0001885 VOLUME 475219.013 3826066.483 889.87

LOCATION L0001886 VOLUME 475212.946 3826058.914 890.29

LOCATION L0001887 VOLUME 475206.880 3826051.345 890.45

LOCATION L0001888 VOLUME 475200.813 3826043.776 890.21

LOCATION L0001889 VOLUME 475194.747 3826036.207 889.90

LOCATION L0001890 VOLUME 475188.681 3826028.638 889.60

LOCATION L0001891 VOLUME 475182.614 3826021.070 889.23

LOCATION L0001892 VOLUME 475176.548 3826013.501 888.74

LOCATION L0001893 VOLUME 475170.481 3826005.932 888.25

LOCATION L0001894 VOLUME 475164.415 3825998.363 887.80

LOCATION L0001895 VOLUME 475158.348 3825990.794 887.59

LOCATION L0001896 VOLUME 475152.282 3825983.225 887.56

LOCATION L0001897 VOLUME 475146.215 3825975.656 887.49

LOCATION L0001898 VOLUME 475140.149 3825968.087 887.40

LOCATION L0001899 VOLUME 475134.082 3825960.518 887.32

LOCATION L0001900 VOLUME 475128.016 3825952.950 887.44

LOCATION L0001901 VOLUME 475121.950 3825945.381 887.67

LOCATION L0001902 VOLUME 475115.883 3825937.812 887.74

LOCATION L0001903 VOLUME 475109.817 3825930.243 887.58

LOCATION L0001904 VOLUME 475103.750 3825922.674 887.25

LOCATION L0001905 VOLUME 475097.684 3825915.105 887.09

LOCATION L0001906 VOLUME 475091.617 3825907.536 887.16

LOCATION L0001907 VOLUME 475085.551 3825899.967 887.43

LOCATION L0001908 VOLUME 475079.484 3825892.398 887.68

LOCATION L0001909 VOLUME 475073.418 3825884.829 887.73

LOCATION L0001910 VOLUME 475067.351 3825877.261 887.61

LOCATION L0001911 VOLUME 475061.285 3825869.692 887.39

** End of LINE VOLUME Source ID = IDLE1

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = IDLE2

** DESCRSRC truck idling near loading docks

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.25

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 2

** 475587.934, 3826152.044, 894.62, 3.40, 4.51

** 475238.089, 3825708.801, 895.96, 3.40, 4.51

** ----------

LOCATION L0001912 VOLUME 475584.929 3826148.237 895.01

LOCATION L0001913 VOLUME 475578.920 3826140.622 894.00

LOCATION L0001914 VOLUME 475572.910 3826133.008 893.40

LOCATION L0001915 VOLUME 475566.900 3826125.394 893.31

LOCATION L0001916 VOLUME 475560.891 3826117.780 893.72

LOCATION L0001917 VOLUME 475554.881 3826110.166 894.43

LOCATION L0001918 VOLUME 475548.871 3826102.552 894.96

LOCATION L0001919 VOLUME 475542.862 3826094.938 895.98

LOCATION L0001920 VOLUME 475536.852 3826087.324 897.51

LOCATION L0001921 VOLUME 475530.842 3826079.710 898.66

LOCATION L0001922 VOLUME 475524.833 3826072.096 898.41

LOCATION L0001923 VOLUME 475518.823 3826064.482 898.04

LOCATION L0001924 VOLUME 475512.813 3826056.868 898.02

LOCATION L0001925 VOLUME 475506.804 3826049.254 898.35

LOCATION L0001926 VOLUME 475500.794 3826041.640 898.63

LOCATION L0001927 VOLUME 475494.784 3826034.026 898.60

LOCATION L0001928 VOLUME 475488.775 3826026.412 898.31

LOCATION L0001929 VOLUME 475482.765 3826018.798 897.83

LOCATION L0001930 VOLUME 475476.755 3826011.183 897.39

LOCATION L0001931 VOLUME 475470.746 3826003.569 897.05

LOCATION L0001932 VOLUME 475464.736 3825995.955 896.68

LOCATION L0001933 VOLUME 475458.726 3825988.341 896.60

LOCATION L0001934 VOLUME 475452.717 3825980.727 896.91

LOCATION L0001935 VOLUME 475446.707 3825973.113 897.40

LOCATION L0001936 VOLUME 475440.697 3825965.499 897.50

LOCATION L0001937 VOLUME 475434.688 3825957.885 897.36

LOCATION L0001938 VOLUME 475428.678 3825950.271 897.42

LOCATION L0001939 VOLUME 475422.668 3825942.657 897.78

LOCATION L0001940 VOLUME 475416.659 3825935.043 898.07

LOCATION L0001941 VOLUME 475410.649 3825927.429 897.99

LOCATION L0001942 VOLUME 475404.639 3825919.815 897.72

LOCATION L0001943 VOLUME 475398.630 3825912.201 897.49

LOCATION L0001944 VOLUME 475392.620 3825904.587 897.28

LOCATION L0001945 VOLUME 475386.610 3825896.973 897.11

LOCATION L0001946 VOLUME 475380.601 3825889.359 896.99

LOCATION L0001947 VOLUME 475374.591 3825881.744 896.90

LOCATION L0001948 VOLUME 475368.581 3825874.130 896.82

LOCATION L0001949 VOLUME 475362.572 3825866.516 896.76

LOCATION L0001950 VOLUME 475356.562 3825858.902 896.79

LOCATION L0001951 VOLUME 475350.552 3825851.288 896.84

LOCATION L0001952 VOLUME 475344.543 3825843.674 896.90

LOCATION L0001953 VOLUME 475338.533 3825836.060 896.93

LOCATION L0001954 VOLUME 475332.523 3825828.446 896.93

LOCATION L0001955 VOLUME 475326.514 3825820.832 896.93

LOCATION L0001956 VOLUME 475320.504 3825813.218 896.95

LOCATION L0001957 VOLUME 475314.494 3825805.604 897.00

LOCATION L0001958 VOLUME 475308.485 3825797.990 897.05

LOCATION L0001959 VOLUME 475302.475 3825790.376 897.07

LOCATION L0001960 VOLUME 475296.465 3825782.762 897.06

LOCATION L0001961 VOLUME 475290.456 3825775.148 897.07

LOCATION L0001962 VOLUME 475284.446 3825767.534 897.09

LOCATION L0001963 VOLUME 475278.436 3825759.920 897.11

LOCATION L0001964 VOLUME 475272.427 3825752.305 897.14

LOCATION L0001965 VOLUME 475266.417 3825744.691 897.09

LOCATION L0001966 VOLUME 475260.407 3825737.077 896.83

LOCATION L0001967 VOLUME 475254.398 3825729.463 896.54

LOCATION L0001968 VOLUME 475248.388 3825721.849 896.20

LOCATION L0001969 VOLUME 475242.378 3825714.235 895.89

** End of LINE VOLUME Source ID = IDLE2

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = IDLE3

** DESCRSRC truck idling near loading docks

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.25

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 2

** 475733.571, 3826180.538, 900.28, 3.40, 4.51

** 475461.293, 3825825.944, 901.02, 3.40, 4.51

** ---

LOCATION L0001970 VOLUME 475730.617 3826176.691 900.22

LOCATION L0001971 VOLUME 475724.710 3826168.997 900.55

LOCATION L0001972 VOLUME 475718.802 3826161.304 900.90

LOCATION L0001973 VOLUME 475712.894 3826153.610 901.28

LOCATION L0001974 VOLUME 475706.987 3826145.917 901.69

LOCATION L0001975 VOLUME 475701.079 3826138.223 900.41

LOCATION L0001976 VOLUME 475695.172 3826130.530 899.06

LOCATION L0001977 VOLUME 475689.264 3826122.836 897.64

LOCATION L0001978 VOLUME 475683.357 3826115.142 896.15

LOCATION L0001979 VOLUME 475677.449 3826107.449 897.05

LOCATION L0001980 VOLUME 475671.542 3826099.755 897.85

LOCATION L0001981 VOLUME 475665.634 3826092.062 898.44

LOCATION L0001982 VOLUME 475659.726 3826084.368 898.82

LOCATION L0001983 VOLUME 475653.819 3826076.675 898.72

LOCATION L0001984 VOLUME 475647.911 3826068.981 898.66

LOCATION L0001985 VOLUME 475642.004 3826061.288 898.50

LOCATION L0001986 VOLUME 475636.096 3826053.594 898.26

LOCATION L0001987 VOLUME 475630.189 3826045.900 898.71

LOCATION L0001988 VOLUME 475624.281 3826038.207 899.41

LOCATION L0001989 VOLUME 475618.374 3826030.513 900.08

LOCATION L0001990 VOLUME 475612.466 3826022.820 900.72

LOCATION L0001991 VOLUME 475606.558 3826015.126 901.20

LOCATION L0001992 VOLUME 475600.651 3826007.433 901.86

LOCATION L0001993 VOLUME 475594.743 3825999.739 902.31

LOCATION L0001994 VOLUME 475588.836 3825992.046 902.52

LOCATION L0001995 VOLUME 475582.928 3825984.352 902.64

LOCATION L0001996 VOLUME 475577.021 3825976.658 902.62

LOCATION L0001997 VOLUME 475571.113 3825968.965 902.37

LOCATION L0001998 VOLUME 475565.206 3825961.271 901.91

LOCATION L0001999 VOLUME 475559.298 3825953.578 901.70

LOCATION L0002000 VOLUME 475553.390 3825945.884 901.75

LOCATION L0002001 VOLUME 475547.483 3825938.191 902.02

LOCATION L0002002 VOLUME 475541.575 3825930.497 902.18

LOCATION L0002003 VOLUME 475535.668 3825922.804 902.11

LOCATION L0002004 VOLUME 475529.760 3825915.110 902.04

LOCATION L0002005 VOLUME 475523.853 3825907.416 902.03

LOCATION L0002006 VOLUME 475517.945 3825899.723 901.97

LOCATION L0002007 VOLUME 475512.038 3825892.029 901.86

LOCATION L0002008 VOLUME 475506.130 3825884.336 901.74

LOCATION L0002009 VOLUME 475500.223 3825876.642 901.63

LOCATION L0002010 VOLUME 475494.315 3825868.949 901.55

LOCATION L0002011 VOLUME 475488.407 3825861.255 901.52

LOCATION L0002012 VOLUME 475482.500 3825853.562 901.48

LOCATION L0002013 VOLUME 475476.592 3825845.868 901.43

LOCATION L0002014 VOLUME 475470.685 3825838.174 901.37

LOCATION L0002015 VOLUME 475464.777 3825830.481 901.35

** End of LINE VOLUME Source ID = IDLE3

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = IDLE4

** DESCRSRC truck idling near loading docks

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.25

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 2

** 475893.455, 3826028.569, 907.74, 3.40, 4.51

** 475638.590, 3825691.388, 911.81, 3.40, 4.51

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LOCATION L0002016 VOLUME 475890.530 3826024.700 908.15

LOCATION L0002017 VOLUME 475884.681 3826016.962 907.58

LOCATION L0002018 VOLUME 475878.832 3826009.224 906.65

LOCATION L0002019 VOLUME 475872.983 3826001.485 905.94

LOCATION L0002020 VOLUME 475867.134 3825993.747 905.47

LOCATION L0002021 VOLUME 475861.285 3825986.009 905.80

LOCATION L0002022 VOLUME 475855.436 3825978.271 906.70

LOCATION L0002023 VOLUME 475849.587 3825970.533 907.58

LOCATION L0002024 VOLUME 475843.738 3825962.795 908.12

LOCATION L0002025 VOLUME 475837.889 3825955.057 909.31

LOCATION L0002026 VOLUME 475832.040 3825947.318 910.63

LOCATION L0002027 VOLUME 475826.191 3825939.580 911.65

LOCATION L0002028 VOLUME 475820.342 3825931.842 912.52

LOCATION L0002029 VOLUME 475814.493 3825924.104 912.38

LOCATION L0002030 VOLUME 475808.644 3825916.366 912.11

LOCATION L0002031 VOLUME 475802.795 3825908.628 911.69

LOCATION L0002032 VOLUME 475796.946 3825900.890 911.27

LOCATION L0002033 VOLUME 475791.097 3825893.151 910.91

LOCATION L0002034 VOLUME 475785.248 3825885.413 910.64

LOCATION L0002035 VOLUME 475779.399 3825877.675 910.60

LOCATION L0002036 VOLUME 475773.550 3825869.937 910.73

LOCATION L0002037 VOLUME 475767.701 3825862.199 910.77

LOCATION L0002038 VOLUME 475761.852 3825854.461 910.75

LOCATION L0002039 VOLUME 475756.003 3825846.722 910.70

LOCATION L0002040 VOLUME 475750.154 3825838.984 910.60

LOCATION L0002041 VOLUME 475744.305 3825831.246 910.50

LOCATION L0002042 VOLUME 475738.456 3825823.508 910.38

LOCATION L0002043 VOLUME 475732.607 3825815.770 910.23

LOCATION L0002044 VOLUME 475726.758 3825808.032 910.26

LOCATION L0002045 VOLUME 475720.908 3825800.294 910.66

LOCATION L0002046 VOLUME 475715.059 3825792.555 911.05

LOCATION L0002047 VOLUME 475709.210 3825784.817 911.40

LOCATION L0002048 VOLUME 475703.361 3825777.079 911.63

LOCATION L0002049 VOLUME 475697.512 3825769.341 911.60

LOCATION L0002050 VOLUME 475691.663 3825761.603 911.51

LOCATION L0002051 VOLUME 475685.814 3825753.865 911.36

LOCATION L0002052 VOLUME 475679.965 3825746.127 911.19

LOCATION L0002053 VOLUME 475674.116 3825738.388 911.39

LOCATION L0002054 VOLUME 475668.267 3825730.650 911.56

LOCATION L0002055 VOLUME 475662.418 3825722.912 911.69

LOCATION L0002056 VOLUME 475656.569 3825715.174 911.78

LOCATION L0002057 VOLUME 475650.720 3825707.436 911.78

LOCATION L0002058 VOLUME 475644.871 3825699.698 911.75

LOCATION L0002059 VOLUME 475639.022 3825691.960 911.71

** End of LINE VOLUME Source ID = IDLE4

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = YTRK1

** DESCRSRC yard trucks around buildings

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.5

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 14

** 475017.731, 3825852.314, 886.10, 3.40, 4.51

** 474934.923, 3825732.879, 884.22, 3.40, 4.51

** 475047.988, 3825659.626, 890.46, 3.40, 4.51

** 475194.494, 3825654.849, 895.21, 3.40, 4.51

** 475229.528, 3825697.845, 896.25, 3.40, 4.51

** 475255.008, 3825701.030, 896.85, 3.40, 4.51

** 475605.349, 3826151.696, 896.69, 3.40, 4.51

** 475611.719, 3826201.063, 894.88, 3.40, 4.51

** 475608.534, 3826239.282, 896.07, 3.40, 4.51

** 475500.247, 3826309.350, 890.00, 3.40, 4.51

** 475444.511, 3826349.161, 888.10, 3.40, 4.51

** 475376.035, 3826315.720, 887.19, 3.40, 4.51

** 475318.706, 3826275.908, 883.03, 3.40, 4.51

** 474998.622, 3825877.793, 884.84, 3.40, 4.51

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LOCATION L0002060 VOLUME 475014.968 3825848.328 886.06

LOCATION L0002061 VOLUME 475009.441 3825840.357 885.92

LOCATION L0002062 VOLUME 475003.914 3825832.385 885.58

LOCATION L0002063 VOLUME 474998.387 3825824.414 885.27

LOCATION L0002064 VOLUME 474992.860 3825816.442 884.99

LOCATION L0002065 VOLUME 474987.333 3825808.471 884.58

LOCATION L0002066 VOLUME 474981.806 3825800.499 884.35

LOCATION L0002067 VOLUME 474976.280 3825792.528 884.16

LOCATION L0002068 VOLUME 474970.753 3825784.557 883.99

LOCATION L0002069 VOLUME 474965.226 3825776.585 883.89

LOCATION L0002070 VOLUME 474959.699 3825768.614 883.89

LOCATION L0002071 VOLUME 474954.172 3825760.642 884.00

LOCATION L0002072 VOLUME 474948.645 3825752.671 884.21

LOCATION L0002073 VOLUME 474943.118 3825744.699 884.41

LOCATION L0002074 VOLUME 474937.592 3825736.728 884.27

LOCATION L0002075 VOLUME 474939.133 3825730.151 884.44

LOCATION L0002076 VOLUME 474947.274 3825724.877 884.72

LOCATION L0002077 VOLUME 474955.415 3825719.603 884.92

LOCATION L0002078 VOLUME 474963.556 3825714.329 885.19

LOCATION L0002079 VOLUME 474971.696 3825709.054 885.62

LOCATION L0002080 VOLUME 474979.837 3825703.780 886.19

LOCATION L0002081 VOLUME 474987.978 3825698.506 886.80

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LOCATION L0002083 VOLUME 475004.259 3825687.957 887.94

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LOCATION L0002085 VOLUME 475020.541 3825677.408 888.60

LOCATION L0002086 VOLUME 475028.682 3825672.134 888.90

LOCATION L0002087 VOLUME 475036.822 3825666.860 889.47

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LOCATION L0002096 VOLUME 475121.945 3825657.214 892.07

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LOCATION L0002103 VOLUME 475189.808 3825655.001 894.90

LOCATION L0002104 VOLUME 475197.660 3825658.734 895.15

LOCATION L0002105 VOLUME 475203.787 3825666.254 895.20

LOCATION L0002106 VOLUME 475209.914 3825673.773 895.31

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LOCATION L0002108 VOLUME 475222.169 3825688.813 895.63

LOCATION L0002109 VOLUME 475228.296 3825696.333 895.72

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LOCATION L0002128 VOLUME 475351.165 3825824.723 897.62

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LOCATION L0002166 VOLUME 475577.392 3826115.733 892.67

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LOCATION L0002170 VOLUME 475601.205 3826146.366 896.37

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LOCATION L0002173 VOLUME 475608.209 3826173.861 897.41

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LOCATION L0002175 VOLUME 475610.692 3826193.101 895.96

LOCATION L0002176 VOLUME 475611.580 3826202.730 895.10

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LOCATION L0002184 VOLUME 475574.178 3826261.512 892.86

LOCATION L0002185 VOLUME 475566.034 3826266.782 892.17

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LOCATION L0002191 VOLUME 475517.171 3826298.399 890.32

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LOCATION L0002211 VOLUME 475352.098 3826299.097 883.34

LOCATION L0002212 VOLUME 475344.131 3826293.565 882.93

LOCATION L0002213 VOLUME 475336.164 3826288.032 882.80

LOCATION L0002214 VOLUME 475328.197 3826282.499 882.79

LOCATION L0002215 VOLUME 475320.229 3826276.966 882.95

LOCATION L0002216 VOLUME 475313.790 3826269.794 883.51

LOCATION L0002217 VOLUME 475307.712 3826262.234 884.09

LOCATION L0002218 VOLUME 475301.634 3826254.674 885.01

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LOCATION L0002222 VOLUME 475277.322 3826224.436 887.61

LOCATION L0002223 VOLUME 475271.244 3826216.876 887.86

LOCATION L0002224 VOLUME 475265.166 3826209.317 887.85

LOCATION L0002225 VOLUME 475259.088 3826201.757 887.03

LOCATION L0002226 VOLUME 475253.011 3826194.197 886.46

LOCATION L0002227 VOLUME 475246.933 3826186.638 886.05

LOCATION L0002228 VOLUME 475240.855 3826179.078 885.35

LOCATION L0002229 VOLUME 475234.777 3826171.518 884.56

LOCATION L0002230 VOLUME 475228.699 3826163.959 884.09

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LOCATION L0002234 VOLUME 475204.387 3826133.720 885.23

LOCATION L0002235 VOLUME 475198.309 3826126.160 885.48

LOCATION L0002236 VOLUME 475192.231 3826118.601 886.13

LOCATION L0002237 VOLUME 475186.153 3826111.041 886.94

LOCATION L0002238 VOLUME 475180.075 3826103.481 887.76

LOCATION L0002239 VOLUME 475173.997 3826095.922 888.63

LOCATION L0002240 VOLUME 475167.919 3826088.362 889.12

LOCATION L0002241 VOLUME 475161.841 3826080.802 888.96

LOCATION L0002242 VOLUME 475155.763 3826073.243 888.62

LOCATION L0002243 VOLUME 475149.685 3826065.683 888.32

LOCATION L0002244 VOLUME 475143.607 3826058.123 887.92

LOCATION L0002245 VOLUME 475137.529 3826050.564 887.24

LOCATION L0002246 VOLUME 475131.451 3826043.004 886.60

LOCATION L0002247 VOLUME 475125.373 3826035.445 886.08

LOCATION L0002248 VOLUME 475119.295 3826027.885 885.70

LOCATION L0002249 VOLUME 475113.217 3826020.325 885.61

LOCATION L0002250 VOLUME 475107.139 3826012.766 885.62

LOCATION L0002251 VOLUME 475101.061 3826005.206 885.60

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LOCATION L0002253 VOLUME 475088.906 3825990.087 885.37

LOCATION L0002254 VOLUME 475082.828 3825982.527 885.17

LOCATION L0002255 VOLUME 475076.750 3825974.967 884.99

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LOCATION L0002257 VOLUME 475064.594 3825959.848 884.69

LOCATION L0002258 VOLUME 475058.516 3825952.288 884.77

LOCATION L0002259 VOLUME 475052.438 3825944.729 885.02

LOCATION L0002260 VOLUME 475046.360 3825937.169 885.46

LOCATION L0002261 VOLUME 475040.282 3825929.609 885.91

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LOCATION L0002264 VOLUME 475022.048 3825906.930 885.97

LOCATION L0002265 VOLUME 475015.970 3825899.371 885.69

LOCATION L0002266 VOLUME 475009.892 3825891.811 885.42

LOCATION L0002267 VOLUME 475003.814 3825884.251 885.18

** End of LINE VOLUME Source ID = YTRK1

** ----------

** Line Source Represented by Adjacent Volume Sources

** LINE VOLUME Source ID = YTRK2

** DESCRSRC yard trucks around buildings

** PREFIX

** Length of Side = 9.70

** Configuration = Adjacent

** Emission Rate = 0.5

** Vertical Dimension = 6.80

** SZINIT = 3.16

** Nodes = 11

** 475721.599, 3826209.025, 901.19, 3.40, 4.51

** 475587.832, 3826046.594, 899.53, 3.40, 4.51

** 475436.548, 3825850.721, 899.52, 3.40, 4.51

** 475403.107, 3825806.132, 899.75, 3.40, 4.51

** 475372.850, 3825763.136, 900.16, 3.40, 4.51

** 475344.186, 3825728.102, 900.01, 3.40, 4.51

** 475337.816, 3825713.770, 900.14, 3.40, 4.51

** 475434.956, 3825648.479, 904.72, 3.40, 4.51

** 475598.979, 3825643.701, 910.84, 3.40, 4.51

** 475677.010, 3825708.992, 913.10, 3.40, 4.51

** 475899.954, 3826016.337, 908.29, 3.40, 4.51

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LOCATION L0002291 VOLUME 475577.118 3826032.722 900.80

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LOCATION L0002376 VOLUME 475701.902 3825743.309 912.58

LOCATION L0002377 VOLUME 475707.598 3825751.160 912.65

LOCATION L0002378 VOLUME 475713.294 3825759.012 912.51

LOCATION L0002379 VOLUME 475718.989 3825766.864 912.33

LOCATION L0002380 VOLUME 475724.685 3825774.716 912.12

LOCATION L0002381 VOLUME 475730.380 3825782.567 911.76

LOCATION L0002382 VOLUME 475736.076 3825790.419 911.47

LOCATION L0002383 VOLUME 475741.772 3825798.271 911.24

LOCATION L0002384 VOLUME 475747.467 3825806.123 911.06

LOCATION L0002385 VOLUME 475753.163 3825813.974 911.15

LOCATION L0002386 VOLUME 475758.858 3825821.826 911.24

LOCATION L0002387 VOLUME 475764.554 3825829.678 911.30

LOCATION L0002388 VOLUME 475770.249 3825837.530 911.26

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LOCATION L0002390 VOLUME 475781.641 3825853.233 911.28

LOCATION L0002391 VOLUME 475787.336 3825861.085 911.38

LOCATION L0002392 VOLUME 475793.032 3825868.937 911.52

LOCATION L0002393 VOLUME 475798.727 3825876.789 911.74

LOCATION L0002394 VOLUME 475804.423 3825884.640 912.06

LOCATION L0002395 VOLUME 475810.119 3825892.492 912.36

LOCATION L0002396 VOLUME 475815.814 3825900.344 912.37

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LOCATION L0002399 VOLUME 475832.901 3825923.899 913.51

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LOCATION L0002401 VOLUME 475844.292 3825939.603 912.15

LOCATION L0002402 VOLUME 475849.988 3825947.455 910.66

LOCATION L0002403 VOLUME 475855.683 3825955.306 909.10

LOCATION L0002404 VOLUME 475861.379 3825963.158 908.18

LOCATION L0002405 VOLUME 475867.074 3825971.010 908.38

LOCATION L0002406 VOLUME 475872.770 3825978.862 907.95

LOCATION L0002407 VOLUME 475878.466 3825986.713 906.89

LOCATION L0002408 VOLUME 475884.161 3825994.565 906.21

LOCATION L0002409 VOLUME 475889.857 3826002.417 906.87

LOCATION L0002410 VOLUME 475895.552 3826010.269 907.59

** End of LINE VOLUME Source ID = YTRK2

** Source Parameters **

** LINE VOLUME Source ID = TRUCK1

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SRCPARAM L0001969 0.0043103448 3.40 4.51 3.16

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SRCPARAM L0002002 0.0054347826 3.40 4.51 3.16

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  SRCPARAM L0002003   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002004   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002005   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002006   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002007   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002008   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002009   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002010   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002011   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002012   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002013   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002014   0.0054347826   3.40   4.51   3.16
  SRCPARAM L0002015   0.0054347826   3.40   4.51   3.16
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  SRCPARAM L0002017   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002018   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002019   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002020   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002021   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002022   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002023   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002024   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002025   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002026   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002027   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002028   0.0056818182   3.40   4.51   3.16
  SRCPARAM L0002029   0.0056818182   3.40   4.51   3.16
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SRCPARAM L0002030	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002031	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002032	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002033	0.0056818182	3.40	4.51	3.16
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SRCPARAM L0002035	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002036	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002037	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002038	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002039	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002040	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002041	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002042	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002043	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002044	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002045	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002046	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002047	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002048	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002049	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002050	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002051	0.0056818182	3.40	4.51	3.16
SRCPARAM L0002052	0.0056818182	3.40	4.51	3.16
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SRCPARAM L0002056	0.0056818182	3.40	4.51	3.16
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SRCPARAM L0002058	0.0056818182	3.40	4.51	3.16

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  SRCPARAM L0002059    0.0056818182    3.40    4.51    3.16
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  SRCPARAM L0002062    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002063    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002064    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002065    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002066    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002067    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002068    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002069    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002070    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002071    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002072    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002073    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002074    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002075    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002076    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002077    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002078    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002079    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002080    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002081    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002082    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002083    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002084    0.0024038462    3.40    4.51    3.16
  SRCPARAM L0002085    0.0024038462    3.40    4.51    3.16
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SRCPARAM L0002087 0.0024038462 3.40 4.51 3.16

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** LINE VOLUME Source ID = YTRK2

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  SRCPARAM L0002408    0.0034965035     3.40     4.51     3.16
  SRCPARAM L0002409    0.0034965035     3.40     4.51     3.16
  SRCPARAM L0002410    0.0034965035     3.40     4.51     3.16
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SO FINISHED
**
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** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
  INCLUDED "IENL AV Op HRA.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
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files\KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC"
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  PROFFILE "..\Apple Valley IENL Con HRA\construction HRA
files\KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL"
  SURFDATA 23161 2015 Barstow-Daggett_Airport
  UAIRDATA 3120 2015
  PROFBASE 584.3 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 ALL 1ST "IENL AV Op HRA.AD\01H1GALL.PLT" 31
  PLOTFILE PERIOD ALL "IENL AV Op HRA.AD\PE00GALL.PLT" 32
  SUMMFILE "IENL AV Op HRA.sum"
OU FINISHED


 *** Message Summary For AERMOD Model Setup ***


 --------- Summary of Total Messages --------

A Total of         0 Fatal Error Message(s)
A Total of         2 Warning Message(s)
A Total of         0 Informational Message(s)
```

******** FATAL ERROR MESSAGES ********

*** NONE ***

******** WARNING MESSAGES ********

ME W186 5079 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 5079 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

****

*** SETUP Finishes Successfully ***

****

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

* Model Allows User-Specified Options

* Model Is Setup For Calculation of Average CONCentration Values.

* NO GAS DEPOSITION Data Provided.

* NO PARTICLE DEPOSITION Data Provided.

* Model Uses NO DRY DEPLETION. DDPLETE = F

* Model Uses NO WET DEPLETION. WETDPLT = F

* Stack-tip Downwash.

* Model Accounts for ELEVated Terrain Effects.

* Use Calms Processing Routine.

* Use Missing Data Processing Routine.

* No Exponential Decay.

* Model Uses RURAL Dispersion Only.

* ADJ_U* - Use ADJ_U* option for SBL in AERMET

* CCVR_Sub - Meteorological data includes CCVR substitutions

* TEMP_Sub - Meteorological data includes TEMP substitutions

* Model Assumes No FLAGPOLE Receptor Heights.

* The User Specified a Pollutant Type of: PM_10

**Model Calculates 1 Short Term Average(s) of: 1-HR

and Calculates PERIOD Averages

**This Run Includes: 2410 Source(s); 1 Source Group(s); and 85 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 2410 VOLUME source(s)
and: 0 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 19191

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 584.30 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 4.5 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: IENL AV Op HRA.err

**File for Summary of Results: IENL AV Op HRA.sum

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.96618E-03	475264.6	3826335.5	878.6	3.40	4.51	3.16	NO	
L0000002	0	0.96618E-03	475258.5	3826328.0	878.3	3.40	4.51	3.16	NO	
L0000003	0	0.96618E-03	475252.4	3826320.4	877.8	3.40	4.51	3.16	NO	
L0000004	0	0.96618E-03	475246.2	3826312.9	877.4	3.40	4.51	3.16	NO	
L0000005	0	0.96618E-03	475240.1	3826305.4	877.5	3.40	4.51	3.16	NO	
L0000006	0	0.96618E-03	475234.0	3826297.9	878.0	3.40	4.51	3.16	NO	
L0000007	0	0.96618E-03	475227.8	3826290.4	878.8	3.40	4.51	3.16	NO	
L0000008	0	0.96618E-03	475221.7	3826282.9	879.4	3.40	4.51	3.16	NO	
L0000009	0	0.96618E-03	475215.6	3826275.3	879.6	3.40	4.51	3.16	NO	
L0000010	0	0.96618E-03	475209.5	3826267.8	879.8	3.40	4.51	3.16	NO	
L0000011	0	0.96618E-03	475203.3	3826260.3	879.9	3.40	4.51	3.16	NO	
L0000012	0	0.96618E-03	475197.2	3826252.8	880.0	3.40	4.51	3.16	NO	
L0000013	0	0.96618E-03	475191.1	3826245.3	880.0	3.40	4.51	3.16	NO	
L0000014	0	0.96618E-03	475184.9	3826237.8	880.0	3.40	4.51	3.16	NO	
L0000015	0	0.96618E-03	475178.8	3826230.2	880.0	3.40	4.51	3.16	NO	

L0000016	0	0.96618E-03	475172.7	3826222.7	879.8	3.40	4.51	3.16	NO
L0000017	0	0.96618E-03	475166.5	3826215.2	879.6	3.40	4.51	3.16	NO
L0000018	0	0.96618E-03	475160.4	3826207.7	879.6	3.40	4.51	3.16	NO
L0000019	0	0.96618E-03	475154.3	3826200.2	880.1	3.40	4.51	3.16	NO
L0000020	0	0.96618E-03	475148.1	3826192.7	880.6	3.40	4.51	3.16	NO
L0000021	0	0.96618E-03	475142.0	3826185.1	880.9	3.40	4.51	3.16	NO
L0000022	0	0.96618E-03	475135.9	3826177.6	881.0	3.40	4.51	3.16	NO
L0000023	0	0.96618E-03	475129.8	3826170.1	881.2	3.40	4.51	3.16	NO
L0000024	0	0.96618E-03	475123.6	3826162.6	881.2	3.40	4.51	3.16	NO
L0000025	0	0.96618E-03	475117.5	3826155.1	881.4	3.40	4.51	3.16	NO
L0000026	0	0.96618E-03	475111.4	3826147.6	881.9	3.40	4.51	3.16	NO
L0000027	0	0.96618E-03	475105.2	3826140.0	882.4	3.40	4.51	3.16	NO
L0000028	0	0.96618E-03	475099.1	3826132.5	882.7	3.40	4.51	3.16	NO
L0000029	0	0.96618E-03	475093.0	3826125.0	882.8	3.40	4.51	3.16	NO
L0000030	0	0.96618E-03	475086.8	3826117.5	883.0	3.40	4.51	3.16	NO
L0000031	0	0.96618E-03	475080.7	3826110.0	883.2	3.40	4.51	3.16	NO
L0000032	0	0.96618E-03	475074.6	3826102.5	883.4	3.40	4.51	3.16	NO
L0000033	0	0.96618E-03	475068.4	3826094.9	883.4	3.40	4.51	3.16	NO
L0000034	0	0.96618E-03	475062.3	3826087.4	883.3	3.40	4.51	3.16	NO
L0000035	0	0.96618E-03	475056.2	3826079.9	883.0	3.40	4.51	3.16	NO
L0000036	0	0.96618E-03	475050.1	3826072.4	882.7	3.40	4.51	3.16	NO
L0000037	0	0.96618E-03	475043.9	3826064.9	882.5	3.40	4.51	3.16	NO
L0000038	0	0.96618E-03	475037.8	3826057.4	882.5	3.40	4.51	3.16	NO
L0000039	0	0.96618E-03	475031.7	3826049.8	882.4	3.40	4.51	3.16	NO
L0000040	0	0.96618E-03	475025.5	3826042.3	882.3	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.96618E-03	475019.4	3826034.8	882.1	3.40	4.51	3.16	NO	
L0000042	0	0.96618E-03	475013.3	3826027.3	882.0	3.40	4.51	3.16	NO	
L0000043	0	0.96618E-03	475007.1	3826019.8	881.9	3.40	4.51	3.16	NO	
L0000044	0	0.96618E-03	475001.0	3826012.3	881.7	3.40	4.51	3.16	NO	
L0000045	0	0.96618E-03	474994.9	3826004.7	881.7	3.40	4.51	3.16	NO	
L0000046	0	0.96618E-03	474988.7	3825997.2	881.5	3.40	4.51	3.16	NO	
L0000047	0	0.96618E-03	474982.6	3825989.7	881.5	3.40	4.51	3.16	NO	
L0000048	0	0.96618E-03	474976.5	3825982.2	881.6	3.40	4.51	3.16	NO	
L0000049	0	0.96618E-03	474970.4	3825974.7	881.6	3.40	4.51	3.16	NO	
L0000050	0	0.96618E-03	474964.2	3825967.2	881.6	3.40	4.51	3.16	NO	
L0000051	0	0.96618E-03	474958.1	3825959.6	881.4	3.40	4.51	3.16	NO	
L0000052	0	0.96618E-03	474952.0	3825952.1	881.2	3.40	4.51	3.16	NO	
L0000053	0	0.96618E-03	474945.8	3825944.6	881.0	3.40	4.51	3.16	NO	
L0000054	0	0.96618E-03	474939.7	3825937.1	880.7	3.40	4.51	3.16	NO	
L0000055	0	0.96618E-03	474933.6	3825929.6	880.8	3.40	4.51	3.16	NO	

L0000056	0	0.96618E-03	474927.4	3825922.1	880.9	3.40	4.51	3.16	NO
L0000057	0	0.96618E-03	474921.3	3825914.5	880.7	3.40	4.51	3.16	NO
L0000058	0	0.96618E-03	474915.2	3825907.0	880.3	3.40	4.51	3.16	NO
L0000059	0	0.96618E-03	474909.0	3825899.5	880.2	3.40	4.51	3.16	NO
L0000060	0	0.96618E-03	474902.9	3825892.0	880.1	3.40	4.51	3.16	NO
L0000061	0	0.96618E-03	474896.8	3825884.5	880.1	3.40	4.51	3.16	NO
L0000062	0	0.96618E-03	474890.7	3825877.0	880.1	3.40	4.51	3.16	NO
L0000063	0	0.96618E-03	474884.5	3825869.4	880.2	3.40	4.51	3.16	NO
L0000064	0	0.96618E-03	474878.4	3825861.9	880.0	3.40	4.51	3.16	NO
L0000065	0	0.96618E-03	474872.3	3825854.4	880.0	3.40	4.51	3.16	NO
L0000066	0	0.96618E-03	474866.1	3825846.9	880.1	3.40	4.51	3.16	NO
L0000067	0	0.96618E-03	474860.0	3825839.4	880.1	3.40	4.51	3.16	NO
L0000068	0	0.96618E-03	474853.9	3825831.9	880.2	3.40	4.51	3.16	NO
L0000069	0	0.96618E-03	474847.7	3825824.3	880.2	3.40	4.51	3.16	NO
L0000070	0	0.96618E-03	474841.6	3825816.8	880.1	3.40	4.51	3.16	NO
L0000071	0	0.96618E-03	474835.5	3825809.3	880.1	3.40	4.51	3.16	NO
L0000072	0	0.96618E-03	474829.3	3825801.8	880.0	3.40	4.51	3.16	NO
L0000073	0	0.96618E-03	474823.2	3825794.3	880.0	3.40	4.51	3.16	NO
L0000074	0	0.96618E-03	474817.1	3825786.8	880.0	3.40	4.51	3.16	NO
L0000075	0	0.96618E-03	474811.0	3825779.2	880.0	3.40	4.51	3.16	NO
L0000076	0	0.96618E-03	474804.8	3825771.7	879.9	3.40	4.51	3.16	NO
L0000077	0	0.96618E-03	474798.7	3825764.2	879.9	3.40	4.51	3.16	NO
L0000078	0	0.96618E-03	474792.6	3825756.7	879.9	3.40	4.51	3.16	NO
L0000079	0	0.96618E-03	474786.4	3825749.2	880.0	3.40	4.51	3.16	NO
L0000080	0	0.96618E-03	474780.3	3825741.6	879.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000081	0	0.96618E-03	474774.2	3825734.1	879.8	3.40	4.51	3.16	NO	
L0000082	0	0.96618E-03	474768.0	3825726.6	879.8	3.40	4.51	3.16	NO	
L0000083	0	0.96618E-03	474761.9	3825719.1	879.9	3.40	4.51	3.16	NO	
L0000084	0	0.96618E-03	474755.8	3825711.6	879.8	3.40	4.51	3.16	NO	
L0000085	0	0.96618E-03	474749.6	3825704.1	879.8	3.40	4.51	3.16	NO	
L0000086	0	0.96618E-03	474743.5	3825696.5	879.8	3.40	4.51	3.16	NO	
L0000087	0	0.96618E-03	474737.4	3825689.0	879.7	3.40	4.51	3.16	NO	
L0000088	0	0.96618E-03	474731.3	3825681.5	879.8	3.40	4.51	3.16	NO	
L0000089	0	0.96618E-03	474725.1	3825674.0	879.9	3.40	4.51	3.16	NO	
L0000090	0	0.96618E-03	474719.0	3825666.5	879.8	3.40	4.51	3.16	NO	
L0000091	0	0.96618E-03	474712.9	3825659.0	879.6	3.40	4.51	3.16	NO	
L0000092	0	0.96618E-03	474706.7	3825651.4	879.6	3.40	4.51	3.16	NO	
L0000093	0	0.96618E-03	474700.6	3825643.9	879.5	3.40	4.51	3.16	NO	
L0000094	0	0.96618E-03	474694.5	3825636.4	879.4	3.40	4.51	3.16	NO	
L0000095	0	0.96618E-03	474688.3	3825628.9	879.2	3.40	4.51	3.16	NO	

L0000096	0	0.96618E-03	474682.2	3825621.4	879.2	3.40	4.51	3.16	NO
L0000097	0	0.96618E-03	474676.1	3825613.9	879.3	3.40	4.51	3.16	NO
L0000098	0	0.96618E-03	474669.9	3825606.3	879.2	3.40	4.51	3.16	NO
L0000099	0	0.96618E-03	474663.8	3825598.8	879.1	3.40	4.51	3.16	NO
L0000100	0	0.96618E-03	474657.7	3825591.3	879.0	3.40	4.51	3.16	NO
L0000101	0	0.96618E-03	474651.6	3825583.8	879.0	3.40	4.51	3.16	NO
L0000102	0	0.96618E-03	474645.4	3825576.3	879.0	3.40	4.51	3.16	NO
L0000103	0	0.96618E-03	474639.3	3825568.8	878.9	3.40	4.51	3.16	NO
L0000104	0	0.96618E-03	474633.2	3825561.2	878.9	3.40	4.51	3.16	NO
L0000105	0	0.96618E-03	474627.0	3825553.7	879.0	3.40	4.51	3.16	NO
L0000106	0	0.96618E-03	474620.9	3825546.2	879.0	3.40	4.51	3.16	NO
L0000107	0	0.96618E-03	474614.8	3825538.7	878.9	3.40	4.51	3.16	NO
L0000108	0	0.96618E-03	474608.6	3825531.2	878.8	3.40	4.51	3.16	NO
L0000109	0	0.96618E-03	474602.5	3825523.7	878.9	3.40	4.51	3.16	NO
L0000110	0	0.96618E-03	474596.4	3825516.1	878.9	3.40	4.51	3.16	NO
L0000111	0	0.96618E-03	474590.2	3825508.6	878.9	3.40	4.51	3.16	NO
L0000112	0	0.96618E-03	474584.1	3825501.1	878.8	3.40	4.51	3.16	NO
L0000113	0	0.96618E-03	474578.0	3825493.6	878.8	3.40	4.51	3.16	NO
L0000114	0	0.96618E-03	474571.9	3825486.1	878.8	3.40	4.51	3.16	NO
L0000115	0	0.96618E-03	474565.7	3825478.6	878.8	3.40	4.51	3.16	NO
L0000116	0	0.96618E-03	474559.6	3825471.0	878.7	3.40	4.51	3.16	NO
L0000117	0	0.96618E-03	474553.5	3825463.5	878.7	3.40	4.51	3.16	NO
L0000118	0	0.96618E-03	474547.3	3825456.0	878.7	3.40	4.51	3.16	NO
L0000119	0	0.96618E-03	474541.2	3825448.5	878.7	3.40	4.51	3.16	NO
L0000120	0	0.96618E-03	474535.1	3825441.0	878.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000121	0	0.96618E-03	474528.9	3825433.5	878.6	3.40	4.51	3.16	NO	
L0000122	0	0.96618E-03	474522.8	3825425.9	878.7	3.40	4.51	3.16	NO	
L0000123	0	0.96618E-03	474516.7	3825418.4	878.6	3.40	4.51	3.16	NO	
L0000124	0	0.96618E-03	474510.5	3825410.9	878.6	3.40	4.51	3.16	NO	
L0000125	0	0.96618E-03	474504.4	3825403.4	878.6	3.40	4.51	3.16	NO	
L0000126	0	0.96618E-03	474498.3	3825395.9	878.6	3.40	4.51	3.16	NO	
L0000127	0	0.96618E-03	474492.2	3825388.4	878.6	3.40	4.51	3.16	NO	
L0000128	0	0.96618E-03	474486.0	3825380.8	878.6	3.40	4.51	3.16	NO	
L0000129	0	0.96618E-03	474479.9	3825373.3	878.5	3.40	4.51	3.16	NO	
L0000130	0	0.96618E-03	474473.8	3825365.8	878.5	3.40	4.51	3.16	NO	
L0000131	0	0.96618E-03	474467.6	3825358.3	878.5	3.40	4.51	3.16	NO	
L0000132	0	0.96618E-03	474461.5	3825350.8	878.5	3.40	4.51	3.16	NO	
L0000133	0	0.96618E-03	474455.4	3825343.3	878.4	3.40	4.51	3.16	NO	
L0000134	0	0.96618E-03	474449.2	3825335.7	878.3	3.40	4.51	3.16	NO	
L0000135	0	0.96618E-03	474443.1	3825328.2	878.3	3.40	4.51	3.16	NO	

L0000136	0	0.96618E-03	474437.0	3825320.7	878.3	3.40	4.51	3.16	NO
L0000137	0	0.96618E-03	474430.8	3825313.2	878.3	3.40	4.51	3.16	NO
L0000138	0	0.96618E-03	474424.7	3825305.7	878.2	3.40	4.51	3.16	NO
L0000139	0	0.96618E-03	474418.6	3825298.2	878.1	3.40	4.51	3.16	NO
L0000140	0	0.96618E-03	474412.5	3825290.6	878.1	3.40	4.51	3.16	NO
L0000141	0	0.96618E-03	474406.3	3825283.1	878.1	3.40	4.51	3.16	NO
L0000142	0	0.96618E-03	474400.2	3825275.6	878.0	3.40	4.51	3.16	NO
L0000143	0	0.96618E-03	474394.1	3825268.1	877.9	3.40	4.51	3.16	NO
L0000144	0	0.96618E-03	474387.9	3825260.6	877.9	3.40	4.51	3.16	NO
L0000145	0	0.96618E-03	474381.8	3825253.1	878.0	3.40	4.51	3.16	NO
L0000146	0	0.96618E-03	474375.7	3825245.5	877.8	3.40	4.51	3.16	NO
L0000147	0	0.96618E-03	474369.5	3825238.0	877.7	3.40	4.51	3.16	NO
L0000148	0	0.96618E-03	474363.4	3825230.5	877.7	3.40	4.51	3.16	NO
L0000149	0	0.96618E-03	474357.3	3825223.0	877.7	3.40	4.51	3.16	NO
L0000150	0	0.96618E-03	474351.1	3825215.5	877.5	3.40	4.51	3.16	NO
L0000151	0	0.96618E-03	474345.0	3825208.0	877.4	3.40	4.51	3.16	NO
L0000152	0	0.96618E-03	474338.9	3825200.4	877.3	3.40	4.51	3.16	NO
L0000153	0	0.96618E-03	474332.7	3825192.9	877.2	3.40	4.51	3.16	NO
L0000154	0	0.96618E-03	474326.6	3825185.4	877.1	3.40	4.51	3.16	NO
L0000155	0	0.96618E-03	474320.5	3825177.9	876.9	3.40	4.51	3.16	NO
L0000156	0	0.96618E-03	474314.3	3825170.4	876.7	3.40	4.51	3.16	NO
L0000157	0	0.96618E-03	474308.2	3825162.9	876.6	3.40	4.51	3.16	NO
L0000158	0	0.96618E-03	474302.0	3825155.4	876.5	3.40	4.51	3.16	NO
L0000159	0	0.96618E-03	474295.9	3825147.9	876.2	3.40	4.51	3.16	NO
L0000160	0	0.96618E-03	474289.8	3825140.4	876.1	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000161	0	0.96618E-03	474283.6	3825132.9	876.0	3.40	4.51	3.16	NO	
L0000162	0	0.96618E-03	474277.5	3825125.3	875.8	3.40	4.51	3.16	NO	
L0000163	0	0.96618E-03	474271.3	3825117.8	875.6	3.40	4.51	3.16	NO	
L0000164	0	0.96618E-03	474265.2	3825110.3	875.4	3.40	4.51	3.16	NO	
L0000165	0	0.96618E-03	474259.0	3825102.8	875.3	3.40	4.51	3.16	NO	
L0000166	0	0.96618E-03	474252.9	3825095.3	875.1	3.40	4.51	3.16	NO	
L0000167	0	0.96618E-03	474246.8	3825087.8	874.9	3.40	4.51	3.16	NO	
L0000168	0	0.96618E-03	474240.6	3825080.3	874.7	3.40	4.51	3.16	NO	
L0000169	0	0.96618E-03	474234.5	3825072.8	874.6	3.40	4.51	3.16	NO	
L0000170	0	0.96618E-03	474228.3	3825065.3	874.4	3.40	4.51	3.16	NO	
L0000171	0	0.96618E-03	474222.2	3825057.8	874.2	3.40	4.51	3.16	NO	
L0000172	0	0.96618E-03	474216.1	3825050.3	874.0	3.40	4.51	3.16	NO	
L0000173	0	0.96618E-03	474209.9	3825042.8	873.9	3.40	4.51	3.16	NO	
L0000174	0	0.96618E-03	474203.8	3825035.2	873.7	3.40	4.51	3.16	NO	
L0000175	0	0.96618E-03	474197.6	3825027.7	873.5	3.40	4.51	3.16	NO	

L0000176	0	0.96618E-03	474191.5	3825020.2	873.3	3.40	4.51	3.16	NO
L0000177	0	0.96618E-03	474185.4	3825012.7	873.1	3.40	4.51	3.16	NO
L0000178	0	0.96618E-03	474179.2	3825005.2	872.9	3.40	4.51	3.16	NO
L0000179	0	0.96618E-03	474173.1	3824997.7	872.7	3.40	4.51	3.16	NO
L0000180	0	0.96618E-03	474166.9	3824990.2	872.5	3.40	4.51	3.16	NO
L0000181	0	0.96618E-03	474160.8	3824982.7	872.3	3.40	4.51	3.16	NO
L0000182	0	0.96618E-03	474154.7	3824975.2	872.0	3.40	4.51	3.16	NO
L0000183	0	0.96618E-03	474148.5	3824967.7	871.8	3.40	4.51	3.16	NO
L0000184	0	0.96618E-03	474142.4	3824960.2	871.5	3.40	4.51	3.16	NO
L0000185	0	0.96618E-03	474136.2	3824952.6	871.3	3.40	4.51	3.16	NO
L0000186	0	0.96618E-03	474130.1	3824945.1	871.1	3.40	4.51	3.16	NO
L0000187	0	0.96618E-03	474124.2	3824937.4	870.9	3.40	4.51	3.16	NO
L0000188	0	0.96618E-03	474118.8	3824929.4	870.5	3.40	4.51	3.16	NO
L0000189	0	0.96618E-03	474113.4	3824921.3	870.3	3.40	4.51	3.16	NO
L0000190	0	0.96618E-03	474108.0	3824913.2	870.0	3.40	4.51	3.16	NO
L0000191	0	0.96618E-03	474102.7	3824905.2	869.8	3.40	4.51	3.16	NO
L0000192	0	0.96618E-03	474097.3	3824897.1	869.6	3.40	4.51	3.16	NO
L0000193	0	0.96618E-03	474091.9	3824889.1	869.3	3.40	4.51	3.16	NO
L0000194	0	0.96618E-03	474086.5	3824881.0	868.9	3.40	4.51	3.16	NO
L0000195	0	0.96618E-03	474081.1	3824872.9	868.6	3.40	4.51	3.16	NO
L0000196	0	0.96618E-03	474075.7	3824864.9	868.5	3.40	4.51	3.16	NO
L0000197	0	0.96618E-03	474070.3	3824856.8	868.4	3.40	4.51	3.16	NO
L0000198	0	0.96618E-03	474064.9	3824848.7	867.8	3.40	4.51	3.16	NO
L0000199	0	0.96618E-03	474059.5	3824840.7	867.6	3.40	4.51	3.16	NO
L0000200	0	0.96618E-03	474054.1	3824832.6	867.5	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000201	0	0.96618E-03	474048.7	3824824.6	867.6	3.40	4.51	3.16	NO	
L0000202	0	0.96618E-03	474043.3	3824816.5	867.0	3.40	4.51	3.16	NO	
L0000203	0	0.96618E-03	474037.9	3824808.4	866.7	3.40	4.51	3.16	NO	
L0000204	0	0.96618E-03	474032.5	3824800.4	866.6	3.40	4.51	3.16	NO	
L0000205	0	0.96618E-03	474027.1	3824792.3	866.6	3.40	4.51	3.16	NO	
L0000206	0	0.96618E-03	474021.7	3824784.3	866.4	3.40	4.51	3.16	NO	
L0000207	0	0.96618E-03	474016.3	3824776.2	865.8	3.40	4.51	3.16	NO	
L0000208	0	0.96618E-03	474010.9	3824768.1	865.7	3.40	4.51	3.16	NO	
L0000209	0	0.96618E-03	474005.5	3824760.1	865.7	3.40	4.51	3.16	NO	
L0000210	0	0.96618E-03	474000.2	3824752.0	865.4	3.40	4.51	3.16	NO	
L0000211	0	0.96618E-03	473994.8	3824743.9	865.2	3.40	4.51	3.16	NO	
L0000212	0	0.96618E-03	473989.4	3824735.9	864.9	3.40	4.51	3.16	NO	
L0000213	0	0.96618E-03	473984.0	3824727.8	864.7	3.40	4.51	3.16	NO	
L0000214	0	0.96618E-03	473978.6	3824719.8	864.5	3.40	4.51	3.16	NO	
L0000215	0	0.96618E-03	473973.2	3824711.7	864.3	3.40	4.51	3.16	NO	

L0000216	0	0.96618E-03	473967.8	3824703.6	864.1	3.40	4.51	3.16	NO
L0000217	0	0.96618E-03	473962.4	3824695.6	863.8	3.40	4.51	3.16	NO
L0000218	0	0.96618E-03	473957.0	3824687.5	863.5	3.40	4.51	3.16	NO
L0000219	0	0.96618E-03	473951.6	3824679.5	863.3	3.40	4.51	3.16	NO
L0000220	0	0.96618E-03	473946.2	3824671.4	863.1	3.40	4.51	3.16	NO
L0000221	0	0.96618E-03	473940.8	3824663.3	862.8	3.40	4.51	3.16	NO
L0000222	0	0.96618E-03	473935.4	3824655.3	862.5	3.40	4.51	3.16	NO
L0000223	0	0.96618E-03	473930.0	3824647.2	862.3	3.40	4.51	3.16	NO
L0000224	0	0.96618E-03	473924.6	3824639.1	862.0	3.40	4.51	3.16	NO
L0000225	0	0.96618E-03	473919.2	3824631.1	861.8	3.40	4.51	3.16	NO
L0000226	0	0.96618E-03	473913.8	3824623.0	861.5	3.40	4.51	3.16	NO
L0000227	0	0.96618E-03	473908.4	3824615.0	861.2	3.40	4.51	3.16	NO
L0000228	0	0.96618E-03	473903.1	3824606.9	861.0	3.40	4.51	3.16	NO
L0000229	0	0.96618E-03	473897.7	3824598.8	860.7	3.40	4.51	3.16	NO
L0000230	0	0.96618E-03	473892.3	3824590.8	860.4	3.40	4.51	3.16	NO
L0000231	0	0.96618E-03	473886.9	3824582.7	860.0	3.40	4.51	3.16	NO
L0000232	0	0.96618E-03	473881.5	3824574.7	859.8	3.40	4.51	3.16	NO
L0000233	0	0.96618E-03	473876.1	3824566.6	859.5	3.40	4.51	3.16	NO
L0000234	0	0.96618E-03	473870.7	3824558.5	859.4	3.40	4.51	3.16	NO
L0000235	0	0.96618E-03	473865.3	3824550.5	859.2	3.40	4.51	3.16	NO
L0000236	0	0.96618E-03	473859.9	3824542.4	858.9	3.40	4.51	3.16	NO
L0000237	0	0.96618E-03	473854.5	3824534.3	858.7	3.40	4.51	3.16	NO
L0000238	0	0.96618E-03	473849.1	3824526.3	858.5	3.40	4.51	3.16	NO
L0000239	0	0.96618E-03	473843.7	3824518.2	858.3	3.40	4.51	3.16	NO
L0000240	0	0.96618E-03	473838.3	3824510.2	858.0	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000241	0	0.96618E-03	473832.9	3824502.1	857.7	3.40	4.51	3.16	NO	
L0000242	0	0.96618E-03	473827.5	3824494.0	857.5	3.40	4.51	3.16	NO	
L0000243	0	0.96618E-03	473822.1	3824486.0	857.3	3.40	4.51	3.16	NO	
L0000244	0	0.96618E-03	473816.7	3824477.9	857.0	3.40	4.51	3.16	NO	
L0000245	0	0.96618E-03	473811.3	3824469.9	856.5	3.40	4.51	3.16	NO	
L0000246	0	0.96618E-03	473806.0	3824461.8	856.2	3.40	4.51	3.16	NO	
L0000247	0	0.96618E-03	473800.6	3824453.7	856.1	3.40	4.51	3.16	NO	
L0000248	0	0.96618E-03	473795.2	3824445.7	855.9	3.40	4.51	3.16	NO	
L0000249	0	0.96618E-03	473789.8	3824437.6	855.7	3.40	4.51	3.16	NO	
L0000250	0	0.96618E-03	473784.4	3824429.5	855.4	3.40	4.51	3.16	NO	
L0000251	0	0.96618E-03	473779.0	3824421.5	855.2	3.40	4.51	3.16	NO	
L0000252	0	0.96618E-03	473773.6	3824413.4	854.8	3.40	4.51	3.16	NO	
L0000253	0	0.96618E-03	473768.2	3824405.4	854.6	3.40	4.51	3.16	NO	
L0000254	0	0.96618E-03	473762.8	3824397.3	853.8	3.40	4.51	3.16	NO	
L0000255	0	0.96618E-03	473757.4	3824389.2	853.0	3.40	4.51	3.16	NO	

L0000256	0	0.96618E-03	473752.0	3824381.2	852.6	3.40	4.51	3.16	NO
L0000257	0	0.96618E-03	473746.6	3824373.1	852.7	3.40	4.51	3.16	NO
L0000258	0	0.96618E-03	473741.2	3824365.1	853.2	3.40	4.51	3.16	NO
L0000259	0	0.96618E-03	473736.2	3824356.8	852.3	3.40	4.51	3.16	NO
L0000260	0	0.96618E-03	473732.6	3824347.8	851.6	3.40	4.51	3.16	NO
L0000261	0	0.96618E-03	473729.0	3824338.8	850.9	3.40	4.51	3.16	NO
L0000262	0	0.96618E-03	473725.3	3824329.8	850.4	3.40	4.51	3.16	NO
L0000263	0	0.96618E-03	473721.7	3824320.8	850.4	3.40	4.51	3.16	NO
L0000264	0	0.96618E-03	473718.1	3824311.8	850.5	3.40	4.51	3.16	NO
L0000265	0	0.96618E-03	473714.5	3824302.8	850.8	3.40	4.51	3.16	NO
L0000266	0	0.96618E-03	473710.8	3824293.8	850.1	3.40	4.51	3.16	NO
L0000267	0	0.96618E-03	473707.2	3824284.8	849.5	3.40	4.51	3.16	NO
L0000268	0	0.96618E-03	473703.6	3824275.8	849.0	3.40	4.51	3.16	NO
L0000269	0	0.96618E-03	473700.0	3824266.8	848.6	3.40	4.51	3.16	NO
L0000270	0	0.96618E-03	473696.3	3824257.8	848.4	3.40	4.51	3.16	NO
L0000271	0	0.96618E-03	473692.7	3824248.8	848.4	3.40	4.51	3.16	NO
L0000272	0	0.96618E-03	473689.1	3824239.8	848.4	3.40	4.51	3.16	NO
L0000273	0	0.96618E-03	473685.5	3824230.8	847.9	3.40	4.51	3.16	NO
L0000274	0	0.96618E-03	473681.8	3824221.8	847.4	3.40	4.51	3.16	NO
L0000275	0	0.96618E-03	473678.2	3824212.8	847.0	3.40	4.51	3.16	NO
L0000276	0	0.96618E-03	473674.6	3824203.8	846.6	3.40	4.51	3.16	NO
L0000277	0	0.96618E-03	473670.9	3824194.8	846.4	3.40	4.51	3.16	NO
L0000278	0	0.96618E-03	473667.3	3824185.8	846.2	3.40	4.51	3.16	NO
L0000279	0	0.96618E-03	473663.7	3824176.8	846.1	3.40	4.51	3.16	NO
L0000280	0	0.96618E-03	473660.1	3824167.9	845.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000281	0	0.96618E-03	473656.4	3824158.9	845.0	3.40	4.51	3.16	NO	
L0000282	0	0.96618E-03	473652.8	3824149.9	844.4	3.40	4.51	3.16	NO	
L0000283	0	0.96618E-03	473649.2	3824140.9	844.0	3.40	4.51	3.16	NO	
L0000284	0	0.96618E-03	473645.6	3824131.9	843.8	3.40	4.51	3.16	NO	
L0000285	0	0.96618E-03	473641.9	3824122.9	843.8	3.40	4.51	3.16	NO	
L0000286	0	0.96618E-03	473638.3	3824113.9	843.7	3.40	4.51	3.16	NO	
L0000287	0	0.96618E-03	473634.7	3824104.9	843.2	3.40	4.51	3.16	NO	
L0000288	0	0.96618E-03	473631.1	3824095.9	842.8	3.40	4.51	3.16	NO	
L0000289	0	0.96618E-03	473627.4	3824086.9	842.5	3.40	4.51	3.16	NO	
L0000290	0	0.96618E-03	473623.8	3824077.9	842.2	3.40	4.51	3.16	NO	
L0000291	0	0.96618E-03	473620.2	3824068.9	841.9	3.40	4.51	3.16	NO	
L0000292	0	0.96618E-03	473616.5	3824059.9	841.6	3.40	4.51	3.16	NO	
L0000293	0	0.96618E-03	473612.9	3824050.9	841.3	3.40	4.51	3.16	NO	
L0000294	0	0.96618E-03	473609.3	3824041.9	840.9	3.40	4.51	3.16	NO	
L0000295	0	0.96618E-03	473605.7	3824032.9	840.5	3.40	4.51	3.16	NO	

L0000296	0	0.96618E-03	473602.0	3824023.9	840.2	3.40	4.51	3.16	NO
L0000297	0	0.96618E-03	473598.4	3824014.9	839.8	3.40	4.51	3.16	NO
L0000298	0	0.96618E-03	473594.8	3824005.9	839.5	3.40	4.51	3.16	NO
L0000299	0	0.96618E-03	473591.2	3823996.9	839.2	3.40	4.51	3.16	NO
L0000300	0	0.96618E-03	473587.5	3823987.9	838.9	3.40	4.51	3.16	NO
L0000301	0	0.96618E-03	473583.9	3823978.9	838.5	3.40	4.51	3.16	NO
L0000302	0	0.96618E-03	473580.3	3823969.9	838.2	3.40	4.51	3.16	NO
L0000303	0	0.96618E-03	473576.7	3823960.9	837.8	3.40	4.51	3.16	NO
L0000304	0	0.96618E-03	473573.0	3823951.9	837.5	3.40	4.51	3.16	NO
L0000305	0	0.96618E-03	473569.4	3823942.9	837.1	3.40	4.51	3.16	NO
L0000306	0	0.96618E-03	473565.8	3823933.9	836.9	3.40	4.51	3.16	NO
L0000307	0	0.96618E-03	473562.1	3823924.9	836.5	3.40	4.51	3.16	NO
L0000308	0	0.96618E-03	473558.5	3823915.9	836.2	3.40	4.51	3.16	NO
L0000309	0	0.96618E-03	473554.9	3823907.0	835.8	3.40	4.51	3.16	NO
L0000310	0	0.96618E-03	473551.3	3823898.0	835.4	3.40	4.51	3.16	NO
L0000311	0	0.96618E-03	473547.6	3823889.0	835.0	3.40	4.51	3.16	NO
L0000312	0	0.96618E-03	473544.0	3823880.0	834.7	3.40	4.51	3.16	NO
L0000313	0	0.96618E-03	473540.4	3823871.0	834.5	3.40	4.51	3.16	NO
L0000314	0	0.96618E-03	473536.8	3823862.0	834.1	3.40	4.51	3.16	NO
L0000315	0	0.96618E-03	473533.1	3823853.0	833.8	3.40	4.51	3.16	NO
L0000316	0	0.96618E-03	473529.5	3823844.0	833.3	3.40	4.51	3.16	NO
L0000317	0	0.96618E-03	473525.9	3823835.0	832.9	3.40	4.51	3.16	NO
L0000318	0	0.96618E-03	473522.3	3823826.0	832.5	3.40	4.51	3.16	NO
L0000319	0	0.96618E-03	473518.6	3823817.0	832.1	3.40	4.51	3.16	NO
L0000320	0	0.96618E-03	473515.0	3823808.0	831.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000321	0	0.96618E-03	473511.4	3823799.0	831.5	3.40	4.51	3.16	NO	
L0000322	0	0.96618E-03	473507.4	3823790.2	831.2	3.40	4.51	3.16	NO	
L0000323	0	0.96618E-03	473503.1	3823781.4	830.7	3.40	4.51	3.16	NO	
L0000324	0	0.96618E-03	473498.9	3823772.7	830.2	3.40	4.51	3.16	NO	
L0000325	0	0.96618E-03	473494.6	3823764.0	829.8	3.40	4.51	3.16	NO	
L0000326	0	0.96618E-03	473490.3	3823755.3	829.5	3.40	4.51	3.16	NO	
L0000327	0	0.96618E-03	473486.0	3823746.6	829.3	3.40	4.51	3.16	NO	
L0000328	0	0.96618E-03	473481.7	3823737.9	829.1	3.40	4.51	3.16	NO	
L0000329	0	0.96618E-03	473477.5	3823729.2	828.8	3.40	4.51	3.16	NO	
L0000330	0	0.96618E-03	473473.2	3823720.5	828.2	3.40	4.51	3.16	NO	
L0000331	0	0.96618E-03	473468.9	3823711.8	827.7	3.40	4.51	3.16	NO	
L0000332	0	0.96618E-03	473464.6	3823703.1	827.4	3.40	4.51	3.16	NO	
L0000333	0	0.96618E-03	473460.4	3823694.4	827.3	3.40	4.51	3.16	NO	
L0000334	0	0.96618E-03	473456.1	3823685.7	827.5	3.40	4.51	3.16	NO	
L0000335	0	0.96618E-03	473451.8	3823677.0	827.8	3.40	4.51	3.16	NO	

L0000336	0	0.96618E-03	473447.5	3823668.3	827.4	3.40	4.51	3.16	NO
L0000337	0	0.96618E-03	473443.3	3823659.6	826.4	3.40	4.51	3.16	NO
L0000338	0	0.96618E-03	473439.0	3823650.8	826.0	3.40	4.51	3.16	NO
L0000339	0	0.96618E-03	473434.7	3823642.1	825.9	3.40	4.51	3.16	NO
L0000340	0	0.96618E-03	473430.4	3823633.4	826.1	3.40	4.51	3.16	NO
L0000341	0	0.96618E-03	473426.1	3823624.7	826.3	3.40	4.51	3.16	NO
L0000342	0	0.96618E-03	473421.9	3823616.0	826.2	3.40	4.51	3.16	NO
L0000343	0	0.96618E-03	473417.6	3823607.3	825.9	3.40	4.51	3.16	NO
L0000344	0	0.96618E-03	473413.3	3823598.6	825.3	3.40	4.51	3.16	NO
L0000345	0	0.96618E-03	473409.0	3823589.9	825.1	3.40	4.51	3.16	NO
L0000346	0	0.96618E-03	473404.8	3823581.2	825.1	3.40	4.51	3.16	NO
L0000347	0	0.96618E-03	473400.5	3823572.5	825.2	3.40	4.51	3.16	NO
L0000348	0	0.96618E-03	473396.2	3823563.8	825.3	3.40	4.51	3.16	NO
L0000349	0	0.96618E-03	473391.9	3823555.1	825.3	3.40	4.51	3.16	NO
L0000350	0	0.96618E-03	473387.7	3823546.4	825.2	3.40	4.51	3.16	NO
L0000351	0	0.96618E-03	473383.4	3823537.7	825.0	3.40	4.51	3.16	NO
L0000352	0	0.96618E-03	473379.1	3823529.0	824.7	3.40	4.51	3.16	NO
L0000353	0	0.96618E-03	473374.8	3823520.3	824.5	3.40	4.51	3.16	NO
L0000354	0	0.96618E-03	473370.6	3823511.5	824.6	3.40	4.51	3.16	NO
L0000355	0	0.96618E-03	473366.3	3823502.8	824.9	3.40	4.51	3.16	NO
L0000356	0	0.96618E-03	473362.0	3823494.1	825.0	3.40	4.51	3.16	NO
L0000357	0	0.96618E-03	473357.7	3823485.4	825.1	3.40	4.51	3.16	NO
L0000358	0	0.96618E-03	473353.4	3823476.7	825.1	3.40	4.51	3.16	NO
L0000359	0	0.96618E-03	473349.2	3823468.0	825.0	3.40	4.51	3.16	NO
L0000360	0	0.96618E-03	473344.9	3823459.3	825.0	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000361	0	0.96618E-03	473340.6	3823450.6	825.2	3.40	4.51	3.16	NO	
L0000362	0	0.96618E-03	473336.3	3823441.9	825.5	3.40	4.51	3.16	NO	
L0000363	0	0.96618E-03	473332.1	3823433.2	825.5	3.40	4.51	3.16	NO	
L0000364	0	0.96618E-03	473327.8	3823424.5	825.5	3.40	4.51	3.16	NO	
L0000365	0	0.96618E-03	473323.5	3823415.8	825.6	3.40	4.51	3.16	NO	
L0000366	0	0.96618E-03	473319.2	3823407.1	825.7	3.40	4.51	3.16	NO	
L0000367	0	0.96618E-03	473315.0	3823398.4	825.7	3.40	4.51	3.16	NO	
L0000368	0	0.96618E-03	473310.7	3823389.7	825.9	3.40	4.51	3.16	NO	
L0000369	0	0.96618E-03	473306.4	3823381.0	826.1	3.40	4.51	3.16	NO	
L0000370	0	0.96618E-03	473302.1	3823372.2	826.2	3.40	4.51	3.16	NO	
L0000371	0	0.96618E-03	473297.8	3823363.5	826.2	3.40	4.51	3.16	NO	
L0000372	0	0.96618E-03	473293.6	3823354.8	826.4	3.40	4.51	3.16	NO	
L0000373	0	0.96618E-03	473289.3	3823346.1	826.4	3.40	4.51	3.16	NO	
L0000374	0	0.96618E-03	473285.0	3823337.4	826.3	3.40	4.51	3.16	NO	
L0000375	0	0.96618E-03	473280.7	3823328.7	826.6	3.40	4.51	3.16	NO	

L0000376	0	0.96618E-03	473276.5	3823320.0	826.9	3.40	4.51	3.16	NO
L0000377	0	0.96618E-03	473272.2	3823311.3	826.1	3.40	4.51	3.16	NO
L0000378	0	0.96618E-03	473267.9	3823302.6	825.6	3.40	4.51	3.16	NO
L0000379	0	0.96618E-03	473262.6	3823294.7	825.8	3.40	4.51	3.16	NO
L0000380	0	0.96618E-03	473254.8	3823289.1	826.9	3.40	4.51	3.16	NO
L0000381	0	0.96618E-03	473246.9	3823283.4	826.6	3.40	4.51	3.16	NO
L0000382	0	0.96618E-03	473239.0	3823277.8	826.2	3.40	4.51	3.16	NO
L0000383	0	0.96618E-03	473231.1	3823272.2	826.3	3.40	4.51	3.16	NO
L0000384	0	0.96618E-03	473223.2	3823266.5	826.3	3.40	4.51	3.16	NO
L0000385	0	0.96618E-03	473215.3	3823260.9	826.5	3.40	4.51	3.16	NO
L0000386	0	0.96618E-03	473207.4	3823255.2	826.7	3.40	4.51	3.16	NO
L0000387	0	0.96618E-03	473199.5	3823249.6	826.3	3.40	4.51	3.16	NO
L0000388	0	0.96618E-03	473191.6	3823244.0	826.0	3.40	4.51	3.16	NO
L0000389	0	0.96618E-03	473183.7	3823238.3	826.3	3.40	4.51	3.16	NO
L0000390	0	0.96618E-03	473175.8	3823232.7	827.1	3.40	4.51	3.16	NO
L0000391	0	0.96618E-03	473168.0	3823227.0	827.3	3.40	4.51	3.16	NO
L0000392	0	0.96618E-03	473160.1	3823221.4	827.0	3.40	4.51	3.16	NO
L0000393	0	0.96618E-03	473152.2	3823215.7	827.3	3.40	4.51	3.16	NO
L0000394	0	0.96618E-03	473144.3	3823210.1	826.9	3.40	4.51	3.16	NO
L0000395	0	0.96618E-03	473136.4	3823204.5	826.8	3.40	4.51	3.16	NO
L0000396	0	0.96618E-03	473128.5	3823198.8	827.3	3.40	4.51	3.16	NO
L0000397	0	0.96618E-03	473120.6	3823193.2	827.0	3.40	4.51	3.16	NO
L0000398	0	0.96618E-03	473112.7	3823187.5	826.2	3.40	4.51	3.16	NO
L0000399	0	0.96618E-03	473104.8	3823181.9	826.1	3.40	4.51	3.16	NO
L0000400	0	0.96618E-03	473096.9	3823176.3	826.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000401	0	0.96618E-03	473089.1	3823170.6	827.2	3.40	4.51	3.16	NO	
L0000402	0	0.96618E-03	473081.2	3823165.0	827.9	3.40	4.51	3.16	NO	
L0000403	0	0.96618E-03	473073.3	3823159.3	827.8	3.40	4.51	3.16	NO	
L0000404	0	0.96618E-03	473065.4	3823153.7	826.9	3.40	4.51	3.16	NO	
L0000405	0	0.96618E-03	473057.5	3823148.0	826.7	3.40	4.51	3.16	NO	
L0000406	0	0.96618E-03	473049.6	3823142.4	827.0	3.40	4.51	3.16	NO	
L0000407	0	0.96618E-03	473041.7	3823136.8	827.0	3.40	4.51	3.16	NO	
L0000408	0	0.96618E-03	473033.8	3823131.1	825.9	3.40	4.51	3.16	NO	
L0000409	0	0.96618E-03	473025.9	3823125.5	824.4	3.40	4.51	3.16	NO	
L0000410	0	0.96618E-03	473018.0	3823119.8	823.5	3.40	4.51	3.16	NO	
L0000411	0	0.96618E-03	473010.1	3823114.2	823.0	3.40	4.51	3.16	NO	
L0000412	0	0.96618E-03	473002.3	3823108.5	822.8	3.40	4.51	3.16	NO	
L0000413	0	0.96618E-03	472994.4	3823102.9	822.6	3.40	4.51	3.16	NO	
L0000414	0	0.96618E-03	472986.5	3823097.3	822.1	3.40	4.51	3.16	NO	
L0000415	0	0.96618E-03	472978.6	3823091.6	821.6	3.40	4.51	3.16	NO	

L0000416	0	0.96618E-03	472970.7	3823086.0	821.2	3.40	4.51	3.16	NO
L0000417	0	0.96618E-03	472962.8	3823080.3	821.1	3.40	4.51	3.16	NO
L0000418	0	0.96618E-03	472954.9	3823074.7	821.1	3.40	4.51	3.16	NO
L0000419	0	0.96618E-03	472947.0	3823069.1	821.1	3.40	4.51	3.16	NO
L0000420	0	0.96618E-03	472939.1	3823063.4	821.1	3.40	4.51	3.16	NO
L0000421	0	0.96618E-03	472931.2	3823057.8	821.3	3.40	4.51	3.16	NO
L0000422	0	0.96618E-03	472923.4	3823052.1	821.5	3.40	4.51	3.16	NO
L0000423	0	0.96618E-03	472915.5	3823046.5	822.3	3.40	4.51	3.16	NO
L0000424	0	0.96618E-03	472907.6	3823040.8	823.6	3.40	4.51	3.16	NO
L0000425	0	0.96618E-03	472899.7	3823035.2	825.1	3.40	4.51	3.16	NO
L0000426	0	0.96618E-03	472891.8	3823029.6	826.2	3.40	4.51	3.16	NO
L0000427	0	0.96618E-03	472883.9	3823023.9	826.8	3.40	4.51	3.16	NO
L0000428	0	0.96618E-03	472876.0	3823018.3	827.9	3.40	4.51	3.16	NO
L0000429	0	0.96618E-03	472868.1	3823012.6	829.0	3.40	4.51	3.16	NO
L0000430	0	0.96618E-03	472860.2	3823007.0	828.1	3.40	4.51	3.16	NO
L0000431	0	0.96618E-03	472852.3	3823001.4	827.6	3.40	4.51	3.16	NO
L0000432	0	0.96618E-03	472844.5	3822995.7	827.8	3.40	4.51	3.16	NO
L0000433	0	0.96618E-03	472836.6	3822990.1	828.3	3.40	4.51	3.16	NO
L0000434	0	0.96618E-03	472828.7	3822984.4	829.2	3.40	4.51	3.16	NO
L0000435	0	0.96618E-03	472820.8	3822978.8	829.8	3.40	4.51	3.16	NO
L0000436	0	0.96618E-03	472812.9	3822973.1	829.1	3.40	4.51	3.16	NO
L0000437	0	0.96618E-03	472805.0	3822967.5	828.6	3.40	4.51	3.16	NO
L0000438	0	0.96618E-03	472797.1	3822961.9	828.7	3.40	4.51	3.16	NO
L0000439	0	0.96618E-03	472789.2	3822956.2	829.3	3.40	4.51	3.16	NO
L0000440	0	0.96618E-03	472781.3	3822950.6	830.1	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000441	0	0.96618E-03	472773.4	3822944.9	830.0	3.40	4.51	3.16	NO	
L0000442	0	0.96618E-03	472765.5	3822939.3	829.9	3.40	4.51	3.16	NO	
L0000443	0	0.96618E-03	472757.7	3822933.7	829.4	3.40	4.51	3.16	NO	
L0000444	0	0.96618E-03	472749.8	3822928.0	829.5	3.40	4.51	3.16	NO	
L0000445	0	0.96618E-03	472741.9	3822922.4	830.2	3.40	4.51	3.16	NO	
L0000446	0	0.96618E-03	472734.0	3822916.7	830.5	3.40	4.51	3.16	NO	
L0000447	0	0.96618E-03	472726.1	3822911.1	830.6	3.40	4.51	3.16	NO	
L0000448	0	0.96618E-03	472718.2	3822905.4	830.7	3.40	4.51	3.16	NO	
L0000449	0	0.96618E-03	472710.3	3822899.8	830.9	3.40	4.51	3.16	NO	
L0000450	0	0.96618E-03	472702.4	3822894.2	830.9	3.40	4.51	3.16	NO	
L0000451	0	0.96618E-03	472694.5	3822888.5	831.0	3.40	4.51	3.16	NO	
L0000452	0	0.96618E-03	472686.6	3822882.9	830.3	3.40	4.51	3.16	NO	
L0000453	0	0.96618E-03	472678.8	3822877.2	829.6	3.40	4.51	3.16	NO	
L0000454	0	0.96618E-03	472670.9	3822871.6	829.5	3.40	4.51	3.16	NO	
L0000455	0	0.96618E-03	472663.0	3822865.9	830.1	3.40	4.51	3.16	NO	

L0000456	0	0.96618E-03	472655.1	3822860.3	831.0	3.40	4.51	3.16	NO
L0000457	0	0.96618E-03	472647.2	3822854.7	831.3	3.40	4.51	3.16	NO
L0000458	0	0.96618E-03	472639.3	3822849.0	831.3	3.40	4.51	3.16	NO
L0000459	0	0.96618E-03	472631.4	3822843.4	830.4	3.40	4.51	3.16	NO
L0000460	0	0.96618E-03	472623.5	3822837.7	830.4	3.40	4.51	3.16	NO
L0000461	0	0.96618E-03	472615.6	3822832.1	831.1	3.40	4.51	3.16	NO
L0000462	0	0.96618E-03	472607.7	3822826.5	831.3	3.40	4.51	3.16	NO
L0000463	0	0.96618E-03	472599.8	3822820.8	830.7	3.40	4.51	3.16	NO
L0000464	0	0.96618E-03	472592.0	3822815.2	830.6	3.40	4.51	3.16	NO
L0000465	0	0.96618E-03	472584.1	3822809.5	830.8	3.40	4.51	3.16	NO
L0000466	0	0.96618E-03	472576.2	3822803.9	831.3	3.40	4.51	3.16	NO
L0000467	0	0.96618E-03	472568.3	3822798.2	832.3	3.40	4.51	3.16	NO
L0000468	0	0.96618E-03	472560.4	3822792.6	832.0	3.40	4.51	3.16	NO
L0000469	0	0.96618E-03	472552.5	3822787.0	830.9	3.40	4.51	3.16	NO
L0000470	0	0.96618E-03	472544.6	3822781.3	830.6	3.40	4.51	3.16	NO
L0000471	0	0.96618E-03	472536.7	3822775.7	831.0	3.40	4.51	3.16	NO
L0000472	0	0.96618E-03	472528.8	3822770.0	831.6	3.40	4.51	3.16	NO
L0000473	0	0.96618E-03	472520.9	3822764.4	831.8	3.40	4.51	3.16	NO
L0000474	0	0.96618E-03	472513.1	3822758.8	831.6	3.40	4.51	3.16	NO
L0000475	0	0.96618E-03	472505.2	3822753.1	831.0	3.40	4.51	3.16	NO
L0000476	0	0.96618E-03	472497.3	3822747.5	831.1	3.40	4.51	3.16	NO
L0000477	0	0.96618E-03	472489.4	3822741.8	831.9	3.40	4.51	3.16	NO
L0000478	0	0.96618E-03	472481.5	3822736.2	832.1	3.40	4.51	3.16	NO
L0000479	0	0.96618E-03	472473.6	3822730.5	829.8	3.40	4.51	3.16	NO
L0000480	0	0.96618E-03	472465.7	3822724.9	827.0	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000481	0	0.96618E-03	472457.8	3822719.3	824.9	3.40	4.51	3.16	NO	
L0000482	0	0.96618E-03	472449.9	3822713.6	824.5	3.40	4.51	3.16	NO	
L0000483	0	0.96618E-03	472442.0	3822708.0	824.7	3.40	4.51	3.16	NO	
L0000484	0	0.96618E-03	472434.1	3822702.3	824.9	3.40	4.51	3.16	NO	
L0000485	0	0.96618E-03	472426.3	3822696.7	824.6	3.40	4.51	3.16	NO	
L0000486	0	0.96618E-03	472418.4	3822691.0	824.3	3.40	4.51	3.16	NO	
L0000487	0	0.96618E-03	472410.7	3822685.2	824.1	3.40	4.51	3.16	NO	
L0000488	0	0.96618E-03	472402.9	3822679.3	824.6	3.40	4.51	3.16	NO	
L0000489	0	0.96618E-03	472395.1	3822673.5	825.4	3.40	4.51	3.16	NO	
L0000490	0	0.96618E-03	472387.4	3822667.7	827.6	3.40	4.51	3.16	NO	
L0000491	0	0.96618E-03	472379.6	3822661.9	830.3	3.40	4.51	3.16	NO	
L0000492	0	0.96618E-03	472371.9	3822656.0	832.4	3.40	4.51	3.16	NO	
L0000493	0	0.96618E-03	472364.1	3822650.2	834.1	3.40	4.51	3.16	NO	
L0000494	0	0.96618E-03	472356.4	3822644.4	835.2	3.40	4.51	3.16	NO	
L0000495	0	0.96618E-03	472348.6	3822638.6	835.3	3.40	4.51	3.16	NO	

L0000496	0	0.96618E-03	472340.9	3822632.7	835.5	3.40	4.51	3.16	NO
L0000497	0	0.96618E-03	472333.1	3822626.9	835.7	3.40	4.51	3.16	NO
L0000498	0	0.96618E-03	472325.3	3822621.1	835.7	3.40	4.51	3.16	NO
L0000499	0	0.96618E-03	472317.6	3822615.2	835.9	3.40	4.51	3.16	NO
L0000500	0	0.96618E-03	472309.8	3822609.4	836.0	3.40	4.51	3.16	NO
L0000501	0	0.96618E-03	472302.1	3822603.6	836.1	3.40	4.51	3.16	NO
L0000502	0	0.96618E-03	472294.3	3822597.8	836.3	3.40	4.51	3.16	NO
L0000503	0	0.96618E-03	472286.6	3822591.9	836.6	3.40	4.51	3.16	NO
L0000504	0	0.96618E-03	472278.8	3822586.1	837.0	3.40	4.51	3.16	NO
L0000505	0	0.96618E-03	472271.1	3822580.3	837.2	3.40	4.51	3.16	NO
L0000506	0	0.96618E-03	472263.3	3822574.5	837.3	3.40	4.51	3.16	NO
L0000507	0	0.96618E-03	472255.6	3822568.6	837.7	3.40	4.51	3.16	NO
L0000508	0	0.96618E-03	472247.8	3822562.8	838.1	3.40	4.51	3.16	NO
L0000509	0	0.96618E-03	472240.0	3822557.0	838.6	3.40	4.51	3.16	NO
L0000510	0	0.96618E-03	472232.3	3822551.1	839.1	3.40	4.51	3.16	NO
L0000511	0	0.96618E-03	472224.5	3822545.3	839.3	3.40	4.51	3.16	NO
L0000512	0	0.96618E-03	472216.8	3822539.5	839.7	3.40	4.51	3.16	NO
L0000513	0	0.96618E-03	472209.0	3822533.7	840.2	3.40	4.51	3.16	NO
L0000514	0	0.96618E-03	472201.3	3822527.8	840.7	3.40	4.51	3.16	NO
L0000515	0	0.96618E-03	472193.5	3822522.0	841.2	3.40	4.51	3.16	NO
L0000516	0	0.96618E-03	472185.8	3822516.2	841.5	3.40	4.51	3.16	NO
L0000517	0	0.96618E-03	472178.0	3822510.4	841.9	3.40	4.51	3.16	NO
L0000518	0	0.96618E-03	472170.2	3822504.5	842.4	3.40	4.51	3.16	NO
L0000519	0	0.96618E-03	472162.5	3822498.7	842.9	3.40	4.51	3.16	NO
L0000520	0	0.96618E-03	472154.7	3822492.9	843.5	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000521	0	0.96618E-03	472147.0	3822487.1	843.7	3.40	4.51	3.16	NO	
L0000522	0	0.96618E-03	472139.2	3822481.2	844.0	3.40	4.51	3.16	NO	
L0000523	0	0.96618E-03	472131.5	3822475.4	844.5	3.40	4.51	3.16	NO	
L0000524	0	0.96618E-03	472123.7	3822469.6	845.1	3.40	4.51	3.16	NO	
L0000525	0	0.96618E-03	472116.0	3822463.7	845.7	3.40	4.51	3.16	NO	
L0000526	0	0.96618E-03	472108.2	3822457.9	846.1	3.40	4.51	3.16	NO	
L0000527	0	0.96618E-03	472100.5	3822452.1	846.4	3.40	4.51	3.16	NO	
L0000528	0	0.96618E-03	472092.7	3822446.3	846.9	3.40	4.51	3.16	NO	
L0000529	0	0.96618E-03	472084.9	3822440.4	847.4	3.40	4.51	3.16	NO	
L0000530	0	0.96618E-03	472077.2	3822434.6	847.9	3.40	4.51	3.16	NO	
L0000531	0	0.96618E-03	472069.4	3822428.8	848.3	3.40	4.51	3.16	NO	
L0000532	0	0.96618E-03	472061.7	3822423.0	848.6	3.40	4.51	3.16	NO	
L0000533	0	0.96618E-03	472053.9	3822417.1	849.0	3.40	4.51	3.16	NO	
L0000534	0	0.96618E-03	472046.2	3822411.3	849.5	3.40	4.51	3.16	NO	
L0000535	0	0.96618E-03	472038.4	3822405.5	850.0	3.40	4.51	3.16	NO	

L0000536	0	0.96618E-03	472030.7	3822399.7	850.6	3.40	4.51	3.16	NO
L0000537	0	0.96618E-03	472022.9	3822393.8	850.9	3.40	4.51	3.16	NO
L0000538	0	0.96618E-03	472015.2	3822388.0	851.3	3.40	4.51	3.16	NO
L0000539	0	0.96618E-03	472007.4	3822382.2	851.8	3.40	4.51	3.16	NO
L0000540	0	0.96618E-03	471999.6	3822376.3	852.3	3.40	4.51	3.16	NO
L0000541	0	0.96618E-03	471991.9	3822370.5	852.7	3.40	4.51	3.16	NO
L0000542	0	0.96618E-03	471984.1	3822364.7	853.1	3.40	4.51	3.16	NO
L0000543	0	0.96618E-03	471976.4	3822358.9	853.5	3.40	4.51	3.16	NO
L0000544	0	0.96618E-03	471968.6	3822353.0	853.9	3.40	4.51	3.16	NO
L0000545	0	0.96618E-03	471960.9	3822347.2	854.4	3.40	4.51	3.16	NO
L0000546	0	0.96618E-03	471953.1	3822341.4	854.9	3.40	4.51	3.16	NO
L0000547	0	0.96618E-03	471945.4	3822335.6	855.4	3.40	4.51	3.16	NO
L0000548	0	0.96618E-03	471937.6	3822329.7	855.7	3.40	4.51	3.16	NO
L0000549	0	0.96618E-03	471929.8	3822323.9	856.2	3.40	4.51	3.16	NO
L0000550	0	0.96618E-03	471922.1	3822318.1	856.6	3.40	4.51	3.16	NO
L0000551	0	0.96618E-03	471914.3	3822312.3	857.0	3.40	4.51	3.16	NO
L0000552	0	0.96618E-03	471906.6	3822306.4	857.6	3.40	4.51	3.16	NO
L0000553	0	0.96618E-03	471898.8	3822300.6	858.0	3.40	4.51	3.16	NO
L0000554	0	0.96618E-03	471891.1	3822294.8	858.4	3.40	4.51	3.16	NO
L0000555	0	0.96618E-03	471883.3	3822288.9	858.8	3.40	4.51	3.16	NO
L0000556	0	0.96618E-03	471875.6	3822283.1	859.4	3.40	4.51	3.16	NO
L0000557	0	0.96618E-03	471867.8	3822277.3	859.9	3.40	4.51	3.16	NO
L0000558	0	0.96618E-03	471860.1	3822271.5	860.4	3.40	4.51	3.16	NO
L0000559	0	0.96618E-03	471852.3	3822265.6	860.7	3.40	4.51	3.16	NO
L0000560	0	0.96618E-03	471844.5	3822259.8	861.0	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000561	0	0.96618E-03	471836.8	3822254.0	861.4	3.40	4.51	3.16	NO	
L0000562	0	0.96618E-03	471829.0	3822248.2	861.9	3.40	4.51	3.16	NO	
L0000563	0	0.96618E-03	471821.3	3822242.3	862.4	3.40	4.51	3.16	NO	
L0000564	0	0.96618E-03	471813.5	3822236.5	862.9	3.40	4.51	3.16	NO	
L0000565	0	0.96618E-03	471805.8	3822230.7	863.4	3.40	4.51	3.16	NO	
L0000566	0	0.96618E-03	471798.0	3822224.9	863.8	3.40	4.51	3.16	NO	
L0000567	0	0.96618E-03	471790.3	3822219.0	864.3	3.40	4.51	3.16	NO	
L0000568	0	0.96618E-03	471782.5	3822213.2	864.8	3.40	4.51	3.16	NO	
L0000569	0	0.96618E-03	471774.7	3822207.4	865.2	3.40	4.51	3.16	NO	
L0000570	0	0.96618E-03	471767.0	3822201.5	865.4	3.40	4.51	3.16	NO	
L0000571	0	0.96618E-03	471759.2	3822195.7	865.9	3.40	4.51	3.16	NO	
L0000572	0	0.96618E-03	471751.5	3822189.9	866.4	3.40	4.51	3.16	NO	
L0000573	0	0.96618E-03	471743.7	3822184.1	866.9	3.40	4.51	3.16	NO	
L0000574	0	0.96618E-03	471736.0	3822178.2	867.6	3.40	4.51	3.16	NO	
L0000575	0	0.96618E-03	471728.2	3822172.4	868.1	3.40	4.51	3.16	NO	

L0000576	0	0.96618E-03	471720.5	3822166.6	868.3	3.40	4.51	3.16	NO
L0000577	0	0.96618E-03	471712.7	3822160.8	868.8	3.40	4.51	3.16	NO
L0000578	0	0.96618E-03	471705.0	3822154.9	869.2	3.40	4.51	3.16	NO
L0000579	0	0.96618E-03	471697.2	3822149.1	869.7	3.40	4.51	3.16	NO
L0000580	0	0.96618E-03	471689.4	3822143.3	870.1	3.40	4.51	3.16	NO
L0000581	0	0.96618E-03	471681.7	3822137.5	870.5	3.40	4.51	3.16	NO
L0000582	0	0.96618E-03	471673.9	3822131.6	870.9	3.40	4.51	3.16	NO
L0000583	0	0.96618E-03	471666.2	3822125.8	871.4	3.40	4.51	3.16	NO
L0000584	0	0.96618E-03	471658.4	3822120.0	871.9	3.40	4.51	3.16	NO
L0000585	0	0.96618E-03	471650.7	3822114.1	872.5	3.40	4.51	3.16	NO
L0000586	0	0.96618E-03	471642.9	3822108.3	872.9	3.40	4.51	3.16	NO
L0000587	0	0.96618E-03	471635.2	3822102.5	873.5	3.40	4.51	3.16	NO
L0000588	0	0.96618E-03	471627.4	3822096.7	874.0	3.40	4.51	3.16	NO
L0000589	0	0.96618E-03	471619.6	3822090.8	874.3	3.40	4.51	3.16	NO
L0000590	0	0.96618E-03	471611.9	3822085.0	874.9	3.40	4.51	3.16	NO
L0000591	0	0.96618E-03	471606.0	3822077.3	875.3	3.40	4.51	3.16	NO
L0000592	0	0.96618E-03	471600.0	3822069.7	875.7	3.40	4.51	3.16	NO
L0000593	0	0.96618E-03	471594.1	3822062.0	875.9	3.40	4.51	3.16	NO
L0000594	0	0.96618E-03	471588.2	3822054.3	876.3	3.40	4.51	3.16	NO
L0000595	0	0.96618E-03	471582.2	3822046.7	876.7	3.40	4.51	3.16	NO
L0000596	0	0.96618E-03	471576.3	3822039.0	877.1	3.40	4.51	3.16	NO
L0000597	0	0.96618E-03	471570.3	3822031.3	877.6	3.40	4.51	3.16	NO
L0000598	0	0.96618E-03	471564.4	3822023.6	878.0	3.40	4.51	3.16	NO
L0000599	0	0.96618E-03	471558.5	3822016.0	878.4	3.40	4.51	3.16	NO
L0000600	0	0.96618E-03	471552.5	3822008.3	878.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000601	0	0.96618E-03	471546.6	3822000.6	879.2	3.40	4.51	3.16	NO	
L0000602	0	0.96618E-03	471540.6	3821993.0	879.5	3.40	4.51	3.16	NO	
L0000603	0	0.96618E-03	471534.7	3821985.3	879.9	3.40	4.51	3.16	NO	
L0000604	0	0.96618E-03	471528.8	3821977.6	880.2	3.40	4.51	3.16	NO	
L0000605	0	0.96618E-03	471522.8	3821970.0	880.5	3.40	4.51	3.16	NO	
L0000606	0	0.96618E-03	471516.9	3821962.3	880.9	3.40	4.51	3.16	NO	
L0000607	0	0.96618E-03	471511.0	3821954.6	881.4	3.40	4.51	3.16	NO	
L0000608	0	0.96618E-03	471505.6	3821946.6	881.6	3.40	4.51	3.16	NO	
L0000609	0	0.96618E-03	471501.4	3821937.8	881.6	3.40	4.51	3.16	NO	
L0000610	0	0.96618E-03	471497.3	3821929.1	881.8	3.40	4.51	3.16	NO	
L0000611	0	0.96618E-03	471493.1	3821920.3	882.0	3.40	4.51	3.16	NO	
L0000612	0	0.96618E-03	471488.9	3821911.6	882.1	3.40	4.51	3.16	NO	
L0000613	0	0.96618E-03	471484.7	3821902.8	882.3	3.40	4.51	3.16	NO	
L0000614	0	0.96618E-03	471480.6	3821894.0	882.5	3.40	4.51	3.16	NO	
L0000615	0	0.96618E-03	471476.4	3821885.3	882.7	3.40	4.51	3.16	NO	

L0000616	0	0.96618E-03	471472.2	3821876.5	882.8	3.40	4.51	3.16	NO
L0000617	0	0.96618E-03	471468.0	3821867.8	883.1	3.40	4.51	3.16	NO
L0000618	0	0.96618E-03	471463.8	3821859.0	883.1	3.40	4.51	3.16	NO
L0000619	0	0.96618E-03	471459.7	3821850.3	883.2	3.40	4.51	3.16	NO
L0000620	0	0.96618E-03	471455.5	3821841.5	883.3	3.40	4.51	3.16	NO
L0000621	0	0.96618E-03	471451.3	3821832.8	883.4	3.40	4.51	3.16	NO
L0000622	0	0.96618E-03	471447.1	3821824.0	883.5	3.40	4.51	3.16	NO
L0000623	0	0.96618E-03	471443.0	3821815.3	883.5	3.40	4.51	3.16	NO
L0000624	0	0.96618E-03	471438.8	3821806.5	883.7	3.40	4.51	3.16	NO
L0000625	0	0.96618E-03	471434.6	3821797.7	883.8	3.40	4.51	3.16	NO
L0000626	0	0.96618E-03	471430.4	3821789.0	883.9	3.40	4.51	3.16	NO
L0000627	0	0.96618E-03	471426.3	3821780.2	884.0	3.40	4.51	3.16	NO
L0000628	0	0.96618E-03	471422.1	3821771.5	884.0	3.40	4.51	3.16	NO
L0000629	0	0.96618E-03	471417.9	3821762.7	884.0	3.40	4.51	3.16	NO
L0000630	0	0.96618E-03	471413.7	3821754.0	884.0	3.40	4.51	3.16	NO
L0000631	0	0.96618E-03	471409.6	3821745.2	884.0	3.40	4.51	3.16	NO
L0000632	0	0.96618E-03	471405.4	3821736.5	884.0	3.40	4.51	3.16	NO
L0000633	0	0.96618E-03	471401.2	3821727.7	884.0	3.40	4.51	3.16	NO
L0000634	0	0.96618E-03	471397.0	3821718.9	884.0	3.40	4.51	3.16	NO
L0000635	0	0.96618E-03	471392.9	3821710.2	884.1	3.40	4.51	3.16	NO
L0000636	0	0.96618E-03	471388.7	3821701.4	884.1	3.40	4.51	3.16	NO
L0000637	0	0.96618E-03	471384.5	3821692.7	884.1	3.40	4.51	3.16	NO
L0000638	0	0.96618E-03	471380.3	3821683.9	884.0	3.40	4.51	3.16	NO
L0000639	0	0.96618E-03	471376.2	3821675.2	884.0	3.40	4.51	3.16	NO
L0000640	0	0.96618E-03	471372.0	3821666.4	884.0	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000641	0	0.96618E-03	471368.1	3821657.5	884.0	3.40	4.51	3.16	NO	
L0000642	0	0.96618E-03	471364.3	3821648.6	884.1	3.40	4.51	3.16	NO	
L0000643	0	0.96618E-03	471360.4	3821639.7	884.1	3.40	4.51	3.16	NO	
L0000644	0	0.96618E-03	471356.6	3821630.8	884.1	3.40	4.51	3.16	NO	
L0000645	0	0.96618E-03	471352.8	3821621.9	884.1	3.40	4.51	3.16	NO	
L0000646	0	0.96618E-03	471348.9	3821613.0	884.1	3.40	4.51	3.16	NO	
L0000647	0	0.96618E-03	471345.1	3821604.1	884.1	3.40	4.51	3.16	NO	
L0000648	0	0.96618E-03	471341.2	3821595.2	884.2	3.40	4.51	3.16	NO	
L0000649	0	0.96618E-03	471337.4	3821586.3	884.2	3.40	4.51	3.16	NO	
L0000650	0	0.96618E-03	471333.6	3821577.3	884.2	3.40	4.51	3.16	NO	
L0000651	0	0.96618E-03	471329.7	3821568.4	884.2	3.40	4.51	3.16	NO	
L0000652	0	0.96618E-03	471325.9	3821559.5	884.2	3.40	4.51	3.16	NO	
L0000653	0	0.96618E-03	471322.1	3821550.6	884.2	3.40	4.51	3.16	NO	
L0000654	0	0.96618E-03	471318.2	3821541.7	884.2	3.40	4.51	3.16	NO	
L0000655	0	0.96618E-03	471314.4	3821532.8	884.3	3.40	4.51	3.16	NO	

L0000656	0	0.96618E-03	471310.5	3821523.9	884.3	3.40	4.51	3.16	NO
L0000657	0	0.96618E-03	471306.7	3821515.0	884.4	3.40	4.51	3.16	NO
L0000658	0	0.96618E-03	471302.9	3821506.1	884.3	3.40	4.51	3.16	NO
L0000659	0	0.96618E-03	471299.0	3821497.2	884.3	3.40	4.51	3.16	NO
L0000660	0	0.96618E-03	471295.2	3821488.3	884.3	3.40	4.51	3.16	NO
L0000661	0	0.96618E-03	471291.4	3821479.4	884.3	3.40	4.51	3.16	NO
L0000662	0	0.96618E-03	471287.5	3821470.4	884.4	3.40	4.51	3.16	NO
L0000663	0	0.96618E-03	471283.7	3821461.5	884.4	3.40	4.51	3.16	NO
L0000664	0	0.96618E-03	471279.8	3821452.6	884.5	3.40	4.51	3.16	NO
L0000665	0	0.96618E-03	471276.0	3821443.7	884.4	3.40	4.51	3.16	NO
L0000666	0	0.96618E-03	471272.2	3821434.8	884.4	3.40	4.51	3.16	NO
L0000667	0	0.96618E-03	471268.3	3821425.9	884.4	3.40	4.51	3.16	NO
L0000668	0	0.96618E-03	471264.5	3821417.0	884.4	3.40	4.51	3.16	NO
L0000669	0	0.96618E-03	471260.7	3821408.1	884.5	3.40	4.51	3.16	NO
L0000670	0	0.96618E-03	471256.8	3821399.2	884.5	3.40	4.51	3.16	NO
L0000671	0	0.96618E-03	471253.0	3821390.3	884.5	3.40	4.51	3.16	NO
L0000672	0	0.96618E-03	471249.1	3821381.4	884.5	3.40	4.51	3.16	NO
L0000673	0	0.96618E-03	471245.3	3821372.4	884.4	3.40	4.51	3.16	NO
L0000674	0	0.96618E-03	471241.5	3821363.5	884.5	3.40	4.51	3.16	NO
L0000675	0	0.96618E-03	471237.6	3821354.6	884.5	3.40	4.51	3.16	NO
L0000676	0	0.96618E-03	471233.8	3821345.7	884.6	3.40	4.51	3.16	NO
L0000677	0	0.96618E-03	471230.0	3821336.8	884.6	3.40	4.51	3.16	NO
L0000678	0	0.96618E-03	471226.1	3821327.9	884.6	3.40	4.51	3.16	NO
L0000679	0	0.96618E-03	471222.3	3821319.0	884.6	3.40	4.51	3.16	NO
L0000680	0	0.96618E-03	471218.4	3821310.1	884.5	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000681	0	0.96618E-03	471214.6	3821301.2	884.6	3.40	4.51	3.16	NO	
L0000682	0	0.96618E-03	471210.8	3821292.3	884.6	3.40	4.51	3.16	NO	
L0000683	0	0.96618E-03	471206.9	3821283.4	884.6	3.40	4.51	3.16	NO	
L0000684	0	0.96618E-03	471203.1	3821274.5	884.4	3.40	4.51	3.16	NO	
L0000685	0	0.96618E-03	471199.3	3821265.5	884.5	3.40	4.51	3.16	NO	
L0000686	0	0.96618E-03	471195.4	3821256.6	884.6	3.40	4.51	3.16	NO	
L0000687	0	0.96618E-03	471191.6	3821247.7	884.6	3.40	4.51	3.16	NO	
L0000688	0	0.96618E-03	471187.7	3821238.8	884.7	3.40	4.51	3.16	NO	
L0000689	0	0.96618E-03	471183.9	3821229.9	884.8	3.40	4.51	3.16	NO	
L0000690	0	0.96618E-03	471180.1	3821221.0	884.8	3.40	4.51	3.16	NO	
L0000691	0	0.96618E-03	471176.2	3821212.1	884.7	3.40	4.51	3.16	NO	
L0000692	0	0.96618E-03	471172.4	3821203.2	884.7	3.40	4.51	3.16	NO	
L0000693	0	0.96618E-03	471168.6	3821194.3	884.7	3.40	4.51	3.16	NO	
L0000694	0	0.96618E-03	471164.7	3821185.4	884.7	3.40	4.51	3.16	NO	
L0000695	0	0.96618E-03	471160.9	3821176.5	884.8	3.40	4.51	3.16	NO	

L0000696	0	0.96618E-03	471157.0	3821167.6	884.9	3.40	4.51	3.16	NO
L0000697	0	0.96618E-03	471153.2	3821158.6	884.8	3.40	4.51	3.16	NO
L0000698	0	0.96618E-03	471149.4	3821149.7	884.8	3.40	4.51	3.16	NO
L0000699	0	0.96618E-03	471145.5	3821140.8	884.8	3.40	4.51	3.16	NO
L0000700	0	0.96618E-03	471141.7	3821131.9	884.8	3.40	4.51	3.16	NO
L0000701	0	0.96618E-03	471137.9	3821123.0	884.8	3.40	4.51	3.16	NO
L0000702	0	0.96618E-03	471134.0	3821114.1	884.9	3.40	4.51	3.16	NO
L0000703	0	0.96618E-03	471130.2	3821105.2	885.0	3.40	4.51	3.16	NO
L0000704	0	0.96618E-03	471126.4	3821096.3	884.9	3.40	4.51	3.16	NO
L0000705	0	0.96618E-03	471122.8	3821087.3	884.8	3.40	4.51	3.16	NO
L0000706	0	0.96618E-03	471119.2	3821078.3	884.9	3.40	4.51	3.16	NO
L0000707	0	0.96618E-03	471115.6	3821069.2	884.9	3.40	4.51	3.16	NO
L0000708	0	0.96618E-03	471112.0	3821060.2	884.9	3.40	4.51	3.16	NO
L0000709	0	0.96618E-03	471108.4	3821051.2	885.0	3.40	4.51	3.16	NO
L0000710	0	0.96618E-03	471104.8	3821042.2	885.1	3.40	4.51	3.16	NO
L0000711	0	0.96618E-03	471101.2	3821033.2	885.0	3.40	4.51	3.16	NO
L0000712	0	0.96618E-03	471097.6	3821024.2	885.0	3.40	4.51	3.16	NO
L0000713	0	0.96618E-03	471094.0	3821015.2	885.0	3.40	4.51	3.16	NO
L0000714	0	0.96618E-03	471090.5	3821006.2	885.0	3.40	4.51	3.16	NO
L0000715	0	0.96618E-03	471086.9	3820997.2	885.0	3.40	4.51	3.16	NO
L0000716	0	0.96618E-03	471083.3	3820988.1	885.1	3.40	4.51	3.16	NO
L0000717	0	0.96618E-03	471079.7	3820979.1	885.2	3.40	4.51	3.16	NO
L0000718	0	0.96618E-03	471076.1	3820970.1	885.2	3.40	4.51	3.16	NO
L0000719	0	0.96618E-03	471072.5	3820961.1	885.2	3.40	4.51	3.16	NO
L0000720	0	0.96618E-03	471068.9	3820952.1	885.2	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000721	0	0.96618E-03	471065.3	3820943.1	885.3	3.40	4.51	3.16	NO	
L0000722	0	0.96618E-03	471061.7	3820934.1	885.3	3.40	4.51	3.16	NO	
L0000723	0	0.96618E-03	471058.1	3820925.1	885.4	3.40	4.51	3.16	NO	
L0000724	0	0.96618E-03	471054.5	3820916.1	885.5	3.40	4.51	3.16	NO	
L0000725	0	0.96618E-03	471051.0	3820907.0	885.6	3.40	4.51	3.16	NO	
L0000726	0	0.96618E-03	471047.4	3820898.0	885.6	3.40	4.51	3.16	NO	
L0000727	0	0.96618E-03	471043.8	3820889.0	885.7	3.40	4.51	3.16	NO	
L0000728	0	0.96618E-03	471040.2	3820880.0	885.9	3.40	4.51	3.16	NO	
L0000729	0	0.96618E-03	471036.6	3820871.0	886.1	3.40	4.51	3.16	NO	
L0000730	0	0.96618E-03	471033.0	3820862.0	886.1	3.40	4.51	3.16	NO	
L0000731	0	0.96618E-03	471029.4	3820853.0	886.1	3.40	4.51	3.16	NO	
L0000732	0	0.96618E-03	471025.8	3820844.0	886.1	3.40	4.51	3.16	NO	
L0000733	0	0.96618E-03	471022.2	3820835.0	886.1	3.40	4.51	3.16	NO	
L0000734	0	0.96618E-03	471018.6	3820825.9	886.2	3.40	4.51	3.16	NO	
L0000735	0	0.96618E-03	471015.1	3820816.9	886.3	3.40	4.51	3.16	NO	

L0000736	0	0.96618E-03	471011.5	3820807.9	886.5	3.40	4.51	3.16	NO
L0000737	0	0.96618E-03	471007.9	3820798.9	886.7	3.40	4.51	3.16	NO
L0000738	0	0.96618E-03	471004.3	3820789.9	886.8	3.40	4.51	3.16	NO
L0000739	0	0.96618E-03	471000.7	3820780.9	886.8	3.40	4.51	3.16	NO
L0000740	0	0.96618E-03	470997.1	3820771.9	886.9	3.40	4.51	3.16	NO
L0000741	0	0.96618E-03	470993.5	3820762.9	887.0	3.40	4.51	3.16	NO
L0000742	0	0.96618E-03	470989.9	3820753.9	887.1	3.40	4.51	3.16	NO
L0000743	0	0.96618E-03	470986.3	3820744.8	887.2	3.40	4.51	3.16	NO
L0000744	0	0.96618E-03	470982.7	3820735.8	887.4	3.40	4.51	3.16	NO
L0000745	0	0.96618E-03	470979.1	3820726.8	887.4	3.40	4.51	3.16	NO
L0000746	0	0.96618E-03	470975.6	3820717.8	887.5	3.40	4.51	3.16	NO
L0000747	0	0.96618E-03	470972.0	3820708.8	887.6	3.40	4.51	3.16	NO
L0000748	0	0.96618E-03	470968.4	3820699.8	887.6	3.40	4.51	3.16	NO
L0000749	0	0.96618E-03	470964.8	3820690.8	887.7	3.40	4.51	3.16	NO
L0000750	0	0.96618E-03	470961.2	3820681.8	887.8	3.40	4.51	3.16	NO
L0000751	0	0.96618E-03	470957.6	3820672.8	888.0	3.40	4.51	3.16	NO
L0000752	0	0.96618E-03	470954.0	3820663.7	888.2	3.40	4.51	3.16	NO
L0000753	0	0.96618E-03	470950.4	3820654.7	888.2	3.40	4.51	3.16	NO
L0000754	0	0.96618E-03	470946.8	3820645.7	888.3	3.40	4.51	3.16	NO
L0000755	0	0.96618E-03	470943.2	3820636.7	888.4	3.40	4.51	3.16	NO
L0000756	0	0.96618E-03	470939.7	3820627.7	888.5	3.40	4.51	3.16	NO
L0000757	0	0.96618E-03	470936.1	3820618.7	888.6	3.40	4.51	3.16	NO
L0000758	0	0.96618E-03	470932.5	3820609.7	888.8	3.40	4.51	3.16	NO
L0000759	0	0.96618E-03	470928.9	3820600.7	888.9	3.40	4.51	3.16	NO
L0000760	0	0.96618E-03	470925.3	3820591.7	888.9	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000761	0	0.96618E-03	470921.7	3820582.6	889.0	3.40	4.51	3.16	NO	
L0000762	0	0.96618E-03	470918.1	3820573.6	889.5	3.40	4.51	3.16	NO	
L0000763	0	0.96618E-03	470914.5	3820564.6	889.8	3.40	4.51	3.16	NO	
L0000764	0	0.96618E-03	470910.9	3820555.6	890.0	3.40	4.51	3.16	NO	
L0000765	0	0.96618E-03	470907.3	3820546.6	890.0	3.40	4.51	3.16	NO	
L0000766	0	0.96618E-03	470903.8	3820537.6	889.9	3.40	4.51	3.16	NO	
L0000767	0	0.96618E-03	470900.2	3820528.6	889.6	3.40	4.51	3.16	NO	
L0000768	0	0.96618E-03	470896.6	3820519.6	889.8	3.40	4.51	3.16	NO	
L0000769	0	0.96618E-03	470893.0	3820510.6	890.3	3.40	4.51	3.16	NO	
L0000770	0	0.96618E-03	470889.4	3820501.5	890.7	3.40	4.51	3.16	NO	
L0000771	0	0.96618E-03	470885.8	3820492.5	890.9	3.40	4.51	3.16	NO	
L0000772	0	0.96618E-03	470882.2	3820483.5	890.8	3.40	4.51	3.16	NO	
L0000773	0	0.96618E-03	470878.6	3820474.5	890.6	3.40	4.51	3.16	NO	
L0000774	0	0.96618E-03	470875.0	3820465.5	890.3	3.40	4.51	3.16	NO	
L0000775	0	0.96618E-03	470871.4	3820456.5	890.6	3.40	4.51	3.16	NO	

L0000776	0	0.96618E-03	470867.8	3820447.5	891.2	3.40	4.51	3.16	NO
L0000777	0	0.96618E-03	470864.3	3820438.5	891.6	3.40	4.51	3.16	NO
L0000778	0	0.96618E-03	470860.7	3820429.5	891.8	3.40	4.51	3.16	NO
L0000779	0	0.96618E-03	470857.1	3820420.4	891.5	3.40	4.51	3.16	NO
L0000780	0	0.96618E-03	470853.5	3820411.4	891.3	3.40	4.51	3.16	NO
L0000781	0	0.96618E-03	470849.9	3820402.4	891.0	3.40	4.51	3.16	NO
L0000782	0	0.96618E-03	470846.3	3820393.4	891.3	3.40	4.51	3.16	NO
L0000783	0	0.96618E-03	470842.7	3820384.4	891.8	3.40	4.51	3.16	NO
L0000784	0	0.96618E-03	470839.1	3820375.4	892.1	3.40	4.51	3.16	NO
L0000785	0	0.96618E-03	470835.5	3820366.4	892.1	3.40	4.51	3.16	NO
L0000786	0	0.96618E-03	470831.9	3820357.4	891.8	3.40	4.51	3.16	NO
L0000787	0	0.96618E-03	470828.4	3820348.4	891.6	3.40	4.51	3.16	NO
L0000788	0	0.96618E-03	470824.8	3820339.3	891.4	3.40	4.51	3.16	NO
L0000789	0	0.96618E-03	470821.2	3820330.3	891.2	3.40	4.51	3.16	NO
L0000790	0	0.96618E-03	470817.6	3820321.3	891.0	3.40	4.51	3.16	NO
L0000791	0	0.96618E-03	470814.0	3820312.3	891.0	3.40	4.51	3.16	NO
L0000792	0	0.96618E-03	470810.4	3820303.3	891.1	3.40	4.51	3.16	NO
L0000793	0	0.96618E-03	470806.8	3820294.3	891.4	3.40	4.51	3.16	NO
L0000794	0	0.96618E-03	470803.2	3820285.3	891.6	3.40	4.51	3.16	NO
L0000795	0	0.96618E-03	470799.6	3820276.3	891.9	3.40	4.51	3.16	NO
L0000796	0	0.96618E-03	470796.0	3820267.3	891.9	3.40	4.51	3.16	NO
L0000797	0	0.96618E-03	470792.5	3820258.2	891.8	3.40	4.51	3.16	NO
L0000798	0	0.96618E-03	470788.9	3820249.2	891.8	3.40	4.51	3.16	NO
L0000799	0	0.96618E-03	470785.3	3820240.2	891.9	3.40	4.51	3.16	NO
L0000800	0	0.96618E-03	470781.7	3820231.2	892.1	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000801	0	0.96618E-03	470778.1	3820222.2	892.3	3.40	4.51	3.16	NO	
L0000802	0	0.96618E-03	470774.5	3820213.2	892.7	3.40	4.51	3.16	NO	
L0000803	0	0.96618E-03	470770.9	3820204.2	893.0	3.40	4.51	3.16	NO	
L0000804	0	0.96618E-03	470767.3	3820195.2	893.1	3.40	4.51	3.16	NO	
L0000805	0	0.96618E-03	470763.7	3820186.2	893.1	3.40	4.51	3.16	NO	
L0000806	0	0.96618E-03	470760.1	3820177.1	893.0	3.40	4.51	3.16	NO	
L0000807	0	0.96618E-03	470756.5	3820168.1	893.0	3.40	4.51	3.16	NO	
L0000808	0	0.96618E-03	470753.0	3820159.1	893.2	3.40	4.51	3.16	NO	
L0000809	0	0.96618E-03	470749.4	3820150.1	893.5	3.40	4.51	3.16	NO	
L0000810	0	0.96618E-03	470745.8	3820141.1	893.9	3.40	4.51	3.16	NO	
L0000811	0	0.96618E-03	470742.2	3820132.1	894.0	3.40	4.51	3.16	NO	
L0000812	0	0.96618E-03	470738.6	3820123.1	894.1	3.40	4.51	3.16	NO	
L0000813	0	0.96618E-03	470735.0	3820114.1	894.2	3.40	4.51	3.16	NO	
L0000814	0	0.96618E-03	470731.4	3820105.1	894.3	3.40	4.51	3.16	NO	
L0000815	0	0.96618E-03	470727.8	3820096.0	894.4	3.40	4.51	3.16	NO	

L0000816	0	0.96618E-03	470724.2	3820087.0	894.5	3.40	4.51	3.16	NO
L0000817	0	0.96618E-03	470720.6	3820078.0	894.8	3.40	4.51	3.16	NO
L0000818	0	0.96618E-03	470717.1	3820069.0	894.9	3.40	4.51	3.16	NO
L0000819	0	0.96618E-03	470713.5	3820060.0	895.1	3.40	4.51	3.16	NO
L0000820	0	0.96618E-03	470709.9	3820051.0	895.1	3.40	4.51	3.16	NO
L0000821	0	0.96618E-03	470706.3	3820042.0	895.2	3.40	4.51	3.16	NO
L0000822	0	0.96618E-03	470702.7	3820033.0	895.3	3.40	4.51	3.16	NO
L0000823	0	0.96618E-03	470699.1	3820024.0	895.4	3.40	4.51	3.16	NO
L0000824	0	0.96618E-03	470695.5	3820014.9	895.5	3.40	4.51	3.16	NO
L0000825	0	0.96618E-03	470691.9	3820005.9	895.6	3.40	4.51	3.16	NO
L0000826	0	0.96618E-03	470688.3	3819996.9	895.6	3.40	4.51	3.16	NO
L0000827	0	0.96618E-03	470684.7	3819987.9	895.7	3.40	4.51	3.16	NO
L0000828	0	0.96618E-03	470681.1	3819978.9	895.7	3.40	4.51	3.16	NO
L0000829	0	0.28902E-03	475273.9	3826374.1	879.1	3.40	4.51	3.16	NO
L0000830	0	0.28902E-03	475279.1	3826382.3	879.3	3.40	4.51	3.16	NO
L0000831	0	0.28902E-03	475284.3	3826390.4	879.4	3.40	4.51	3.16	NO
L0000832	0	0.28902E-03	475289.6	3826398.6	879.6	3.40	4.51	3.16	NO
L0000833	0	0.28902E-03	475294.8	3826406.8	879.8	3.40	4.51	3.16	NO
L0000834	0	0.28902E-03	475300.0	3826414.9	879.9	3.40	4.51	3.16	NO
L0000835	0	0.28902E-03	475305.3	3826423.1	880.1	3.40	4.51	3.16	NO
L0000836	0	0.28902E-03	475310.5	3826431.3	880.2	3.40	4.51	3.16	NO
L0000837	0	0.28902E-03	475315.7	3826439.4	880.3	3.40	4.51	3.16	NO
L0000838	0	0.28902E-03	475321.0	3826447.6	880.4	3.40	4.51	3.16	NO
L0000839	0	0.28902E-03	475326.2	3826455.8	880.4	3.40	4.51	3.16	NO
L0000840	0	0.28902E-03	475331.4	3826463.9	880.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000841	0	0.28902E-03	475336.7	3826472.1	881.2	3.40	4.51	3.16	NO	
L0000842	0	0.28902E-03	475341.9	3826480.3	881.5	3.40	4.51	3.16	NO	
L0000843	0	0.28902E-03	475347.1	3826488.5	881.8	3.40	4.51	3.16	NO	
L0000844	0	0.28902E-03	475352.4	3826496.6	881.7	3.40	4.51	3.16	NO	
L0000845	0	0.28902E-03	475357.6	3826504.8	881.6	3.40	4.51	3.16	NO	
L0000846	0	0.28902E-03	475362.8	3826513.0	881.7	3.40	4.51	3.16	NO	
L0000847	0	0.28902E-03	475368.1	3826521.1	881.9	3.40	4.51	3.16	NO	
L0000848	0	0.28902E-03	475373.3	3826529.3	881.8	3.40	4.51	3.16	NO	
L0000849	0	0.28902E-03	475378.5	3826537.5	881.8	3.40	4.51	3.16	NO	
L0000850	0	0.28902E-03	475383.8	3826545.6	881.7	3.40	4.51	3.16	NO	
L0000851	0	0.28902E-03	475389.0	3826553.8	881.9	3.40	4.51	3.16	NO	
L0000852	0	0.28902E-03	475394.2	3826562.0	882.0	3.40	4.51	3.16	NO	
L0000853	0	0.28902E-03	475399.5	3826570.1	882.0	3.40	4.51	3.16	NO	
L0000854	0	0.28902E-03	475404.7	3826578.3	882.0	3.40	4.51	3.16	NO	
L0000855	0	0.28902E-03	475409.9	3826586.5	882.4	3.40	4.51	3.16	NO	

L0000856	0	0.28902E-03	475415.2	3826594.6	882.6	3.40	4.51	3.16	NO
L0000857	0	0.28902E-03	475420.4	3826602.8	882.7	3.40	4.51	3.16	NO
L0000858	0	0.28902E-03	475425.6	3826611.0	882.7	3.40	4.51	3.16	NO
L0000859	0	0.28902E-03	475430.9	3826619.1	882.8	3.40	4.51	3.16	NO
L0000860	0	0.28902E-03	475436.1	3826627.3	883.1	3.40	4.51	3.16	NO
L0000861	0	0.28902E-03	475441.3	3826635.5	883.4	3.40	4.51	3.16	NO
L0000862	0	0.28902E-03	475446.6	3826643.6	883.5	3.40	4.51	3.16	NO
L0000863	0	0.28902E-03	475451.8	3826651.8	883.5	3.40	4.51	3.16	NO
L0000864	0	0.28902E-03	475457.0	3826660.0	883.5	3.40	4.51	3.16	NO
L0000865	0	0.28902E-03	475462.3	3826668.1	883.7	3.40	4.51	3.16	NO
L0000866	0	0.28902E-03	475467.5	3826676.3	883.9	3.40	4.51	3.16	NO
L0000867	0	0.28902E-03	475472.7	3826684.5	883.9	3.40	4.51	3.16	NO
L0000868	0	0.28902E-03	475478.0	3826692.6	883.6	3.40	4.51	3.16	NO
L0000869	0	0.28902E-03	475483.2	3826700.8	883.4	3.40	4.51	3.16	NO
L0000870	0	0.28902E-03	475488.4	3826709.0	883.8	3.40	4.51	3.16	NO
L0000871	0	0.28902E-03	475493.7	3826717.1	883.8	3.40	4.51	3.16	NO
L0000872	0	0.28902E-03	475498.9	3826725.3	883.6	3.40	4.51	3.16	NO
L0000873	0	0.28902E-03	475504.1	3826733.5	883.2	3.40	4.51	3.16	NO
L0000874	0	0.28902E-03	475509.4	3826741.6	883.6	3.40	4.51	3.16	NO
L0000875	0	0.28902E-03	475514.6	3826749.8	883.7	3.40	4.51	3.16	NO
L0000876	0	0.28902E-03	475519.8	3826758.0	883.6	3.40	4.51	3.16	NO
L0000877	0	0.28902E-03	475525.1	3826766.1	883.4	3.40	4.51	3.16	NO
L0000878	0	0.28902E-03	475530.3	3826774.3	883.4	3.40	4.51	3.16	NO
L0000879	0	0.28902E-03	475535.5	3826782.5	883.6	3.40	4.51	3.16	NO
L0000880	0	0.28902E-03	475540.8	3826790.6	883.5	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000881	0	0.28902E-03	475546.0	3826798.8	883.6	3.40	4.51	3.16	NO	
L0000882	0	0.28902E-03	475551.2	3826807.0	883.7	3.40	4.51	3.16	NO	
L0000883	0	0.28902E-03	475556.5	3826815.1	883.7	3.40	4.51	3.16	NO	
L0000884	0	0.28902E-03	475561.7	3826823.3	883.8	3.40	4.51	3.16	NO	
L0000885	0	0.28902E-03	475566.9	3826831.5	883.9	3.40	4.51	3.16	NO	
L0000886	0	0.28902E-03	475572.2	3826839.6	884.0	3.40	4.51	3.16	NO	
L0000887	0	0.28902E-03	475577.4	3826847.8	884.1	3.40	4.51	3.16	NO	
L0000888	0	0.28902E-03	475582.6	3826856.0	884.1	3.40	4.51	3.16	NO	
L0000889	0	0.28902E-03	475587.9	3826864.1	884.2	3.40	4.51	3.16	NO	
L0000890	0	0.28902E-03	475593.1	3826872.3	884.3	3.40	4.51	3.16	NO	
L0000891	0	0.28902E-03	475598.3	3826880.5	884.4	3.40	4.51	3.16	NO	
L0000892	0	0.28902E-03	475603.6	3826888.6	884.5	3.40	4.51	3.16	NO	
L0000893	0	0.28902E-03	475608.8	3826896.8	884.6	3.40	4.51	3.16	NO	
L0000894	0	0.28902E-03	475614.0	3826905.0	884.7	3.40	4.51	3.16	NO	
L0000895	0	0.28902E-03	475619.3	3826913.1	884.8	3.40	4.51	3.16	NO	

L0000896	0	0.28902E-03	475624.5	3826921.3	884.8	3.40	4.51	3.16	NO
L0000897	0	0.28902E-03	475629.7	3826929.5	884.9	3.40	4.51	3.16	NO
L0000898	0	0.28902E-03	475635.0	3826937.6	885.1	3.40	4.51	3.16	NO
L0000899	0	0.28902E-03	475640.2	3826945.8	885.1	3.40	4.51	3.16	NO
L0000900	0	0.28902E-03	475645.5	3826954.0	885.1	3.40	4.51	3.16	NO
L0000901	0	0.28902E-03	475650.7	3826962.1	885.1	3.40	4.51	3.16	NO
L0000902	0	0.28902E-03	475655.9	3826970.3	885.3	3.40	4.51	3.16	NO
L0000903	0	0.28902E-03	475661.2	3826978.5	885.4	3.40	4.51	3.16	NO
L0000904	0	0.28902E-03	475666.4	3826986.6	885.2	3.40	4.51	3.16	NO
L0000905	0	0.28902E-03	475671.8	3826994.7	885.2	3.40	4.51	3.16	NO
L0000906	0	0.28902E-03	475677.3	3827002.6	885.4	3.40	4.51	3.16	NO
L0000907	0	0.28902E-03	475682.9	3827010.6	885.6	3.40	4.51	3.16	NO
L0000908	0	0.28902E-03	475688.5	3827018.5	885.6	3.40	4.51	3.16	NO
L0000909	0	0.28902E-03	475694.1	3827026.5	885.7	3.40	4.51	3.16	NO
L0000910	0	0.28902E-03	475699.6	3827034.4	885.8	3.40	4.51	3.16	NO
L0000911	0	0.28902E-03	475705.2	3827042.3	885.8	3.40	4.51	3.16	NO
L0000912	0	0.28902E-03	475710.8	3827050.3	886.0	3.40	4.51	3.16	NO
L0000913	0	0.28902E-03	475716.3	3827058.2	886.0	3.40	4.51	3.16	NO
L0000914	0	0.28902E-03	475721.9	3827066.2	886.0	3.40	4.51	3.16	NO
L0000915	0	0.28902E-03	475727.5	3827074.1	886.0	3.40	4.51	3.16	NO
L0000916	0	0.28902E-03	475733.0	3827082.1	886.0	3.40	4.51	3.16	NO
L0000917	0	0.28902E-03	475738.6	3827090.0	886.2	3.40	4.51	3.16	NO
L0000918	0	0.28902E-03	475744.2	3827097.9	886.1	3.40	4.51	3.16	NO
L0000919	0	0.28902E-03	475749.7	3827105.9	885.9	3.40	4.51	3.16	NO
L0000920	0	0.28902E-03	475755.3	3827113.8	885.9	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000921	0	0.28902E-03	475760.9	3827121.8	886.3	3.40	4.51	3.16	NO	
L0000922	0	0.28902E-03	475766.5	3827129.7	886.3	3.40	4.51	3.16	NO	
L0000923	0	0.28902E-03	475772.0	3827137.6	885.9	3.40	4.51	3.16	NO	
L0000924	0	0.28902E-03	475777.6	3827145.6	885.8	3.40	4.51	3.16	NO	
L0000925	0	0.28902E-03	475783.2	3827153.5	886.2	3.40	4.51	3.16	NO	
L0000926	0	0.28902E-03	475788.7	3827161.5	886.6	3.40	4.51	3.16	NO	
L0000927	0	0.28902E-03	475794.3	3827169.4	886.2	3.40	4.51	3.16	NO	
L0000928	0	0.28902E-03	475799.9	3827177.4	886.0	3.40	4.51	3.16	NO	
L0000929	0	0.28902E-03	475805.4	3827185.3	886.2	3.40	4.51	3.16	NO	
L0000930	0	0.28902E-03	475811.0	3827193.2	886.6	3.40	4.51	3.16	NO	
L0000931	0	0.28902E-03	475816.6	3827201.2	886.4	3.40	4.51	3.16	NO	
L0000932	0	0.28902E-03	475822.2	3827209.1	886.3	3.40	4.51	3.16	NO	
L0000933	0	0.28902E-03	475827.7	3827217.1	886.4	3.40	4.51	3.16	NO	
L0000934	0	0.28902E-03	475833.3	3827225.0	886.5	3.40	4.51	3.16	NO	
L0000935	0	0.28902E-03	475838.9	3827232.9	886.4	3.40	4.51	3.16	NO	

L0000936	0	0.28902E-03	475844.4	3827240.9	886.3	3.40	4.51	3.16	NO
L0000937	0	0.28902E-03	475850.0	3827248.8	886.3	3.40	4.51	3.16	NO
L0000938	0	0.28902E-03	475855.6	3827256.8	886.4	3.40	4.51	3.16	NO
L0000939	0	0.28902E-03	475861.1	3827264.7	886.5	3.40	4.51	3.16	NO
L0000940	0	0.28902E-03	475866.7	3827272.7	886.4	3.40	4.51	3.16	NO
L0000941	0	0.28902E-03	475872.3	3827280.6	886.4	3.40	4.51	3.16	NO
L0000942	0	0.28902E-03	475877.8	3827288.5	886.4	3.40	4.51	3.16	NO
L0000943	0	0.28902E-03	475883.4	3827296.5	886.5	3.40	4.51	3.16	NO
L0000944	0	0.28902E-03	475889.0	3827304.4	886.5	3.40	4.51	3.16	NO
L0000945	0	0.28902E-03	475894.6	3827312.4	886.5	3.40	4.51	3.16	NO
L0000946	0	0.28902E-03	475900.1	3827320.3	886.4	3.40	4.51	3.16	NO
L0000947	0	0.28902E-03	475905.7	3827328.2	886.4	3.40	4.51	3.16	NO
L0000948	0	0.28902E-03	475911.3	3827336.2	886.5	3.40	4.51	3.16	NO
L0000949	0	0.28902E-03	475916.8	3827344.1	886.7	3.40	4.51	3.16	NO
L0000950	0	0.28902E-03	475922.4	3827352.1	886.3	3.40	4.51	3.16	NO
L0000951	0	0.28902E-03	475928.0	3827360.0	886.1	3.40	4.51	3.16	NO
L0000952	0	0.28902E-03	475933.5	3827368.0	886.2	3.40	4.51	3.16	NO
L0000953	0	0.28902E-03	475939.1	3827375.9	886.5	3.40	4.51	3.16	NO
L0000954	0	0.28902E-03	475944.7	3827383.8	886.0	3.40	4.51	3.16	NO
L0000955	0	0.28902E-03	475950.3	3827391.8	885.6	3.40	4.51	3.16	NO
L0000956	0	0.28902E-03	475955.8	3827399.7	885.6	3.40	4.51	3.16	NO
L0000957	0	0.28902E-03	475961.4	3827407.7	886.0	3.40	4.51	3.16	NO
L0000958	0	0.28902E-03	475967.0	3827415.6	886.1	3.40	4.51	3.16	NO
L0000959	0	0.28902E-03	475972.5	3827423.5	885.8	3.40	4.51	3.16	NO
L0000960	0	0.28902E-03	475978.1	3827431.5	885.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000961	0	0.28902E-03	475983.7	3827439.4	886.0	3.40	4.51	3.16	NO	
L0000962	0	0.28902E-03	475989.2	3827447.4	886.1	3.40	4.51	3.16	NO	
L0000963	0	0.28902E-03	475994.8	3827455.3	886.1	3.40	4.51	3.16	NO	
L0000964	0	0.28902E-03	476000.4	3827463.3	886.1	3.40	4.51	3.16	NO	
L0000965	0	0.28902E-03	476005.9	3827471.2	886.0	3.40	4.51	3.16	NO	
L0000966	0	0.28902E-03	476011.5	3827479.1	886.0	3.40	4.51	3.16	NO	
L0000967	0	0.28902E-03	476017.1	3827487.1	886.4	3.40	4.51	3.16	NO	
L0000968	0	0.28902E-03	476022.7	3827495.0	886.4	3.40	4.51	3.16	NO	
L0000969	0	0.28902E-03	476028.2	3827503.0	886.4	3.40	4.51	3.16	NO	
L0000970	0	0.28902E-03	476033.8	3827510.9	886.4	3.40	4.51	3.16	NO	
L0000971	0	0.28902E-03	476039.4	3827518.8	886.3	3.40	4.51	3.16	NO	
L0000972	0	0.28902E-03	476044.9	3827526.8	886.2	3.40	4.51	3.16	NO	
L0000973	0	0.28902E-03	476050.5	3827534.7	886.6	3.40	4.51	3.16	NO	
L0000974	0	0.28902E-03	476056.1	3827542.7	887.0	3.40	4.51	3.16	NO	
L0000975	0	0.28902E-03	476061.6	3827550.6	886.9	3.40	4.51	3.16	NO	

L0000976	0	0.28902E-03	476067.2	3827558.6	886.1	3.40	4.51	3.16	NO
L0000977	0	0.28902E-03	476072.8	3827566.5	885.8	3.40	4.51	3.16	NO
L0000978	0	0.28902E-03	476078.3	3827574.4	885.6	3.40	4.51	3.16	NO
L0000979	0	0.28902E-03	476083.9	3827582.4	885.6	3.40	4.51	3.16	NO
L0000980	0	0.28902E-03	476089.5	3827590.3	885.8	3.40	4.51	3.16	NO
L0000981	0	0.28902E-03	476095.1	3827598.3	885.4	3.40	4.51	3.16	NO
L0000982	0	0.28902E-03	476100.6	3827606.2	884.8	3.40	4.51	3.16	NO
L0000983	0	0.28902E-03	476106.2	3827614.1	884.7	3.40	4.51	3.16	NO
L0000984	0	0.28902E-03	476111.8	3827622.1	884.9	3.40	4.51	3.16	NO
L0000985	0	0.28902E-03	476117.3	3827630.0	884.0	3.40	4.51	3.16	NO
L0000986	0	0.28902E-03	476122.9	3827638.0	882.0	3.40	4.51	3.16	NO
L0000987	0	0.28902E-03	476128.5	3827645.9	879.9	3.40	4.51	3.16	NO
L0000988	0	0.28902E-03	476134.0	3827653.9	877.9	3.40	4.51	3.16	NO
L0000989	0	0.28902E-03	476139.6	3827661.8	879.2	3.40	4.51	3.16	NO
L0000990	0	0.28902E-03	476145.2	3827669.7	881.1	3.40	4.51	3.16	NO
L0000991	0	0.28902E-03	476150.8	3827677.7	882.9	3.40	4.51	3.16	NO
L0000992	0	0.28902E-03	476156.3	3827685.6	884.7	3.40	4.51	3.16	NO
L0000993	0	0.28902E-03	476161.9	3827693.6	884.7	3.40	4.51	3.16	NO
L0000994	0	0.28902E-03	476167.5	3827701.5	885.2	3.40	4.51	3.16	NO
L0000995	0	0.28902E-03	476173.0	3827709.4	885.6	3.40	4.51	3.16	NO
L0000996	0	0.28902E-03	476178.6	3827717.4	885.6	3.40	4.51	3.16	NO
L0000997	0	0.28902E-03	476184.2	3827725.3	885.3	3.40	4.51	3.16	NO
L0000998	0	0.28902E-03	476189.7	3827733.3	885.4	3.40	4.51	3.16	NO
L0000999	0	0.28902E-03	476195.3	3827741.2	885.7	3.40	4.51	3.16	NO
L0001000	0	0.28902E-03	476200.9	3827749.2	885.7	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001001	0	0.28902E-03	476206.4	3827757.1	885.6	3.40	4.51	3.16	NO	
L0001002	0	0.28902E-03	476212.0	3827765.0	885.6	3.40	4.51	3.16	NO	
L0001003	0	0.28902E-03	476217.6	3827773.0	885.7	3.40	4.51	3.16	NO	
L0001004	0	0.28902E-03	476223.2	3827780.9	885.8	3.40	4.51	3.16	NO	
L0001005	0	0.28902E-03	476228.7	3827788.9	885.9	3.40	4.51	3.16	NO	
L0001006	0	0.28902E-03	476234.3	3827796.8	886.0	3.40	4.51	3.16	NO	
L0001007	0	0.28902E-03	476239.9	3827804.7	886.1	3.40	4.51	3.16	NO	
L0001008	0	0.28902E-03	476245.4	3827812.7	886.2	3.40	4.51	3.16	NO	
L0001009	0	0.28902E-03	476251.0	3827820.6	886.3	3.40	4.51	3.16	NO	
L0001010	0	0.28902E-03	476256.6	3827828.6	886.4	3.40	4.51	3.16	NO	
L0001011	0	0.28902E-03	476262.1	3827836.5	886.5	3.40	4.51	3.16	NO	
L0001012	0	0.28902E-03	476267.7	3827844.5	886.7	3.40	4.51	3.16	NO	
L0001013	0	0.28902E-03	476273.3	3827852.4	886.9	3.40	4.51	3.16	NO	
L0001014	0	0.28902E-03	476278.9	3827860.3	887.0	3.40	4.51	3.16	NO	
L0001015	0	0.28902E-03	476284.4	3827868.3	887.1	3.40	4.51	3.16	NO	

L0001016	0	0.28902E-03	476290.0	3827876.2	887.3	3.40	4.51	3.16	NO
L0001017	0	0.28902E-03	476295.6	3827884.2	887.6	3.40	4.51	3.16	NO
L0001018	0	0.28902E-03	476301.1	3827892.1	888.0	3.40	4.51	3.16	NO
L0001019	0	0.28902E-03	476306.7	3827900.0	888.3	3.40	4.51	3.16	NO
L0001020	0	0.28902E-03	476312.3	3827908.0	888.5	3.40	4.51	3.16	NO
L0001021	0	0.28902E-03	476317.8	3827915.9	888.9	3.40	4.51	3.16	NO
L0001022	0	0.28902E-03	476323.4	3827923.9	889.2	3.40	4.51	3.16	NO
L0001023	0	0.28902E-03	476329.0	3827931.8	889.5	3.40	4.51	3.16	NO
L0001024	0	0.28902E-03	476334.5	3827939.8	889.7	3.40	4.51	3.16	NO
L0001025	0	0.28902E-03	476340.1	3827947.7	890.0	3.40	4.51	3.16	NO
L0001026	0	0.28902E-03	476345.7	3827955.6	890.4	3.40	4.51	3.16	NO
L0001027	0	0.28902E-03	476351.3	3827963.6	890.8	3.40	4.51	3.16	NO
L0001028	0	0.28902E-03	476356.8	3827971.5	891.0	3.40	4.51	3.16	NO
L0001029	0	0.28902E-03	476362.4	3827979.5	891.2	3.40	4.51	3.16	NO
L0001030	0	0.28902E-03	476368.0	3827987.4	891.5	3.40	4.51	3.16	NO
L0001031	0	0.28902E-03	476373.5	3827995.3	891.8	3.40	4.51	3.16	NO
L0001032	0	0.28902E-03	476379.1	3828003.3	892.1	3.40	4.51	3.16	NO
L0001033	0	0.28902E-03	476384.6	3828011.3	892.4	3.40	4.51	3.16	NO
L0001034	0	0.28902E-03	476390.0	3828019.3	892.6	3.40	4.51	3.16	NO
L0001035	0	0.28902E-03	476395.5	3828027.3	892.9	3.40	4.51	3.16	NO
L0001036	0	0.28902E-03	476401.0	3828035.3	893.3	3.40	4.51	3.16	NO
L0001037	0	0.28902E-03	476406.5	3828043.3	893.7	3.40	4.51	3.16	NO
L0001038	0	0.28902E-03	476411.9	3828051.3	894.1	3.40	4.51	3.16	NO
L0001039	0	0.28902E-03	476417.4	3828059.4	894.4	3.40	4.51	3.16	NO
L0001040	0	0.28902E-03	476422.9	3828067.4	894.7	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001041	0	0.28902E-03	476428.4	3828075.4	895.1	3.40	4.51	3.16	NO	
L0001042	0	0.28902E-03	476433.8	3828083.4	895.4	3.40	4.51	3.16	NO	
L0001043	0	0.28902E-03	476439.3	3828091.4	895.6	3.40	4.51	3.16	NO	
L0001044	0	0.28902E-03	476444.8	3828099.4	895.9	3.40	4.51	3.16	NO	
L0001045	0	0.28902E-03	476450.3	3828107.4	896.4	3.40	4.51	3.16	NO	
L0001046	0	0.28902E-03	476455.7	3828115.4	896.7	3.40	4.51	3.16	NO	
L0001047	0	0.28902E-03	476461.2	3828123.4	896.9	3.40	4.51	3.16	NO	
L0001048	0	0.28902E-03	476466.7	3828131.4	897.1	3.40	4.51	3.16	NO	
L0001049	0	0.28902E-03	476472.2	3828139.4	897.4	3.40	4.51	3.16	NO	
L0001050	0	0.28902E-03	476477.6	3828147.4	897.7	3.40	4.51	3.16	NO	
L0001051	0	0.28902E-03	476483.1	3828155.4	898.0	3.40	4.51	3.16	NO	
L0001052	0	0.28902E-03	476488.6	3828163.4	898.3	3.40	4.51	3.16	NO	
L0001053	0	0.28902E-03	476494.1	3828171.4	898.5	3.40	4.51	3.16	NO	
L0001054	0	0.28902E-03	476499.5	3828179.5	898.8	3.40	4.51	3.16	NO	
L0001055	0	0.28902E-03	476505.0	3828187.5	899.1	3.40	4.51	3.16	NO	

L0001056	0	0.28902E-03	476510.5	3828195.5	899.5	3.40	4.51	3.16	NO
L0001057	0	0.28902E-03	476516.0	3828203.5	899.8	3.40	4.51	3.16	NO
L0001058	0	0.28902E-03	476521.4	3828211.5	900.1	3.40	4.51	3.16	NO
L0001059	0	0.28902E-03	476526.9	3828219.5	900.4	3.40	4.51	3.16	NO
L0001060	0	0.28902E-03	476532.4	3828227.5	900.6	3.40	4.51	3.16	NO
L0001061	0	0.28902E-03	476537.9	3828235.5	900.9	3.40	4.51	3.16	NO
L0001062	0	0.28902E-03	476543.3	3828243.5	901.1	3.40	4.51	3.16	NO
L0001063	0	0.28902E-03	476548.8	3828251.5	901.3	3.40	4.51	3.16	NO
L0001064	0	0.28902E-03	476554.3	3828259.5	901.7	3.40	4.51	3.16	NO
L0001065	0	0.28902E-03	476559.8	3828267.5	901.9	3.40	4.51	3.16	NO
L0001066	0	0.28902E-03	476565.3	3828275.5	902.1	3.40	4.51	3.16	NO
L0001067	0	0.28902E-03	476570.7	3828283.5	902.2	3.40	4.51	3.16	NO
L0001068	0	0.28902E-03	476576.2	3828291.5	902.4	3.40	4.51	3.16	NO
L0001069	0	0.28902E-03	476581.7	3828299.6	902.6	3.40	4.51	3.16	NO
L0001070	0	0.28902E-03	476587.2	3828307.6	902.9	3.40	4.51	3.16	NO
L0001071	0	0.28902E-03	476592.6	3828315.6	903.1	3.40	4.51	3.16	NO
L0001072	0	0.28902E-03	476598.1	3828323.6	903.4	3.40	4.51	3.16	NO
L0001073	0	0.28902E-03	476603.6	3828331.6	903.7	3.40	4.51	3.16	NO
L0001074	0	0.28902E-03	476609.1	3828339.6	903.9	3.40	4.51	3.16	NO
L0001075	0	0.28902E-03	476614.5	3828347.6	904.2	3.40	4.51	3.16	NO
L0001076	0	0.28902E-03	476620.0	3828355.6	904.4	3.40	4.51	3.16	NO
L0001077	0	0.28902E-03	476625.5	3828363.6	904.7	3.40	4.51	3.16	NO
L0001078	0	0.28902E-03	476631.0	3828371.6	905.0	3.40	4.51	3.16	NO
L0001079	0	0.28902E-03	476636.4	3828379.6	905.2	3.40	4.51	3.16	NO
L0001080	0	0.28902E-03	476641.9	3828387.6	905.4	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001081	0	0.28902E-03	476647.4	3828395.6	905.8	3.40	4.51	3.16	NO	
L0001082	0	0.28902E-03	476652.9	3828403.6	906.0	3.40	4.51	3.16	NO	
L0001083	0	0.28902E-03	476658.3	3828411.6	906.2	3.40	4.51	3.16	NO	
L0001084	0	0.28902E-03	476663.8	3828419.6	906.5	3.40	4.51	3.16	NO	
L0001085	0	0.28902E-03	476669.3	3828427.7	906.6	3.40	4.51	3.16	NO	
L0001086	0	0.28902E-03	476674.8	3828435.7	906.8	3.40	4.51	3.16	NO	
L0001087	0	0.28902E-03	476680.2	3828443.7	906.9	3.40	4.51	3.16	NO	
L0001088	0	0.28902E-03	476685.7	3828451.7	907.1	3.40	4.51	3.16	NO	
L0001089	0	0.28902E-03	476691.2	3828459.7	907.4	3.40	4.51	3.16	NO	
L0001090	0	0.28902E-03	476696.7	3828467.7	907.7	3.40	4.51	3.16	NO	
L0001091	0	0.28902E-03	476702.1	3828475.7	908.0	3.40	4.51	3.16	NO	
L0001092	0	0.28902E-03	476707.6	3828483.7	908.2	3.40	4.51	3.16	NO	
L0001093	0	0.28902E-03	476713.1	3828491.7	908.4	3.40	4.51	3.16	NO	
L0001094	0	0.28902E-03	476718.6	3828499.7	908.7	3.40	4.51	3.16	NO	
L0001095	0	0.28902E-03	476724.1	3828507.7	909.0	3.40	4.51	3.16	NO	

L0001096	0	0.28902E-03	476729.5	3828515.7	909.3	3.40	4.51	3.16	NO
L0001097	0	0.28902E-03	476735.0	3828523.7	909.5	3.40	4.51	3.16	NO
L0001098	0	0.28902E-03	476740.5	3828531.7	909.6	3.40	4.51	3.16	NO
L0001099	0	0.28902E-03	476746.0	3828539.8	909.9	3.40	4.51	3.16	NO
L0001100	0	0.28902E-03	476751.4	3828547.8	910.2	3.40	4.51	3.16	NO
L0001101	0	0.28902E-03	476756.9	3828555.8	910.4	3.40	4.51	3.16	NO
L0001102	0	0.28902E-03	476762.4	3828563.8	910.6	3.40	4.51	3.16	NO
L0001103	0	0.28902E-03	476767.9	3828571.8	910.8	3.40	4.51	3.16	NO
L0001104	0	0.28902E-03	476773.3	3828579.8	911.1	3.40	4.51	3.16	NO
L0001105	0	0.28902E-03	476778.8	3828587.8	911.2	3.40	4.51	3.16	NO
L0001106	0	0.28902E-03	476784.3	3828595.8	911.4	3.40	4.51	3.16	NO
L0001107	0	0.28902E-03	476789.8	3828603.8	911.5	3.40	4.51	3.16	NO
L0001108	0	0.28902E-03	476795.2	3828611.8	911.8	3.40	4.51	3.16	NO
L0001109	0	0.28902E-03	476800.7	3828619.8	912.1	3.40	4.51	3.16	NO
L0001110	0	0.28902E-03	476806.2	3828627.8	912.4	3.40	4.51	3.16	NO
L0001111	0	0.28902E-03	476811.7	3828635.8	912.6	3.40	4.51	3.16	NO
L0001112	0	0.28902E-03	476817.1	3828643.8	912.8	3.40	4.51	3.16	NO
L0001113	0	0.28902E-03	476822.6	3828651.8	912.9	3.40	4.51	3.16	NO
L0001114	0	0.28902E-03	476828.1	3828659.8	913.2	3.40	4.51	3.16	NO
L0001115	0	0.28902E-03	476833.6	3828667.9	913.4	3.40	4.51	3.16	NO
L0001116	0	0.28902E-03	476839.0	3828675.9	913.6	3.40	4.51	3.16	NO
L0001117	0	0.28902E-03	476844.5	3828683.9	913.7	3.40	4.51	3.16	NO
L0001118	0	0.28902E-03	476850.0	3828691.9	913.9	3.40	4.51	3.16	NO
L0001119	0	0.28902E-03	476855.5	3828699.9	914.1	3.40	4.51	3.16	NO
L0001120	0	0.28902E-03	476860.9	3828707.9	914.2	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001121	0	0.28902E-03	476866.4	3828715.9	914.3	3.40	4.51	3.16	NO	
L0001122	0	0.28902E-03	476871.9	3828723.9	914.5	3.40	4.51	3.16	NO	
L0001123	0	0.28902E-03	476877.4	3828731.9	914.8	3.40	4.51	3.16	NO	
L0001124	0	0.28902E-03	476882.8	3828739.9	914.9	3.40	4.51	3.16	NO	
L0001125	0	0.28902E-03	476888.3	3828747.9	915.0	3.40	4.51	3.16	NO	
L0001126	0	0.28902E-03	476893.8	3828755.9	915.1	3.40	4.51	3.16	NO	
L0001127	0	0.28902E-03	476899.2	3828764.0	915.4	3.40	4.51	3.16	NO	
L0001128	0	0.28902E-03	476904.5	3828772.1	915.7	3.40	4.51	3.16	NO	
L0001129	0	0.28902E-03	476909.8	3828780.3	915.9	3.40	4.51	3.16	NO	
L0001130	0	0.28902E-03	476915.0	3828788.4	916.1	3.40	4.51	3.16	NO	
L0001131	0	0.28902E-03	476920.3	3828796.6	916.2	3.40	4.51	3.16	NO	
L0001132	0	0.28902E-03	476925.6	3828804.7	916.4	3.40	4.51	3.16	NO	
L0001133	0	0.28902E-03	476930.8	3828812.8	916.6	3.40	4.51	3.16	NO	
L0001134	0	0.28902E-03	476936.1	3828821.0	916.9	3.40	4.51	3.16	NO	
L0001135	0	0.28902E-03	476941.3	3828829.1	917.0	3.40	4.51	3.16	NO	

L0001136	0	0.28902E-03	476946.6	3828837.3	917.1	3.40	4.51	3.16	NO
L0001137	0	0.28902E-03	476951.9	3828845.4	917.3	3.40	4.51	3.16	NO
L0001138	0	0.28902E-03	476957.1	3828853.6	917.6	3.40	4.51	3.16	NO
L0001139	0	0.28902E-03	476962.4	3828861.7	917.7	3.40	4.51	3.16	NO
L0001140	0	0.28902E-03	476967.7	3828869.9	917.8	3.40	4.51	3.16	NO
L0001141	0	0.28902E-03	476972.9	3828878.0	918.0	3.40	4.51	3.16	NO
L0001142	0	0.28902E-03	476978.2	3828886.2	918.2	3.40	4.51	3.16	NO
L0001143	0	0.28902E-03	476983.5	3828894.3	918.4	3.40	4.51	3.16	NO
L0001144	0	0.28902E-03	476988.7	3828902.5	918.5	3.40	4.51	3.16	NO
L0001145	0	0.28902E-03	476994.0	3828910.6	918.6	3.40	4.51	3.16	NO
L0001146	0	0.28902E-03	476999.3	3828918.7	918.9	3.40	4.51	3.16	NO
L0001147	0	0.28902E-03	477004.5	3828926.9	919.1	3.40	4.51	3.16	NO
L0001148	0	0.28902E-03	477009.8	3828935.0	919.4	3.40	4.51	3.16	NO
L0001149	0	0.28902E-03	477015.1	3828943.2	919.6	3.40	4.51	3.16	NO
L0001150	0	0.28902E-03	477020.3	3828951.3	919.7	3.40	4.51	3.16	NO
L0001151	0	0.28902E-03	477025.6	3828959.5	919.9	3.40	4.51	3.16	NO
L0001152	0	0.28902E-03	477030.9	3828967.6	920.1	3.40	4.51	3.16	NO
L0001153	0	0.28902E-03	477036.1	3828975.8	920.4	3.40	4.51	3.16	NO
L0001154	0	0.28902E-03	477041.4	3828983.9	920.5	3.40	4.51	3.16	NO
L0001155	0	0.28902E-03	477046.7	3828992.1	920.7	3.40	4.51	3.16	NO
L0001156	0	0.28902E-03	477051.9	3829000.2	920.9	3.40	4.51	3.16	NO
L0001157	0	0.28902E-03	477057.2	3829008.4	921.1	3.40	4.51	3.16	NO
L0001158	0	0.28902E-03	477062.5	3829016.5	921.3	3.40	4.51	3.16	NO
L0001159	0	0.28902E-03	477067.7	3829024.6	921.3	3.40	4.51	3.16	NO
L0001160	0	0.28902E-03	477073.0	3829032.8	921.5	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001161	0	0.28902E-03	477078.3	3829040.9	921.7	3.40	4.51	3.16	NO	
L0001162	0	0.28902E-03	477083.5	3829049.1	921.9	3.40	4.51	3.16	NO	
L0001163	0	0.28902E-03	477088.8	3829057.2	922.1	3.40	4.51	3.16	NO	
L0001164	0	0.28902E-03	477094.1	3829065.4	922.3	3.40	4.51	3.16	NO	
L0001165	0	0.28902E-03	477099.3	3829073.5	922.5	3.40	4.51	3.16	NO	
L0001166	0	0.28902E-03	477104.6	3829081.7	922.7	3.40	4.51	3.16	NO	
L0001167	0	0.28902E-03	477109.9	3829089.8	922.9	3.40	4.51	3.16	NO	
L0001168	0	0.28902E-03	477115.1	3829098.0	923.2	3.40	4.51	3.16	NO	
L0001169	0	0.28902E-03	477120.4	3829106.1	923.3	3.40	4.51	3.16	NO	
L0001170	0	0.28902E-03	477125.7	3829114.3	923.4	3.40	4.51	3.16	NO	
L0001171	0	0.28902E-03	477130.9	3829122.4	923.7	3.40	4.51	3.16	NO	
L0001172	0	0.28902E-03	477136.2	3829130.6	923.9	3.40	4.51	3.16	NO	
L0001173	0	0.28902E-03	477141.5	3829138.7	924.1	3.40	4.51	3.16	NO	
L0001174	0	0.28902E-03	477146.7	3829146.8	924.2	3.40	4.51	3.16	NO	
L0001175	0	0.28902E-03	477152.0	3829155.0	924.4	3.40	4.51	3.16	NO	

L0001176	0	0.28902E-03	477157.2	3829163.1	924.6	3.40	4.51	3.16	NO
L0001177	0	0.28902E-03	477162.5	3829171.3	924.7	3.40	4.51	3.16	NO
L0001178	0	0.28902E-03	477167.8	3829179.4	924.9	3.40	4.51	3.16	NO
L0001179	0	0.28902E-03	477173.0	3829187.6	925.0	3.40	4.51	3.16	NO
L0001180	0	0.28902E-03	477178.3	3829195.7	925.2	3.40	4.51	3.16	NO
L0001181	0	0.28902E-03	477183.6	3829203.9	925.4	3.40	4.51	3.16	NO
L0001182	0	0.28902E-03	477188.8	3829212.0	925.6	3.40	4.51	3.16	NO
L0001183	0	0.28902E-03	477194.1	3829220.2	925.9	3.40	4.51	3.16	NO
L0001184	0	0.28902E-03	477199.4	3829228.3	926.0	3.40	4.51	3.16	NO
L0001185	0	0.28902E-03	477204.6	3829236.5	926.2	3.40	4.51	3.16	NO
L0001186	0	0.28902E-03	477209.9	3829244.6	926.4	3.40	4.51	3.16	NO
L0001187	0	0.28902E-03	477215.2	3829252.7	926.7	3.40	4.51	3.16	NO
L0001188	0	0.28902E-03	477220.4	3829260.9	926.8	3.40	4.51	3.16	NO
L0001189	0	0.28902E-03	477225.7	3829269.0	926.9	3.40	4.51	3.16	NO
L0001190	0	0.28902E-03	477231.0	3829277.2	927.1	3.40	4.51	3.16	NO
L0001191	0	0.28902E-03	477236.2	3829285.3	927.4	3.40	4.51	3.16	NO
L0001192	0	0.28902E-03	477241.5	3829293.5	927.5	3.40	4.51	3.16	NO
L0001193	0	0.28902E-03	477246.8	3829301.6	927.7	3.40	4.51	3.16	NO
L0001194	0	0.28902E-03	477252.0	3829309.8	927.9	3.40	4.51	3.16	NO
L0001195	0	0.28902E-03	477257.3	3829317.9	928.1	3.40	4.51	3.16	NO
L0001196	0	0.28902E-03	477262.6	3829326.1	928.2	3.40	4.51	3.16	NO
L0001197	0	0.28902E-03	477267.8	3829334.2	928.3	3.40	4.51	3.16	NO
L0001198	0	0.28902E-03	477273.1	3829342.4	928.4	3.40	4.51	3.16	NO
L0001199	0	0.28902E-03	477278.4	3829350.5	928.7	3.40	4.51	3.16	NO
L0001200	0	0.28902E-03	477283.6	3829358.6	928.9	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001201	0	0.28902E-03	477288.9	3829366.8	929.2	3.40	4.51	3.16	NO	
L0001202	0	0.28902E-03	477294.2	3829374.9	929.4	3.40	4.51	3.16	NO	
L0001203	0	0.28902E-03	477299.4	3829383.1	929.6	3.40	4.51	3.16	NO	
L0001204	0	0.28902E-03	477304.7	3829391.2	929.7	3.40	4.51	3.16	NO	
L0001205	0	0.28902E-03	477310.0	3829399.4	929.9	3.40	4.51	3.16	NO	
L0001206	0	0.28902E-03	477315.2	3829407.5	930.2	3.40	4.51	3.16	NO	
L0001207	0	0.28902E-03	477320.5	3829415.7	930.4	3.40	4.51	3.16	NO	
L0001208	0	0.28902E-03	477325.8	3829423.8	930.5	3.40	4.51	3.16	NO	
L0001209	0	0.28902E-03	477331.0	3829432.0	930.7	3.40	4.51	3.16	NO	
L0001210	0	0.28902E-03	477336.3	3829440.1	930.9	3.40	4.51	3.16	NO	
L0001211	0	0.28902E-03	477341.6	3829448.3	931.0	3.40	4.51	3.16	NO	
L0001212	0	0.28902E-03	477346.8	3829456.4	931.2	3.40	4.51	3.16	NO	
L0001213	0	0.28902E-03	477352.1	3829464.5	931.3	3.40	4.51	3.16	NO	
L0001214	0	0.28902E-03	477357.3	3829472.7	931.5	3.40	4.51	3.16	NO	
L0001215	0	0.28902E-03	477362.6	3829480.8	931.7	3.40	4.51	3.16	NO	

L0001216	0	0.28902E-03	477367.9	3829489.0	931.9	3.40	4.51	3.16	NO
L0001217	0	0.28902E-03	477373.1	3829497.1	932.0	3.40	4.51	3.16	NO
L0001218	0	0.28902E-03	477378.4	3829505.3	932.2	3.40	4.51	3.16	NO
L0001219	0	0.28902E-03	477383.7	3829513.4	932.5	3.40	4.51	3.16	NO
L0001220	0	0.28902E-03	477388.9	3829521.6	932.7	3.40	4.51	3.16	NO
L0001221	0	0.28902E-03	477394.2	3829529.7	933.0	3.40	4.51	3.16	NO
L0001222	0	0.28902E-03	477399.5	3829537.9	933.1	3.40	4.51	3.16	NO
L0001223	0	0.28902E-03	477404.7	3829546.0	933.3	3.40	4.51	3.16	NO
L0001224	0	0.28902E-03	477410.0	3829554.2	933.5	3.40	4.51	3.16	NO
L0001225	0	0.28902E-03	477415.3	3829562.3	933.7	3.40	4.51	3.16	NO
L0001226	0	0.28902E-03	477420.5	3829570.4	933.9	3.40	4.51	3.16	NO
L0001227	0	0.28902E-03	477425.8	3829578.6	934.1	3.40	4.51	3.16	NO
L0001228	0	0.28902E-03	477431.1	3829586.7	934.2	3.40	4.51	3.16	NO
L0001229	0	0.28902E-03	477436.3	3829594.9	934.4	3.40	4.51	3.16	NO
L0001230	0	0.28902E-03	477441.6	3829603.0	934.6	3.40	4.51	3.16	NO
L0001231	0	0.28902E-03	477446.9	3829611.2	934.8	3.40	4.51	3.16	NO
L0001232	0	0.28902E-03	477452.1	3829619.3	934.9	3.40	4.51	3.16	NO
L0001233	0	0.28902E-03	477457.4	3829627.5	935.1	3.40	4.51	3.16	NO
L0001234	0	0.28902E-03	477462.7	3829635.6	935.2	3.40	4.51	3.16	NO
L0001235	0	0.28902E-03	477467.9	3829643.8	935.4	3.40	4.51	3.16	NO
L0001236	0	0.28902E-03	477473.2	3829651.9	935.6	3.40	4.51	3.16	NO
L0001237	0	0.28902E-03	477478.5	3829660.1	935.7	3.40	4.51	3.16	NO
L0001238	0	0.28902E-03	477483.7	3829668.2	935.9	3.40	4.51	3.16	NO
L0001239	0	0.28902E-03	477489.0	3829676.3	936.1	3.40	4.51	3.16	NO
L0001240	0	0.28902E-03	477494.3	3829684.5	936.4	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001241	0	0.28902E-03	477499.5	3829692.6	936.5	3.40	4.51	3.16	NO	
L0001242	0	0.28902E-03	477504.8	3829700.8	936.6	3.40	4.51	3.16	NO	
L0001243	0	0.28902E-03	477510.1	3829708.9	936.7	3.40	4.51	3.16	NO	
L0001244	0	0.28902E-03	477515.3	3829717.1	936.9	3.40	4.51	3.16	NO	
L0001245	0	0.28902E-03	477520.6	3829725.2	937.0	3.40	4.51	3.16	NO	
L0001246	0	0.28902E-03	477525.9	3829733.4	937.1	3.40	4.51	3.16	NO	
L0001247	0	0.28902E-03	477531.1	3829741.5	937.2	3.40	4.51	3.16	NO	
L0001248	0	0.28902E-03	477536.4	3829749.7	937.2	3.40	4.51	3.16	NO	
L0001249	0	0.28902E-03	477541.7	3829757.8	937.2	3.40	4.51	3.16	NO	
L0001250	0	0.28902E-03	477546.9	3829766.0	937.2	3.40	4.51	3.16	NO	
L0001251	0	0.28902E-03	477552.2	3829774.1	937.2	3.40	4.51	3.16	NO	
L0001252	0	0.28902E-03	477557.4	3829782.3	937.3	3.40	4.51	3.16	NO	
L0001253	0	0.28902E-03	477562.7	3829790.4	937.4	3.40	4.51	3.16	NO	
L0001254	0	0.28902E-03	477568.0	3829798.5	937.4	3.40	4.51	3.16	NO	
L0001255	0	0.28902E-03	477573.2	3829806.7	937.5	3.40	4.51	3.16	NO	

L0001256	0	0.28902E-03	477578.5	3829814.8	937.6	3.40	4.51	3.16	NO
L0001257	0	0.28902E-03	477583.8	3829823.0	937.7	3.40	4.51	3.16	NO
L0001258	0	0.28902E-03	477589.0	3829831.1	937.7	3.40	4.51	3.16	NO
L0001259	0	0.28902E-03	477594.3	3829839.3	937.8	3.40	4.51	3.16	NO
L0001260	0	0.28902E-03	477599.6	3829847.4	937.9	3.40	4.51	3.16	NO
L0001261	0	0.28902E-03	477604.8	3829855.6	938.0	3.40	4.51	3.16	NO
L0001262	0	0.28902E-03	477610.1	3829863.7	938.0	3.40	4.51	3.16	NO
L0001263	0	0.28902E-03	477615.4	3829871.9	938.0	3.40	4.51	3.16	NO
L0001264	0	0.28902E-03	477620.6	3829880.0	938.0	3.40	4.51	3.16	NO
L0001265	0	0.28902E-03	477625.9	3829888.2	938.2	3.40	4.51	3.16	NO
L0001266	0	0.28902E-03	477631.2	3829896.3	938.3	3.40	4.51	3.16	NO
L0001267	0	0.28902E-03	477636.4	3829904.4	938.2	3.40	4.51	3.16	NO
L0001268	0	0.28902E-03	477641.7	3829912.6	938.1	3.40	4.51	3.16	NO
L0001269	0	0.28902E-03	477647.0	3829920.7	938.0	3.40	4.51	3.16	NO
L0001270	0	0.28902E-03	477652.2	3829928.9	937.9	3.40	4.51	3.16	NO
L0001271	0	0.28902E-03	477657.5	3829937.0	938.1	3.40	4.51	3.16	NO
L0001272	0	0.28902E-03	477662.8	3829945.2	938.2	3.40	4.51	3.16	NO
L0001273	0	0.28902E-03	477668.0	3829953.3	938.3	3.40	4.51	3.16	NO
L0001274	0	0.28902E-03	477673.3	3829961.5	938.4	3.40	4.51	3.16	NO
L0001275	0	0.28902E-03	477678.6	3829969.6	938.4	3.40	4.51	3.16	NO
L0001276	0	0.28902E-03	477683.8	3829977.8	938.5	3.40	4.51	3.16	NO
L0001277	0	0.28902E-03	477689.1	3829985.9	938.5	3.40	4.51	3.16	NO
L0001278	0	0.28902E-03	477694.4	3829994.1	938.6	3.40	4.51	3.16	NO
L0001279	0	0.28902E-03	477699.6	3830002.2	938.7	3.40	4.51	3.16	NO
L0001280	0	0.28902E-03	477704.9	3830010.3	938.7	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001281	0	0.28902E-03	477710.2	3830018.5	938.8	3.40	4.51	3.16	NO	
L0001282	0	0.28902E-03	477715.4	3830026.6	938.7	3.40	4.51	3.16	NO	
L0001283	0	0.28902E-03	477720.7	3830034.8	938.8	3.40	4.51	3.16	NO	
L0001284	0	0.28902E-03	477726.0	3830042.9	938.9	3.40	4.51	3.16	NO	
L0001285	0	0.28902E-03	477731.2	3830051.1	939.0	3.40	4.51	3.16	NO	
L0001286	0	0.28902E-03	477736.5	3830059.2	939.0	3.40	4.51	3.16	NO	
L0001287	0	0.28902E-03	477741.8	3830067.4	939.0	3.40	4.51	3.16	NO	
L0001288	0	0.28902E-03	477747.0	3830075.5	939.0	3.40	4.51	3.16	NO	
L0001289	0	0.28902E-03	477752.3	3830083.7	939.2	3.40	4.51	3.16	NO	
L0001290	0	0.28902E-03	477757.5	3830091.8	939.3	3.40	4.51	3.16	NO	
L0001291	0	0.28902E-03	477762.8	3830100.0	939.5	3.40	4.51	3.16	NO	
L0001292	0	0.28902E-03	477768.1	3830108.1	939.6	3.40	4.51	3.16	NO	
L0001293	0	0.28902E-03	477773.3	3830116.2	939.8	3.40	4.51	3.16	NO	
L0001294	0	0.28902E-03	477778.6	3830124.4	940.1	3.40	4.51	3.16	NO	
L0001295	0	0.28902E-03	477783.9	3830132.5	940.4	3.40	4.51	3.16	NO	

L0001296	0	0.28902E-03	477789.1	3830140.7	940.6	3.40	4.51	3.16	NO
L0001297	0	0.28902E-03	477794.4	3830148.8	940.9	3.40	4.51	3.16	NO
L0001298	0	0.28902E-03	477799.7	3830157.0	941.3	3.40	4.51	3.16	NO
L0001299	0	0.28902E-03	477804.9	3830165.1	941.7	3.40	4.51	3.16	NO
L0001300	0	0.28902E-03	477810.2	3830173.3	942.1	3.40	4.51	3.16	NO
L0001301	0	0.28902E-03	477815.5	3830181.4	942.3	3.40	4.51	3.16	NO
L0001302	0	0.28902E-03	477820.7	3830189.6	942.6	3.40	4.51	3.16	NO
L0001303	0	0.28902E-03	477826.0	3830197.7	943.2	3.40	4.51	3.16	NO
L0001304	0	0.28902E-03	477831.3	3830205.9	943.8	3.40	4.51	3.16	NO
L0001305	0	0.28902E-03	477836.5	3830214.0	943.9	3.40	4.51	3.16	NO
L0001306	0	0.28902E-03	477841.8	3830222.1	944.0	3.40	4.51	3.16	NO
L0001307	0	0.28902E-03	477847.1	3830230.3	944.1	3.40	4.51	3.16	NO
L0001308	0	0.28902E-03	477852.3	3830238.4	944.4	3.40	4.51	3.16	NO
L0001309	0	0.28902E-03	477857.6	3830246.6	944.8	3.40	4.51	3.16	NO
L0001310	0	0.28902E-03	477862.9	3830254.7	945.5	3.40	4.51	3.16	NO
L0001311	0	0.28902E-03	477868.1	3830262.9	946.0	3.40	4.51	3.16	NO
L0001312	0	0.28902E-03	477873.4	3830271.0	946.6	3.40	4.51	3.16	NO
L0001313	0	0.28902E-03	477878.7	3830279.2	947.1	3.40	4.51	3.16	NO
L0001314	0	0.28902E-03	477883.9	3830287.3	947.5	3.40	4.51	3.16	NO
L0001315	0	0.28902E-03	477889.2	3830295.5	947.9	3.40	4.51	3.16	NO
L0001316	0	0.28902E-03	477894.5	3830303.6	948.3	3.40	4.51	3.16	NO
L0001317	0	0.28902E-03	477899.7	3830311.8	948.7	3.40	4.51	3.16	NO
L0001318	0	0.28902E-03	477905.0	3830319.9	949.2	3.40	4.51	3.16	NO
L0001319	0	0.28902E-03	477910.3	3830328.0	949.7	3.40	4.51	3.16	NO
L0001320	0	0.28902E-03	477915.5	3830336.2	949.9	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0001321	0	0.28902E-03	477920.8	3830344.3	950.3	3.40	4.51	3.16	NO	
L0001322	0	0.28902E-03	477926.1	3830352.5	950.7	3.40	4.51	3.16	NO	
L0001323	0	0.28902E-03	477931.4	3830360.6	951.2	3.40	4.51	3.16	NO	
L0001324	0	0.28902E-03	477936.7	3830368.7	951.5	3.40	4.51	3.16	NO	
L0001325	0	0.28902E-03	477942.0	3830376.8	951.8	3.40	4.51	3.16	NO	
L0001326	0	0.28902E-03	477947.3	3830384.9	952.0	3.40	4.51	3.16	NO	
L0001327	0	0.28902E-03	477952.6	3830393.0	952.4	3.40	4.51	3.16	NO	
L0001328	0	0.28902E-03	477958.0	3830401.2	952.8	3.40	4.51	3.16	NO	
L0001329	0	0.28902E-03	477963.3	3830409.3	953.2	3.40	4.51	3.16	NO	
L0001330	0	0.28902E-03	477968.6	3830417.4	953.6	3.40	4.51	3.16	NO	
L0001331	0	0.28902E-03	477973.9	3830425.5	954.0	3.40	4.51	3.16	NO	
L0001332	0	0.28902E-03	477979.2	3830433.6	954.3	3.40	4.51	3.16	NO	
L0001333	0	0.28902E-03	477984.5	3830441.8	954.7	3.40	4.51	3.16	NO	
L0001334	0	0.28902E-03	477989.8	3830449.9	955.0	3.40	4.51	3.16	NO	
L0001335	0	0.28902E-03	477995.1	3830458.0	955.2	3.40	4.51	3.16	NO	

L0001336	0	0.28902E-03	478000.4	3830466.1	955.5	3.40	4.51	3.16	NO
L0001337	0	0.28902E-03	478005.7	3830474.2	955.8	3.40	4.51	3.16	NO
L0001338	0	0.28902E-03	478011.0	3830482.3	956.2	3.40	4.51	3.16	NO
L0001339	0	0.28902E-03	478016.4	3830490.5	956.3	3.40	4.51	3.16	NO
L0001340	0	0.28902E-03	478021.7	3830498.6	956.4	3.40	4.51	3.16	NO
L0001341	0	0.28902E-03	478027.0	3830506.7	956.6	3.40	4.51	3.16	NO
L0001342	0	0.28902E-03	478032.3	3830514.8	956.8	3.40	4.51	3.16	NO
L0001343	0	0.28902E-03	478037.6	3830522.9	957.0	3.40	4.51	3.16	NO
L0001344	0	0.28902E-03	478042.9	3830531.1	957.1	3.40	4.51	3.16	NO
L0001345	0	0.28902E-03	478048.2	3830539.2	957.2	3.40	4.51	3.16	NO
L0001346	0	0.28902E-03	478053.5	3830547.3	957.4	3.40	4.51	3.16	NO
L0001347	0	0.28902E-03	478058.8	3830555.4	957.6	3.40	4.51	3.16	NO
L0001348	0	0.28902E-03	478064.1	3830563.5	957.8	3.40	4.51	3.16	NO
L0001349	0	0.28902E-03	478069.5	3830571.6	957.9	3.40	4.51	3.16	NO
L0001350	0	0.28902E-03	478074.8	3830579.8	958.1	3.40	4.51	3.16	NO
L0001351	0	0.28902E-03	478080.1	3830587.9	958.2	3.40	4.51	3.16	NO
L0001352	0	0.28902E-03	478085.4	3830596.0	958.3	3.40	4.51	3.16	NO
L0001353	0	0.28902E-03	478090.7	3830604.1	958.4	3.40	4.51	3.16	NO
L0001354	0	0.28902E-03	478096.0	3830612.2	958.4	3.40	4.51	3.16	NO
L0001355	0	0.28902E-03	478101.3	3830620.3	958.3	3.40	4.51	3.16	NO
L0001356	0	0.28902E-03	478106.6	3830628.5	958.4	3.40	4.51	3.16	NO
L0001357	0	0.28902E-03	478111.9	3830636.6	958.6	3.40	4.51	3.16	NO
L0001358	0	0.28902E-03	478117.2	3830644.7	958.5	3.40	4.51	3.16	NO
L0001359	0	0.28902E-03	478122.5	3830652.8	958.4	3.40	4.51	3.16	NO
L0001360	0	0.28902E-03	478127.9	3830660.9	958.4	3.40	4.51	3.16	NO

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L0001361	0	0.28902E-03	478133.2	3830669.1	958.4	3.40	4.51	3.16	NO	
L0001362	0	0.28902E-03	478138.5	3830677.2	958.5	3.40	4.51	3.16	NO	
L0001363	0	0.28902E-03	478143.8	3830685.3	958.5	3.40	4.51	3.16	NO	
L0001364	0	0.28902E-03	478149.1	3830693.4	958.5	3.40	4.51	3.16	NO	
L0001365	0	0.28902E-03	478154.4	3830701.5	958.5	3.40	4.51	3.16	NO	
L0001366	0	0.28902E-03	478159.7	3830709.6	958.6	3.40	4.51	3.16	NO	
L0001367	0	0.28902E-03	478165.0	3830717.8	958.7	3.40	4.51	3.16	NO	
L0001368	0	0.28902E-03	478170.3	3830725.9	958.7	3.40	4.51	3.16	NO	
L0001369	0	0.28902E-03	478175.6	3830734.0	958.7	3.40	4.51	3.16	NO	
L0001370	0	0.28902E-03	478181.0	3830742.1	958.8	3.40	4.51	3.16	NO	
L0001371	0	0.28902E-03	478186.3	3830750.2	958.8	3.40	4.51	3.16	NO	
L0001372	0	0.28902E-03	478191.6	3830758.4	958.9	3.40	4.51	3.16	NO	
L0001373	0	0.28902E-03	478196.9	3830766.5	958.8	3.40	4.51	3.16	NO	
L0001374	0	0.28902E-03	478202.2	3830774.6	958.8	3.40	4.51	3.16	NO	
L0001375	0	0.28902E-03	478207.5	3830782.7	958.8	3.40	4.51	3.16	NO	

L0001376	0	0.28902E-03	478212.8	3830790.8	958.9	3.40	4.51	3.16	NO
L0001377	0	0.28902E-03	478218.1	3830798.9	958.9	3.40	4.51	3.16	NO
L0001378	0	0.28902E-03	478223.4	3830807.1	958.8	3.40	4.51	3.16	NO
L0001379	0	0.28902E-03	478228.7	3830815.2	958.8	3.40	4.51	3.16	NO
L0001380	0	0.28902E-03	478234.0	3830823.3	958.8	3.40	4.51	3.16	NO
L0001381	0	0.28902E-03	478239.4	3830831.4	958.8	3.40	4.51	3.16	NO
L0001382	0	0.28902E-03	478244.7	3830839.5	958.9	3.40	4.51	3.16	NO
L0001383	0	0.28902E-03	478250.0	3830847.6	958.9	3.40	4.51	3.16	NO
L0001384	0	0.28902E-03	478255.3	3830855.8	958.9	3.40	4.51	3.16	NO
L0001385	0	0.28902E-03	478260.6	3830863.9	958.9	3.40	4.51	3.16	NO
L0001386	0	0.28902E-03	478265.9	3830872.0	959.1	3.40	4.51	3.16	NO
L0001387	0	0.28902E-03	478271.2	3830880.1	959.1	3.40	4.51	3.16	NO
L0001388	0	0.28902E-03	478276.5	3830888.2	959.1	3.40	4.51	3.16	NO
L0001389	0	0.28902E-03	478281.8	3830896.4	959.1	3.40	4.51	3.16	NO
L0001390	0	0.28902E-03	478287.1	3830904.5	959.3	3.40	4.51	3.16	NO
L0001391	0	0.28902E-03	478292.5	3830912.6	959.4	3.40	4.51	3.16	NO
L0001392	0	0.28902E-03	478297.8	3830920.7	959.4	3.40	4.51	3.16	NO
L0001393	0	0.28902E-03	478303.1	3830928.8	959.3	3.40	4.51	3.16	NO
L0001394	0	0.28902E-03	478308.4	3830936.9	959.4	3.40	4.51	3.16	NO
L0001395	0	0.28902E-03	478313.7	3830945.1	959.5	3.40	4.51	3.16	NO
L0001396	0	0.28902E-03	478319.0	3830953.2	959.6	3.40	4.51	3.16	NO
L0001397	0	0.28902E-03	478324.3	3830961.3	959.7	3.40	4.51	3.16	NO
L0001398	0	0.28902E-03	478329.6	3830969.4	959.8	3.40	4.51	3.16	NO
L0001399	0	0.28902E-03	478334.9	3830977.5	960.0	3.40	4.51	3.16	NO
L0001400	0	0.28902E-03	478340.2	3830985.7	960.2	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001401	0	0.28902E-03	478345.5	3830993.8	960.3	3.40	4.51	3.16	NO	
L0001402	0	0.28902E-03	478350.9	3831001.9	960.6	3.40	4.51	3.16	NO	
L0001403	0	0.28902E-03	478356.2	3831010.0	960.8	3.40	4.51	3.16	NO	
L0001404	0	0.28902E-03	478361.5	3831018.1	961.1	3.40	4.51	3.16	NO	
L0001405	0	0.28902E-03	478366.8	3831026.2	961.3	3.40	4.51	3.16	NO	
L0001406	0	0.28902E-03	478372.1	3831034.4	961.5	3.40	4.51	3.16	NO	
L0001407	0	0.28902E-03	478377.4	3831042.5	961.7	3.40	4.51	3.16	NO	
L0001408	0	0.28902E-03	478382.7	3831050.6	961.9	3.40	4.51	3.16	NO	
L0001409	0	0.28902E-03	478388.0	3831058.7	962.2	3.40	4.51	3.16	NO	
L0001410	0	0.28902E-03	478393.3	3831066.8	962.5	3.40	4.51	3.16	NO	
L0001411	0	0.28902E-03	478398.6	3831074.9	962.7	3.40	4.51	3.16	NO	
L0001412	0	0.28902E-03	478404.0	3831083.1	962.8	3.40	4.51	3.16	NO	
L0001413	0	0.28902E-03	478409.3	3831091.2	963.0	3.40	4.51	3.16	NO	
L0001414	0	0.28902E-03	478414.6	3831099.3	963.2	3.40	4.51	3.16	NO	
L0001415	0	0.28902E-03	478419.9	3831107.4	963.4	3.40	4.51	3.16	NO	

L0001416	0	0.28902E-03	478425.2	3831115.5	963.6	3.40	4.51	3.16	NO
L0001417	0	0.28902E-03	478430.5	3831123.7	963.9	3.40	4.51	3.16	NO
L0001418	0	0.28902E-03	478435.8	3831131.8	964.1	3.40	4.51	3.16	NO
L0001419	0	0.28902E-03	478441.1	3831139.9	964.4	3.40	4.51	3.16	NO
L0001420	0	0.28902E-03	478446.4	3831148.0	964.6	3.40	4.51	3.16	NO
L0001421	0	0.28902E-03	478451.7	3831156.1	964.8	3.40	4.51	3.16	NO
L0001422	0	0.28902E-03	478457.0	3831164.2	965.0	3.40	4.51	3.16	NO
L0001423	0	0.28902E-03	478462.4	3831172.4	965.3	3.40	4.51	3.16	NO
L0001424	0	0.28902E-03	478467.7	3831180.5	965.5	3.40	4.51	3.16	NO
L0001425	0	0.28902E-03	478473.0	3831188.6	965.7	3.40	4.51	3.16	NO
L0001426	0	0.28902E-03	478478.3	3831196.7	965.7	3.40	4.51	3.16	NO
L0001427	0	0.28902E-03	478483.6	3831204.8	965.8	3.40	4.51	3.16	NO
L0001428	0	0.28902E-03	478488.9	3831213.0	966.0	3.40	4.51	3.16	NO
L0001429	0	0.28902E-03	478494.2	3831221.1	966.3	3.40	4.51	3.16	NO
L0001430	0	0.28902E-03	478499.5	3831229.2	966.3	3.40	4.51	3.16	NO
L0001431	0	0.28902E-03	478504.8	3831237.3	966.3	3.40	4.51	3.16	NO
L0001432	0	0.28902E-03	478510.1	3831245.4	966.3	3.40	4.51	3.16	NO
L0001433	0	0.28902E-03	478515.5	3831253.5	966.4	3.40	4.51	3.16	NO
L0001434	0	0.28902E-03	478520.8	3831261.7	966.5	3.40	4.51	3.16	NO
L0001435	0	0.28902E-03	478526.1	3831269.8	966.6	3.40	4.51	3.16	NO
L0001436	0	0.28902E-03	478531.4	3831277.9	966.7	3.40	4.51	3.16	NO
L0001437	0	0.28902E-03	478536.7	3831286.0	966.8	3.40	4.51	3.16	NO
L0001438	0	0.28902E-03	478542.0	3831294.1	966.8	3.40	4.51	3.16	NO
L0001439	0	0.28902E-03	478547.3	3831302.2	966.9	3.40	4.51	3.16	NO
L0001440	0	0.28902E-03	478552.6	3831310.4	966.9	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001441	0	0.28902E-03	478557.9	3831318.5	966.9	3.40	4.51	3.16	NO	
L0001442	0	0.28902E-03	478563.2	3831326.6	966.9	3.40	4.51	3.16	NO	
L0001443	0	0.28902E-03	478568.5	3831334.7	966.9	3.40	4.51	3.16	NO	
L0001444	0	0.28902E-03	478573.9	3831342.8	967.0	3.40	4.51	3.16	NO	
L0001445	0	0.28902E-03	478579.2	3831351.0	966.9	3.40	4.51	3.16	NO	
L0001446	0	0.28902E-03	478584.5	3831359.1	966.8	3.40	4.51	3.16	NO	
L0001447	0	0.28902E-03	478589.8	3831367.2	966.8	3.40	4.51	3.16	NO	
L0001448	0	0.28902E-03	478595.1	3831375.3	966.8	3.40	4.51	3.16	NO	
L0001449	0	0.28902E-03	478600.4	3831383.4	966.8	3.40	4.51	3.16	NO	
L0001450	0	0.28902E-03	478605.7	3831391.5	966.7	3.40	4.51	3.16	NO	
L0001451	0	0.28902E-03	478611.0	3831399.7	966.6	3.40	4.51	3.16	NO	
L0001452	0	0.28902E-03	478616.3	3831407.8	966.5	3.40	4.51	3.16	NO	
L0001453	0	0.28902E-03	478621.6	3831415.9	966.5	3.40	4.51	3.16	NO	
L0001454	0	0.28902E-03	478627.0	3831424.0	966.6	3.40	4.51	3.16	NO	
L0001455	0	0.28902E-03	478632.3	3831432.1	966.6	3.40	4.51	3.16	NO	

L0001456	0	0.28902E-03	478637.6	3831440.2	966.6	3.40	4.51	3.16	NO
L0001457	0	0.28902E-03	478642.9	3831448.4	966.6	3.40	4.51	3.16	NO
L0001458	0	0.28902E-03	478648.2	3831456.5	966.6	3.40	4.51	3.16	NO
L0001459	0	0.28902E-03	478653.5	3831464.6	966.6	3.40	4.51	3.16	NO
L0001460	0	0.28902E-03	478658.8	3831472.7	966.6	3.40	4.51	3.16	NO
L0001461	0	0.28902E-03	478664.1	3831480.8	966.6	3.40	4.51	3.16	NO
L0001462	0	0.28902E-03	478669.4	3831489.0	966.6	3.40	4.51	3.16	NO
L0001463	0	0.28902E-03	478674.7	3831497.1	966.6	3.40	4.51	3.16	NO
L0001464	0	0.28902E-03	478680.0	3831505.2	966.5	3.40	4.51	3.16	NO
L0001465	0	0.28902E-03	478685.4	3831513.3	966.4	3.40	4.51	3.16	NO
L0001466	0	0.28902E-03	478690.7	3831521.4	966.4	3.40	4.51	3.16	NO
L0001467	0	0.28902E-03	478696.0	3831529.5	966.4	3.40	4.51	3.16	NO
L0001468	0	0.28902E-03	478701.3	3831537.7	966.4	3.40	4.51	3.16	NO
L0001469	0	0.28902E-03	478706.6	3831545.8	966.3	3.40	4.51	3.16	NO
L0001470	0	0.28902E-03	478711.9	3831553.9	966.2	3.40	4.51	3.16	NO
L0001471	0	0.28902E-03	478717.2	3831562.0	966.2	3.40	4.51	3.16	NO
L0001472	0	0.28902E-03	478722.5	3831570.1	966.2	3.40	4.51	3.16	NO
L0001473	0	0.28902E-03	478727.8	3831578.3	966.2	3.40	4.51	3.16	NO
L0001474	0	0.28902E-03	478733.1	3831586.4	966.2	3.40	4.51	3.16	NO
L0001475	0	0.28902E-03	478738.5	3831594.5	966.3	3.40	4.51	3.16	NO
L0001476	0	0.28902E-03	478743.8	3831602.6	966.3	3.40	4.51	3.16	NO
L0001477	0	0.28902E-03	478749.1	3831610.7	966.4	3.40	4.51	3.16	NO
L0001478	0	0.28902E-03	478754.4	3831618.8	966.3	3.40	4.51	3.16	NO
L0001479	0	0.28902E-03	478759.7	3831627.0	966.3	3.40	4.51	3.16	NO
L0001480	0	0.28902E-03	478765.0	3831635.1	966.2	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001481	0	0.28902E-03	478770.3	3831643.2	966.3	3.40	4.51	3.16	NO	
L0001482	0	0.28902E-03	478775.6	3831651.3	966.4	3.40	4.51	3.16	NO	
L0001483	0	0.28902E-03	478780.9	3831659.4	966.3	3.40	4.51	3.16	NO	
L0001484	0	0.28902E-03	478786.2	3831667.5	966.2	3.40	4.51	3.16	NO	
L0001485	0	0.28902E-03	478791.5	3831675.7	966.1	3.40	4.51	3.16	NO	
L0001486	0	0.28902E-03	478796.9	3831683.8	966.1	3.40	4.51	3.16	NO	
L0001487	0	0.28902E-03	478802.2	3831691.9	966.2	3.40	4.51	3.16	NO	
L0001488	0	0.28902E-03	478807.5	3831700.0	966.1	3.40	4.51	3.16	NO	
L0001489	0	0.28902E-03	478812.8	3831708.1	966.0	3.40	4.51	3.16	NO	
L0001490	0	0.28902E-03	478818.1	3831716.3	965.9	3.40	4.51	3.16	NO	
L0001491	0	0.28902E-03	478823.4	3831724.4	965.9	3.40	4.51	3.16	NO	
L0001492	0	0.28902E-03	478828.7	3831732.5	966.1	3.40	4.51	3.16	NO	
L0001493	0	0.28902E-03	478834.0	3831740.6	966.2	3.40	4.51	3.16	NO	
L0001494	0	0.28902E-03	478839.3	3831748.7	966.2	3.40	4.51	3.16	NO	
L0001495	0	0.28902E-03	478844.6	3831756.8	966.2	3.40	4.51	3.16	NO	

L0001496	0	0.28902E-03	478849.9	3831765.0	966.3	3.40	4.51	3.16	NO
L0001497	0	0.28902E-03	478855.3	3831773.1	966.5	3.40	4.51	3.16	NO
L0001498	0	0.28902E-03	478860.6	3831781.2	966.4	3.40	4.51	3.16	NO
L0001499	0	0.28902E-03	478865.9	3831789.3	966.4	3.40	4.51	3.16	NO
L0001500	0	0.28902E-03	478871.2	3831797.4	966.4	3.40	4.51	3.16	NO
L0001501	0	0.28902E-03	478876.5	3831805.6	966.6	3.40	4.51	3.16	NO
L0001502	0	0.28902E-03	478881.8	3831813.7	966.5	3.40	4.51	3.16	NO
L0001503	0	0.28902E-03	478887.1	3831821.8	966.4	3.40	4.51	3.16	NO
L0001504	0	0.28902E-03	478892.4	3831829.9	966.3	3.40	4.51	3.16	NO
L0001505	0	0.28902E-03	478897.7	3831838.0	966.4	3.40	4.51	3.16	NO
L0001506	0	0.28902E-03	478903.0	3831846.1	966.4	3.40	4.51	3.16	NO
L0001507	0	0.28902E-03	478908.4	3831854.3	966.4	3.40	4.51	3.16	NO
L0001508	0	0.28902E-03	478913.7	3831862.4	966.4	3.40	4.51	3.16	NO
L0001509	0	0.28902E-03	478919.0	3831870.5	966.4	3.40	4.51	3.16	NO
L0001510	0	0.28902E-03	478924.3	3831878.6	966.5	3.40	4.51	3.16	NO
L0001511	0	0.28902E-03	478929.6	3831886.7	966.5	3.40	4.51	3.16	NO
L0001512	0	0.28902E-03	478934.9	3831894.8	966.5	3.40	4.51	3.16	NO
L0001513	0	0.28902E-03	478940.2	3831903.0	966.6	3.40	4.51	3.16	NO
L0001514	0	0.28902E-03	478945.5	3831911.1	966.7	3.40	4.51	3.16	NO
L0001515	0	0.28902E-03	478950.8	3831919.2	966.7	3.40	4.51	3.16	NO
L0001516	0	0.28902E-03	478956.1	3831927.3	966.7	3.40	4.51	3.16	NO
L0001517	0	0.28902E-03	478961.4	3831935.4	966.6	3.40	4.51	3.16	NO
L0001518	0	0.28902E-03	478966.8	3831943.6	966.5	3.40	4.51	3.16	NO
L0001519	0	0.28902E-03	478972.1	3831951.7	966.6	3.40	4.51	3.16	NO
L0001520	0	0.28902E-03	478977.4	3831959.8	966.7	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001521	0	0.29851E-02	475227.0	3825729.5	895.3	3.40	4.51	3.16	NO	
L0001522	0	0.29851E-02	475233.1	3825737.1	895.7	3.40	4.51	3.16	NO	
L0001523	0	0.29851E-02	475239.1	3825744.7	896.1	3.40	4.51	3.16	NO	
L0001524	0	0.29851E-02	475245.1	3825752.3	896.3	3.40	4.51	3.16	NO	
L0001525	0	0.29851E-02	475251.1	3825760.0	896.3	3.40	4.51	3.16	NO	
L0001526	0	0.29851E-02	475257.1	3825767.6	896.3	3.40	4.51	3.16	NO	
L0001527	0	0.29851E-02	475263.1	3825775.2	896.3	3.40	4.51	3.16	NO	
L0001528	0	0.29851E-02	475269.1	3825782.8	896.2	3.40	4.51	3.16	NO	
L0001529	0	0.29851E-02	475275.1	3825790.4	896.2	3.40	4.51	3.16	NO	
L0001530	0	0.29851E-02	475281.2	3825798.0	896.2	3.40	4.51	3.16	NO	
L0001531	0	0.29851E-02	475287.2	3825805.6	896.2	3.40	4.51	3.16	NO	
L0001532	0	0.29851E-02	475293.2	3825813.2	896.2	3.40	4.51	3.16	NO	
L0001533	0	0.29851E-02	475299.2	3825820.8	896.2	3.40	4.51	3.16	NO	
L0001534	0	0.29851E-02	475305.2	3825828.5	896.1	3.40	4.51	3.16	NO	
L0001535	0	0.29851E-02	475311.2	3825836.1	896.1	3.40	4.51	3.16	NO	

L0001536	0	0.29851E-02	475317.2	3825843.7	896.1	3.40	4.51	3.16	NO
L0001537	0	0.29851E-02	475323.2	3825851.3	896.0	3.40	4.51	3.16	NO
L0001538	0	0.29851E-02	475329.3	3825858.9	896.0	3.40	4.51	3.16	NO
L0001539	0	0.29851E-02	475335.3	3825866.5	896.0	3.40	4.51	3.16	NO
L0001540	0	0.29851E-02	475341.3	3825874.1	895.9	3.40	4.51	3.16	NO
L0001541	0	0.29851E-02	475347.3	3825881.7	896.0	3.40	4.51	3.16	NO
L0001542	0	0.29851E-02	475353.3	3825889.4	896.1	3.40	4.51	3.16	NO
L0001543	0	0.29851E-02	475359.3	3825897.0	896.1	3.40	4.51	3.16	NO
L0001544	0	0.29851E-02	475365.3	3825904.6	896.2	3.40	4.51	3.16	NO
L0001545	0	0.29851E-02	475371.3	3825912.2	896.4	3.40	4.51	3.16	NO
L0001546	0	0.29851E-02	475377.4	3825919.8	896.5	3.40	4.51	3.16	NO
L0001547	0	0.29851E-02	475383.4	3825927.4	896.7	3.40	4.51	3.16	NO
L0001548	0	0.29851E-02	475389.4	3825935.0	897.0	3.40	4.51	3.16	NO
L0001549	0	0.29851E-02	475395.4	3825942.6	897.1	3.40	4.51	3.16	NO
L0001550	0	0.29851E-02	475401.4	3825950.2	897.1	3.40	4.51	3.16	NO
L0001551	0	0.29851E-02	475407.4	3825957.9	896.8	3.40	4.51	3.16	NO
L0001552	0	0.29851E-02	475413.4	3825965.5	896.6	3.40	4.51	3.16	NO
L0001553	0	0.29851E-02	475419.5	3825973.1	896.6	3.40	4.51	3.16	NO
L0001554	0	0.29851E-02	475425.5	3825980.7	896.8	3.40	4.51	3.16	NO
L0001555	0	0.29851E-02	475431.5	3825988.3	896.8	3.40	4.51	3.16	NO
L0001556	0	0.29851E-02	475437.5	3825995.9	896.3	3.40	4.51	3.16	NO
L0001557	0	0.29851E-02	475443.5	3826003.5	895.9	3.40	4.51	3.16	NO
L0001558	0	0.29851E-02	475449.5	3826011.1	895.6	3.40	4.51	3.16	NO
L0001559	0	0.29851E-02	475455.5	3826018.8	895.9	3.40	4.51	3.16	NO
L0001560	0	0.29851E-02	475461.5	3826026.4	896.4	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001561	0	0.29851E-02	475467.6	3826034.0	897.0	3.40	4.51	3.16	NO	
L0001562	0	0.29851E-02	475473.6	3826041.6	897.5	3.40	4.51	3.16	NO	
L0001563	0	0.29851E-02	475479.6	3826049.2	897.8	3.40	4.51	3.16	NO	
L0001564	0	0.29851E-02	475485.6	3826056.8	897.8	3.40	4.51	3.16	NO	
L0001565	0	0.29851E-02	475491.6	3826064.4	897.5	3.40	4.51	3.16	NO	
L0001566	0	0.29851E-02	475497.6	3826072.0	897.0	3.40	4.51	3.16	NO	
L0001567	0	0.29851E-02	475503.6	3826079.6	896.2	3.40	4.51	3.16	NO	
L0001568	0	0.29851E-02	475509.6	3826087.3	896.4	3.40	4.51	3.16	NO	
L0001569	0	0.29851E-02	475515.7	3826094.9	896.1	3.40	4.51	3.16	NO	
L0001570	0	0.29851E-02	475521.7	3826102.5	895.5	3.40	4.51	3.16	NO	
L0001571	0	0.29851E-02	475527.7	3826110.1	894.6	3.40	4.51	3.16	NO	
L0001572	0	0.29851E-02	475533.7	3826117.7	893.7	3.40	4.51	3.16	NO	
L0001573	0	0.29851E-02	475539.7	3826125.3	893.2	3.40	4.51	3.16	NO	
L0001574	0	0.29851E-02	475545.7	3826132.9	892.7	3.40	4.51	3.16	NO	
L0001575	0	0.29851E-02	475551.7	3826140.5	892.2	3.40	4.51	3.16	NO	

L0001576	0	0.29851E-02	475557.7	3826148.2	892.4	3.40	4.51	3.16	NO
L0001577	0	0.29851E-02	475563.8	3826155.8	893.7	3.40	4.51	3.16	NO
L0001578	0	0.29851E-02	475569.8	3826163.4	894.9	3.40	4.51	3.16	NO
L0001579	0	0.29851E-02	475576.8	3826169.3	895.9	3.40	4.51	3.16	NO
L0001580	0	0.29851E-02	475586.4	3826170.4	896.5	3.40	4.51	3.16	NO
L0001581	0	0.29851E-02	475596.0	3826171.6	897.0	3.40	4.51	3.16	NO
L0001582	0	0.29851E-02	475605.6	3826172.8	897.3	3.40	4.51	3.16	NO
L0001583	0	0.29851E-02	475615.3	3826173.9	897.5	3.40	4.51	3.16	NO
L0001584	0	0.29851E-02	475624.9	3826175.1	897.6	3.40	4.51	3.16	NO
L0001585	0	0.29851E-02	475634.5	3826176.3	897.6	3.40	4.51	3.16	NO
L0001586	0	0.29851E-02	475644.2	3826177.5	897.4	3.40	4.51	3.16	NO
L0001587	0	0.29851E-02	475653.8	3826178.6	897.3	3.40	4.51	3.16	NO
L0001588	0	0.29851E-02	475663.4	3826179.8	897.9	3.40	4.51	3.16	NO
L0001589	0	0.29851E-02	475673.0	3826181.0	898.6	3.40	4.51	3.16	NO
L0001590	0	0.29851E-02	475682.7	3826182.2	899.2	3.40	4.51	3.16	NO
L0001591	0	0.29851E-02	475692.3	3826183.3	899.5	3.40	4.51	3.16	NO
L0001592	0	0.29851E-02	475701.9	3826184.5	899.9	3.40	4.51	3.16	NO
L0001593	0	0.29851E-02	475711.6	3826185.7	900.2	3.40	4.51	3.16	NO
L0001594	0	0.29851E-02	475721.2	3826186.9	900.5	3.40	4.51	3.16	NO
L0001595	0	0.29851E-02	475724.4	3826184.4	900.4	3.40	4.51	3.16	NO
L0001596	0	0.29851E-02	475718.4	3826176.8	900.0	3.40	4.51	3.16	NO
L0001597	0	0.29851E-02	475712.4	3826169.2	900.4	3.40	4.51	3.16	NO
L0001598	0	0.29851E-02	475706.3	3826161.6	900.7	3.40	4.51	3.16	NO
L0001599	0	0.29851E-02	475700.3	3826154.0	901.0	3.40	4.51	3.16	NO
L0001600	0	0.29851E-02	475694.3	3826146.4	901.3	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001601	0	0.29851E-02	475688.3	3826138.8	900.1	3.40	4.51	3.16	NO	
L0001602	0	0.29851E-02	475682.3	3826131.2	898.7	3.40	4.51	3.16	NO	
L0001603	0	0.29851E-02	475676.2	3826123.6	897.4	3.40	4.51	3.16	NO	
L0001604	0	0.29851E-02	475670.2	3826116.0	896.3	3.40	4.51	3.16	NO	
L0001605	0	0.29851E-02	475664.2	3826108.4	896.8	3.40	4.51	3.16	NO	
L0001606	0	0.29851E-02	475658.2	3826100.8	897.4	3.40	4.51	3.16	NO	
L0001607	0	0.29851E-02	475652.2	3826093.2	897.8	3.40	4.51	3.16	NO	
L0001608	0	0.29851E-02	475646.1	3826085.6	898.2	3.40	4.51	3.16	NO	
L0001609	0	0.29851E-02	475640.1	3826078.0	898.2	3.40	4.51	3.16	NO	
L0001610	0	0.29851E-02	475634.1	3826070.4	898.1	3.40	4.51	3.16	NO	
L0001611	0	0.29851E-02	475628.1	3826062.7	897.8	3.40	4.51	3.16	NO	
L0001612	0	0.29851E-02	475622.1	3826055.1	897.8	3.40	4.51	3.16	NO	
L0001613	0	0.29851E-02	475616.0	3826047.5	898.4	3.40	4.51	3.16	NO	
L0001614	0	0.29851E-02	475610.0	3826039.9	899.1	3.40	4.51	3.16	NO	
L0001615	0	0.29851E-02	475604.0	3826032.3	899.8	3.40	4.51	3.16	NO	

L0001616	0	0.29851E-02	475598.0	3826024.7	900.7	3.40	4.51	3.16	NO
L0001617	0	0.29851E-02	475592.0	3826017.1	901.4	3.40	4.51	3.16	NO
L0001618	0	0.29851E-02	475586.0	3826009.5	901.8	3.40	4.51	3.16	NO
L0001619	0	0.29851E-02	475579.9	3826001.9	902.0	3.40	4.51	3.16	NO
L0001620	0	0.29851E-02	475573.9	3825994.3	902.0	3.40	4.51	3.16	NO
L0001621	0	0.29851E-02	475567.9	3825986.7	901.9	3.40	4.51	3.16	NO
L0001622	0	0.29851E-02	475561.9	3825979.1	901.6	3.40	4.51	3.16	NO
L0001623	0	0.29851E-02	475555.9	3825971.5	901.1	3.40	4.51	3.16	NO
L0001624	0	0.29851E-02	475549.8	3825963.9	900.7	3.40	4.51	3.16	NO
L0001625	0	0.29851E-02	475543.8	3825956.3	900.9	3.40	4.51	3.16	NO
L0001626	0	0.29851E-02	475537.8	3825948.7	901.1	3.40	4.51	3.16	NO
L0001627	0	0.29851E-02	475531.8	3825941.1	901.3	3.40	4.51	3.16	NO
L0001628	0	0.29851E-02	475525.8	3825933.4	901.4	3.40	4.51	3.16	NO
L0001629	0	0.29851E-02	475519.7	3825925.8	901.5	3.40	4.51	3.16	NO
L0001630	0	0.29851E-02	475513.7	3825918.2	901.5	3.40	4.51	3.16	NO
L0001631	0	0.29851E-02	475507.7	3825910.6	901.4	3.40	4.51	3.16	NO
L0001632	0	0.29851E-02	475501.7	3825903.0	901.3	3.40	4.51	3.16	NO
L0001633	0	0.29851E-02	475495.7	3825895.4	901.2	3.40	4.51	3.16	NO
L0001634	0	0.29851E-02	475489.6	3825887.8	901.1	3.40	4.51	3.16	NO
L0001635	0	0.29851E-02	475483.6	3825880.2	901.0	3.40	4.51	3.16	NO
L0001636	0	0.29851E-02	475477.6	3825872.6	900.9	3.40	4.51	3.16	NO
L0001637	0	0.29851E-02	475471.6	3825865.0	900.8	3.40	4.51	3.16	NO
L0001638	0	0.29851E-02	475465.6	3825857.4	900.8	3.40	4.51	3.16	NO
L0001639	0	0.29851E-02	475459.5	3825849.8	900.7	3.40	4.51	3.16	NO
L0001640	0	0.29851E-02	475453.5	3825842.2	900.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001641	0	0.29851E-02	475447.3	3825834.8	900.6	3.40	4.51	3.16	NO	
L0001642	0	0.29851E-02	475440.9	3825827.5	900.5	3.40	4.51	3.16	NO	
L0001643	0	0.29851E-02	475434.5	3825820.2	900.5	3.40	4.51	3.16	NO	
L0001644	0	0.29851E-02	475428.0	3825812.9	900.5	3.40	4.51	3.16	NO	
L0001645	0	0.29851E-02	475421.6	3825805.6	900.5	3.40	4.51	3.16	NO	
L0001646	0	0.29851E-02	475415.2	3825798.3	900.5	3.40	4.51	3.16	NO	
L0001647	0	0.29851E-02	475408.8	3825791.0	900.5	3.40	4.51	3.16	NO	
L0001648	0	0.29851E-02	475402.4	3825783.8	900.5	3.40	4.51	3.16	NO	
L0001649	0	0.29851E-02	475398.8	3825776.9	900.6	3.40	4.51	3.16	NO	
L0001650	0	0.29851E-02	475406.9	3825771.6	901.0	3.40	4.51	3.16	NO	
L0001651	0	0.29851E-02	475415.0	3825766.3	901.4	3.40	4.51	3.16	NO	
L0001652	0	0.29851E-02	475423.2	3825761.0	901.7	3.40	4.51	3.16	NO	
L0001653	0	0.29851E-02	475431.3	3825755.7	902.1	3.40	4.51	3.16	NO	
L0001654	0	0.29851E-02	475439.4	3825750.4	902.5	3.40	4.51	3.16	NO	
L0001655	0	0.29851E-02	475447.6	3825745.1	903.0	3.40	4.51	3.16	NO	

L0001656	0	0.29851E-02	475455.7	3825739.8	903.4	3.40	4.51	3.16	NO
L0001657	0	0.29851E-02	475463.8	3825734.5	903.8	3.40	4.51	3.16	NO
L0001658	0	0.29851E-02	475471.9	3825729.2	904.3	3.40	4.51	3.16	NO
L0001659	0	0.29851E-02	475480.1	3825724.0	904.7	3.40	4.51	3.16	NO
L0001660	0	0.29851E-02	475488.2	3825718.7	905.1	3.40	4.51	3.16	NO
L0001661	0	0.29851E-02	475496.3	3825713.4	905.6	3.40	4.51	3.16	NO
L0001662	0	0.29851E-02	475504.5	3825708.1	906.0	3.40	4.51	3.16	NO
L0001663	0	0.29851E-02	475512.6	3825702.8	906.4	3.40	4.51	3.16	NO
L0001664	0	0.29851E-02	475520.7	3825697.5	906.8	3.40	4.51	3.16	NO
L0001665	0	0.29851E-02	475528.9	3825692.2	907.2	3.40	4.51	3.16	NO
L0001666	0	0.29851E-02	475537.0	3825686.9	907.7	3.40	4.51	3.16	NO
L0001667	0	0.29851E-02	475545.1	3825681.6	908.3	3.40	4.51	3.16	NO
L0001668	0	0.29851E-02	475553.3	3825676.4	908.8	3.40	4.51	3.16	NO
L0001669	0	0.29851E-02	475561.4	3825671.1	909.3	3.40	4.51	3.16	NO
L0001670	0	0.29851E-02	475569.5	3825665.8	909.8	3.40	4.51	3.16	NO
L0001671	0	0.29851E-02	475577.7	3825660.5	910.2	3.40	4.51	3.16	NO
L0001672	0	0.29851E-02	475585.8	3825655.2	910.8	3.40	4.51	3.16	NO
L0001673	0	0.29851E-02	475592.6	3825657.7	911.0	3.40	4.51	3.16	NO
L0001674	0	0.29851E-02	475598.5	3825665.4	911.0	3.40	4.51	3.16	NO
L0001675	0	0.29851E-02	475604.3	3825673.1	910.9	3.40	4.51	3.16	NO
L0001676	0	0.29851E-02	475610.2	3825680.8	910.9	3.40	4.51	3.16	NO
L0001677	0	0.29851E-02	475616.1	3825688.5	910.8	3.40	4.51	3.16	NO
L0001678	0	0.29851E-02	475622.0	3825696.2	910.8	3.40	4.51	3.16	NO
L0001679	0	0.29851E-02	475627.9	3825703.9	910.8	3.40	4.51	3.16	NO
L0001680	0	0.29851E-02	475633.8	3825711.6	910.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001681	0	0.29851E-02	475639.7	3825719.4	910.9	3.40	4.51	3.16	NO	
L0001682	0	0.29851E-02	475645.5	3825727.1	910.9	3.40	4.51	3.16	NO	
L0001683	0	0.29851E-02	475651.4	3825734.8	910.9	3.40	4.51	3.16	NO	
L0001684	0	0.29851E-02	475657.3	3825742.5	910.9	3.40	4.51	3.16	NO	
L0001685	0	0.29851E-02	475663.2	3825750.2	910.8	3.40	4.51	3.16	NO	
L0001686	0	0.29851E-02	475669.1	3825757.9	910.7	3.40	4.51	3.16	NO	
L0001687	0	0.29851E-02	475675.0	3825765.6	910.7	3.40	4.51	3.16	NO	
L0001688	0	0.29851E-02	475680.9	3825773.3	910.7	3.40	4.51	3.16	NO	
L0001689	0	0.29851E-02	475686.7	3825781.0	910.8	3.40	4.51	3.16	NO	
L0001690	0	0.29851E-02	475692.6	3825788.8	910.7	3.40	4.51	3.16	NO	
L0001691	0	0.29851E-02	475698.5	3825796.5	910.6	3.40	4.51	3.16	NO	
L0001692	0	0.29851E-02	475704.4	3825804.2	910.4	3.40	4.51	3.16	NO	
L0001693	0	0.29851E-02	475710.3	3825811.9	910.2	3.40	4.51	3.16	NO	
L0001694	0	0.29851E-02	475716.2	3825819.6	910.1	3.40	4.51	3.16	NO	
L0001695	0	0.29851E-02	475722.0	3825827.3	910.0	3.40	4.51	3.16	NO	

L0001696	0	0.29851E-02	475727.9	3825835.0	910.0	3.40	4.51	3.16	NO
L0001697	0	0.29851E-02	475733.8	3825842.7	910.2	3.40	4.51	3.16	NO
L0001698	0	0.29851E-02	475739.7	3825850.4	910.5	3.40	4.51	3.16	NO
L0001699	0	0.29851E-02	475745.6	3825858.2	910.6	3.40	4.51	3.16	NO
L0001700	0	0.29851E-02	475751.5	3825865.9	910.6	3.40	4.51	3.16	NO
L0001701	0	0.29851E-02	475757.4	3825873.6	910.2	3.40	4.51	3.16	NO
L0001702	0	0.29851E-02	475763.2	3825881.3	910.0	3.40	4.51	3.16	NO
L0001703	0	0.29851E-02	475769.1	3825889.0	909.9	3.40	4.51	3.16	NO
L0001704	0	0.29851E-02	475775.0	3825896.7	909.8	3.40	4.51	3.16	NO
L0001705	0	0.29851E-02	475780.9	3825904.4	909.9	3.40	4.51	3.16	NO
L0001706	0	0.29851E-02	475786.8	3825912.1	910.2	3.40	4.51	3.16	NO
L0001707	0	0.29851E-02	475792.7	3825919.8	910.6	3.40	4.51	3.16	NO
L0001708	0	0.29851E-02	475798.6	3825927.5	911.0	3.40	4.51	3.16	NO
L0001709	0	0.29851E-02	475804.4	3825935.3	910.9	3.40	4.51	3.16	NO
L0001710	0	0.29851E-02	475810.3	3825943.0	910.2	3.40	4.51	3.16	NO
L0001711	0	0.29851E-02	475816.2	3825950.7	909.3	3.40	4.51	3.16	NO
L0001712	0	0.29851E-02	475822.1	3825958.4	908.4	3.40	4.51	3.16	NO
L0001713	0	0.29851E-02	475828.0	3825966.1	908.1	3.40	4.51	3.16	NO
L0001714	0	0.29851E-02	475833.9	3825973.8	908.3	3.40	4.51	3.16	NO
L0001715	0	0.29851E-02	475839.8	3825981.5	907.9	3.40	4.51	3.16	NO
L0001716	0	0.29851E-02	475845.6	3825989.2	907.0	3.40	4.51	3.16	NO
L0001717	0	0.29851E-02	475851.5	3825996.9	905.9	3.40	4.51	3.16	NO
L0001718	0	0.29851E-02	475857.4	3826004.7	905.2	3.40	4.51	3.16	NO
L0001719	0	0.29851E-02	475863.3	3826012.4	905.4	3.40	4.51	3.16	NO
L0001720	0	0.29851E-02	475869.2	3826020.1	906.1	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001721	0	0.29851E-02	475875.1	3826027.8	906.9	3.40	4.51	3.16	NO	
L0001722	0	0.29851E-02	475881.0	3826035.5	907.4	3.40	4.51	3.16	NO	
L0001723	0	0.29851E-02	475886.5	3826043.5	907.6	3.40	4.51	3.16	NO	
L0001724	0	0.29851E-02	475891.7	3826051.6	907.6	3.40	4.51	3.16	NO	
L0001725	0	0.29851E-02	475897.0	3826059.8	907.7	3.40	4.51	3.16	NO	
L0001726	0	0.29851E-02	475902.2	3826067.9	907.8	3.40	4.51	3.16	NO	
L0001727	0	0.29851E-02	475907.5	3826076.1	908.1	3.40	4.51	3.16	NO	
L0001728	0	0.29851E-02	475912.8	3826084.2	908.3	3.40	4.51	3.16	NO	
L0001729	0	0.29851E-02	475918.0	3826092.4	908.5	3.40	4.51	3.16	NO	
L0001730	0	0.29851E-02	475919.9	3826101.3	908.3	3.40	4.51	3.16	NO	
L0001731	0	0.29851E-02	475918.7	3826110.9	908.0	3.40	4.51	3.16	NO	
L0001732	0	0.29851E-02	475917.5	3826120.5	908.0	3.40	4.51	3.16	NO	
L0001733	0	0.29851E-02	475916.3	3826130.2	908.2	3.40	4.51	3.16	NO	
L0001734	0	0.29851E-02	475915.1	3826139.8	908.3	3.40	4.51	3.16	NO	
L0001735	0	0.29851E-02	475907.8	3826145.5	908.0	3.40	4.51	3.16	NO	

L0001736	0	0.29851E-02	475899.6	3826150.7	907.6	3.40	4.51	3.16	NO
L0001737	0	0.29851E-02	475891.3	3826155.8	907.2	3.40	4.51	3.16	NO
L0001738	0	0.29851E-02	475883.1	3826161.0	907.0	3.40	4.51	3.16	NO
L0001739	0	0.29851E-02	475874.9	3826166.1	906.9	3.40	4.51	3.16	NO
L0001740	0	0.29851E-02	475866.7	3826171.3	906.9	3.40	4.51	3.16	NO
L0001741	0	0.29851E-02	475858.5	3826176.4	906.9	3.40	4.51	3.16	NO
L0001742	0	0.29851E-02	475850.2	3826181.6	906.4	3.40	4.51	3.16	NO
L0001743	0	0.29851E-02	475842.0	3826186.7	905.9	3.40	4.51	3.16	NO
L0001744	0	0.29851E-02	475833.8	3826191.9	905.6	3.40	4.51	3.16	NO
L0001745	0	0.29851E-02	475825.6	3826197.0	905.3	3.40	4.51	3.16	NO
L0001746	0	0.29851E-02	475817.4	3826202.2	905.1	3.40	4.51	3.16	NO
L0001747	0	0.29851E-02	475809.1	3826207.3	905.0	3.40	4.51	3.16	NO
L0001748	0	0.29851E-02	475800.9	3826212.5	904.5	3.40	4.51	3.16	NO
L0001749	0	0.29851E-02	475792.7	3826217.6	904.1	3.40	4.51	3.16	NO
L0001750	0	0.29851E-02	475784.5	3826222.8	903.8	3.40	4.51	3.16	NO
L0001751	0	0.29851E-02	475776.3	3826227.9	903.4	3.40	4.51	3.16	NO
L0001752	0	0.29851E-02	475768.0	3826233.0	903.2	3.40	4.51	3.16	NO
L0001753	0	0.29851E-02	475759.7	3826237.7	903.0	3.40	4.51	3.16	NO
L0001754	0	0.29851E-02	475750.1	3826236.3	902.6	3.40	4.51	3.16	NO
L0001755	0	0.29851E-02	475740.5	3826234.8	902.0	3.40	4.51	3.16	NO
L0001756	0	0.29851E-02	475731.0	3826233.4	901.6	3.40	4.51	3.16	NO
L0001757	0	0.29851E-02	475721.4	3826231.9	901.2	3.40	4.51	3.16	NO
L0001758	0	0.29851E-02	475711.8	3826230.5	900.9	3.40	4.51	3.16	NO
L0001759	0	0.29851E-02	475702.2	3826229.0	900.5	3.40	4.51	3.16	NO
L0001760	0	0.29851E-02	475692.6	3826227.5	900.1	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001761	0	0.29851E-02	475683.0	3826226.1	899.8	3.40	4.51	3.16	NO	
L0001762	0	0.29851E-02	475673.4	3826224.6	899.3	3.40	4.51	3.16	NO	
L0001763	0	0.29851E-02	475663.8	3826223.2	899.0	3.40	4.51	3.16	NO	
L0001764	0	0.29851E-02	475654.2	3826221.7	898.5	3.40	4.51	3.16	NO	
L0001765	0	0.29851E-02	475644.6	3826220.3	897.7	3.40	4.51	3.16	NO	
L0001766	0	0.29851E-02	475635.1	3826218.8	896.9	3.40	4.51	3.16	NO	
L0001767	0	0.29851E-02	475625.5	3826217.3	896.1	3.40	4.51	3.16	NO	
L0001768	0	0.29851E-02	475615.9	3826215.9	895.4	3.40	4.51	3.16	NO	
L0001769	0	0.29851E-02	475607.4	3826219.4	895.0	3.40	4.51	3.16	NO	
L0001770	0	0.29851E-02	475599.3	3826224.7	895.1	3.40	4.51	3.16	NO	
L0001771	0	0.29851E-02	475591.2	3826230.1	894.7	3.40	4.51	3.16	NO	
L0001772	0	0.29851E-02	475583.1	3826235.4	893.7	3.40	4.51	3.16	NO	
L0001773	0	0.29851E-02	475575.0	3826240.8	893.1	3.40	4.51	3.16	NO	
L0001774	0	0.29851E-02	475566.9	3826246.1	892.9	3.40	4.51	3.16	NO	
L0001775	0	0.29851E-02	475558.8	3826251.4	892.4	3.40	4.51	3.16	NO	

L0001776	0	0.29851E-02	475550.7	3826256.8	892.1	3.40	4.51	3.16	NO
L0001777	0	0.29851E-02	475542.6	3826262.1	892.0	3.40	4.51	3.16	NO
L0001778	0	0.29851E-02	475534.5	3826267.5	891.8	3.40	4.51	3.16	NO
L0001779	0	0.29851E-02	475526.4	3826272.8	891.5	3.40	4.51	3.16	NO
L0001780	0	0.29851E-02	475518.3	3826278.1	891.3	3.40	4.51	3.16	NO
L0001781	0	0.29851E-02	475510.2	3826283.5	891.0	3.40	4.51	3.16	NO
L0001782	0	0.29851E-02	475502.1	3826288.8	890.8	3.40	4.51	3.16	NO
L0001783	0	0.29851E-02	475494.0	3826294.2	890.4	3.40	4.51	3.16	NO
L0001784	0	0.29851E-02	475485.9	3826299.5	889.8	3.40	4.51	3.16	NO
L0001785	0	0.29851E-02	475477.8	3826304.9	889.1	3.40	4.51	3.16	NO
L0001786	0	0.29851E-02	475469.7	3826310.2	888.8	3.40	4.51	3.16	NO
L0001787	0	0.29851E-02	475461.6	3826315.5	888.6	3.40	4.51	3.16	NO
L0001788	0	0.29851E-02	475453.5	3826320.9	888.5	3.40	4.51	3.16	NO
L0001789	0	0.29851E-02	475445.4	3826326.2	888.3	3.40	4.51	3.16	NO
L0001790	0	0.29851E-02	475437.3	3826331.6	888.0	3.40	4.51	3.16	NO
L0001791	0	0.29851E-02	475428.6	3826334.4	887.8	3.40	4.51	3.16	NO
L0001792	0	0.29851E-02	475418.9	3826333.6	887.6	3.40	4.51	3.16	NO
L0001793	0	0.29851E-02	475409.3	3826332.9	887.4	3.40	4.51	3.16	NO
L0001794	0	0.29851E-02	475402.9	3826325.9	887.6	3.40	4.51	3.16	NO
L0001795	0	0.29851E-02	475396.8	3826318.3	887.8	3.40	4.51	3.16	NO
L0001796	0	0.29851E-02	475390.8	3826310.7	888.0	3.40	4.51	3.16	NO
L0001797	0	0.29851E-02	475384.7	3826303.2	888.0	3.40	4.51	3.16	NO
L0001798	0	0.29851E-02	475378.7	3826295.6	887.3	3.40	4.51	3.16	NO
L0001799	0	0.29851E-02	475372.6	3826288.0	886.0	3.40	4.51	3.16	NO
L0001800	0	0.29851E-02	475366.6	3826280.4	884.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001801	0	0.29851E-02	475360.5	3826272.8	883.9	3.40	4.51	3.16	NO	
L0001802	0	0.29851E-02	475354.5	3826265.3	883.8	3.40	4.51	3.16	NO	
L0001803	0	0.29851E-02	475348.4	3826257.7	884.2	3.40	4.51	3.16	NO	
L0001804	0	0.29851E-02	475342.4	3826250.1	884.4	3.40	4.51	3.16	NO	
L0001805	0	0.29851E-02	475336.3	3826242.5	884.2	3.40	4.51	3.16	NO	
L0001806	0	0.29851E-02	475330.3	3826234.9	884.4	3.40	4.51	3.16	NO	
L0001807	0	0.29851E-02	475324.2	3826227.4	885.5	3.40	4.51	3.16	NO	
L0001808	0	0.29851E-02	475318.2	3826219.8	887.2	3.40	4.51	3.16	NO	
L0001809	0	0.29851E-02	475312.1	3826212.2	888.3	3.40	4.51	3.16	NO	
L0001810	0	0.29851E-02	475306.0	3826204.6	888.8	3.40	4.51	3.16	NO	
L0001811	0	0.29851E-02	475300.0	3826197.0	888.8	3.40	4.51	3.16	NO	
L0001812	0	0.29851E-02	475293.9	3826189.5	888.8	3.40	4.51	3.16	NO	
L0001813	0	0.29851E-02	475287.9	3826181.9	888.3	3.40	4.51	3.16	NO	
L0001814	0	0.29851E-02	475281.8	3826174.3	887.6	3.40	4.51	3.16	NO	
L0001815	0	0.29851E-02	475275.8	3826166.7	887.3	3.40	4.51	3.16	NO	

L0001816	0	0.29851E-02	475269.7	3826159.1	887.3	3.40	4.51	3.16	NO
L0001817	0	0.29851E-02	475263.7	3826151.6	886.8	3.40	4.51	3.16	NO
L0001818	0	0.29851E-02	475257.6	3826144.0	886.1	3.40	4.51	3.16	NO
L0001819	0	0.29851E-02	475251.6	3826136.4	885.7	3.40	4.51	3.16	NO
L0001820	0	0.29851E-02	475245.5	3826128.8	886.0	3.40	4.51	3.16	NO
L0001821	0	0.29851E-02	475239.5	3826121.2	886.6	3.40	4.51	3.16	NO
L0001822	0	0.29851E-02	475233.4	3826113.7	887.2	3.40	4.51	3.16	NO
L0001823	0	0.29851E-02	475227.4	3826106.1	887.7	3.40	4.51	3.16	NO
L0001824	0	0.29851E-02	475221.3	3826098.5	887.9	3.40	4.51	3.16	NO
L0001825	0	0.29851E-02	475215.3	3826090.9	888.0	3.40	4.51	3.16	NO
L0001826	0	0.29851E-02	475209.2	3826083.3	888.2	3.40	4.51	3.16	NO
L0001827	0	0.29851E-02	475203.2	3826075.8	888.6	3.40	4.51	3.16	NO
L0001828	0	0.29851E-02	475197.1	3826068.2	889.1	3.40	4.51	3.16	NO
L0001829	0	0.29851E-02	475191.1	3826060.6	889.5	3.40	4.51	3.16	NO
L0001830	0	0.29851E-02	475185.0	3826053.0	889.5	3.40	4.51	3.16	NO
L0001831	0	0.29851E-02	475179.0	3826045.4	889.2	3.40	4.51	3.16	NO
L0001832	0	0.29851E-02	475172.9	3826037.9	888.9	3.40	4.51	3.16	NO
L0001833	0	0.29851E-02	475166.8	3826030.3	888.5	3.40	4.51	3.16	NO
L0001834	0	0.29851E-02	475160.8	3826022.7	887.9	3.40	4.51	3.16	NO
L0001835	0	0.29851E-02	475154.7	3826015.1	887.4	3.40	4.51	3.16	NO
L0001836	0	0.29851E-02	475148.7	3826007.5	887.1	3.40	4.51	3.16	NO
L0001837	0	0.29851E-02	475142.6	3825999.9	887.0	3.40	4.51	3.16	NO
L0001838	0	0.29851E-02	475136.6	3825992.4	887.0	3.40	4.51	3.16	NO
L0001839	0	0.29851E-02	475130.5	3825984.8	887.0	3.40	4.51	3.16	NO
L0001840	0	0.29851E-02	475124.5	3825977.2	886.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001841	0	0.29851E-02	475118.4	3825969.6	886.6	3.40	4.51	3.16	NO	
L0001842	0	0.29851E-02	475112.4	3825962.0	886.4	3.40	4.51	3.16	NO	
L0001843	0	0.29851E-02	475106.3	3825954.5	886.5	3.40	4.51	3.16	NO	
L0001844	0	0.29851E-02	475100.3	3825946.9	886.4	3.40	4.51	3.16	NO	
L0001845	0	0.29851E-02	475094.2	3825939.3	886.3	3.40	4.51	3.16	NO	
L0001846	0	0.29851E-02	475088.2	3825931.7	886.2	3.40	4.51	3.16	NO	
L0001847	0	0.29851E-02	475082.1	3825924.1	886.3	3.40	4.51	3.16	NO	
L0001848	0	0.29851E-02	475076.1	3825916.6	886.5	3.40	4.51	3.16	NO	
L0001849	0	0.29851E-02	475070.0	3825909.0	886.9	3.40	4.51	3.16	NO	
L0001850	0	0.29851E-02	475064.0	3825901.4	887.4	3.40	4.51	3.16	NO	
L0001851	0	0.29851E-02	475057.9	3825893.8	887.3	3.40	4.51	3.16	NO	
L0001852	0	0.29851E-02	475051.9	3825886.2	887.1	3.40	4.51	3.16	NO	
L0001853	0	0.29851E-02	475045.8	3825878.7	886.8	3.40	4.51	3.16	NO	
L0001854	0	0.29851E-02	475039.8	3825871.1	886.5	3.40	4.51	3.16	NO	
L0001855	0	0.29851E-02	475033.7	3825863.5	886.5	3.40	4.51	3.16	NO	

L0001856	0	0.44643E-02	475394.9	3826286.0	887.2	3.40	4.51	3.16	NO
L0001857	0	0.44643E-02	475388.9	3826278.4	886.2	3.40	4.51	3.16	NO
L0001858	0	0.44643E-02	475382.8	3826270.8	885.3	3.40	4.51	3.16	NO
L0001859	0	0.44643E-02	475376.7	3826263.3	884.8	3.40	4.51	3.16	NO
L0001860	0	0.44643E-02	475370.7	3826255.7	884.6	3.40	4.51	3.16	NO
L0001861	0	0.44643E-02	475364.6	3826248.1	884.8	3.40	4.51	3.16	NO
L0001862	0	0.44643E-02	475358.5	3826240.6	885.4	3.40	4.51	3.16	NO
L0001863	0	0.44643E-02	475352.5	3826233.0	886.4	3.40	4.51	3.16	NO
L0001864	0	0.44643E-02	475346.4	3826225.4	886.9	3.40	4.51	3.16	NO
L0001865	0	0.44643E-02	475340.3	3826217.9	887.6	3.40	4.51	3.16	NO
L0001866	0	0.44643E-02	475334.3	3826210.3	888.8	3.40	4.51	3.16	NO
L0001867	0	0.44643E-02	475328.2	3826202.7	889.8	3.40	4.51	3.16	NO
L0001868	0	0.44643E-02	475322.1	3826195.2	890.3	3.40	4.51	3.16	NO
L0001869	0	0.44643E-02	475316.1	3826187.6	890.5	3.40	4.51	3.16	NO
L0001870	0	0.44643E-02	475310.0	3826180.0	890.5	3.40	4.51	3.16	NO
L0001871	0	0.44643E-02	475303.9	3826172.4	890.1	3.40	4.51	3.16	NO
L0001872	0	0.44643E-02	475297.9	3826164.9	889.4	3.40	4.51	3.16	NO
L0001873	0	0.44643E-02	475291.8	3826157.3	888.9	3.40	4.51	3.16	NO
L0001874	0	0.44643E-02	475285.7	3826149.7	888.7	3.40	4.51	3.16	NO
L0001875	0	0.44643E-02	475279.7	3826142.2	888.3	3.40	4.51	3.16	NO
L0001876	0	0.44643E-02	475273.6	3826134.6	887.4	3.40	4.51	3.16	NO
L0001877	0	0.44643E-02	475267.5	3826127.0	886.7	3.40	4.51	3.16	NO
L0001878	0	0.44643E-02	475261.5	3826119.5	886.4	3.40	4.51	3.16	NO
L0001879	0	0.44643E-02	475255.4	3826111.9	886.8	3.40	4.51	3.16	NO
L0001880	0	0.44643E-02	475249.3	3826104.3	887.5	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001881	0	0.44643E-02	475243.3	3826096.8	888.1	3.40	4.51	3.16	NO	
L0001882	0	0.44643E-02	475237.2	3826089.2	888.5	3.40	4.51	3.16	NO	
L0001883	0	0.44643E-02	475231.1	3826081.6	888.9	3.40	4.51	3.16	NO	
L0001884	0	0.44643E-02	475225.1	3826074.1	889.4	3.40	4.51	3.16	NO	
L0001885	0	0.44643E-02	475219.0	3826066.5	889.9	3.40	4.51	3.16	NO	
L0001886	0	0.44643E-02	475212.9	3826058.9	890.3	3.40	4.51	3.16	NO	
L0001887	0	0.44643E-02	475206.9	3826051.3	890.4	3.40	4.51	3.16	NO	
L0001888	0	0.44643E-02	475200.8	3826043.8	890.2	3.40	4.51	3.16	NO	
L0001889	0	0.44643E-02	475194.7	3826036.2	889.9	3.40	4.51	3.16	NO	
L0001890	0	0.44643E-02	475188.7	3826028.6	889.6	3.40	4.51	3.16	NO	
L0001891	0	0.44643E-02	475182.6	3826021.1	889.2	3.40	4.51	3.16	NO	
L0001892	0	0.44643E-02	475176.5	3826013.5	888.7	3.40	4.51	3.16	NO	
L0001893	0	0.44643E-02	475170.5	3826005.9	888.2	3.40	4.51	3.16	NO	
L0001894	0	0.44643E-02	475164.4	3825998.4	887.8	3.40	4.51	3.16	NO	
L0001895	0	0.44643E-02	475158.3	3825990.8	887.6	3.40	4.51	3.16	NO	

L0001896	0	0.44643E-02	475152.3	3825983.2	887.6	3.40	4.51	3.16	NO
L0001897	0	0.44643E-02	475146.2	3825975.7	887.5	3.40	4.51	3.16	NO
L0001898	0	0.44643E-02	475140.1	3825968.1	887.4	3.40	4.51	3.16	NO
L0001899	0	0.44643E-02	475134.1	3825960.5	887.3	3.40	4.51	3.16	NO
L0001900	0	0.44643E-02	475128.0	3825952.9	887.4	3.40	4.51	3.16	NO
L0001901	0	0.44643E-02	475122.0	3825945.4	887.7	3.40	4.51	3.16	NO
L0001902	0	0.44643E-02	475115.9	3825937.8	887.7	3.40	4.51	3.16	NO
L0001903	0	0.44643E-02	475109.8	3825930.2	887.6	3.40	4.51	3.16	NO
L0001904	0	0.44643E-02	475103.8	3825922.7	887.2	3.40	4.51	3.16	NO
L0001905	0	0.44643E-02	475097.7	3825915.1	887.1	3.40	4.51	3.16	NO
L0001906	0	0.44643E-02	475091.6	3825907.5	887.2	3.40	4.51	3.16	NO
L0001907	0	0.44643E-02	475085.6	3825900.0	887.4	3.40	4.51	3.16	NO
L0001908	0	0.44643E-02	475079.5	3825892.4	887.7	3.40	4.51	3.16	NO
L0001909	0	0.44643E-02	475073.4	3825884.8	887.7	3.40	4.51	3.16	NO
L0001910	0	0.44643E-02	475067.4	3825877.3	887.6	3.40	4.51	3.16	NO
L0001911	0	0.44643E-02	475061.3	3825869.7	887.4	3.40	4.51	3.16	NO
L0001912	0	0.43103E-02	475584.9	3826148.2	895.0	3.40	4.51	3.16	NO
L0001913	0	0.43103E-02	475578.9	3826140.6	894.0	3.40	4.51	3.16	NO
L0001914	0	0.43103E-02	475572.9	3826133.0	893.4	3.40	4.51	3.16	NO
L0001915	0	0.43103E-02	475566.9	3826125.4	893.3	3.40	4.51	3.16	NO
L0001916	0	0.43103E-02	475560.9	3826117.8	893.7	3.40	4.51	3.16	NO
L0001917	0	0.43103E-02	475554.9	3826110.2	894.4	3.40	4.51	3.16	NO
L0001918	0	0.43103E-02	475548.9	3826102.6	895.0	3.40	4.51	3.16	NO
L0001919	0	0.43103E-02	475542.9	3826094.9	896.0	3.40	4.51	3.16	NO
L0001920	0	0.43103E-02	475536.9	3826087.3	897.5	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001921	0	0.43103E-02	475530.8	3826079.7	898.7	3.40	4.51	3.16	NO	
L0001922	0	0.43103E-02	475524.8	3826072.1	898.4	3.40	4.51	3.16	NO	
L0001923	0	0.43103E-02	475518.8	3826064.5	898.0	3.40	4.51	3.16	NO	
L0001924	0	0.43103E-02	475512.8	3826056.9	898.0	3.40	4.51	3.16	NO	
L0001925	0	0.43103E-02	475506.8	3826049.3	898.3	3.40	4.51	3.16	NO	
L0001926	0	0.43103E-02	475500.8	3826041.6	898.6	3.40	4.51	3.16	NO	
L0001927	0	0.43103E-02	475494.8	3826034.0	898.6	3.40	4.51	3.16	NO	
L0001928	0	0.43103E-02	475488.8	3826026.4	898.3	3.40	4.51	3.16	NO	
L0001929	0	0.43103E-02	475482.8	3826018.8	897.8	3.40	4.51	3.16	NO	
L0001930	0	0.43103E-02	475476.8	3826011.2	897.4	3.40	4.51	3.16	NO	
L0001931	0	0.43103E-02	475470.7	3826003.6	897.0	3.40	4.51	3.16	NO	
L0001932	0	0.43103E-02	475464.7	3825996.0	896.7	3.40	4.51	3.16	NO	
L0001933	0	0.43103E-02	475458.7	3825988.3	896.6	3.40	4.51	3.16	NO	
L0001934	0	0.43103E-02	475452.7	3825980.7	896.9	3.40	4.51	3.16	NO	
L0001935	0	0.43103E-02	475446.7	3825973.1	897.4	3.40	4.51	3.16	NO	

L0001936	0	0.43103E-02	475440.7	3825965.5	897.5	3.40	4.51	3.16	NO
L0001937	0	0.43103E-02	475434.7	3825957.9	897.4	3.40	4.51	3.16	NO
L0001938	0	0.43103E-02	475428.7	3825950.3	897.4	3.40	4.51	3.16	NO
L0001939	0	0.43103E-02	475422.7	3825942.7	897.8	3.40	4.51	3.16	NO
L0001940	0	0.43103E-02	475416.7	3825935.0	898.1	3.40	4.51	3.16	NO
L0001941	0	0.43103E-02	475410.6	3825927.4	898.0	3.40	4.51	3.16	NO
L0001942	0	0.43103E-02	475404.6	3825919.8	897.7	3.40	4.51	3.16	NO
L0001943	0	0.43103E-02	475398.6	3825912.2	897.5	3.40	4.51	3.16	NO
L0001944	0	0.43103E-02	475392.6	3825904.6	897.3	3.40	4.51	3.16	NO
L0001945	0	0.43103E-02	475386.6	3825897.0	897.1	3.40	4.51	3.16	NO
L0001946	0	0.43103E-02	475380.6	3825889.4	897.0	3.40	4.51	3.16	NO
L0001947	0	0.43103E-02	475374.6	3825881.7	896.9	3.40	4.51	3.16	NO
L0001948	0	0.43103E-02	475368.6	3825874.1	896.8	3.40	4.51	3.16	NO
L0001949	0	0.43103E-02	475362.6	3825866.5	896.8	3.40	4.51	3.16	NO
L0001950	0	0.43103E-02	475356.6	3825858.9	896.8	3.40	4.51	3.16	NO
L0001951	0	0.43103E-02	475350.6	3825851.3	896.8	3.40	4.51	3.16	NO
L0001952	0	0.43103E-02	475344.5	3825843.7	896.9	3.40	4.51	3.16	NO
L0001953	0	0.43103E-02	475338.5	3825836.1	896.9	3.40	4.51	3.16	NO
L0001954	0	0.43103E-02	475332.5	3825828.4	896.9	3.40	4.51	3.16	NO
L0001955	0	0.43103E-02	475326.5	3825820.8	896.9	3.40	4.51	3.16	NO
L0001956	0	0.43103E-02	475320.5	3825813.2	896.9	3.40	4.51	3.16	NO
L0001957	0	0.43103E-02	475314.5	3825805.6	897.0	3.40	4.51	3.16	NO
L0001958	0	0.43103E-02	475308.5	3825798.0	897.0	3.40	4.51	3.16	NO
L0001959	0	0.43103E-02	475302.5	3825790.4	897.1	3.40	4.51	3.16	NO
L0001960	0	0.43103E-02	475296.5	3825782.8	897.1	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001961	0	0.43103E-02	475290.5	3825775.1	897.1	3.40	4.51	3.16	NO	
L0001962	0	0.43103E-02	475284.4	3825767.5	897.1	3.40	4.51	3.16	NO	
L0001963	0	0.43103E-02	475278.4	3825759.9	897.1	3.40	4.51	3.16	NO	
L0001964	0	0.43103E-02	475272.4	3825752.3	897.1	3.40	4.51	3.16	NO	
L0001965	0	0.43103E-02	475266.4	3825744.7	897.1	3.40	4.51	3.16	NO	
L0001966	0	0.43103E-02	475260.4	3825737.1	896.8	3.40	4.51	3.16	NO	
L0001967	0	0.43103E-02	475254.4	3825729.5	896.5	3.40	4.51	3.16	NO	
L0001968	0	0.43103E-02	475248.4	3825721.8	896.2	3.40	4.51	3.16	NO	
L0001969	0	0.43103E-02	475242.4	3825714.2	895.9	3.40	4.51	3.16	NO	
L0001970	0	0.54348E-02	475730.6	3826176.7	900.2	3.40	4.51	3.16	NO	
L0001971	0	0.54348E-02	475724.7	3826169.0	900.5	3.40	4.51	3.16	NO	
L0001972	0	0.54348E-02	475718.8	3826161.3	900.9	3.40	4.51	3.16	NO	
L0001973	0	0.54348E-02	475712.9	3826153.6	901.3	3.40	4.51	3.16	NO	
L0001974	0	0.54348E-02	475707.0	3826145.9	901.7	3.40	4.51	3.16	NO	
L0001975	0	0.54348E-02	475701.1	3826138.2	900.4	3.40	4.51	3.16	NO	

L0001976	0	0.54348E-02	475695.2	3826130.5	899.1	3.40	4.51	3.16	NO
L0001977	0	0.54348E-02	475689.3	3826122.8	897.6	3.40	4.51	3.16	NO
L0001978	0	0.54348E-02	475683.4	3826115.1	896.1	3.40	4.51	3.16	NO
L0001979	0	0.54348E-02	475677.4	3826107.4	897.0	3.40	4.51	3.16	NO
L0001980	0	0.54348E-02	475671.5	3826099.8	897.8	3.40	4.51	3.16	NO
L0001981	0	0.54348E-02	475665.6	3826092.1	898.4	3.40	4.51	3.16	NO
L0001982	0	0.54348E-02	475659.7	3826084.4	898.8	3.40	4.51	3.16	NO
L0001983	0	0.54348E-02	475653.8	3826076.7	898.7	3.40	4.51	3.16	NO
L0001984	0	0.54348E-02	475647.9	3826069.0	898.7	3.40	4.51	3.16	NO
L0001985	0	0.54348E-02	475642.0	3826061.3	898.5	3.40	4.51	3.16	NO
L0001986	0	0.54348E-02	475636.1	3826053.6	898.3	3.40	4.51	3.16	NO
L0001987	0	0.54348E-02	475630.2	3826045.9	898.7	3.40	4.51	3.16	NO
L0001988	0	0.54348E-02	475624.3	3826038.2	899.4	3.40	4.51	3.16	NO
L0001989	0	0.54348E-02	475618.4	3826030.5	900.1	3.40	4.51	3.16	NO
L0001990	0	0.54348E-02	475612.5	3826022.8	900.7	3.40	4.51	3.16	NO
L0001991	0	0.54348E-02	475606.6	3826015.1	901.2	3.40	4.51	3.16	NO
L0001992	0	0.54348E-02	475600.7	3826007.4	901.9	3.40	4.51	3.16	NO
L0001993	0	0.54348E-02	475594.7	3825999.7	902.3	3.40	4.51	3.16	NO
L0001994	0	0.54348E-02	475588.8	3825992.0	902.5	3.40	4.51	3.16	NO
L0001995	0	0.54348E-02	475582.9	3825984.4	902.6	3.40	4.51	3.16	NO
L0001996	0	0.54348E-02	475577.0	3825976.7	902.6	3.40	4.51	3.16	NO
L0001997	0	0.54348E-02	475571.1	3825969.0	902.4	3.40	4.51	3.16	NO
L0001998	0	0.54348E-02	475565.2	3825961.3	901.9	3.40	4.51	3.16	NO
L0001999	0	0.54348E-02	475559.3	3825953.6	901.7	3.40	4.51	3.16	NO
L0002000	0	0.54348E-02	475553.4	3825945.9	901.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002001	0	0.54348E-02	475547.5	3825938.2	902.0	3.40	4.51	3.16	NO	
L0002002	0	0.54348E-02	475541.6	3825930.5	902.2	3.40	4.51	3.16	NO	
L0002003	0	0.54348E-02	475535.7	3825922.8	902.1	3.40	4.51	3.16	NO	
L0002004	0	0.54348E-02	475529.8	3825915.1	902.0	3.40	4.51	3.16	NO	
L0002005	0	0.54348E-02	475523.9	3825907.4	902.0	3.40	4.51	3.16	NO	
L0002006	0	0.54348E-02	475517.9	3825899.7	902.0	3.40	4.51	3.16	NO	
L0002007	0	0.54348E-02	475512.0	3825892.0	901.9	3.40	4.51	3.16	NO	
L0002008	0	0.54348E-02	475506.1	3825884.3	901.7	3.40	4.51	3.16	NO	
L0002009	0	0.54348E-02	475500.2	3825876.6	901.6	3.40	4.51	3.16	NO	
L0002010	0	0.54348E-02	475494.3	3825868.9	901.5	3.40	4.51	3.16	NO	
L0002011	0	0.54348E-02	475488.4	3825861.3	901.5	3.40	4.51	3.16	NO	
L0002012	0	0.54348E-02	475482.5	3825853.6	901.5	3.40	4.51	3.16	NO	
L0002013	0	0.54348E-02	475476.6	3825845.9	901.4	3.40	4.51	3.16	NO	
L0002014	0	0.54348E-02	475470.7	3825838.2	901.4	3.40	4.51	3.16	NO	
L0002015	0	0.54348E-02	475464.8	3825830.5	901.3	3.40	4.51	3.16	NO	

L0002016	0	0.56818E-02	475890.5	3826024.7	908.1	3.40	4.51	3.16	NO
L0002017	0	0.56818E-02	475884.7	3826017.0	907.6	3.40	4.51	3.16	NO
L0002018	0	0.56818E-02	475878.8	3826009.2	906.6	3.40	4.51	3.16	NO
L0002019	0	0.56818E-02	475873.0	3826001.5	905.9	3.40	4.51	3.16	NO
L0002020	0	0.56818E-02	475867.1	3825993.7	905.5	3.40	4.51	3.16	NO
L0002021	0	0.56818E-02	475861.3	3825986.0	905.8	3.40	4.51	3.16	NO
L0002022	0	0.56818E-02	475855.4	3825978.3	906.7	3.40	4.51	3.16	NO
L0002023	0	0.56818E-02	475849.6	3825970.5	907.6	3.40	4.51	3.16	NO
L0002024	0	0.56818E-02	475843.7	3825962.8	908.1	3.40	4.51	3.16	NO
L0002025	0	0.56818E-02	475837.9	3825955.1	909.3	3.40	4.51	3.16	NO
L0002026	0	0.56818E-02	475832.0	3825947.3	910.6	3.40	4.51	3.16	NO
L0002027	0	0.56818E-02	475826.2	3825939.6	911.6	3.40	4.51	3.16	NO
L0002028	0	0.56818E-02	475820.3	3825931.8	912.5	3.40	4.51	3.16	NO
L0002029	0	0.56818E-02	475814.5	3825924.1	912.4	3.40	4.51	3.16	NO
L0002030	0	0.56818E-02	475808.6	3825916.4	912.1	3.40	4.51	3.16	NO
L0002031	0	0.56818E-02	475802.8	3825908.6	911.7	3.40	4.51	3.16	NO
L0002032	0	0.56818E-02	475796.9	3825900.9	911.3	3.40	4.51	3.16	NO
L0002033	0	0.56818E-02	475791.1	3825893.2	910.9	3.40	4.51	3.16	NO
L0002034	0	0.56818E-02	475785.2	3825885.4	910.6	3.40	4.51	3.16	NO
L0002035	0	0.56818E-02	475779.4	3825877.7	910.6	3.40	4.51	3.16	NO
L0002036	0	0.56818E-02	475773.5	3825869.9	910.7	3.40	4.51	3.16	NO
L0002037	0	0.56818E-02	475767.7	3825862.2	910.8	3.40	4.51	3.16	NO
L0002038	0	0.56818E-02	475761.9	3825854.5	910.8	3.40	4.51	3.16	NO
L0002039	0	0.56818E-02	475756.0	3825846.7	910.7	3.40	4.51	3.16	NO
L0002040	0	0.56818E-02	475750.2	3825839.0	910.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002041	0	0.56818E-02	475744.3	3825831.2	910.5	3.40	4.51	3.16	NO	
L0002042	0	0.56818E-02	475738.5	3825823.5	910.4	3.40	4.51	3.16	NO	
L0002043	0	0.56818E-02	475732.6	3825815.8	910.2	3.40	4.51	3.16	NO	
L0002044	0	0.56818E-02	475726.8	3825808.0	910.3	3.40	4.51	3.16	NO	
L0002045	0	0.56818E-02	475720.9	3825800.3	910.7	3.40	4.51	3.16	NO	
L0002046	0	0.56818E-02	475715.1	3825792.6	911.0	3.40	4.51	3.16	NO	
L0002047	0	0.56818E-02	475709.2	3825784.8	911.4	3.40	4.51	3.16	NO	
L0002048	0	0.56818E-02	475703.4	3825777.1	911.6	3.40	4.51	3.16	NO	
L0002049	0	0.56818E-02	475697.5	3825769.3	911.6	3.40	4.51	3.16	NO	
L0002050	0	0.56818E-02	475691.7	3825761.6	911.5	3.40	4.51	3.16	NO	
L0002051	0	0.56818E-02	475685.8	3825753.9	911.4	3.40	4.51	3.16	NO	
L0002052	0	0.56818E-02	475680.0	3825746.1	911.2	3.40	4.51	3.16	NO	
L0002053	0	0.56818E-02	475674.1	3825738.4	911.4	3.40	4.51	3.16	NO	
L0002054	0	0.56818E-02	475668.3	3825730.6	911.6	3.40	4.51	3.16	NO	
L0002055	0	0.56818E-02	475662.4	3825722.9	911.7	3.40	4.51	3.16	NO	

L0002056	0	0.56818E-02	475656.6	3825715.2	911.8	3.40	4.51	3.16	NO
L0002057	0	0.56818E-02	475650.7	3825707.4	911.8	3.40	4.51	3.16	NO
L0002058	0	0.56818E-02	475644.9	3825699.7	911.8	3.40	4.51	3.16	NO
L0002059	0	0.56818E-02	475639.0	3825692.0	911.7	3.40	4.51	3.16	NO
L0002060	0	0.24038E-02	475015.0	3825848.3	886.1	3.40	4.51	3.16	NO
L0002061	0	0.24038E-02	475009.4	3825840.4	885.9	3.40	4.51	3.16	NO
L0002062	0	0.24038E-02	475003.9	3825832.4	885.6	3.40	4.51	3.16	NO
L0002063	0	0.24038E-02	474998.4	3825824.4	885.3	3.40	4.51	3.16	NO
L0002064	0	0.24038E-02	474992.9	3825816.4	885.0	3.40	4.51	3.16	NO
L0002065	0	0.24038E-02	474987.3	3825808.5	884.6	3.40	4.51	3.16	NO
L0002066	0	0.24038E-02	474981.8	3825800.5	884.3	3.40	4.51	3.16	NO
L0002067	0	0.24038E-02	474976.3	3825792.5	884.2	3.40	4.51	3.16	NO
L0002068	0	0.24038E-02	474970.8	3825784.6	884.0	3.40	4.51	3.16	NO
L0002069	0	0.24038E-02	474965.2	3825776.6	883.9	3.40	4.51	3.16	NO
L0002070	0	0.24038E-02	474959.7	3825768.6	883.9	3.40	4.51	3.16	NO
L0002071	0	0.24038E-02	474954.2	3825760.6	884.0	3.40	4.51	3.16	NO
L0002072	0	0.24038E-02	474948.6	3825752.7	884.2	3.40	4.51	3.16	NO
L0002073	0	0.24038E-02	474943.1	3825744.7	884.4	3.40	4.51	3.16	NO
L0002074	0	0.24038E-02	474937.6	3825736.7	884.3	3.40	4.51	3.16	NO
L0002075	0	0.24038E-02	474939.1	3825730.2	884.4	3.40	4.51	3.16	NO
L0002076	0	0.24038E-02	474947.3	3825724.9	884.7	3.40	4.51	3.16	NO
L0002077	0	0.24038E-02	474955.4	3825719.6	884.9	3.40	4.51	3.16	NO
L0002078	0	0.24038E-02	474963.6	3825714.3	885.2	3.40	4.51	3.16	NO
L0002079	0	0.24038E-02	474971.7	3825709.1	885.6	3.40	4.51	3.16	NO
L0002080	0	0.24038E-02	474979.8	3825703.8	886.2	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002081	0	0.24038E-02	474988.0	3825698.5	886.8	3.40	4.51	3.16	NO	
L0002082	0	0.24038E-02	474996.1	3825693.2	887.4	3.40	4.51	3.16	NO	
L0002083	0	0.24038E-02	475004.3	3825688.0	887.9	3.40	4.51	3.16	NO	
L0002084	0	0.24038E-02	475012.4	3825682.7	888.4	3.40	4.51	3.16	NO	
L0002085	0	0.24038E-02	475020.5	3825677.4	888.6	3.40	4.51	3.16	NO	
L0002086	0	0.24038E-02	475028.7	3825672.1	888.9	3.40	4.51	3.16	NO	
L0002087	0	0.24038E-02	475036.8	3825666.9	889.5	3.40	4.51	3.16	NO	
L0002088	0	0.24038E-02	475045.0	3825661.6	890.2	3.40	4.51	3.16	NO	
L0002089	0	0.24038E-02	475054.1	3825659.4	890.3	3.40	4.51	3.16	NO	
L0002090	0	0.24038E-02	475063.8	3825659.1	890.3	3.40	4.51	3.16	NO	
L0002091	0	0.24038E-02	475073.5	3825658.8	890.4	3.40	4.51	3.16	NO	
L0002092	0	0.24038E-02	475083.2	3825658.5	890.8	3.40	4.51	3.16	NO	
L0002093	0	0.24038E-02	475092.9	3825658.2	891.1	3.40	4.51	3.16	NO	
L0002094	0	0.24038E-02	475102.6	3825657.8	891.4	3.40	4.51	3.16	NO	
L0002095	0	0.24038E-02	475112.2	3825657.5	891.7	3.40	4.51	3.16	NO	

L0002096	0	0.24038E-02	475121.9	3825657.2	892.1	3.40	4.51	3.16	NO
L0002097	0	0.24038E-02	475131.6	3825656.9	892.6	3.40	4.51	3.16	NO
L0002098	0	0.24038E-02	475141.3	3825656.6	893.2	3.40	4.51	3.16	NO
L0002099	0	0.24038E-02	475151.0	3825656.3	893.6	3.40	4.51	3.16	NO
L0002100	0	0.24038E-02	475160.7	3825655.9	893.8	3.40	4.51	3.16	NO
L0002101	0	0.24038E-02	475170.4	3825655.6	894.0	3.40	4.51	3.16	NO
L0002102	0	0.24038E-02	475180.1	3825655.3	894.4	3.40	4.51	3.16	NO
L0002103	0	0.24038E-02	475189.8	3825655.0	894.9	3.40	4.51	3.16	NO
L0002104	0	0.24038E-02	475197.7	3825658.7	895.1	3.40	4.51	3.16	NO
L0002105	0	0.24038E-02	475203.8	3825666.3	895.2	3.40	4.51	3.16	NO
L0002106	0	0.24038E-02	475209.9	3825673.8	895.3	3.40	4.51	3.16	NO
L0002107	0	0.24038E-02	475216.0	3825681.3	895.5	3.40	4.51	3.16	NO
L0002108	0	0.24038E-02	475222.2	3825688.8	895.6	3.40	4.51	3.16	NO
L0002109	0	0.24038E-02	475228.3	3825696.3	895.7	3.40	4.51	3.16	NO
L0002110	0	0.24038E-02	475237.2	3825698.8	896.1	3.40	4.51	3.16	NO
L0002111	0	0.24038E-02	475246.8	3825700.0	896.5	3.40	4.51	3.16	NO
L0002112	0	0.24038E-02	475255.9	3825702.2	896.8	3.40	4.51	3.16	NO
L0002113	0	0.24038E-02	475261.9	3825709.8	896.8	3.40	4.51	3.16	NO
L0002114	0	0.24038E-02	475267.8	3825717.5	897.0	3.40	4.51	3.16	NO
L0002115	0	0.24038E-02	475273.8	3825725.2	897.3	3.40	4.51	3.16	NO
L0002116	0	0.24038E-02	475279.7	3825732.8	897.5	3.40	4.51	3.16	NO
L0002117	0	0.24038E-02	475285.7	3825740.5	897.7	3.40	4.51	3.16	NO
L0002118	0	0.24038E-02	475291.6	3825748.1	897.8	3.40	4.51	3.16	NO
L0002119	0	0.24038E-02	475297.6	3825755.8	897.8	3.40	4.51	3.16	NO
L0002120	0	0.24038E-02	475303.5	3825763.5	897.8	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002121	0	0.24038E-02	475309.5	3825771.1	897.8	3.40	4.51	3.16	NO	
L0002122	0	0.24038E-02	475315.4	3825778.8	897.8	3.40	4.51	3.16	NO	
L0002123	0	0.24038E-02	475321.4	3825786.4	897.8	3.40	4.51	3.16	NO	
L0002124	0	0.24038E-02	475327.4	3825794.1	897.7	3.40	4.51	3.16	NO	
L0002125	0	0.24038E-02	475333.3	3825801.7	897.7	3.40	4.51	3.16	NO	
L0002126	0	0.24038E-02	475339.3	3825809.4	897.6	3.40	4.51	3.16	NO	
L0002127	0	0.24038E-02	475345.2	3825817.1	897.6	3.40	4.51	3.16	NO	
L0002128	0	0.24038E-02	475351.2	3825824.7	897.6	3.40	4.51	3.16	NO	
L0002129	0	0.24038E-02	475357.1	3825832.4	897.6	3.40	4.51	3.16	NO	
L0002130	0	0.24038E-02	475363.1	3825840.0	897.6	3.40	4.51	3.16	NO	
L0002131	0	0.24038E-02	475369.0	3825847.7	897.5	3.40	4.51	3.16	NO	
L0002132	0	0.24038E-02	475375.0	3825855.4	897.5	3.40	4.51	3.16	NO	
L0002133	0	0.24038E-02	475380.9	3825863.0	897.5	3.40	4.51	3.16	NO	
L0002134	0	0.24038E-02	475386.9	3825870.7	897.5	3.40	4.51	3.16	NO	
L0002135	0	0.24038E-02	475392.8	3825878.3	897.6	3.40	4.51	3.16	NO	

L0002136	0	0.24038E-02	475398.8	3825886.0	897.7	3.40	4.51	3.16	NO
L0002137	0	0.24038E-02	475404.7	3825893.6	897.9	3.40	4.51	3.16	NO
L0002138	0	0.24038E-02	475410.7	3825901.3	898.0	3.40	4.51	3.16	NO
L0002139	0	0.24038E-02	475416.7	3825909.0	898.2	3.40	4.51	3.16	NO
L0002140	0	0.24038E-02	475422.6	3825916.6	898.5	3.40	4.51	3.16	NO
L0002141	0	0.24038E-02	475428.6	3825924.3	898.8	3.40	4.51	3.16	NO
L0002142	0	0.24038E-02	475434.5	3825931.9	898.9	3.40	4.51	3.16	NO
L0002143	0	0.24038E-02	475440.5	3825939.6	898.7	3.40	4.51	3.16	NO
L0002144	0	0.24038E-02	475446.4	3825947.3	898.6	3.40	4.51	3.16	NO
L0002145	0	0.24038E-02	475452.4	3825954.9	898.8	3.40	4.51	3.16	NO
L0002146	0	0.24038E-02	475458.3	3825962.6	898.7	3.40	4.51	3.16	NO
L0002147	0	0.24038E-02	475464.3	3825970.2	898.3	3.40	4.51	3.16	NO
L0002148	0	0.24038E-02	475470.2	3825977.9	898.0	3.40	4.51	3.16	NO
L0002149	0	0.24038E-02	475476.2	3825985.5	897.9	3.40	4.51	3.16	NO
L0002150	0	0.24038E-02	475482.1	3825993.2	898.1	3.40	4.51	3.16	NO
L0002151	0	0.24038E-02	475488.1	3826000.9	898.5	3.40	4.51	3.16	NO
L0002152	0	0.24038E-02	475494.0	3826008.5	898.9	3.40	4.51	3.16	NO
L0002153	0	0.24038E-02	475500.0	3826016.2	899.4	3.40	4.51	3.16	NO
L0002154	0	0.24038E-02	475506.0	3826023.8	899.8	3.40	4.51	3.16	NO
L0002155	0	0.24038E-02	475511.9	3826031.5	899.5	3.40	4.51	3.16	NO
L0002156	0	0.24038E-02	475517.9	3826039.2	899.1	3.40	4.51	3.16	NO
L0002157	0	0.24038E-02	475523.8	3826046.8	898.7	3.40	4.51	3.16	NO
L0002158	0	0.24038E-02	475529.8	3826054.5	898.3	3.40	4.51	3.16	NO
L0002159	0	0.24038E-02	475535.7	3826062.1	898.4	3.40	4.51	3.16	NO
L0002160	0	0.24038E-02	475541.7	3826069.8	897.9	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

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L0002161	0	0.24038E-02	475547.6	3826077.4	896.9	3.40	4.51	3.16	NO	
L0002162	0	0.24038E-02	475553.6	3826085.1	895.3	3.40	4.51	3.16	NO	
L0002163	0	0.24038E-02	475559.5	3826092.8	895.3	3.40	4.51	3.16	NO	
L0002164	0	0.24038E-02	475565.5	3826100.4	894.9	3.40	4.51	3.16	NO	
L0002165	0	0.24038E-02	475571.4	3826108.1	894.0	3.40	4.51	3.16	NO	
L0002166	0	0.24038E-02	475577.4	3826115.7	892.7	3.40	4.51	3.16	NO	
L0002167	0	0.24038E-02	475583.3	3826123.4	893.2	3.40	4.51	3.16	NO	
L0002168	0	0.24038E-02	475589.3	3826131.0	894.2	3.40	4.51	3.16	NO	
L0002169	0	0.24038E-02	475595.3	3826138.7	895.3	3.40	4.51	3.16	NO	
L0002170	0	0.24038E-02	475601.2	3826146.4	896.4	3.40	4.51	3.16	NO	
L0002171	0	0.24038E-02	475605.7	3826154.6	896.9	3.40	4.51	3.16	NO	
L0002172	0	0.24038E-02	475607.0	3826164.2	897.2	3.40	4.51	3.16	NO	
L0002173	0	0.24038E-02	475608.2	3826173.9	897.4	3.40	4.51	3.16	NO	
L0002174	0	0.24038E-02	475609.5	3826183.5	896.8	3.40	4.51	3.16	NO	
L0002175	0	0.24038E-02	475610.7	3826193.1	896.0	3.40	4.51	3.16	NO	

L0002176	0	0.24038E-02	475611.6	3826202.7	895.1	3.40	4.51	3.16	NO
L0002177	0	0.24038E-02	475610.8	3826212.4	894.8	3.40	4.51	3.16	NO
L0002178	0	0.24038E-02	475610.0	3826222.1	895.4	3.40	4.51	3.16	NO
L0002179	0	0.24038E-02	475609.2	3826231.7	895.9	3.40	4.51	3.16	NO
L0002180	0	0.24038E-02	475606.8	3826240.4	896.0	3.40	4.51	3.16	NO
L0002181	0	0.24038E-02	475598.6	3826245.7	895.0	3.40	4.51	3.16	NO
L0002182	0	0.24038E-02	475590.5	3826251.0	894.0	3.40	4.51	3.16	NO
L0002183	0	0.24038E-02	475582.3	3826256.2	893.3	3.40	4.51	3.16	NO
L0002184	0	0.24038E-02	475574.2	3826261.5	892.9	3.40	4.51	3.16	NO
L0002185	0	0.24038E-02	475566.0	3826266.8	892.2	3.40	4.51	3.16	NO
L0002186	0	0.24038E-02	475557.9	3826272.1	891.6	3.40	4.51	3.16	NO
L0002187	0	0.24038E-02	475549.7	3826277.3	891.6	3.40	4.51	3.16	NO
L0002188	0	0.24038E-02	475541.6	3826282.6	891.6	3.40	4.51	3.16	NO
L0002189	0	0.24038E-02	475533.5	3826287.9	891.0	3.40	4.51	3.16	NO
L0002190	0	0.24038E-02	475525.3	3826293.1	890.5	3.40	4.51	3.16	NO
L0002191	0	0.24038E-02	475517.2	3826298.4	890.3	3.40	4.51	3.16	NO
L0002192	0	0.24038E-02	475509.0	3826303.7	890.2	3.40	4.51	3.16	NO
L0002193	0	0.24038E-02	475500.9	3826308.9	889.7	3.40	4.51	3.16	NO
L0002194	0	0.24038E-02	475493.0	3826314.5	889.0	3.40	4.51	3.16	NO
L0002195	0	0.24038E-02	475485.1	3826320.2	888.4	3.40	4.51	3.16	NO
L0002196	0	0.24038E-02	475477.2	3826325.8	888.0	3.40	4.51	3.16	NO
L0002197	0	0.24038E-02	475469.3	3826331.5	887.8	3.40	4.51	3.16	NO
L0002198	0	0.24038E-02	475461.4	3826337.1	887.6	3.40	4.51	3.16	NO
L0002199	0	0.24038E-02	475453.5	3826342.7	887.2	3.40	4.51	3.16	NO
L0002200	0	0.24038E-02	475445.6	3826348.4	886.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002201	0	0.24038E-02	475437.0	3826345.5	886.8	3.40	4.51	3.16	NO	
L0002202	0	0.24038E-02	475428.3	3826341.2	887.1	3.40	4.51	3.16	NO	
L0002203	0	0.24038E-02	475419.6	3826337.0	887.4	3.40	4.51	3.16	NO	
L0002204	0	0.24038E-02	475410.9	3826332.7	887.4	3.40	4.51	3.16	NO	
L0002205	0	0.24038E-02	475402.1	3826328.5	887.4	3.40	4.51	3.16	NO	
L0002206	0	0.24038E-02	475393.4	3826324.2	887.6	3.40	4.51	3.16	NO	
L0002207	0	0.24038E-02	475384.7	3826320.0	887.6	3.40	4.51	3.16	NO	
L0002208	0	0.24038E-02	475376.0	3826315.7	887.5	3.40	4.51	3.16	NO	
L0002209	0	0.24038E-02	475368.0	3826310.2	886.3	3.40	4.51	3.16	NO	
L0002210	0	0.24038E-02	475360.1	3826304.6	884.9	3.40	4.51	3.16	NO	
L0002211	0	0.24038E-02	475352.1	3826299.1	883.3	3.40	4.51	3.16	NO	
L0002212	0	0.24038E-02	475344.1	3826293.6	882.9	3.40	4.51	3.16	NO	
L0002213	0	0.24038E-02	475336.2	3826288.0	882.8	3.40	4.51	3.16	NO	
L0002214	0	0.24038E-02	475328.2	3826282.5	882.8	3.40	4.51	3.16	NO	
L0002215	0	0.24038E-02	475320.2	3826277.0	882.9	3.40	4.51	3.16	NO	

L0002216	0	0.24038E-02	475313.8	3826269.8	883.5	3.40	4.51	3.16	NO
L0002217	0	0.24038E-02	475307.7	3826262.2	884.1	3.40	4.51	3.16	NO
L0002218	0	0.24038E-02	475301.6	3826254.7	885.0	3.40	4.51	3.16	NO
L0002219	0	0.24038E-02	475295.6	3826247.1	885.6	3.40	4.51	3.16	NO
L0002220	0	0.24038E-02	475289.5	3826239.6	886.4	3.40	4.51	3.16	NO
L0002221	0	0.24038E-02	475283.4	3826232.0	886.9	3.40	4.51	3.16	NO
L0002222	0	0.24038E-02	475277.3	3826224.4	887.6	3.40	4.51	3.16	NO
L0002223	0	0.24038E-02	475271.2	3826216.9	887.9	3.40	4.51	3.16	NO
L0002224	0	0.24038E-02	475265.2	3826209.3	887.8	3.40	4.51	3.16	NO
L0002225	0	0.24038E-02	475259.1	3826201.8	887.0	3.40	4.51	3.16	NO
L0002226	0	0.24038E-02	475253.0	3826194.2	886.5	3.40	4.51	3.16	NO
L0002227	0	0.24038E-02	475246.9	3826186.6	886.0	3.40	4.51	3.16	NO
L0002228	0	0.24038E-02	475240.9	3826179.1	885.3	3.40	4.51	3.16	NO
L0002229	0	0.24038E-02	475234.8	3826171.5	884.6	3.40	4.51	3.16	NO
L0002230	0	0.24038E-02	475228.7	3826164.0	884.1	3.40	4.51	3.16	NO
L0002231	0	0.24038E-02	475222.6	3826156.4	884.0	3.40	4.51	3.16	NO
L0002232	0	0.24038E-02	475216.5	3826148.8	884.3	3.40	4.51	3.16	NO
L0002233	0	0.24038E-02	475210.5	3826141.3	884.8	3.40	4.51	3.16	NO
L0002234	0	0.24038E-02	475204.4	3826133.7	885.2	3.40	4.51	3.16	NO
L0002235	0	0.24038E-02	475198.3	3826126.2	885.5	3.40	4.51	3.16	NO
L0002236	0	0.24038E-02	475192.2	3826118.6	886.1	3.40	4.51	3.16	NO
L0002237	0	0.24038E-02	475186.2	3826111.0	886.9	3.40	4.51	3.16	NO
L0002238	0	0.24038E-02	475180.1	3826103.5	887.8	3.40	4.51	3.16	NO
L0002239	0	0.24038E-02	475174.0	3826095.9	888.6	3.40	4.51	3.16	NO
L0002240	0	0.24038E-02	475167.9	3826088.4	889.1	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002241	0	0.24038E-02	475161.8	3826080.8	889.0	3.40	4.51	3.16	NO	
L0002242	0	0.24038E-02	475155.8	3826073.2	888.6	3.40	4.51	3.16	NO	
L0002243	0	0.24038E-02	475149.7	3826065.7	888.3	3.40	4.51	3.16	NO	
L0002244	0	0.24038E-02	475143.6	3826058.1	887.9	3.40	4.51	3.16	NO	
L0002245	0	0.24038E-02	475137.5	3826050.6	887.2	3.40	4.51	3.16	NO	
L0002246	0	0.24038E-02	475131.5	3826043.0	886.6	3.40	4.51	3.16	NO	
L0002247	0	0.24038E-02	475125.4	3826035.4	886.1	3.40	4.51	3.16	NO	
L0002248	0	0.24038E-02	475119.3	3826027.9	885.7	3.40	4.51	3.16	NO	
L0002249	0	0.24038E-02	475113.2	3826020.3	885.6	3.40	4.51	3.16	NO	
L0002250	0	0.24038E-02	475107.1	3826012.8	885.6	3.40	4.51	3.16	NO	
L0002251	0	0.24038E-02	475101.1	3826005.2	885.6	3.40	4.51	3.16	NO	
L0002252	0	0.24038E-02	475095.0	3825997.6	885.5	3.40	4.51	3.16	NO	
L0002253	0	0.24038E-02	475088.9	3825990.1	885.4	3.40	4.51	3.16	NO	
L0002254	0	0.24038E-02	475082.8	3825982.5	885.2	3.40	4.51	3.16	NO	
L0002255	0	0.24038E-02	475076.8	3825975.0	885.0	3.40	4.51	3.16	NO	

L0002256	0	0.24038E-02	475070.7	3825967.4	884.8	3.40	4.51	3.16	NO
L0002257	0	0.24038E-02	475064.6	3825959.8	884.7	3.40	4.51	3.16	NO
L0002258	0	0.24038E-02	475058.5	3825952.3	884.8	3.40	4.51	3.16	NO
L0002259	0	0.24038E-02	475052.4	3825944.7	885.0	3.40	4.51	3.16	NO
L0002260	0	0.24038E-02	475046.4	3825937.2	885.5	3.40	4.51	3.16	NO
L0002261	0	0.24038E-02	475040.3	3825929.6	885.9	3.40	4.51	3.16	NO
L0002262	0	0.24038E-02	475034.2	3825922.0	886.1	3.40	4.51	3.16	NO
L0002263	0	0.24038E-02	475028.1	3825914.5	886.1	3.40	4.51	3.16	NO
L0002264	0	0.24038E-02	475022.0	3825906.9	886.0	3.40	4.51	3.16	NO
L0002265	0	0.24038E-02	475016.0	3825899.4	885.7	3.40	4.51	3.16	NO
L0002266	0	0.24038E-02	475009.9	3825891.8	885.4	3.40	4.51	3.16	NO
L0002267	0	0.24038E-02	475003.8	3825884.3	885.2	3.40	4.51	3.16	NO
L0002268	0	0.34965E-02	475718.5	3826205.3	901.0	3.40	4.51	3.16	NO
L0002269	0	0.34965E-02	475712.3	3826197.8	900.5	3.40	4.51	3.16	NO
L0002270	0	0.34965E-02	475706.2	3826190.3	900.1	3.40	4.51	3.16	NO
L0002271	0	0.34965E-02	475700.0	3826182.8	899.8	3.40	4.51	3.16	NO
L0002272	0	0.34965E-02	475693.8	3826175.3	899.6	3.40	4.51	3.16	NO
L0002273	0	0.34965E-02	475687.7	3826167.8	899.9	3.40	4.51	3.16	NO
L0002274	0	0.34965E-02	475681.5	3826160.4	900.1	3.40	4.51	3.16	NO
L0002275	0	0.34965E-02	475675.4	3826152.9	900.2	3.40	4.51	3.16	NO
L0002276	0	0.34965E-02	475669.2	3826145.4	900.3	3.40	4.51	3.16	NO
L0002277	0	0.34965E-02	475663.0	3826137.9	899.1	3.40	4.51	3.16	NO
L0002278	0	0.34965E-02	475656.9	3826130.4	898.0	3.40	4.51	3.16	NO
L0002279	0	0.34965E-02	475650.7	3826122.9	897.0	3.40	4.51	3.16	NO
L0002280	0	0.34965E-02	475644.5	3826115.4	896.0	3.40	4.51	3.16	NO

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*** VOLUME SOURCE DATA ***

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L0002281	0	0.34965E-02	475638.4	3826107.9	896.4	3.40	4.51	3.16	NO	
L0002282	0	0.34965E-02	475632.2	3826100.5	896.8	3.40	4.51	3.16	NO	
L0002283	0	0.34965E-02	475626.0	3826093.0	896.8	3.40	4.51	3.16	NO	
L0002284	0	0.34965E-02	475619.9	3826085.5	896.4	3.40	4.51	3.16	NO	
L0002285	0	0.34965E-02	475613.7	3826078.0	896.1	3.40	4.51	3.16	NO	
L0002286	0	0.34965E-02	475607.5	3826070.5	896.2	3.40	4.51	3.16	NO	
L0002287	0	0.34965E-02	475601.4	3826063.0	897.0	3.40	4.51	3.16	NO	
L0002288	0	0.34965E-02	475595.2	3826055.5	898.1	3.40	4.51	3.16	NO	
L0002289	0	0.34965E-02	475589.0	3826048.0	899.1	3.40	4.51	3.16	NO	
L0002290	0	0.34965E-02	475583.0	3826040.4	900.1	3.40	4.51	3.16	NO	
L0002291	0	0.34965E-02	475577.1	3826032.7	900.8	3.40	4.51	3.16	NO	
L0002292	0	0.34965E-02	475571.2	3826025.0	901.1	3.40	4.51	3.16	NO	
L0002293	0	0.34965E-02	475565.3	3826017.4	901.0	3.40	4.51	3.16	NO	
L0002294	0	0.34965E-02	475559.3	3826009.7	901.0	3.40	4.51	3.16	NO	
L0002295	0	0.34965E-02	475553.4	3826002.0	901.0	3.40	4.51	3.16	NO	

L0002296	0	0.34965E-02	475547.5	3825994.3	901.3	3.40	4.51	3.16	NO
L0002297	0	0.34965E-02	475541.5	3825986.7	901.2	3.40	4.51	3.16	NO
L0002298	0	0.34965E-02	475535.6	3825979.0	900.9	3.40	4.51	3.16	NO
L0002299	0	0.34965E-02	475529.7	3825971.3	900.7	3.40	4.51	3.16	NO
L0002300	0	0.34965E-02	475523.8	3825963.6	900.2	3.40	4.51	3.16	NO
L0002301	0	0.34965E-02	475517.8	3825956.0	900.0	3.40	4.51	3.16	NO
L0002302	0	0.34965E-02	475511.9	3825948.3	900.2	3.40	4.51	3.16	NO
L0002303	0	0.34965E-02	475506.0	3825940.6	900.5	3.40	4.51	3.16	NO
L0002304	0	0.34965E-02	475500.0	3825932.9	900.9	3.40	4.51	3.16	NO
L0002305	0	0.34965E-02	475494.1	3825925.2	900.8	3.40	4.51	3.16	NO
L0002306	0	0.34965E-02	475488.2	3825917.6	900.6	3.40	4.51	3.16	NO
L0002307	0	0.34965E-02	475482.2	3825909.9	900.4	3.40	4.51	3.16	NO
L0002308	0	0.34965E-02	475476.3	3825902.2	900.3	3.40	4.51	3.16	NO
L0002309	0	0.34965E-02	475470.4	3825894.5	900.2	3.40	4.51	3.16	NO
L0002310	0	0.34965E-02	475464.5	3825886.9	900.2	3.40	4.51	3.16	NO
L0002311	0	0.34965E-02	475458.5	3825879.2	900.1	3.40	4.51	3.16	NO
L0002312	0	0.34965E-02	475452.6	3825871.5	900.1	3.40	4.51	3.16	NO
L0002313	0	0.34965E-02	475446.7	3825863.8	900.0	3.40	4.51	3.16	NO
L0002314	0	0.34965E-02	475440.7	3825856.2	899.9	3.40	4.51	3.16	NO
L0002315	0	0.34965E-02	475434.8	3825848.5	899.8	3.40	4.51	3.16	NO
L0002316	0	0.34965E-02	475429.0	3825840.7	899.8	3.40	4.51	3.16	NO
L0002317	0	0.34965E-02	475423.2	3825832.9	899.8	3.40	4.51	3.16	NO
L0002318	0	0.34965E-02	475417.4	3825825.2	899.8	3.40	4.51	3.16	NO
L0002319	0	0.34965E-02	475411.6	3825817.4	899.8	3.40	4.51	3.16	NO
L0002320	0	0.34965E-02	475405.7	3825809.7	899.9	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002321	0	0.34965E-02	475400.1	3825801.8	899.9	3.40	4.51	3.16	NO	
L0002322	0	0.34965E-02	475394.5	3825793.9	899.9	3.40	4.51	3.16	NO	
L0002323	0	0.34965E-02	475388.9	3825785.9	900.0	3.40	4.51	3.16	NO	
L0002324	0	0.34965E-02	475383.3	3825778.0	900.1	3.40	4.51	3.16	NO	
L0002325	0	0.34965E-02	475377.7	3825770.1	900.1	3.40	4.51	3.16	NO	
L0002326	0	0.34965E-02	475372.1	3825762.2	900.1	3.40	4.51	3.16	NO	
L0002327	0	0.34965E-02	475365.9	3825754.7	900.1	3.40	4.51	3.16	NO	
L0002328	0	0.34965E-02	475359.8	3825747.2	900.1	3.40	4.51	3.16	NO	
L0002329	0	0.34965E-02	475353.6	3825739.7	900.1	3.40	4.51	3.16	NO	
L0002330	0	0.34965E-02	475347.5	3825732.2	900.0	3.40	4.51	3.16	NO	
L0002331	0	0.34965E-02	475342.4	3825724.0	900.0	3.40	4.51	3.16	NO	
L0002332	0	0.34965E-02	475338.4	3825715.2	900.0	3.40	4.51	3.16	NO	
L0002333	0	0.34965E-02	475344.6	3825709.2	900.2	3.40	4.51	3.16	NO	
L0002334	0	0.34965E-02	475352.6	3825703.8	900.5	3.40	4.51	3.16	NO	
L0002335	0	0.34965E-02	475360.7	3825698.4	900.9	3.40	4.51	3.16	NO	

L0002336	0	0.34965E-02	475368.8	3825693.0	901.3	3.40	4.51	3.16	NO
L0002337	0	0.34965E-02	475376.8	3825687.6	901.7	3.40	4.51	3.16	NO
L0002338	0	0.34965E-02	475384.9	3825682.2	902.2	3.40	4.51	3.16	NO
L0002339	0	0.34965E-02	475392.9	3825676.7	902.7	3.40	4.51	3.16	NO
L0002340	0	0.34965E-02	475401.0	3825671.3	903.3	3.40	4.51	3.16	NO
L0002341	0	0.34965E-02	475409.0	3825665.9	903.7	3.40	4.51	3.16	NO
L0002342	0	0.34965E-02	475417.1	3825660.5	904.1	3.40	4.51	3.16	NO
L0002343	0	0.34965E-02	475425.1	3825655.1	904.6	3.40	4.51	3.16	NO
L0002344	0	0.34965E-02	475433.2	3825649.7	905.0	3.40	4.51	3.16	NO
L0002345	0	0.34965E-02	475442.5	3825648.3	905.4	3.40	4.51	3.16	NO
L0002346	0	0.34965E-02	475452.2	3825648.0	905.8	3.40	4.51	3.16	NO
L0002347	0	0.34965E-02	475461.9	3825647.7	906.2	3.40	4.51	3.16	NO
L0002348	0	0.34965E-02	475471.6	3825647.4	906.6	3.40	4.51	3.16	NO
L0002349	0	0.34965E-02	475481.3	3825647.1	907.0	3.40	4.51	3.16	NO
L0002350	0	0.34965E-02	475491.0	3825646.8	907.3	3.40	4.51	3.16	NO
L0002351	0	0.34965E-02	475500.7	3825646.6	907.7	3.40	4.51	3.16	NO
L0002352	0	0.34965E-02	475510.4	3825646.3	908.1	3.40	4.51	3.16	NO
L0002353	0	0.34965E-02	475520.0	3825646.0	908.5	3.40	4.51	3.16	NO
L0002354	0	0.34965E-02	475529.7	3825645.7	908.9	3.40	4.51	3.16	NO
L0002355	0	0.34965E-02	475539.4	3825645.4	909.3	3.40	4.51	3.16	NO
L0002356	0	0.34965E-02	475549.1	3825645.2	909.6	3.40	4.51	3.16	NO
L0002357	0	0.34965E-02	475558.8	3825644.9	910.0	3.40	4.51	3.16	NO
L0002358	0	0.34965E-02	475568.5	3825644.6	910.4	3.40	4.51	3.16	NO
L0002359	0	0.34965E-02	475578.2	3825644.3	910.8	3.40	4.51	3.16	NO
L0002360	0	0.34965E-02	475587.9	3825644.0	911.2	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002361	0	0.34965E-02	475597.6	3825643.7	911.6	3.40	4.51	3.16	NO	
L0002362	0	0.34965E-02	475605.4	3825649.1	911.8	3.40	4.51	3.16	NO	
L0002363	0	0.34965E-02	475612.8	3825655.3	911.8	3.40	4.51	3.16	NO	
L0002364	0	0.34965E-02	475620.3	3825661.5	911.9	3.40	4.51	3.16	NO	
L0002365	0	0.34965E-02	475627.7	3825667.7	911.9	3.40	4.51	3.16	NO	
L0002366	0	0.34965E-02	475635.1	3825673.9	912.7	3.40	4.51	3.16	NO	
L0002367	0	0.34965E-02	475642.6	3825680.2	912.8	3.40	4.51	3.16	NO	
L0002368	0	0.34965E-02	475650.0	3825686.4	912.4	3.40	4.51	3.16	NO	
L0002369	0	0.34965E-02	475657.4	3825692.6	913.1	3.40	4.51	3.16	NO	
L0002370	0	0.34965E-02	475664.9	3825698.8	914.3	3.40	4.51	3.16	NO	
L0002371	0	0.34965E-02	475672.3	3825705.1	914.5	3.40	4.51	3.16	NO	
L0002372	0	0.34965E-02	475679.1	3825711.9	913.4	3.40	4.51	3.16	NO	
L0002373	0	0.34965E-02	475684.8	3825719.8	912.5	3.40	4.51	3.16	NO	
L0002374	0	0.34965E-02	475690.5	3825727.6	912.4	3.40	4.51	3.16	NO	
L0002375	0	0.34965E-02	475696.2	3825735.5	912.5	3.40	4.51	3.16	NO	

L0002376	0	0.34965E-02	475701.9	3825743.3	912.6	3.40	4.51	3.16	NO
L0002377	0	0.34965E-02	475707.6	3825751.2	912.6	3.40	4.51	3.16	NO
L0002378	0	0.34965E-02	475713.3	3825759.0	912.5	3.40	4.51	3.16	NO
L0002379	0	0.34965E-02	475719.0	3825766.9	912.3	3.40	4.51	3.16	NO
L0002380	0	0.34965E-02	475724.7	3825774.7	912.1	3.40	4.51	3.16	NO
L0002381	0	0.34965E-02	475730.4	3825782.6	911.8	3.40	4.51	3.16	NO
L0002382	0	0.34965E-02	475736.1	3825790.4	911.5	3.40	4.51	3.16	NO
L0002383	0	0.34965E-02	475741.8	3825798.3	911.2	3.40	4.51	3.16	NO
L0002384	0	0.34965E-02	475747.5	3825806.1	911.1	3.40	4.51	3.16	NO
L0002385	0	0.34965E-02	475753.2	3825814.0	911.1	3.40	4.51	3.16	NO
L0002386	0	0.34965E-02	475758.9	3825821.8	911.2	3.40	4.51	3.16	NO
L0002387	0	0.34965E-02	475764.6	3825829.7	911.3	3.40	4.51	3.16	NO
L0002388	0	0.34965E-02	475770.2	3825837.5	911.3	3.40	4.51	3.16	NO
L0002389	0	0.34965E-02	475775.9	3825845.4	911.3	3.40	4.51	3.16	NO
L0002390	0	0.34965E-02	475781.6	3825853.2	911.3	3.40	4.51	3.16	NO
L0002391	0	0.34965E-02	475787.3	3825861.1	911.4	3.40	4.51	3.16	NO
L0002392	0	0.34965E-02	475793.0	3825868.9	911.5	3.40	4.51	3.16	NO
L0002393	0	0.34965E-02	475798.7	3825876.8	911.7	3.40	4.51	3.16	NO
L0002394	0	0.34965E-02	475804.4	3825884.6	912.1	3.40	4.51	3.16	NO
L0002395	0	0.34965E-02	475810.1	3825892.5	912.4	3.40	4.51	3.16	NO
L0002396	0	0.34965E-02	475815.8	3825900.3	912.4	3.40	4.51	3.16	NO
L0002397	0	0.34965E-02	475821.5	3825908.2	912.5	3.40	4.51	3.16	NO
L0002398	0	0.34965E-02	475827.2	3825916.0	912.9	3.40	4.51	3.16	NO
L0002399	0	0.34965E-02	475832.9	3825923.9	913.5	3.40	4.51	3.16	NO
L0002400	0	0.34965E-02	475838.6	3825931.8	913.6	3.40	4.51	3.16	NO

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002401	0	0.34965E-02	475844.3	3825939.6	912.1	3.40	4.51	3.16	NO	
L0002402	0	0.34965E-02	475850.0	3825947.5	910.7	3.40	4.51	3.16	NO	
L0002403	0	0.34965E-02	475855.7	3825955.3	909.1	3.40	4.51	3.16	NO	
L0002404	0	0.34965E-02	475861.4	3825963.2	908.2	3.40	4.51	3.16	NO	
L0002405	0	0.34965E-02	475867.1	3825971.0	908.4	3.40	4.51	3.16	NO	
L0002406	0	0.34965E-02	475872.8	3825978.9	907.9	3.40	4.51	3.16	NO	
L0002407	0	0.34965E-02	475878.5	3825986.7	906.9	3.40	4.51	3.16	NO	
L0002408	0	0.34965E-02	475884.2	3825994.6	906.2	3.40	4.51	3.16	NO	
L0002409	0	0.34965E-02	475889.9	3826002.4	906.9	3.40	4.51	3.16	NO	
L0002410	0	0.34965E-02	475895.6	3826010.3	907.6	3.40	4.51	3.16	NO	

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

(473710.1, 3824861.3, 853.1, 1379.8, 0.0); (473671.0, 3824865.9, 851.4, 1379.8, 0.0);

(473728.5, 3824763.5, 851.7, 1379.8, 0.0); (473730.8, 3824714.0, 851.7, 1379.8, 0.0);

(473726.2, 3824684.1, 851.5, 1379.8, 0.0); (473674.4, 3824609.3, 849.4, 1377.7, 0.0);

(473626.1, 3824610.5, 848.1, 1379.8, 0.0); (473676.7, 3824657.7, 850.1, 1379.8, 0.0);

(473722.7, 3824662.3, 851.2, 1379.8, 0.0); (473649.1, 3824752.0, 849.6, 1379.8, 0.0);

(473565.1, 3824612.8, 847.7, 1379.8, 0.0); (473601.9, 3824654.2, 847.6, 1379.8, 0.0);

(473601.9, 3824695.6, 847.3, 1379.8, 0.0); (473545.5, 3824967.2, 852.2, 1379.8, 0.0);

(473514.5, 3824993.7, 851.9, 1379.8, 0.0); (473496.0, 3825038.5, 852.5, 1379.8, 0.0);

(473458.1, 3825062.7, 852.0, 1379.8, 0.0); (473427.0, 3825039.7, 851.6, 1379.8, 0.0);

(473373.5, 3824580.8, 838.6, 1379.8, 0.0); (475731.9, 3823740.7, 927.1, 1019.5, 0.0);

(474874.5, 3823423.4, 923.2, 1019.5, 0.0); (474767.7, 3823408.1, 921.3, 1019.5, 0.0);

(474548.0, 3823365.4, 921.9, 1019.5, 0.0); (476494.6, 3823804.8, 925.1, 1020.0, 0.0);

(478000.2, 3824540.5, 955.5, 1120.7, 0.0); (477773.0, 3827982.3, 892.6, 1379.8, 0.0);

(478912.9, 3829110.8, 914.3, 1182.7, 0.0); (479067.8, 3829326.9, 917.3, 917.3, 0.0);

(472613.6, 3822601.6, 823.8, 823.8, 0.0); (471900.8, 3822140.9, 875.7, 875.7, 0.0);

(471795.4, 3822394.9, 867.6, 876.0, 0.0); (475655.0, 3823712.1, 926.9, 1019.5, 0.0);

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(475541.2, 3823579.8, 924.2, 1019.5, 0.0); (475513.5, 3823444.4, 917.3, 1019.5, 0.0);

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(475325.8, 3823361.4, 922.8, 1019.5, 0.0); (475258.1, 3823370.6, 921.9, 1019.5, 0.0);

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(474938.2, 3823327.5, 919.6, 1019.5, 0.0); (475027.4, 3823302.9, 917.0, 1019.5, 0.0);

(475193.5, 3823306.0, 915.9, 1019.5, 0.0); (475252.0, 3823318.3, 915.5, 1019.5, 0.0);

(474559.8, 3823275.2, 919.6, 1019.5, 0.0); (475895.0, 3823576.7, 925.0, 1019.5, 0.0);

(474512.5, 3823157.6, 913.1, 1019.5, 0.0); (474732.6, 3823235.4, 912.8, 1019.5, 0.0);

(474808.1, 3823237.6, 913.8, 1019.5, 0.0); (474663.6, 3823155.4, 911.1, 1019.5, 0.0);

(474637.0, 3823275.4, 916.2, 1019.5, 0.0); (474517.0, 3823215.4, 915.9, 1019.5, 0.0);

(474383.6, 3823059.8, 908.1, 966.1, 0.0); (474296.9, 3822997.5, 901.3, 966.1, 0.0);

(474310.2, 3822935.3, 901.1, 965.8, 0.0); (474399.1, 3823004.2, 905.4, 965.8, 0.0);

(474456.9, 3823013.1, 906.4, 965.8, 0.0); (474577.0, 3823055.3, 907.1, 1019.5, 0.0);

(474637.0, 3823086.5, 909.0, 1019.5, 0.0); (474543.6, 3823113.1, 911.3, 1019.5, 0.0);

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(474394.0, 3822955.1, 903.4, 965.8, 0.0); (476394.5, 3823666.4, 922.5, 1007.5, 0.0);

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(477971.3, 3824675.8, 954.1, 1120.7, 0.0); (472613.1, 3822484.4, 824.5, 864.0, 0.0);

(474336.5, 3822811.3, 898.5, 957.0, 0.0); (474263.2, 3822769.5, 897.0, 957.0, 0.0);

(474516.9, 3822840.1, 899.0, 899.0, 0.0); (474590.1, 3822952.5, 902.7, 1019.5, 0.0);

(473463.0, 3824861.5, 846.8, 1379.8, 0.0); (473507.5, 3824840.6, 847.2, 1379.8, 0.0);

(473314.0, 3824934.7, 846.1, 1379.8, 0.0); (473287.8, 3824866.7, 843.1, 1379.8, 0.0);

(473619.9, 3824814.4, 849.1, 1379.8, 0.0);

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

1 1 1

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\Apple Valley IENL Con HRA\construction HRA files\KDAG_723815_23161\KDAG_2015_ Met Version: 19191

Profile file: ..\Apple Valley IENL Con HRA\construction HRA files\KDAG_723815_23161\KDAG_2015_

Surface format: FREE

Profile format: FREE

Surface station no.: 23161 Upper air station no.: 3120

Name: BARSTOW-DAGGETT_AIRPORT Name: UNKNOWN

Year: 2015 Year: 2015

First 24 hours of scalar data

YR MO DY JDY HR H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS WD HT REF TA HT

- -

15 01 01 1 01 -24.9 0.256 -9.000 -9.000 -999. 311. 72.1 0.02 4.18 1.00 4.27 251. 10.0 272.5 2.0

15 01 01 1 02 -24.3 0.250 -9.000 -9.000 -999. 300. 68.6 0.02 4.18 1.00 4.17 240. 10.0 272.5 2.0

15 01 01 1 03 -28.4 0.292 -9.000 -9.000 -999. 379. 94.0 0.02 4.18 1.00 4.85 255. 10.0 273.1 2.0

15 01 01 1 04 -26.1 0.266 -9.000 -9.000 -999. 329. 77.8 0.02 4.18 1.00 4.51 274. 10.0 270.4 2.0

15 01 01 1 05 -32.2 0.328 -9.000 -9.000 -999. 450. 118.0 0.02 4.18 1.00 5.51 275. 10.0 270.4 2.0

15 01 01 1 06 -34.9 0.355 -9.000 -9.000 -999. 507. 138.4 0.02 4.18 1.00 5.84 252. 10.0 270.4 2.0

15 01 01 1 07 -34.8 0.355 -9.000 -9.000 -999. 508. 138.9 0.02 4.18 1.00 5.85 251. 10.0 271.4 2.0

15 01 01 1 08 -19.3 0.250 -9.000 -9.000 -999. 306. 68.6 0.02 4.18 0.57 4.15 266. 10.0 270.9 2.0

15 01 01 1 09 31.4 0.236 0.499 0.005 134. 276. -35.7 0.02 4.18 0.36 3.40 255. 10.0 273.1 2.0

15 01 01 1 10 103.0 0.183 1.101 0.005 441. 188. -5.0 0.02 4.18 0.29 2.15 300. 10.0 277.0 2.0

15 01 01 1 11 152.0 0.131 1.445 0.005 675. 114. -1.3 0.04 4.18 0.26 1.08 230. 10.0 278.8 2.0

15 01 01 1 12 175.1 0.131 2.058 0.006 1692. 114. -1.1 0.02 4.18 0.25 1.31 109. 10.0 280.4 2.0

15 01 01 1 13 171.2 0.143 2.108 0.011 1860. 130. -1.4 0.01 4.18 0.26 1.55 35. 10.0 281.4 2.0

15 01 01 1 14 140.5 0.177 1.982 0.011 1882. 179. -3.4 0.01 4.18 0.27 2.16 55. 10.0 282.0 2.0

15 01 01 1 15 84.4 0.150 1.677 0.011 1895. 139. -3.4 0.02 4.18 0.30 1.77 64. 10.0 282.5 2.0

15 01 01 1 16 8.8 0.148 0.789 0.010 1896. 136. -31.1 0.02 4.18 0.40 2.15 70. 10.0 282.5 2.0

15 01 01 1 17 -7.9 0.117 -9.000 -9.000 -999. 96. 17.3 0.02 4.18 0.70 2.08 75. 10.0 279.9 2.0

15 01 01 1 18 -3.9 0.085 -9.000 -9.000 -999. 60. 13.5 0.05 4.18 1.00 1.24 196. 10.0 277.0 2.0

15 01 01 1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 4.18 1.00 0.00 0. 10.0 274.9 2.0

15 01 01 1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.03 4.18 1.00 0.00 0. 10.0 274.9 2.0

15 01 01 1 21 -10.8 0.137 -9.000 -9.000 -999. 121. 20.5 0.02 4.18 1.00 2.36 260. 10.0 274.2 2.0

15 01 01 1 22 -19.5 0.199 -9.000 -9.000 -999. 214. 43.7 0.02 4.18 1.00 3.36 262. 10.0 272.0 2.0

15 01 01 1 23 -18.8 0.192 -9.000 -9.000 -999. 202. 40.5 0.04 4.18 1.00 2.86 230. 10.0 272.0 2.0

15 01 01 1 24 -28.1 0.287 -9.000 -9.000 -999. 370. 90.9 0.02 4.18 1.00 4.86 270. 10.0 272.0 2.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV

15 01 01 01 10.0 1 251. 4.27 272.6 99.0 -99.00 -99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473710.07	3824861.33	0.89176	473670.95	3824865.94	0.84696
473728.48	3824763.53	0.96288	473730.79	3824714.05	1.00835
473726.18	3824684.13	1.02921	473674.40	3824609.33	0.99758
473626.07	3824610.49	0.90646	473676.70	3824657.66	0.95618
473722.73	3824662.27	1.04622	473649.09	3824752.02	0.85780
473565.09	3824612.79	0.82181	473601.91	3824654.21	0.84480
473601.91	3824695.64	0.82544	473545.53	3824967.19	0.74609
473514.46	3824993.66	0.72879	473496.05	3825038.54	0.72324

473458.08	3825062.70	0.70617	473427.01	3825039.69	0.68789
473373.46	3824580.79	0.65824	475731.86	3823740.67	0.25427
474874.51	3823423.36	0.29452	474767.72	3823408.10	0.30627
474548.04	3823365.39	0.31403	476494.64	3823804.75	0.25969
478000.21	3824540.53	0.40071	477772.95	3827982.32	0.66273
478912.91	3829110.80	0.35837	479067.84	3829326.94	0.32952
472613.60	3822601.57	1.66794	471900.77	3822140.93	1.93710
471795.39	3822394.93	0.75890	475655.01	3823712.09	0.25851
475759.61	3823672.10	0.25372	475571.95	3823641.33	0.25822
475664.24	3823659.79	0.26284	475624.25	3823582.88	0.25992
475765.76	3823622.88	0.26046	475685.78	3823604.42	0.27025
475541.19	3823579.81	0.27010	475513.50	3823444.44	0.29142
475464.27	3823404.45	0.29629	475408.90	3823349.07	0.30764
475325.84	3823361.38	0.27519	475258.15	3823370.61	0.28456
474956.66	3823389.07	0.29121	475092.03	3823382.91	0.28766
474938.21	3823327.54	0.30282	475027.42	3823302.93	0.31182
475193.55	3823306.00	0.31096	475252.00	3823318.31	0.30987
474559.80	3823275.24	0.31474	475894.97	3823576.73	0.24253
474512.51	3823157.59	0.33461	474732.56	3823235.38	0.33297
474808.13	3823237.61	0.32574	474663.65	3823155.36	0.33514
474636.98	3823275.39	0.32536	474516.95	3823215.38	0.32842
474383.59	3823059.79	0.35317	474296.90	3822997.55	0.38005
474310.24	3822935.31	0.37072	474399.15	3823004.22	0.35555
474456.94	3823013.11	0.34817	474576.96	3823055.34	0.34333
474636.98	3823086.46	0.33708	474543.62	3823113.13	0.33564
474456.94	3823108.69	0.34668	475959.42	3823583.06	0.24750
476140.94	3823647.67	0.27777	476088.64	3823632.29	0.27997
474393.98	3822955.12	0.35725	476394.48	3823666.41	0.25974
477861.51	3824469.23	0.37710	477848.44	3824432.62	0.36122

477971.34	3824675.82	0.49642	472613.13	3822484.42	1.20670
474336.45	3822811.30	0.35978	474263.23	3822769.46	0.36500
474516.89	3822840.07	0.35362	474590.11	3822952.51	0.34852

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
473463.03	3824861.50	0.69287	473507.48	3824840.58	0.72012
473313.97	3824934.72	0.62361	473287.82	3824866.73	0.60728
473619.93	3824814.43	0.80836			

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473710.07	3824861.33	132.54693	(15010817)	473670.95	3824865.94	128.43093	(15010817)
473728.48	3824763.53	131.12425	(18120322)	473730.79	3824714.05	130.76236	(16010222)
473726.18	3824684.13	129.33699	(16010222)	473674.40	3824609.33	121.59948	(16010222)
473626.07	3824610.49	121.16977	(16010222)	473676.70	3824657.66	125.71434	(16010222)

473722.73 3824662.27 127.51537 (16010222) 473649.09 3824752.02 126.57431 (18120322)

473565.09 3824612.79 118.50459 (16010222) 473601.91 3824654.21 120.80538 (16010222)

473601.91 3824695.64 122.23255 (18120322) 473545.53 3824967.19 121.63702 (16022324)

473514.46 3824993.66 117.08962 (16022324) 473496.05 3825038.54 113.98130 (16011621)

473458.08 3825062.70 110.78580 (16011621) 473427.01 3825039.69 109.71120 (16011621)

473373.46 3824580.79 109.45552 (15010817) 475731.86 3823740.67 94.03183 (15120819)

474874.51 3823423.36 93.27557 (20122517) 474767.72 3823408.10 106.90061 (20122517)

474548.04 3823365.39 96.39914 (20040923) 476494.64 3823804.75 84.65961 (15121808)

478000.21 3824540.53 33.93442 (16111808) 477772.95 3827982.32 86.13773 (15020221)

478912.91 3829110.80 73.21766 (16021119) 479067.84 3829326.94 73.68444 (20022721)

472613.60 3822601.57 83.39486 (16120921) 471900.77 3822140.93 61.41295 (15102517)

471795.39 3822394.93 63.35267 (18011418) 475655.01 3823712.09 87.79746 (15120819)

475759.61 3823672.10 99.06824 (15120819) 475571.95 3823641.33 90.76686 (20040918)

475664.24 3823659.79 96.68174 (15120819) 475624.25 3823582.88 90.65371 (20040918)

475765.76 3823622.88 105.51194 (15120819) 475685.78 3823604.42 108.06629 (15120819)

475541.19 3823579.81 102.43942 (20040918) 475513.50 3823444.44 116.13731 (20040918)

475464.27 3823404.45 119.41740 (20040918) 475408.90 3823349.07 120.67887 (20040918)

475325.84 3823361.38 94.60211 (20022718) 475258.15 3823370.61 102.81496 (20022718)

474956.66 3823389.07 92.45250 (18122220) 475092.03 3823382.91 93.75389 (18010221)

474938.21 3823327.54 99.43230 (18122220) 475027.42 3823302.93 106.37855 (18010221)

475193.55 3823306.00 109.70522 (20022718) 475252.00 3823318.31 105.54984 (20022718)

474559.80 3823275.24 103.45803 (16022618) 475894.97 3823576.73 83.51220 (15120819)

474512.51 3823157.59 106.50371 (16020520) 474732.56 3823235.38 108.00048 (20122517)

474808.13 3823237.61 107.88895 (18122220) 474663.65 3823155.36 108.07540 (20122517)

474636.98 3823275.39 112.73600 (16012217) 474516.95 3823215.38 104.49453 (16020520)

474383.59 3823059.79 94.74992 (20040923) 474296.90 3822997.55 79.98827 (16020520)

474310.24 3822935.31 79.96644 (16012217) 474399.15 3823004.22 91.67639 (16012217)

474456.94 3823013.11 97.78047 (16012217) 474576.96 3823055.34 102.89148 (16012217)

474636.98 3823086.46 103.70954 (20122517) 474543.62 3823113.13 108.96707 (16012217)

474456.94 3823108.69 101.88262 (16020520) 475959.42 3823583.06 88.98315 (18120603)

476140.94 3823647.67 104.54081 (15112019) 476088.64 3823632.29 105.85786 (20030523)

474393.98 3822955.12 89.11297 (16012217) 476394.48 3823666.41 98.95966 (16010405)

477861.51 3824469.23 30.26303 (19120709) 477848.44 3824432.62 32.87415 (19120709)

477971.34 3824675.82 40.93141 (15040307) 472613.13 3822484.42 71.72296 (19012817)

474336.45 3822811.30 79.43729 (16012217) 474263.23 3822769.46 75.26023 (16012217)

474516.89 3822840.07 81.96991 (16012217) 474590.11 3822952.51 86.70125 (16012217)

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,

L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,

L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,

L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
473463.03	3824861.50	116.75799	(16022324)	473507.48	3824840.58	116.42963	(16022324)
473313.97	3824934.72	104.85030	(16011621)	473287.82	3824866.73	105.83339	(16022324)
473619.93	3824814.43	125.90596	(15010817)				

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	1.93710 AT (471900.77, 3822140.93, 875.73, 875.73, 0.00) DC
	2ND HIGHEST VALUE IS	1.66794 AT (472613.60, 3822601.57, 823.82, 823.82, 0.00) DC
	3RD HIGHEST VALUE IS	1.20670 AT (472613.13, 3822484.42, 824.54, 864.04, 0.00) DC
	4TH HIGHEST VALUE IS	1.04622 AT (473722.73, 3824662.27, 851.18, 1379.79, 0.00) DC
	5TH HIGHEST VALUE IS	1.02921 AT (473726.18, 3824684.13, 851.48, 1379.79, 0.00) DC
	6TH HIGHEST VALUE IS	1.00835 AT (473730.79, 3824714.05, 851.74, 1379.79, 0.00) DC
	7TH HIGHEST VALUE IS	0.99758 AT (473674.40, 3824609.33, 849.45, 1377.67, 0.00) DC
	8TH HIGHEST VALUE IS	0.96288 AT (473728.48, 3824763.53, 851.69, 1379.79, 0.00) DC
	9TH HIGHEST VALUE IS	0.95618 AT (473676.70, 3824657.66, 850.15, 1379.79, 0.00) DC
	10TH HIGHEST VALUE IS	0.90646 AT (473626.07, 3824610.49, 848.14, 1379.79, 0.00) DC

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE	GRID-ID
ALL	1ST HIGH	VALUE IS 132.54693	ON 15010817: AT (473710.07, 3824861.33, 853.10, 1379.79, 0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

*** MODELOPTs: CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)

A Total of 4 Warning Message(s)

A Total of 637 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 191 Calm Hours Identified

A Total of 446 Missing Hours Identified (1.02 Percent)

******** FATAL ERROR MESSAGES ********

*** NONE ***

******** WARNING MESSAGES ********

ME W186 5079 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

ME W187 5079 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 18010101

MX W450 17545 CHKDAT: Record Out of Sequence in Meteorological File at: 1 year gap

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*** AERMOD Finishes Successfully ***

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*HARP - HRACalc v22118 11/14/2023 10:25:46 AM - Cancer Risk - Input File: C:\Users\tlenihan\Documen

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK
1	ALL		473710.1	3824861	2.64E-07	1.15YrCanc	2.64E-07	0.00E+00
2	ALL		473671	3824866	2.46E-07	1.15YrCanc	2.46E-07	0.00E+00
3	ALL		473728.5	3824764	3.08E-07	1.15YrCanc	3.08E-07	0.00E+00
4	ALL		473730.8	3824714	3.35E-07	1.15YrCanc	3.35E-07	0.00E+00
5	ALL		473726.2	3824684	3.48E-07	1.15YrCanc	3.48E-07	0.00E+00
6	ALL		473674.4	3824609	3.44E-07	1.15YrCanc	3.44E-07	0.00E+00
7	ALL		473626.1	3824610	3.03E-07	1.15YrCanc	3.03E-07	0.00E+00
8	ALL		473676.7	3824658	3.19E-07	1.15YrCanc	3.19E-07	0.00E+00
9	ALL		473722.7	3824662	3.59E-07	1.15YrCanc	3.59E-07	0.00E+00
10	ALL		473649.1	3824752	2.65E-07	1.15YrCanc	2.65E-07	0.00E+00
11	ALL		473565.1	3824613	2.66E-07	1.15YrCanc	2.66E-07	0.00E+00
12	ALL		473601.9	3824654	2.71E-07	1.15YrCanc	2.71E-07	0.00E+00
13	ALL		473601.9	3824696	2.59E-07	1.15YrCanc	2.59E-07	0.00E+00
14	ALL		473545.5	3824967	1.95E-07	1.15YrCanc	1.95E-07	0.00E+00
15	ALL		473514.5	3824994	1.86E-07	1.15YrCanc	1.86E-07	0.00E+00
16	ALL		473496.1	3825039	1.79E-07	1.15YrCanc	1.79E-07	0.00E+00
17	ALL		473458.1	3825063	1.72E-07	1.15YrCanc	1.72E-07	0.00E+00
18	ALL		473427	3825040	1.68E-07	1.15YrCanc	1.68E-07	0.00E+00
19	ALL		473373.5	3824581	2.00E-07	1.15YrCanc	2.00E-07	0.00E+00
20	ALL		475731.9	3823741	7.17E-08	1.15YrCanc	7.17E-08	0.00E+00
21	ALL		474874.5	3823423	8.93E-08	1.15YrCanc	8.93E-08	0.00E+00
22	ALL		474767.7	3823408	9.42E-08	1.15YrCanc	9.42E-08	0.00E+00
23	ALL		474548	3823365	1.01E-07	1.15YrCanc	1.01E-07	0.00E+00
24	ALL		476494.6	3823805	6.87E-08	1.15YrCanc	6.87E-08	0.00E+00
25	ALL		478000.2	3824541	7.13E-08	1.15YrCanc	7.13E-08	0.00E+00
26	ALL		477773	3827982	1.16E-07	1.15YrCanc	1.16E-07	0.00E+00
27	ALL		478912.9	3829111	7.27E-08	1.15YrCanc	7.27E-08	0.00E+00
28	ALL		479067.8	3829327	6.90E-08	1.15YrCanc	6.90E-08	0.00E+00
29	ALL		472613.6	3822602	7.61E-07	1.15YrCanc	7.61E-07	0.00E+00
30	ALL		471900.8	3822141	8.92E-07	1.15YrCanc	8.92E-07	0.00E+00
31	ALL		471795.4	3822395	3.25E-07	1.15YrCanc	3.25E-07	0.00E+00
32	ALL		475655	3823712	7.28E-08	1.15YrCanc	7.28E-08	0.00E+00
33	ALL		475759.6	3823672	7.19E-08	1.15YrCanc	7.19E-08	0.00E+00
34	ALL		475572	3823641	7.32E-08	1.15YrCanc	7.32E-08	0.00E+00
35	ALL		475664.2	3823660	7.40E-08	1.15YrCanc	7.40E-08	0.00E+00
36	ALL		475624.3	3823583	7.40E-08	1.15YrCanc	7.40E-08	0.00E+00
37	ALL		475765.8	3823623	7.37E-08	1.15YrCanc	7.37E-08	0.00E+00
38	ALL		475685.8	3823604	7.59E-08	1.15YrCanc	7.59E-08	0.00E+00
39	ALL		475541.2	3823580	7.60E-08	1.15YrCanc	7.60E-08	0.00E+00
40	ALL		475513.5	3823444	8.19E-08	1.15YrCanc	8.19E-08	0.00E+00
41	ALL		475464.3	3823404	8.33E-08	1.15YrCanc	8.33E-08	0.00E+00
42	ALL		475408.9	3823349	8.67E-08	1.15YrCanc	8.67E-08	0.00E+00

43	ALL	475325.8	3823361	7.93E-08	1.15YrCanc	7.93E-08	0.00E+00
44	ALL	475258.2	3823371	8.18E-08	1.15YrCanc	8.18E-08	0.00E+00
45	ALL	474956.7	3823389	8.73E-08	1.15YrCanc	8.73E-08	0.00E+00
46	ALL	475092	3823383	8.43E-08	1.15YrCanc	8.43E-08	0.00E+00
47	ALL	474938.2	3823328	9.07E-08	1.15YrCanc	9.07E-08	0.00E+00
48	ALL	475027.4	3823303	9.15E-08	1.15YrCanc	9.15E-08	0.00E+00
49	ALL	475193.6	3823306	8.89E-08	1.15YrCanc	8.89E-08	0.00E+00
50	ALL	475252	3823318	8.80E-08	1.15YrCanc	8.80E-08	0.00E+00
51	ALL	474559.8	3823275	1.01E-07	1.15YrCanc	1.01E-07	0.00E+00
52	ALL	475895	3823577	6.99E-08	1.15YrCanc	6.99E-08	0.00E+00
53	ALL	474512.5	3823158	1.09E-07	1.15YrCanc	1.09E-07	0.00E+00
54	ALL	474732.6	3823235	1.03E-07	1.15YrCanc	1.03E-07	0.00E+00
55	ALL	474808.1	3823238	9.93E-08	1.15YrCanc	9.93E-08	0.00E+00
56	ALL	474663.7	3823155	1.06E-07	1.15YrCanc	1.06E-07	0.00E+00
57	ALL	474637	3823275	1.03E-07	1.15YrCanc	1.03E-07	0.00E+00
58	ALL	474517	3823215	1.06E-07	1.15YrCanc	1.06E-07	0.00E+00
59	ALL	474383.6	3823060	1.17E-07	1.15YrCanc	1.17E-07	0.00E+00
60	ALL	474296.9	3822998	1.28E-07	1.15YrCanc	1.28E-07	0.00E+00
61	ALL	474310.2	3822935	1.25E-07	1.15YrCanc	1.25E-07	0.00E+00
62	ALL	474399.2	3823004	1.18E-07	1.15YrCanc	1.18E-07	0.00E+00
63	ALL	474456.9	3823013	1.15E-07	1.15YrCanc	1.15E-07	0.00E+00
64	ALL	474577	3823055	1.11E-07	1.15YrCanc	1.11E-07	0.00E+00
65	ALL	474637	3823086	1.08E-07	1.15YrCanc	1.08E-07	0.00E+00
66	ALL	474543.6	3823113	1.09E-07	1.15YrCanc	1.09E-07	0.00E+00
67	ALL	474456.9	3823109	1.14E-07	1.15YrCanc	1.14E-07	0.00E+00
68	ALL	475959.4	3823583	7.07E-08	1.15YrCanc	7.07E-08	0.00E+00
69	ALL	476140.9	3823648	7.55E-08	1.15YrCanc	7.55E-08	0.00E+00
70	ALL	476088.6	3823632	7.65E-08	1.15YrCanc	7.65E-08	0.00E+00
71	ALL	474394	3822955	1.20E-07	1.15YrCanc	1.20E-07	0.00E+00
72	ALL	476394.5	3823666	6.99E-08	1.15YrCanc	6.99E-08	0.00E+00
73	ALL	477861.5	3824469	7.09E-08	1.15YrCanc	7.09E-08	0.00E+00
74	ALL	477848.4	3824433	6.94E-08	1.15YrCanc	6.94E-08	0.00E+00
75	ALL	477971.3	3824676	8.19E-08	1.15YrCanc	8.19E-08	0.00E+00
76	ALL	472613.1	3822484	5.42E-07	1.15YrCanc	5.42E-07	0.00E+00
77	ALL	474336.5	3822811	1.23E-07	1.15YrCanc	1.23E-07	0.00E+00
78	ALL	474263.2	3822769	1.26E-07	1.15YrCanc	1.26E-07	0.00E+00
79	ALL	474516.9	3822840	1.19E-07	1.15YrCanc	1.19E-07	0.00E+00
80	ALL	474590.1	3822953	1.14E-07	1.15YrCanc	1.14E-07	0.00E+00
81	ALL	473463	3824862	1.88E-07	1.15YrCanc	1.88E-07	0.00E+00
82	ALL	473507.5	3824841	2.00E-07	1.15YrCanc	2.00E-07	0.00E+00
83	ALL	473314	3824935	1.58E-07	1.15YrCanc	1.58E-07	0.00E+00
84	ALL	473287.8	3824867	1.58E-07	1.15YrCanc	1.58E-07	0.00E+00
85	ALL	473619.9	3824814	2.37E-07	1.15YrCanc	2.37E-07	0.00E+00

ts\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigated

DERMAL_RI	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_F
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

HRAInput.hra

EGG_RISK
0.00E+00
0.00E+00
0.00E+00

0.00E+00
0.00E+00
0.00E+00

*HARP - HRACalc v22118 11/14/2023 10:25:46 AM - Chronic Risk - Input File: C:\Users\tlenihan\Documen

REC	GRP	NETID	X	Y	CONC	POLID	POLABBRE'	SCENARIO
1	ALL		473710.1	3824861	0.001305	9901	DieselExhP	NonCancer
2	ALL		473671	3824866	0.001213	9901	DieselExhP	NonCancer
3	ALL		473728.5	3824764	0.001522	9901	DieselExhP	NonCancer
4	ALL		473730.8	3824714	0.001654	9901	DieselExhP	NonCancer
5	ALL		473726.2	3824684	0.001721	9901	DieselExhP	NonCancer
6	ALL		473674.4	3824609	0.001699	9901	DieselExhP	NonCancer
7	ALL		473626.1	3824610	0.001498	9901	DieselExhP	NonCancer
8	ALL		473676.7	3824658	0.001578	9901	DieselExhP	NonCancer
9	ALL		473722.7	3824662	0.001773	9901	DieselExhP	NonCancer
10	ALL		473649.1	3824752	0.00131	9901	DieselExhP	NonCancer
11	ALL		473565.1	3824613	0.001314	9901	DieselExhP	NonCancer
12	ALL		473601.9	3824654	0.001341	9901	DieselExhP	NonCancer
13	ALL		473601.9	3824696	0.001277	9901	DieselExhP	NonCancer
14	ALL		473545.5	3824967	0.000962	9901	DieselExhP	NonCancer
15	ALL		473514.5	3824994	0.000919	9901	DieselExhP	NonCancer
16	ALL		473496.1	3825039	0.000886	9901	DieselExhP	NonCancer
17	ALL		473458.1	3825063	0.000848	9901	DieselExhP	NonCancer
18	ALL		473427	3825040	0.000831	9901	DieselExhP	NonCancer
19	ALL		473373.5	3824581	0.00099	9901	DieselExhP	NonCancer
20	ALL		475731.9	3823741	0.000354	9901	DieselExhP	NonCancer
21	ALL		474874.5	3823423	0.000441	9901	DieselExhP	NonCancer
22	ALL		474767.7	3823408	0.000465	9901	DieselExhP	NonCancer
23	ALL		474548	3823365	0.000497	9901	DieselExhP	NonCancer
24	ALL		476494.6	3823805	0.000339	9901	DieselExhP	NonCancer
25	ALL		478000.2	3824541	0.000352	9901	DieselExhP	NonCancer
26	ALL		477773	3827982	0.000575	9901	DieselExhP	NonCancer
27	ALL		478912.9	3829111	0.000359	9901	DieselExhP	NonCancer
28	ALL		479067.8	3829327	0.000341	9901	DieselExhP	NonCancer
29	ALL		472613.6	3822602	0.003761	9901	DieselExhP	NonCancer
30	ALL		471900.8	3822141	0.004406	9901	DieselExhP	NonCancer
31	ALL		471795.4	3822395	0.001607	9901	DieselExhP	NonCancer
32	ALL		475655	3823712	0.00036	9901	DieselExhP	NonCancer
33	ALL		475759.6	3823672	0.000355	9901	DieselExhP	NonCancer
34	ALL		475572	3823641	0.000362	9901	DieselExhP	NonCancer
35	ALL		475664.2	3823660	0.000365	9901	DieselExhP	NonCancer
36	ALL		475624.3	3823583	0.000365	9901	DieselExhP	NonCancer
37	ALL		475765.8	3823623	0.000364	9901	DieselExhP	NonCancer
38	ALL		475685.8	3823604	0.000375	9901	DieselExhP	NonCancer
39	ALL		475541.2	3823580	0.000375	9901	DieselExhP	NonCancer
40	ALL		475513.5	3823444	0.000404	9901	DieselExhP	NonCancer
41	ALL		475464.3	3823404	0.000412	9901	DieselExhP	NonCancer
42	ALL		475408.9	3823349	0.000428	9901	DieselExhP	NonCancer

43	ALL	475325.8	3823361	0.000392	9901	DieselExhP	NonCancer
44	ALL	475258.2	3823371	0.000404	9901	DieselExhP	NonCancer
45	ALL	474956.7	3823389	0.000431	9901	DieselExhP	NonCancer
46	ALL	475092	3823383	0.000416	9901	DieselExhP	NonCancer
47	ALL	474938.2	3823328	0.000448	9901	DieselExhP	NonCancer
48	ALL	475027.4	3823303	0.000452	9901	DieselExhP	NonCancer
49	ALL	475193.6	3823306	0.000439	9901	DieselExhP	NonCancer
50	ALL	475252	3823318	0.000435	9901	DieselExhP	NonCancer
51	ALL	474559.8	3823275	0.000501	9901	DieselExhP	NonCancer
52	ALL	475895	3823577	0.000345	9901	DieselExhP	NonCancer
53	ALL	474512.5	3823158	0.000536	9901	DieselExhP	NonCancer
54	ALL	474732.6	3823235	0.000508	9901	DieselExhP	NonCancer
55	ALL	474808.1	3823238	0.000491	9901	DieselExhP	NonCancer
56	ALL	474663.7	3823155	0.000522	9901	DieselExhP	NonCancer
57	ALL	474637	3823275	0.000507	9901	DieselExhP	NonCancer
58	ALL	474517	3823215	0.000525	9901	DieselExhP	NonCancer
59	ALL	474383.6	3823060	0.000579	9901	DieselExhP	NonCancer
60	ALL	474296.9	3822998	0.000631	9901	DieselExhP	NonCancer
61	ALL	474310.2	3822935	0.000618	9901	DieselExhP	NonCancer
62	ALL	474399.2	3823004	0.000584	9901	DieselExhP	NonCancer
63	ALL	474456.9	3823013	0.000568	9901	DieselExhP	NonCancer
64	ALL	474577	3823055	0.000549	9901	DieselExhP	NonCancer
65	ALL	474637	3823086	0.000532	9901	DieselExhP	NonCancer
66	ALL	474543.6	3823113	0.000537	9901	DieselExhP	NonCancer
67	ALL	474456.9	3823109	0.000561	9901	DieselExhP	NonCancer
68	ALL	475959.4	3823583	0.000349	9901	DieselExhP	NonCancer
69	ALL	476140.9	3823648	0.000373	9901	DieselExhP	NonCancer
70	ALL	476088.6	3823632	0.000378	9901	DieselExhP	NonCancer
71	ALL	474394	3822955	0.00059	9901	DieselExhP	NonCancer
72	ALL	476394.5	3823666	0.000345	9901	DieselExhP	NonCancer
73	ALL	477861.5	3824469	0.00035	9901	DieselExhP	NonCancer
74	ALL	477848.4	3824433	0.000343	9901	DieselExhP	NonCancer
75	ALL	477971.3	3824676	0.000405	9901	DieselExhP	NonCancer
76	ALL	472613.1	3822484	0.002675	9901	DieselExhP	NonCancer
77	ALL	474336.5	3822811	0.000608	9901	DieselExhP	NonCancer
78	ALL	474263.2	3822769	0.000624	9901	DieselExhP	NonCancer
79	ALL	474516.9	3822840	0.000586	9901	DieselExhP	NonCancer
80	ALL	474590.1	3822953	0.000562	9901	DieselExhP	NonCancer
81	ALL	473463	3824862	0.000928	9901	DieselExhP	NonCancer
82	ALL	473507.5	3824841	0.000987	9901	DieselExhP	NonCancer
83	ALL	473314	3824935	0.00078	9901	DieselExhP	NonCancer
84	ALL	473287.8	3824867	0.000781	9901	DieselExhP	NonCancer
85	ALL	473619.9	3824814	0.001171	9901	DieselExhP	NonCancer

ıts\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA mitigated

CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE\	RESP	SKIN	EYE
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.08E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.93E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.79E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.04E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.18E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.52E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.81E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.19E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.31E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-05	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.03E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.81E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-04	0.00E+00	0.00E+00

HRAInput.hra

BONE/TEET	ENDO	BLOOD	ODOR	GENERAL	DETAILS	INH_CONC	SOIL_DOSE	DERMAL_D
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.30E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.21E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.52E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.65E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.72E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.70E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.50E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.58E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.77E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.31E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.31E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.34E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.28E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	9.62E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	9.19E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	8.86E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	8.48E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	8.31E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	9.90E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.54E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.41E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.65E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.97E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.39E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.52E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.75E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.59E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.41E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.76E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.41E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.61E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.60E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.55E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.62E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.65E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.65E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.64E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.75E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.75E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.04E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.12E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.28E-04	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.92E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.04E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.31E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.16E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.48E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.52E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.39E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.35E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.01E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.45E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.36E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.08E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.91E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.22E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.07E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.25E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.79E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	6.31E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	6.18E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.84E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.68E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.49E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.32E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.37E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.61E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.49E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.73E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.78E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.90E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.45E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.50E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	3.43E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	4.05E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	2.68E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	6.08E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	6.24E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.86E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	5.62E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	9.28E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	9.87E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	7.80E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	7.81E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*	1.17E-03	0.00E+00	0.00E+00

MMILK_DO	WATER_DO	FISH_DOSE	CROP_DOS	BEEF_DOSI	DAIRY_DOS	PIG_DOSE	CHICKEN_I	EGG_DOSE
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1ST_DRIVE| 2ND_DRIVE 3RD_DRIVER
INHALATION
INHALATION
INHALATION

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INHALATION
INHALATION

*HARP - HRACalc v22118 11/14/2023 10:24:19 AM - Cancer Risk - Input File: C:\Users\tlenihan\Documen

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK
1	ALL		473710.1	3824861	4.63E-06	1.15YrCanc	4.63E-06	0.00E+00
2	ALL		473671	3824866	4.53E-06	1.15YrCanc	4.53E-06	0.00E+00
3	ALL		473728.5	3824764	4.42E-06	1.15YrCanc	4.42E-06	0.00E+00
4	ALL		473730.8	3824714	4.32E-06	1.15YrCanc	4.32E-06	0.00E+00
5	ALL		473726.2	3824684	4.24E-06	1.15YrCanc	4.24E-06	0.00E+00
6	ALL		473674.4	3824609	3.96E-06	1.15YrCanc	3.96E-06	0.00E+00
7	ALL		473626.1	3824610	3.83E-06	1.15YrCanc	3.83E-06	0.00E+00
8	ALL		473676.7	3824658	4.05E-06	1.15YrCanc	4.05E-06	0.00E+00
9	ALL		473722.7	3824662	4.19E-06	1.15YrCanc	4.19E-06	0.00E+00
10	ALL		473649.1	3824752	4.18E-06	1.15YrCanc	4.18E-06	0.00E+00
11	ALL		473565.1	3824613	3.70E-06	1.15YrCanc	3.70E-06	0.00E+00
12	ALL		473601.9	3824654	3.85E-06	1.15YrCanc	3.85E-06	0.00E+00
13	ALL		473601.9	3824696	3.94E-06	1.15YrCanc	3.94E-06	0.00E+00
14	ALL		473545.5	3824967	4.56E-06	1.15YrCanc	4.56E-06	0.00E+00
15	ALL		473514.5	3824994	4.56E-06	1.15YrCanc	4.56E-06	0.00E+00
16	ALL		473496.1	3825039	4.66E-06	1.15YrCanc	4.66E-06	0.00E+00
17	ALL		473458.1	3825063	4.63E-06	1.15YrCanc	4.63E-06	0.00E+00
18	ALL		473427	3825040	4.49E-06	1.15YrCanc	4.49E-06	0.00E+00
19	ALL		473373.5	3824581	3.29E-06	1.15YrCanc	3.29E-06	0.00E+00
20	ALL		475731.9	3823741	1.41E-06	1.15YrCanc	1.41E-06	0.00E+00
21	ALL		474874.5	3823423	1.49E-06	1.15YrCanc	1.49E-06	0.00E+00
22	ALL		474767.7	3823408	1.51E-06	1.15YrCanc	1.51E-06	0.00E+00
23	ALL		474548	3823365	1.44E-06	1.15YrCanc	1.44E-06	0.00E+00
24	ALL		476494.6	3823805	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00
25	ALL		478000.2	3824541	3.15E-06	1.15YrCanc	3.15E-06	0.00E+00
26	ALL		477773	3827982	5.60E-06	1.15YrCanc	5.60E-06	0.00E+00
27	ALL		478912.9	3829111	2.65E-06	1.15YrCanc	2.65E-06	0.00E+00
28	ALL		479067.8	3829327	2.36E-06	1.15YrCanc	2.36E-06	0.00E+00
29	ALL		472613.6	3822602	1.90E-06	1.15YrCanc	1.90E-06	0.00E+00
30	ALL		471900.8	3822141	2.01E-06	1.15YrCanc	2.01E-06	0.00E+00
31	ALL		471795.4	3822395	1.42E-06	1.15YrCanc	1.42E-06	0.00E+00
32	ALL		475655	3823712	1.45E-06	1.15YrCanc	1.45E-06	0.00E+00
33	ALL		475759.6	3823672	1.40E-06	1.15YrCanc	1.40E-06	0.00E+00
34	ALL		475572	3823641	1.44E-06	1.15YrCanc	1.44E-06	0.00E+00
35	ALL		475664.2	3823660	1.47E-06	1.15YrCanc	1.47E-06	0.00E+00
36	ALL		475624.3	3823583	1.44E-06	1.15YrCanc	1.44E-06	0.00E+00
37	ALL		475765.8	3823623	1.45E-06	1.15YrCanc	1.45E-06	0.00E+00
38	ALL		475685.8	3823604	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00
39	ALL		475541.2	3823580	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00
40	ALL		475513.5	3823444	1.64E-06	1.15YrCanc	1.64E-06	0.00E+00
41	ALL		475464.3	3823404	1.66E-06	1.15YrCanc	1.66E-06	0.00E+00
42	ALL		475408.9	3823349	1.73E-06	1.15YrCanc	1.73E-06	0.00E+00

43	ALL	475325.8	3823361	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00
44	ALL	475258.2	3823371	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00
45	ALL	474956.7	3823389	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00
46	ALL	475092	3823383	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00
47	ALL	474938.2	3823328	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00
48	ALL	475027.4	3823303	1.66E-06	1.15YrCanc	1.66E-06	0.00E+00
49	ALL	475193.6	3823306	1.71E-06	1.15YrCanc	1.71E-06	0.00E+00
50	ALL	475252	3823318	1.72E-06	1.15YrCanc	1.72E-06	0.00E+00
51	ALL	474559.8	3823275	1.43E-06	1.15YrCanc	1.43E-06	0.00E+00
52	ALL	475895	3823577	1.31E-06	1.15YrCanc	1.31E-06	0.00E+00
53	ALL	474512.5	3823158	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00
54	ALL	474732.6	3823235	1.63E-06	1.15YrCanc	1.63E-06	0.00E+00
55	ALL	474808.1	3823238	1.63E-06	1.15YrCanc	1.63E-06	0.00E+00
56	ALL	474663.7	3823155	1.59E-06	1.15YrCanc	1.59E-06	0.00E+00
57	ALL	474637	3823275	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00
58	ALL	474517	3823215	1.47E-06	1.15YrCanc	1.47E-06	0.00E+00
59	ALL	474383.6	3823060	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00
60	ALL	474296.9	3822998	1.60E-06	1.15YrCanc	1.60E-06	0.00E+00
61	ALL	474310.2	3822935	1.55E-06	1.15YrCanc	1.55E-06	0.00E+00
62	ALL	474399.2	3823004	1.54E-06	1.15YrCanc	1.54E-06	0.00E+00
63	ALL	474456.9	3823013	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00
64	ALL	474577	3823055	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00
65	ALL	474637	3823086	1.57E-06	1.15YrCanc	1.57E-06	0.00E+00
66	ALL	474543.6	3823113	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00
67	ALL	474456.9	3823109	1.54E-06	1.15YrCanc	1.54E-06	0.00E+00
68	ALL	475959.4	3823583	1.36E-06	1.15YrCanc	1.36E-06	0.00E+00
69	ALL	476140.9	3823648	1.62E-06	1.15YrCanc	1.62E-06	0.00E+00
70	ALL	476088.6	3823632	1.62E-06	1.15YrCanc	1.62E-06	0.00E+00
71	ALL	474394	3822955	1.52E-06	1.15YrCanc	1.52E-06	0.00E+00
72	ALL	476394.5	3823666	1.53E-06	1.15YrCanc	1.53E-06	0.00E+00
73	ALL	477861.5	3824469	2.86E-06	1.15YrCanc	2.86E-06	0.00E+00
74	ALL	477848.4	3824433	2.72E-06	1.15YrCanc	2.72E-06	0.00E+00
75	ALL	477971.3	3824676	4.07E-06	1.15YrCanc	4.07E-06	0.00E+00
76	ALL	472613.1	3822484	1.61E-06	1.15YrCanc	1.61E-06	0.00E+00
77	ALL	474336.5	3822811	1.47E-06	1.15YrCanc	1.47E-06	0.00E+00
78	ALL	474263.2	3822769	1.45E-06	1.15YrCanc	1.45E-06	0.00E+00
79	ALL	474516.9	3822840	1.50E-06	1.15YrCanc	1.50E-06	0.00E+00
80	ALL	474590.1	3822953	1.56E-06	1.15YrCanc	1.56E-06	0.00E+00
81	ALL	473463	3824862	4.06E-06	1.15YrCanc	4.06E-06	0.00E+00
82	ALL	473507.5	3824841	4.10E-06	1.15YrCanc	4.10E-06	0.00E+00
83	ALL	473314	3824935	3.94E-06	1.15YrCanc	3.94E-06	0.00E+00
84	ALL	473287.8	3824867	3.73E-06	1.15YrCanc	3.73E-06	0.00E+00
85	ALL	473619.9	3824814	4.26E-06	1.15YrCanc	4.26E-06	0.00E+00

ts\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigate

DERMAL_RI	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK	PIG_RISK	CHICKEN_F
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

edHRAInput.hra
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*HARP - HRACalc v22118 11/14/2023 10:24:19 AM - Chronic Risk - Input File: C:\Users\tlenihan\Documen

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN
1	ALL		473710.1	3824861	NonCancer	0.00E+00	0.00E+00	0.00E+00
2	ALL		473671	3824866	NonCancer	0.00E+00	0.00E+00	0.00E+00
3	ALL		473728.5	3824764	NonCancer	0.00E+00	0.00E+00	0.00E+00
4	ALL		473730.8	3824714	NonCancer	0.00E+00	0.00E+00	0.00E+00
5	ALL		473726.2	3824684	NonCancer	0.00E+00	0.00E+00	0.00E+00
6	ALL		473674.4	3824609	NonCancer	0.00E+00	0.00E+00	0.00E+00
7	ALL		473626.1	3824610	NonCancer	0.00E+00	0.00E+00	0.00E+00
8	ALL		473676.7	3824658	NonCancer	0.00E+00	0.00E+00	0.00E+00
9	ALL		473722.7	3824662	NonCancer	0.00E+00	0.00E+00	0.00E+00
10	ALL		473649.1	3824752	NonCancer	0.00E+00	0.00E+00	0.00E+00
11	ALL		473565.1	3824613	NonCancer	0.00E+00	0.00E+00	0.00E+00
12	ALL		473601.9	3824654	NonCancer	0.00E+00	0.00E+00	0.00E+00
13	ALL		473601.9	3824696	NonCancer	0.00E+00	0.00E+00	0.00E+00
14	ALL		473545.5	3824967	NonCancer	0.00E+00	0.00E+00	0.00E+00
15	ALL		473514.5	3824994	NonCancer	0.00E+00	0.00E+00	0.00E+00
16	ALL		473496.1	3825039	NonCancer	0.00E+00	0.00E+00	0.00E+00
17	ALL		473458.1	3825063	NonCancer	0.00E+00	0.00E+00	0.00E+00
18	ALL		473427	3825040	NonCancer	0.00E+00	0.00E+00	0.00E+00
19	ALL		473373.5	3824581	NonCancer	0.00E+00	0.00E+00	0.00E+00
20	ALL		475731.9	3823741	NonCancer	0.00E+00	0.00E+00	0.00E+00
21	ALL		474874.5	3823423	NonCancer	0.00E+00	0.00E+00	0.00E+00
22	ALL		474767.7	3823408	NonCancer	0.00E+00	0.00E+00	0.00E+00
23	ALL		474548	3823365	NonCancer	0.00E+00	0.00E+00	0.00E+00
24	ALL		476494.6	3823805	NonCancer	0.00E+00	0.00E+00	0.00E+00
25	ALL		478000.2	3824541	NonCancer	0.00E+00	0.00E+00	0.00E+00
26	ALL		477773	3827982	NonCancer	0.00E+00	0.00E+00	0.00E+00
27	ALL		478912.9	3829111	NonCancer	0.00E+00	0.00E+00	0.00E+00
28	ALL		479067.8	3829327	NonCancer	0.00E+00	0.00E+00	0.00E+00
29	ALL		472613.6	3822602	NonCancer	0.00E+00	0.00E+00	0.00E+00
30	ALL		471900.8	3822141	NonCancer	0.00E+00	0.00E+00	0.00E+00
31	ALL		471795.4	3822395	NonCancer	0.00E+00	0.00E+00	0.00E+00
32	ALL		475655	3823712	NonCancer	0.00E+00	0.00E+00	0.00E+00
33	ALL		475759.6	3823672	NonCancer	0.00E+00	0.00E+00	0.00E+00
34	ALL		475572	3823641	NonCancer	0.00E+00	0.00E+00	0.00E+00
35	ALL		475664.2	3823660	NonCancer	0.00E+00	0.00E+00	0.00E+00
36	ALL		475624.3	3823583	NonCancer	0.00E+00	0.00E+00	0.00E+00
37	ALL		475765.8	3823623	NonCancer	0.00E+00	0.00E+00	0.00E+00
38	ALL		475685.8	3823604	NonCancer	0.00E+00	0.00E+00	0.00E+00
39	ALL		475541.2	3823580	NonCancer	0.00E+00	0.00E+00	0.00E+00
40	ALL		475513.5	3823444	NonCancer	0.00E+00	0.00E+00	0.00E+00
41	ALL		475464.3	3823404	NonCancer	0.00E+00	0.00E+00	0.00E+00
42	ALL		475408.9	3823349	NonCancer	0.00E+00	0.00E+00	0.00E+00

43	ALL	475325.8	3823361	NonCancer	0.00E+00	0.00E+00	0.00E+00
44	ALL	475258.2	3823371	NonCancer	0.00E+00	0.00E+00	0.00E+00
45	ALL	474956.7	3823389	NonCancer	0.00E+00	0.00E+00	0.00E+00
46	ALL	475092	3823383	NonCancer	0.00E+00	0.00E+00	0.00E+00
47	ALL	474938.2	3823328	NonCancer	0.00E+00	0.00E+00	0.00E+00
48	ALL	475027.4	3823303	NonCancer	0.00E+00	0.00E+00	0.00E+00
49	ALL	475193.6	3823306	NonCancer	0.00E+00	0.00E+00	0.00E+00
50	ALL	475252	3823318	NonCancer	0.00E+00	0.00E+00	0.00E+00
51	ALL	474559.8	3823275	NonCancer	0.00E+00	0.00E+00	0.00E+00
52	ALL	475895	3823577	NonCancer	0.00E+00	0.00E+00	0.00E+00
53	ALL	474512.5	3823158	NonCancer	0.00E+00	0.00E+00	0.00E+00
54	ALL	474732.6	3823235	NonCancer	0.00E+00	0.00E+00	0.00E+00
55	ALL	474808.1	3823238	NonCancer	0.00E+00	0.00E+00	0.00E+00
56	ALL	474663.7	3823155	NonCancer	0.00E+00	0.00E+00	0.00E+00
57	ALL	474637	3823275	NonCancer	0.00E+00	0.00E+00	0.00E+00
58	ALL	474517	3823215	NonCancer	0.00E+00	0.00E+00	0.00E+00
59	ALL	474383.6	3823060	NonCancer	0.00E+00	0.00E+00	0.00E+00
60	ALL	474296.9	3822998	NonCancer	0.00E+00	0.00E+00	0.00E+00
61	ALL	474310.2	3822935	NonCancer	0.00E+00	0.00E+00	0.00E+00
62	ALL	474399.2	3823004	NonCancer	0.00E+00	0.00E+00	0.00E+00
63	ALL	474456.9	3823013	NonCancer	0.00E+00	0.00E+00	0.00E+00
64	ALL	474577	3823055	NonCancer	0.00E+00	0.00E+00	0.00E+00
65	ALL	474637	3823086	NonCancer	0.00E+00	0.00E+00	0.00E+00
66	ALL	474543.6	3823113	NonCancer	0.00E+00	0.00E+00	0.00E+00
67	ALL	474456.9	3823109	NonCancer	0.00E+00	0.00E+00	0.00E+00
68	ALL	475959.4	3823583	NonCancer	0.00E+00	0.00E+00	0.00E+00
69	ALL	476140.9	3823648	NonCancer	0.00E+00	0.00E+00	0.00E+00
70	ALL	476088.6	3823632	NonCancer	0.00E+00	0.00E+00	0.00E+00
71	ALL	474394	3822955	NonCancer	0.00E+00	0.00E+00	0.00E+00
72	ALL	476394.5	3823666	NonCancer	0.00E+00	0.00E+00	0.00E+00
73	ALL	477861.5	3824469	NonCancer	0.00E+00	0.00E+00	0.00E+00
74	ALL	477848.4	3824433	NonCancer	0.00E+00	0.00E+00	0.00E+00
75	ALL	477971.3	3824676	NonCancer	0.00E+00	0.00E+00	0.00E+00
76	ALL	472613.1	3822484	NonCancer	0.00E+00	0.00E+00	0.00E+00
77	ALL	474336.5	3822811	NonCancer	0.00E+00	0.00E+00	0.00E+00
78	ALL	474263.2	3822769	NonCancer	0.00E+00	0.00E+00	0.00E+00
79	ALL	474516.9	3822840	NonCancer	0.00E+00	0.00E+00	0.00E+00
80	ALL	474590.1	3822953	NonCancer	0.00E+00	0.00E+00	0.00E+00
81	ALL	473463	3824862	NonCancer	0.00E+00	0.00E+00	0.00E+00
82	ALL	473507.5	3824841	NonCancer	0.00E+00	0.00E+00	0.00E+00
83	ALL	473314	3824935	NonCancer	0.00E+00	0.00E+00	0.00E+00
84	ALL	473287.8	3824867	NonCancer	0.00E+00	0.00E+00	0.00E+00
85	ALL	473619.9	3824814	NonCancer	0.00E+00	0.00E+00	0.00E+00

ıts\AERMOD\IENL AV Op HRA\IENL APPLE VALLEY OP HRA (UNMITIGATED)\hra\Operational HRA unmitigate

KIDNEY	GILV	REPRO/DE\	RESP	SKIN	EYE	BONE/TEET	ENDO	BLOOD
0.00E+00	0.00E+00	0.00E+00	4.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	5.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	2.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	2.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	1.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	3.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	4.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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ODOR	GENERAL	MAXHI
0.00E+00	0.00E+00	4.57E-03
0.00E+00	0.00E+00	4.48E-03
0.00E+00	0.00E+00	4.36E-03
0.00E+00	0.00E+00	4.26E-03
0.00E+00	0.00E+00	4.19E-03
0.00E+00	0.00E+00	3.91E-03
0.00E+00	0.00E+00	3.78E-03
0.00E+00	0.00E+00	4.00E-03
0.00E+00	0.00E+00	4.14E-03
0.00E+00	0.00E+00	4.12E-03
0.00E+00	0.00E+00	3.66E-03
0.00E+00	0.00E+00	3.81E-03
0.00E+00	0.00E+00	3.89E-03
0.00E+00	0.00E+00	4.50E-03
0.00E+00	0.00E+00	4.50E-03
0.00E+00	0.00E+00	4.60E-03
0.00E+00	0.00E+00	4.57E-03
0.00E+00	0.00E+00	4.43E-03
0.00E+00	0.00E+00	3.25E-03
0.00E+00	0.00E+00	1.40E-03
0.00E+00	0.00E+00	1.47E-03
0.00E+00	0.00E+00	1.49E-03
0.00E+00	0.00E+00	1.42E-03
0.00E+00	0.00E+00	1.54E-03
0.00E+00	0.00E+00	3.11E-03
0.00E+00	0.00E+00	5.53E-03
0.00E+00	0.00E+00	2.62E-03
0.00E+00	0.00E+00	2.33E-03
0.00E+00	0.00E+00	1.87E-03
0.00E+00	0.00E+00	1.98E-03
0.00E+00	0.00E+00	1.40E-03
0.00E+00	0.00E+00	1.43E-03
0.00E+00	0.00E+00	1.39E-03
0.00E+00	0.00E+00	1.42E-03
0.00E+00	0.00E+00	1.46E-03
0.00E+00	0.00E+00	1.42E-03
0.00E+00	0.00E+00	1.43E-03
0.00E+00	0.00E+00	1.50E-03
0.00E+00	0.00E+00	1.50E-03
0.00E+00	0.00E+00	1.62E-03
0.00E+00	0.00E+00	1.64E-03
0.00E+00	0.00E+00	1.71E-03

0.00E+00	0.00E+00	1.48E-03
0.00E+00	0.00E+00	1.54E-03
0.00E+00	0.00E+00	1.48E-03
0.00E+00	0.00E+00	1.51E-03
0.00E+00	0.00E+00	1.54E-03
0.00E+00	0.00E+00	1.64E-03
0.00E+00	0.00E+00	1.69E-03
0.00E+00	0.00E+00	1.70E-03
0.00E+00	0.00E+00	1.41E-03
0.00E+00	0.00E+00	1.30E-03
0.00E+00	0.00E+00	1.49E-03
0.00E+00	0.00E+00	1.61E-03
0.00E+00	0.00E+00	1.61E-03
0.00E+00	0.00E+00	1.57E-03
0.00E+00	0.00E+00	1.51E-03
0.00E+00	0.00E+00	1.46E-03
0.00E+00	0.00E+00	1.51E-03
0.00E+00	0.00E+00	1.58E-03
0.00E+00	0.00E+00	1.53E-03
0.00E+00	0.00E+00	1.52E-03
0.00E+00	0.00E+00	1.50E-03
0.00E+00	0.00E+00	1.54E-03
0.00E+00	0.00E+00	1.55E-03
0.00E+00	0.00E+00	1.50E-03
0.00E+00	0.00E+00	1.52E-03
0.00E+00	0.00E+00	1.34E-03
0.00E+00	0.00E+00	1.60E-03
0.00E+00	0.00E+00	1.60E-03
0.00E+00	0.00E+00	1.50E-03
0.00E+00	0.00E+00	1.51E-03
0.00E+00	0.00E+00	2.83E-03
0.00E+00	0.00E+00	2.68E-03
0.00E+00	0.00E+00	4.02E-03
0.00E+00	0.00E+00	1.59E-03
0.00E+00	0.00E+00	1.45E-03
0.00E+00	0.00E+00	1.43E-03
0.00E+00	0.00E+00	1.48E-03
0.00E+00	0.00E+00	1.54E-03
0.00E+00	0.00E+00	4.01E-03
0.00E+00	0.00E+00	4.05E-03
0.00E+00	0.00E+00	3.90E-03
0.00E+00	0.00E+00	3.69E-03
0.00E+00	0.00E+00	4.21E-03

Appendix B3

Health Effects of Criteria Polluntants

MEMORANDUM

To:	Memorandum to File
From:	Nicholas Lorenzen, Dudek
Subject:	Health Effects from Criteria Air Pollutants Associated with the Inland Empire North Logistics Center Project, Apple Valley, California
Date:	September 6, 2024

1 Purpose and Introduction

In response to the California Supreme Court's *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 decision (referred to herein as the Friant Ranch decision), this memorandum addresses the potential for adverse health effects related to emissions of criteria air pollutants associated with construction and operation of the proposed 1M Warehouse Project (proposed project) located in Apple Valley, California, based on scientific information and technological methods available at the time of this memorandum's preparation. The published Friant Ranch decision (issued on December 24, 2018) addresses the need to correlate mass emission values for criteria air pollutants to specific health consequences, and contains the following direction from the California Supreme Court: "The Environmental Impact Report (EIR) must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must explain what the agency *does* know and why, given existing scientific constraints, it cannot translate potential health impacts further" (*Sierra Club v. County of Fresno* 2018; italics in original).

As discussed below, at the time of this memorandum's preparation, no expert agency, including the Mojave Desert Air Quality Management District (MDAQMD), the California Air Resources Board (CARB), or the U.S. Environmental Protection Agency (EPA), have approved a quantitative method to reliably, meaningfully, and consistently translate the mass emission estimates for the criteria air pollutants resulting from the proposed project to specific health effects. No California air district or other expert agency/entity has published *quantitative* guidance on how to address the Friant Ranch decision.[1] However, in April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing the Friant Ranch decision in the review and analysis of proposed projects under the California Environmental Quality Act (CEQA) in Sacramento County (SMAQMD 2019). In June 2020, the SMAQMD published instructions for using a health effects screening tool that is summarized in Section 4 below.

Nonetheless, following the Supreme Court's Friant Ranch decision, some EIRs where estimated criteria air pollutant emissions exceeded applicable air district thresholds have included a quantitative analysis of potential project-generated health effects using a combination of a regional photochemical grid model and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP-Community Edition [CE]). The publicly available health impact assessments (HIA) typically present results in terms of an increase in health incidences and/or the increase in background health incidence for various health outcomes resulting from the project's estimated increase in concentrations of ozone (O_3) and particulate matter (PM) with an aerodynamic diameter less than or equal to 2.5

[1] The following air districts, state agencies, and entities were contacted by Dudek in January 2019, but could not provide guidance on how to proceed in response to the Friant Ranch decision at that time: San Diego Air Pollution Control District (APCD), MDAQMD, San Joaquin Valley APCD, Santa Barbara County APCD, San Luis Obispo County APCD, Bay Area AQMD, California Air Resources Board, California Office of Planning and Research, California Air Pollution Control Officers Association, and Office of Environmental Health Hazard Assessment.

microns ($PM_{2.5}$). To date, all of the HIAs that are publicly available have concluded that the evaluated project's health effects associated with the estimated project-generated increase in concentrations of O_3 and $PM_{2.5}$ represent a small increase in incidences and a very small percent of the number of background incidences, indicating that these health impacts are negligible and potentially within the models' margin of error. A review of the publicly available HIAs in CEQA documents is provided in Section 4.

2 National and California Ambient Air Quality Standards

As discussed in Section 4.2, Air Quality, of the proposed project's EIR, ambient air quality standards (AAQS) define clean air and are established to protect even the most sensitive individuals (CARB 2023a). An AAQS defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. The EPA and California Air Resources Board are both authorized to set AAQS.

The Clean Air Act Amendments of 1970 instruct the EPA to set primary National AAQS (NAAQS) to protect public health, and secondary NAAQS to protect plants, forests, crops, and materials from damage due to exposure to the following criteria air pollutants: O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), $PM_{2.5}$, and lead.

The federal Clean Air Act requires that the EPA reassess, at least every 5 years, whether adopted standards are adequate to protect public health based on current scientific evidence. The EPA is required to rely on the advice of an independent scientific panel, the Clean Air Scientific Advisory Committee. Reviewing the NAAQS is a lengthy undertaking and includes the following major phases: planning, integrated science assessment, risk/exposure assessment, policy assessment, and rulemaking (EPA 2022a). During the integrated science assessment, a comprehensive review, synthesis, and evaluation of the most policy-relevant science is conducted, including key science judgments that are important to inform the development of the risk and exposure assessments (EPA 2018a). Then, the risk/exposure assessment draws upon information and conclusions presented in the integrated science assessment to develop quantitative characterizations of exposures and associated risks to human health or the environment associated with recent air quality conditions and with air quality estimated to just meet the current or alternative standard(s) under consideration (EPA 2022a). Scientific review during policy assessment development, and the NAAQS review process in general, is thorough and extensive.

In 1959, California enacted legislation requiring the state Department of Public Health to establish AAQS and necessary controls for motor vehicle emissions (CARB 2023b). California's AAQS (CAAQS) were adopted in 1971 (CARB 2023b). The CAAQS are established for O_3, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$, as well as hydrogen sulfide, vinyl chloride, sulfates, and visibility-reducing particles.

Air quality standard setting in California commences with a critical review of all relevant peer-reviewed scientific literature. The EPA's Office of Environmental Health Hazard Assessment uses the review of health literature to develop a recommendation for the standard. The recommendation can be for no change, or it can recommend a new standard. The review, including the Office of Environmental Health Hazard Assessment recommendation, is summarized in a document called the draft Initial Statement of Reasons (ISOR), which is released for comment by the public, and also for public peer review by the Air Quality Advisory Committee. Committee members are appointed by the President of the University of California for their expertise in the range of subjects covered in the ISOR, including health, exposure, air quality monitoring, atmospheric chemistry and physics, and effects on plants, trees,

materials, and ecosystems. The Committee provides written comments on the draft ISOR. CARB staff next revises the ISOR based on comments from the Air Quality Advisory Committee and the public. The revised ISOR is then released for a 45-day public comment period prior to consideration by the Board of CARB at a regularly scheduled Board hearing (CARB 2023c).

Federal law requires that all states attain the NAAQS. Failure of a state to reach attainment of the NAAQS by the target date can trigger penalties, including withholding of federal highway funds (CARB 2023b). California law similarly continues to mandate CAAQS, although attainment of the NAAQS has precedence over attainment of the CAAQS (CARB 2023b).

Of importance to this memorandum, California air districts have based their thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an AAQS is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the AAQS, this means that the thresholds established by air districts are also protective of human health. The particular thresholds of relevance to the proposed project are illustrated in Table 4.2-4, Mojave Desert Air Quality Management District Daily Air Quality Significance Thresholds, of the EIR. Because O_3 is not emitted directly, air districts have established emissions-based thresholds for O_3 precursors—volatile organic compounds (VOCs) and oxides of nitrogen (NO_x)—which are intended to serve as a surrogate for an "O_3 significance threshold" (i.e., the potential for adverse O_3 impacts to occur).

The NAAQS and CAAQS for O_3, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$ are presented in Table 1. Hydrogen sulfide, vinyl chloride, sulfates, and visibility-reducing particles are not addressed further in this evaluation because they are not routinely associated with land use development projects subject to CEQA review, and are thus not presented in Table 1.

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
O_3	1 hour	0.09 ppm (180 µg/m³)	No Data	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	No Data
	3 hours	No Data	No Data	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	No Data

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
	Annual	No Data	0.030 ppm (for certain areas)[g]	No Data
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	No Data	
$PM_{2.5}$[i]	24 hours	No Data	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³

Source: CARB 2016.

Notes: µg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] CARB adopted new PM standards in June of 2002, responding to requirements of the Children's Environmental Health Protection Act (Senate Bill 25, Escutia 1999), specifically the evaluation of all health-based AAQS to determine if the standards adequately protect human health, particularly that of infants and children. The subsequent review of the PM standards resulted in the recommendation of more health-protective AAQS for PM_{10} and a new standard for $PM_{2.5}$. The new PM standards became effective in 2003. Upon further review, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12.0 µg/m³ on December 14, 2012. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved.

Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are redesignated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on CAAQS rather than the NAAQS. Table 2 depicts the current attainment status of the project area with respect to the NAAQS and CAAQS. Notably, the Mojave Desert Air Basin (MDAB) has experienced a substantial reduction in maximum 8-hour concentrations of O_3 over time, as well as reductions in PM_{10}, from strategies including implementation of Reasonable Available Control Technology, vehicle emission standards, and other measures, as described in the respective MDAQMD O_3 attainment plan (MDAQMD 2008) and PM_{10} attainment demonstration and maintenance plan (MDAQMD 1995).

Table 2. Mojave Desert Air Basin Attainment Classification

Pollutant	Designation/Classification[a]	
	Federal Standards	State Standards
O_3 – 1 hour	No federal standard	**Nonattainment**
O_3 – 8 hours	**Severe nonattainment[b]**	**Nonattainment**
NO_2	Unclassifiable/attainment	Attainment
CO	Unclassifiable/attainment	Attainment
SO_2	Unclassifiable/attainment	Attainment
PM_{10}	**Moderate nonattainment[c]**	**Nonattainment**
$PM_{2.5}$	Unclassifiable/attainment	Attainment[d]
Lead	Unclassifiable/attainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified[e]
Sulfates	No federal standard	Attainment
Visibility-reducing particles	No federal standard	Unclassified
Vinyl chloride	No federal standard	No designation

Sources: EPA 2021 (federal); CARB 2021 (state).
Notes: O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
[a] Designations/classifications in **bold** type indicate nonattainment.
[b] West Mojave Desert portion of the MDAB, where the project is located, is designated severe nonattainment. The Kern County portion of the MDAB is designated moderate nonattainment, and the remaining areas of the MDAB are designated unclassifiable/attainment.
[c] The project is located in an area designated moderate nonattainment in the MDAB.
[d] The project is located in an area designated attainment in the MDAB.
[e] The entire MDAB is designated unclassified, except for the Searles Valley portion of the basin, which is designated nonattainment.
Definitions: attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

In summary, the project is located in an area of the MDAB that is designated as a nonattainment area for federal and state O_3 standards and federal and state PM_{10} standards, and unclassifiable/attainment for all other criteria air pollutants (EPA 2021; CARB 2021).

3 Health Effects of Criteria Air Pollutants and Their Precursors

Numerous scientific studies published over the past 50 years point to the harmful effects of air pollution (CARB 2023b). As explained above, the AAQS are designed to prevent these effects (CARB 2023b). According to the South Coast Air Quality Management District (SCAQMD) 2016 Air Quality Management Plan (SCAQMD 2017), the adverse health effects associated with air pollution are diverse and include:

- Premature mortality
- Cardiovascular effects
- Increased health care utilization (hospitalization, physician and emergency room visits)
- Increased respiratory illness and other morbidity (symptoms, infections, and asthma exacerbation)
- Decreased lung function (breathing capacity)
- Lung inflammation
- Potential immunological changes
- Increased airway reactivity to a known pharmacological agent exposure – a method used in laboratories to evaluate the tendency of airways to have an increased possibility of developing an asthmatic response
- A decreased tolerance for exercise
- Adverse birth outcomes such as low birth weights

The evidence linking these effects to air pollutants is derived from population-based observational and field studies (epidemiological) as well as controlled laboratory studies involving human subjects and animals. There have been an increasing number of studies focusing on the mechanisms (that is, on how specific organs, cell types, and biomarkers are involved in the human body's response to air pollution) and specific pollutants responsible for individual effects. Yet the underlying biological pathways for these effects are not always clearly understood (SCAQMD 2017).

Although individuals inhale pollutants as a mixture under ambient conditions, the regulatory framework and the control measures developed are pollutant-specific for six major outdoor pollutants covered under Sections 108 and 109 of the Clean Air Act. This is appropriate, in that different pollutants usually differ in their sources, their times and places of occurrence, the kinds of health effects they may cause, and their overall levels of health risk. Different pollutants, from the same or different sources, oftentimes occur together. Evidence for more than additive effects has not been strong and, as a practical matter, health scientists, as well as regulatory officials, usually must deal with one pollutant at a time in adopting AAQS (SCAQMD 2017).

Health effects associated with criteria air pollutants are discussed below; the same or similar information is provided in Section 4.2.1, Existing Conditions, of the proposed project's Draft EIR.

Ozone (O3). O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, respiratory symptoms, worsening of lung disease leading to premature death, increased susceptibility to infections, inflammation of and damage to the lung tissue, and some immunological changes (EPA

2013; CARB 2023d). These health problems are particularly acute in sensitive receptors such as the sick, older adults, and young children.

Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in and cause shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies of O_3's effects on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2023d).

A number of population groups are potentially at increased risk for O_3 exposure effects. In the ongoing review of O_3, the EPA has identified populations as having adequate evidence for increased risk from O_3 exposures including individuals with asthma, younger and older age groups, individuals with reduced intake of certain nutrients such as Vitamins C and E, and outdoor workers. There is suggestive evidence for other potential factors, such as gender, socioeconomic status, obesity, and variations in genes related to oxidative metabolism or inflammation. However, further evidence is needed (SCAQMD 2017).

The adverse effects reported with short-term O_3 exposure are greater with increased activity because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of O_3 reaching the lungs. Children may be a particularly vulnerable population to air pollution effects because they spend more time outdoors, are generally more active, and have a higher specific ventilation relative to their body weight, compared to adults (SCAQMD 2017).

Volatile Organic Compounds (VOCs). The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered toxic air contaminant (TACs). There are no separate health standards for VOCs as a group. Within this evaluation, VOC and reactive organic gases are used interchangeably.

Nitrogen Dioxide (NO2). A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the AAQS for NO_2, is the results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate relative to their body weight and their typically greater outdoor exposure duration. Several studies

have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher levels of exposure as compared to lower levels. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2023e).

Carbon Monoxide (CO). Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, and light-headedness and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2023f).

Sulfur Dioxide (SO2). SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter (PM), SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can worsen asthma resulting in increased symptoms, increased medication usage, and emergency room visits.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. The elderly and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2023g).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in PM (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in resistance is greater than in healthy people, and increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter (PM10 and PM2.5). A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and world-wide, based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with

worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2023h).

Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that PM in outdoor air pollution causes lung cancer (CARB 2023h).

People with influenza, people with chronic respiratory and cardiovascular diseases, and older adults may suffer worsening illness and premature death as a result of breathing PM. People with bronchitis can expect aggravated symptoms from breathing PM. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

PM encompasses a physically and chemically diverse class of ambient air pollutants of both anthropogenic and biological origin. The PM standard is the only NAAQS that does not target a specific chemical or family of chemical species (NRC 2005). The range of human health effects associated with ambient PM levels or demonstrated in laboratory studies has expanded from earlier concerns for total mortality and respiratory morbidity to include cardiac mortality and morbidity, blood vessel constriction, stroke, premature birth, low birth weight, retarded lung growth, enhancement of allergic responses, reduced resistance to infection, degenerative lesions in the brain, and lung cancer (EPA 2004).

4 Scientific and Technological Complexities

At issue in the Friant Ranch decision was the fact that the Friant Ranch Community Plan Update and Friant Ranch Specific Plan Program Environmental Impact Report (PEIR) did not connect its mass emission totals to specific adverse human health effects. Concerned with the sufficiency of the PEIR as an informational document, and specifically whether the magnitude of project impacts was adequately disclosed, the California Supreme Court stated the following: "The task for real party and the County is clear: The EIR must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must adequately explain what the agency *does* know and why, given existing scientific constraints, it cannot translate potential health impacts further" (*Sierra Club v. County of Fresno* 2018; italics in original).

As discussed further below, at the time of this writing, no available modeling tools have been proven to provide a reliable and meaningful analysis to correlate an increase in mass totals or concentrations of criteria air pollutants from an individual project to specific health effects, or estimate additional pollutant nonattainment days relative to the NAAQS and CAAQS due to a single project.

4.1 Formation of Secondary Pollutants

The California Supreme Court noted in the Friant Ranch decision: "The raw numbers estimating the tons per year of ROG and NO_x from the Project do not give any information to the reader about how much ozone is estimated to be produced as a result."

In response, the formation of O_3 and PM in the atmosphere, as secondary pollutants,[2] involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources, as further explained below. The complexity in how secondary pollutants are formed and dispersed has resulted in ongoing difficulties in measuring and regulating those pollutants.

Tropospheric, or ground level O_3, is not emitted directly into the air, but is created by chemical reactions between NO_x and VOCs (EPA 2022b). This happens when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight (EPA 2022b). O_3 is most likely to reach unhealthy levels on hot sunny days in urban environments, but can still reach high levels during colder months (EPA 2022b). O_3 can also be transported long distances by wind, so even rural areas can experience high O_3 levels (EPA 2022b).

The O_3 reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO_2 is photochemically reformed from nitric oxide (NO). In this way, O_3 is controlled by both NO_x and VOC emissions (NRC 2005). The complexity of these interacting cycles of pollutants means that incremental decreases in one emission may not result in proportional decreases in O_3 (NRC 2005). Although these reactions and interactions are well understood, variability in emission source operations and meteorology creates uncertainty in the modeled O_3 concentrations to which downwind populations may be exposed (NRC 2005). This is especially true for individual projects, like the proposed project, where project-generated criteria air pollutant emissions are not derived from a single "point source," but from mobile sources (cars and trucks) driving to, from, and around the project area and area sources (consumer products, architectural coating, natural gas fireplaces, etc.).

In many urban areas, O_3 nonattainment is not caused by emissions from the local area alone (EPA 2008). Due to atmospheric transport, contributions of precursors from the surrounding region can also be important (EPA 2008, O_3 NAAQS). Thus, in designing control strategies to reduce O_3 concentrations in a local area, it is often necessary to account for regional transport within the U.S. (EPA 2008). In some areas, such as California, global transport of O_3 from beyond North America also can contribute to nonattainment areas (EPA 2008).

According to the 2015 amicus brief from San Joaquin Valley Air Pollution Control District (SJVAPCD), PM can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x (SJVAPCD 2015). In general, PM_{10} is composed largely of primary particles, and a much greater portion of $PM_{2.5}$ contains secondary particles (EPA 2022c). The secondary formation of $PM_{2.5}$ is dominated by a variety of chemical species or components of atmospheric particles, such as ammonium sulfate, ammonium nitrate, organic carbon mass, elemental carbon, and other soil compounds and oxidized metals. $PM_{2.5}$, sulfate, nitrate, and ammonium ions are predominantly the result of chemical reactions of the oxidized products of SO_2 and NO_x emissions with direct ammonia emission (82 FR 5182-5235. Because of the complexity of secondary PM formation, including the potential to be transported long distances by wind, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area (SJVAPCD 2015).

Because of the long-range transport of some pollutants, important emission sources may be far from the locations where measured pollutant concentrations exceed the AAQS (NRC 2005). Thus, for areas experiencing higher

[2] Air pollutants formed through chemical reactions in the atmosphere are referred to as secondary pollutants.

ambient concentrations of pollutants, such as O_3 and PM, controlling emissions of those pollutants and their precursors is typically a regional, often multistate, problem, not a local one (NRC 2005).

4.2 San Joaquin Valley Air Pollution Control District and South Coast Air Quality Management District Briefs

In connection with the judicial proceedings culminating in issuance of the Friant Ranch decision, SJVAPCD and SCAQMD filed amicus briefs attesting to the extreme difficulty of correlating an individual project's criteria air pollutant emissions to specific health impacts. Both the SJVAPCD and the SCAQMD have among the most sophisticated air quality modeling and health impact evaluation capabilities of the air districts in the State. While the information and arguments presented in those briefs was considered by the California Supreme Court, the Court noted that such information was not part of the administrative record associated with the County's decision to approve the Friant Ranch project. A summary of the key, relevant points of the SJVAPCD and SCAQMD briefs is provided below.

Difference between Toxic Air Contaminants and Criteria Air Pollutants

As explained in Section 4.2.1, Existing Conditions, a TAC is an air pollutant, identified in regulation by CARB, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. TACs are considered under a different regulatory process (California Health and Safety Code section 39650 et seq.) than pollutants subject to CAAQS and NAAQS. Health effects to TACs may occur at extremely low levels and it is typically difficult to identify levels of exposure that do not produce adverse health effects. A criteria air pollutant, on the other hand, is an air pollutant for which acceptable levels of exposure can be determined and for which an AAQS has been set (CARB 2023i).

As the SJVAPCD explained in their brief, "Although criteria air pollutants can also be harmful to human health, they are distinguishable from TACs and are regulated separately. The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants" (SJVAPCD 2015). Unlike with TACs (where assessment occurs in conjunction with environmental analysis for individual projects), the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the NAAQS for each criteria pollutant. (42 U.S.C. § 7409(b)(1).) The health impact of a particular criteria pollutant is analyzed on a regional and not a facility or individual project level based on how close the area is to complying with (attaining) the NAAQS (SJVAPCD 2015). The SJVAPCD concluded that while it is possible to perform a health impact analysis for TACs, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task" (SJVAPCD 2015).

Disconnect Between Mass and Concentration

Another important technical nuance is that health effects from air pollutants are related to the concentration of the air pollutant that an individual is exposed to, not necessarily the individual mass quantity of emissions associated with an individual project. For example, health effects from O_3 are correlated with increases in the ambient level of

O_3 in the air a person breathes (SCAQMD 2015). However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O_3 levels over an entire region (SCAQMD 2015).

For CEQA analyses, project-generated emissions are typically estimated in pounds per day or tons per year and compared to mass daily or annual emission thresholds. While CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the AAQS, even if a project exceeds established CEQA significance thresholds, this does not mean that one can easily determine the concentration of O_3 or PM that will be created at or near the project site on a particular day or month of the year, or what specific health impacts will occur (SJVAPCD 2015).

As the SJVAPCD points out, the tonnage of PM "emitted does not always equate to the local PM concentration because it can be transported long distances by wind," and "[s]econdary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO_x) and NO_x," meaning that "the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area" (SJVAPCD 2015). The disconnect between the tonnage of precursor pollutants (NO_x, SO_x and VOCs) and the concentration of O_3 or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting O_3 or PM (SJVAPCD 2015). As discussed previously, the AAQS are established as concentrations of O_3 or PM and not as tonnages of their precursor pollutants (SJVAPCD 2015). The disconnect between the amount of precursor pollutants and the concentration of O_3 or PM formed makes it difficult to determine potential health impacts, which are related to the concentration of O_3 and PM experienced by the receptor rather than levels of NO_x, SO_x, and VOCs produced by a source (SJVAPCD 2015).

As discussed above, attainment of a particular AAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region (SJVAPCD 2015). Because the AAQS are focused on achieving a particular concentration of pollution region-wide, an air district's tools and plans for attaining the AAQS are regional in nature (SJVAPCD 2015). For instance, the computer models used to simulate and predict an attainment date for the O_3 or PM NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SO_x and VOCs) and the atmospheric chemistry and meteorology of the San Joaquin Valley (SJVAPCD 2015). At a very basic level, the models simulate future O_3 or PM levels based on predicted changes in precursor emissions San Joaquin Valley Air Basin-wide (SJVAPCD 2015). Because the AAQS are set levels necessary to protect human health, the closer a region is to attaining a particular AAQS, the lower the human health impact is from that pollutant (SJVAPCD 2015).

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the San Joaquin Valley Air Basin attains the AAQS (SJVAPCD 2015). Rather, the SJVAPCD's modeling and planning strategy is regional in nature and based on the extent to which all of the emission-generating sources in the San Joaquin Valley Air Basin (current and future) must be controlled in order to reach attainment (SJVAPCD 2015).

Correlation to Health Effects

The SJVAPCD ties the difficulty of correlating the emission of criteria pollutants to health impacts to how O_3 and PM are formed, as explained above. According to SJVAPCD, "even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like O_3 and some particulates, it remains impossible,

using today's models, to correlate that increase in concentration to a specific health impact [because] such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level" (SJVAPCD 2015).

To demonstrate the relative scale between emissions within the MDAQMD jurisdiction used in photochemical and other regional modeling and proposed project-level emissions, emissions for the MDAQMD jurisdiction from the CARB California Emissions Projection Analysis Model (CEPAM) emissions inventory and estimated emissions from the proposed project are summarized below. CEPAM produces projected emissions that can then be gridded to serve as the emission input for photochemical modeling. Including all sources except natural sources,[3] total emissions for the MDAQMD for the CEPAM baseline year of 2017 is as follows: 26 tons per day for VOC, 76 tons per day of NO_x, 100 tons per day of CO, 2 tons per day for SO_x, 71 tons per day of PM_{10}, and 16 tons per day of $PM_{2.5}$ (CARB 2023j). For the year 2050 (the latest year available), total projected emissions for the MDAQMD for all sources except natural, as forecasted by CEPAM, is as follows: 26 tons per day for VOC, 68 tons per day of NO_x, 100 tons per day of CO, 2 tons per day for SO_x, 89 tons per day of PM_{10}, and 20 tons per day of $PM_{2.5}$ (CARB 2023j). Construction of the proposed project is estimated to result in maximum daily emissions of 0.05 ton per day for VOC, 0.02 ton per day of NO_x, 0.03 ton per day of CO, less than 0.01 ton per day for SO_x, less than 0.01 ton per day of PM_{10}, and less than 0.01 ton per day of $PM_{2.5}$ (see Table 4.2-9, Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated). The maximum daily emissions associated with the proposed project operation in 2025 is anticipated to result in maximum daily emissions of 0.03 ton per day for VOC, 0.22 ton per day of NO_x, 1.46 ton per day of CO, less than 0.01 ton per day for SO_x, 0.01 ton per day of PM_{10}, and 0.01 ton per day of $PM_{2.5}$ (see Table 4.2-10, Estimated Maximum Daily Operational Criteria Air Pollutant Emissions - Unmitigated). As presented above, proposed project emissions represent a small fraction of the total emissions in the MDAQMD jurisdiction.

SCAQMD used O_3, which is formed from the chemical reaction of NO_x and VOCs in the presence of sunlight, as an example of why it is impracticable to determine specific health outcomes from criteria pollutants for all but very large, regional-scale projects. First, forming O_3 "takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources" (SCAQMD 2015). Second, "it takes a large amount of additional precursor emissions (NO_x and VOCs) to cause a modeled increase in ambient ozone levels over an entire region," with a 2012 study showing that "reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion" (SCAQMD 2015). SCAQMD thus concludes that it "does not currently know of a way to accurately quantify O_3-related health impacts caused by NO_x or VOC emissions from relatively small projects" (SCAQMD 2015).

Essentially, SCAQMD takes the position that a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient O_3 levels may not be detected in the regional air quality models that are currently used to determine O_3 levels; thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_x with specific health impacts from O_3 (SCAQMD 2015). Therefore, lead agencies that use SCAQMD's thresholds of significance may determine that many projects have "significant" air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts.

[3] Natural sources are non-humanmade emission sources, which include biological and geological sources, wildfires, windblown dust, and biogenic emissions from plants and trees.

Effects on Number of Nonattainment Days

In regard to regional concentrations and air basin attainment, the SJVAPCD emphasized that attempting to identify a change in background pollutant concentrations that can be attributed to a single project, even one as large as the entire Friant Ranch Specific Plan, is a theoretical exercise. The SJVAPCD brief noted that it "would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have" (SJVAPCD 2015). The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin, but are constantly fluctuating based upon meteorology and other environmental factors. As discussed above, the currently available modeling tools are equipped to model the impact of all emission sources in the San Joaquin Valley Air Basin on attainment (SJVAPCD 2015). The SJVAPCD brief then indicated that, "Running the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information given the relative scale involved" (SJVAPCD 2015).

4.3 Sacramento Metropolitan Air Quality Management District

As previously discussed, the SMAQMD is to date the only California air district to formally release guidance (SMAQMD 2019) for lead agencies and practitioners preparing CEQA documents for projects within Sacramento County to comply with the Friant Ranch decision. In June 2020, the SMAQMD released Instructions for Sac Metro Air District Minor Project and Strategic Area Project Health Effects Screening Tools (SMAQMD 2020a), which was developed to estimate health effects for proposed projects within the Five-Air-District Region (Sacramento, El Dorado, Sutter, Yuba, and Yolo Counties and the portions of Solano County within the Sacramento Valley). The user inputs the location of the proposed project in latitude and longitude coordinates using decimal degrees. The SMAQMD also released the Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District, which fully details how projects should address the Friant Ranch ruling within their jurisdiction (SMAQMD 2020b). This guidance provides insight on the health effects that may result from a project emitting at the maximum thresholds of significance levels in the Five-Air-District Region for NO_x, VOCs, and PM, in addition to levels of CO and SO_x calculated proportional to NO_x; provides look-up tables for estimating health effects for strategic areas where growth exceeding thresholds of significance is anticipated; provides modeling guidance for CEQA projects that have emissions in excess of the significance thresholds and are located outside the strategic areas modeled; and provides information on disclosing health effects in an overall health context in a CEQA document.

4.4 Methods Available

At the time of writing, no specific tools have been developed for use in CEQA documents to connect criteria air pollutant emissions from an individual project to specific health effects in response to Friant Ranch outside of the SMAQMD jurisdiction. However, it has been demonstrated to be technically feasible to use existing regional models and an existing health effect modeling program to evaluate individual projects, which has been conducted for a few projects in 2019. The following CEQA documents included a quantitative HIA to address Friant Ranch:

- California State University Dominguez Hills 2018 Campus Master Plan EIR (CSUDH MP) (CSUDH 2019)
- March Joint Powers Association K4 Warehouse and Cactus Channel Improvements EIR (March JPA K4) (March JPA 2019)

- Mineta San Jose Airport Amendment to the Airport Master Plan EIR (San Jose Airport) (City of San Jose 2019)
- City of Inglewood Basketball and Entertainment Center Project EIR (IBEC) (City of Inglewood 2019)
- San Diego State University Mission Valley Campus Master Plan EIR (SDSU) (San Diego State University 2019)

The first step in all of the five above-listed examples includes running a regional photochemical grid model, such as the Community Multiscale Air Quality (CMAQ)[4] model or the Comprehensive Air Quality Model with extensions (CAMx),[5] to estimate the increase in concentrations of O_3 and $PM_{2.5}$ as a result of project-generated emissions of criteria and precursor pollutants. Air districts, such as the SCAQMD, use photochemical air quality models for regional air quality planning. These photochemical models are large-scale air quality models that simulate the changes of pollutant concentrations in the atmosphere using a set of mathematical equations characterizing the chemical and physical processes in the atmosphere (EPA 2022d).

After estimating the increase in concentrations of O_3 and $PM_{2.5}$, the second step in the five examples includes use of BenMAP or BenMAP-CE to estimate the resulting associated health effects. BenMAP estimates the number of health incidences resulting from changes in air pollution concentrations (EPA 2022e). The health impact function in BenMAP-CE incorporates four key sources of data: (1) modeled or monitored air quality changes, (2) population, (3) baseline incidence rates, and (4) an effect estimate. While BenMAP can estimate the health effects of emissions of VOC, NO_x, CO, SO_2, and $PM_{2.5}$, O_3 and $PM_{2.5}$ were determined to have the most critical health impacts and thus, were the pollutants evaluated to determine the project's health effects in three of the five examples (CSUDH MP, March JPA K4, and San Jose Airport). The current version of BenMAP-CE only has health impact functions associated with O_3 and $PM_{2.5}$, which is why the example HIA using BenMAP-CE only quantitatively addressed O_3 and $PM_{2.5}$-related health outcomes. As such, all example HIAs focused on O_3 and $PM_{2.5}$.

BenMAP outputs include O_3- and PM-related health endpoints such as premature mortality, hospital admissions, and emergency room visits (City of San Jose 2019). BenMAP uses the following simplified formula to relate changes in ambient air pollution to certain health endpoints:

$$Health\ Effect = Air\ Quality\ Change \times Health\ Effect\ Estimate \times Exposed\ Population \times Background\ Health\ Incidence$$

Population characteristics are a key variable in the BenMAP estimate of health incidences. As such, small increases in emissions in an area with a high population may have a much greater affect than large increases in emissions over an area with a small population. While location and associated population is a key factor, making the five examples specific not only to the project-generated emissions, but also to the geographic location and underlying population estimates, the findings of the five examples are provided herein for context, particularly for the conclusions. For the CSUDH MP, the proposed project retains the existing campus enrollment cap of 20,000 full-time-equivalent students, while providing a framework for development of CSUDH's campus in a forward-looking manner that accommodates growth from the current enrollment of approximately 11,000 full-time-equivalent students to the maximum enrollment

[4] The CMAQ modeling system includes state-of-the-science capabilities for conducting urban-to-regional-to-hemispheric scale simulations of multiple air quality issues, including tropospheric O_3, fine particles, TACs, acid deposition, and visibility degradation. CMAQ brings together three kinds of models: (1) meteorological models to represent atmospheric and weather activities, (2) emission models to represent man-made and naturally occurring contributions to the atmosphere, and (3) an air chemistry-transport model to predict the atmospheric fate of air pollutants under varying conditions (EPA 2022f).

[5] CAMx is a three-dimensional grid-based Eulerian air quality model designed to estimate the formation and fate of oxidant precursors, primary and secondary particulate matter concentrations, and deposition over regional and urban spatial scales (e.g., over the contiguous United States) (EPA 2015).

of 20,000 full-time-equivalent students over a planning horizon extending to 2035. The project is located within the MDAQMD jurisdictional boundaries (within the Mojave Desert Air Basin). For context, the maximum daily emissions of relevant pollutants generated by the CSUDH MP were estimated to be 482.6 pounds per day of VOC, 240.1 pounds per day of NO_x, 2.7 pounds per day of SO_2, and 79.5 pounds per day of $PM_{2.5}$.

The CSUDH MP presented HIA results in terms of an increase in health incidences and the increase in background health incidence for various health outcomes referred to as endpoints. The background health incidence is the actual incidence of health effects as measured in the local population in the absence of additional emissions from the project (CSUDH 2019).

The two highest $PM_{2.5}$-related health outcomes attributed to the CSUDH MP project-related increases in ambient air concentrations included mortality (10.31 incidences per year, 0.0032% in background health incidence) and asthma-related emergency room visits (4.38 incidences per year, 0.0033% in background health incidence). The remaining health endpoints, including asthma-related hospital admissions, all cardiovascular-related hospital admissions (not including myocardial infarctions), all respiratory-related hospital admissions, and nonfatal acute myocardial infarction, ranged from 0.00044 to 2.44 incidences per year (0.00047% to 0.0014% in background health incidence) (CSUDH 2019).

O_3-related health outcomes attributed to the CSUDH project-related increases in ambient air concentrations included respiratory-related hospital admissions (0.67 incidences per year, 0.00034% in background health incidence), mortality (0.28 incidences per year, 0.00013% in background health incidence), and asthma-related emergency room visits for any age range (lower than 3.38 incidences per year for all age groups, lower than 0.0058% percent in background health incidence for all age groups) (CSUDH 2019).

The CSUDH MP HIA then concluded that "for all these health endpoints, the number of estimated incidences is less than 0.0058% of the background health incidence. … When taken into context, the small increase in incidences and the very small percent of the number of background incidences indicate that these health impacts are negligible in a developed, urban environment" (CSUDH 2019).

The March JPA K4 project is located within the SCAQMD jurisdictional boundaries (within the South Coast Air Basin), in Riverside County. The project involves the development of the five parcels on the 35.4-acre K4 Parcel with a 718,000-square-foot building conservatively assumed to be occupied by High-Cube ecommerce/fulfillment center use. The mitigated maximum daily operational emissions of relevant pollutants generated by the March JPA K4 were estimated to be 41.0 pounds per day of VOC, 253.0 pounds per day of NO_x, 1.4 pounds per day of SO_x, and 30.3 pounds per day of $PM_{2.5}$. The March JPA K4 HIA determined that, "for all these health endpoints, the number of estimated incidences is less than 0.0042% of the baseline number of incidences," and that "these health impacts are conservatively estimated, and the actual impacts may be zero" (March JPA 2019).

The SDSU project is located within the City of San Diego. The SDSU project proposes construction and operation of the SDSU Mission Valley campus, stadium, parks, recreation, and innovation area to accommodate up to 15,000 full-time-equivalent students over time, resulting in a total student headcount of approximately 20,000 students. The maximum daily emissions of relevant pollutants generated by SDSU were estimated to be 314.1 pounds per day of VOC, 1,120.7 pounds per day of NO_x, 6.5 pounds per day of SO_2, and 205.9 pounds per day of $PM_{2.5}$ (SDSU 2019).

The $PM_{2.5}$-related health outcomes attributed to the SDSU project-related increases in ambient air concentrations included mortality (8.97 incidences per year, 0.0026% in background health incidence) and asthma-related emergency room visits (5.29 incidences per year, 0.0040% in background health incidence). The remaining health endpoints, including asthma-related hospital admissions, all cardiovascular-related hospital admissions (not including myocardial infarctions), all respiratory-related hospital admissions, and nonfatal acute myocardial infarction, ranged from 0.00083 to 3.33 incidences per year (0.00223% to 0.00164% in background health incidence) (SDSU 2019).

O_3-related health outcomes attributed to the SDSU project-related increases in ambient air concentrations included respiratory-related hospital admissions (0.45 incidences per year, 0.0002% in background health incidence), mortality (0.21 incidences per year, 0.00010% in background health incidence), asthma-related emergency room visits for age groups 0–17 (1.73 incidences per year, 0.003% percent in background health incidence), and asthma-related emergency room visits for age groups 18–99 (2.02 incidences per year, 0.002% percent in background health incidence) (SDSU 2019).

The SDSU HIA found that "health effects estimation using the log-linear method presumes that effects seen at large concentration differences can be linearly scaled down to small increases in concentration, with no consideration of potential thresholds below which health effects may occur; thus, this potentially overstates the potential effects. In summary, health effects are conservatively estimated, and the actual effects may be zero" (SDSU 2019).

San Jose Airport is located in Santa Clara County within the Bay Area AQMD jurisdictional boundaries (within the San Francisco Bay Area Air Basin). The San Jose Airport project includes amending the approved 2018 Airport Master Plan to (1) shift the planning horizon year from 2027 to 2037, (2) modify future facility requirements at the airport to reflect updated demand forecasts, and (3) modify certain components of the airfield to reduce the potential for runway incursions (City of San Jose 2019). The estimated maximum daily incremental operational emissions of relevant pollutants generated by the San Jose Airport project were estimated to be -49.4 pounds per day of VOC, 5,325 pounds per day of NO_x, and 52 pounds per day of $PM_{2.5}$. However, the following emissions inventory was assumed for the HIA: 57.3 pounds per day of VOC, 5,643.0 pounds per day of NO_x, and 51.6 pounds per day of $PM_{2.5}$.

The San Jose Airport HIA estimated that the highest health endpoint from $PM_{2.5}$ was mortality at 4.46 incidences (0.0017% percent in background health incidence). All other $PM_{2.5}$-related health incidences ranged from 0.00022 to 1.89 (0.00027% to 0.0016% percent in background health incidence). For O_3-related health endpoints, the highest was emergency room visits for asthma, which was estimated to be 11.05 incidences (0.028% percent in background health incidence) for ages 0–17 and 14.59 incidences (0.019% percent in background health incidence) for ages 18–99 (City of San Jose 2019). Of the five examples discussed herein, the San Jose Airport resulted in the greatest O_3 incidences, which correlates with the estimated high emissions of ozone-precursors, specifically NO_x at 5,643 pounds per day. Nonetheless, the conclusion was that "when taken into context, the small increase in incidences and the very small percent of the number of background incidences indicate that these health impacts are negligible in a developed, urban environment" (City of San Jose 2019).

The IBEC project HIA provides another important data point for consideration. The IBEC project consists of an arena designed to host the LA Clippers basketball team with up to 18,000 fixed seats for National Basketball Association games and up to 500 additional temporary seats for events such as family shows, concerts, conventions, corporate events, and non-LA Clippers sporting events. The IBEC project is located within Los Angeles County within the

jurisdictional boundaries of the SCAQMD (within the South Coast Air Basin). The IBEC EIR evaluated nine operational scenarios; across these multiple scenarios, the estimated maximum daily net increase in operational emissions of relevant pollutants was 94 pounds per day of VOC, 99 pounds per day of NO_x, 3 pounds per day of SO_x, and 89 pounds per day of $PM_{2.5}$.

The IBEC EIR analysis provided helpful context on using regional models for individual projects, as follows:

> Generally, models that correlate criteria air pollutant concentrations with specific health effects focus on regulatory decision-making that will apply throughout an entire air basin or region. These models focus on the region-wide health effects of pollutants so that regulators can assess the costs and benefits of adopting a proposed regulation that applies to an entire category of air pollutant sources, rather than the health effects related to emissions from a specific proposed project or source. Because of the scale of these analyses, any one project is likely to have only very small incremental effects which may be difficult to differentiate from the effects of air pollutant concentrations in an entire air basin. … For regional pollutants, it is difficult to trace a particular project's criteria air pollutant emissions to a specific health effect. Moreover, the modeled results may be misleading because the margin of error in such modeling is large enough that, even if the modeled results report a given health effect, the model is sufficiently imprecise that the actual effect may differ from the reported results; that is, the modeled results suggest precision, when in fact available models cannot be that precise on a project level (City of Inglewood 2019).

For O_3-related health endpoints, emergency room visits for asthma were estimated to be 0.087 incidence per year for all studied age groups combined, 0.016 incidence per year of respiratory-related hospital admissions, and less than 0.02 incidence per year of mortality; the amount of estimated incremental health effects incidence is less than 0.0001% of the baseline number of health effects incidences in the study area.

A key finding from the IBEC HIA was that for $PM_{2.5}$-related health endpoints, due to the very small changes in ambient $PM_{2.5}$ concentrations as modeled by CMAQ, all of the estimated incremental health incidences were negative values. The IBEC HIA stated that this further confirms that the modeled $PM_{2.5}$ concentrations are within the model's margin of error, no meaningful conclusions can be reached on the specific health effects that may be caused by the proposed project O_3 precursor and $PM_{2.5}$ emissions, and health impacts may in fact be zero, and they would still be well within the models' margin of error (City of Inglewood 2019).

It is also important to note that while these results conclude that the project emissions do not result in a substantial increase in health incidences, the estimated emissions and assumed toxicity is also conservatively inputted into the HIA and thus, overestimate health incidences, particularly for $PM_{2.5}$. For example, as discussed in the San Jose Airport HIA, "the USEPA has also stated that results from various studies have shown the importance of considering particle size, composition, and particle source in determining the health impacts of PM. Further, USEPA found that studies have reported that particles from industrial sources and from coal combustion appear to be the most significant contributors to PM-related mortality, consistent with the findings by Rohr and Wyzga and others. This is particularly important to note here, as the majority of PM emissions generated from the Project are from entrained roadway dust, and not from combustion. Therefore, by not considering the relative toxicity of PM components, the results presented here are conservative" (City of San Jose 2019).

As explained in the SJVAPCD brief and noted previously, running the photochemical grid model used for predicting O_3 attainment with the emissions solely from an individual project like the Friant Ranch project or the proposed project is not likely to yield valid information given the relative scale involved. The five examples discussed herein support the SJVAPCD's brief contention that consistent, reliable, and meaningful results may not be provided by methods applied at this time. Accordingly, additional work in the industry and more importantly, air district participation, is needed to develop a more meaningful analysis to correlate project-level mass criteria air pollutant emissions and health effects for decision-makers and the public. Furthermore, at the time of writing, no HIA has concluded that health effects estimated using the photochemical grid model and BenMAP approach are substantial provided that the estimated project-generated incidences represent a very small percent of the number of background incidences, potentially within the models' margin of error.

5 Evaluation of the Proposed Project's Health Effects

Based on the evaluation of methods provided in Section 4, this evaluation does not attempt to quantify health effects, but builds upon the discussion provided in Sections 2 and 3 to disclose potential health effects associated with the proposed project. As explained in Section 2, the EPA and CARB have established AAQS at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. Further, California air districts (like MDAQMD) have established emission-based thresholds that provide project-level estimates of criteria air pollutant quantities that air basins can accommodate without affecting the attainment dates for the AAQS. Accordingly, elevated levels of criteria air pollutants as a result of a proposed project's emissions could cause adverse health effects associated with these pollutants.

In this case, construction of the proposed project would not exceed the MDAQMD thresholds. The operation of the proposed project is estimated to exceed MDAQMD thresholds for NO_x and PM_{10} before mitigation is incorporated. As shown in Table 2 (Section 2), the MDAB is designated as a nonattainment area for O_3 and PM_{10} under the NAAQS and CAAQS.

As discussed in Section 3, health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2023k). VOCs and NO_x are precursors to O_3, for which the MDAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the MDAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O_3 AAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O_3 precursors is speculative because of the lack of quantitative methods to assess this impact. As the project would exceed the MDAQMD threshold for NO_x after implementation of mitigation (MM-AQ-2), the project is expected anticipated to contribute to health effects associated with O_3.

Health effects associated with NO_x include lung irritation and enhanced allergic responses (see Section 3; CARB 2023k). Health impacts that result from NO_2 and NO_x include respiratory irritation. Although Project operations would generate NO_x emissions that would exceed the SCAQMD mass daily thresholds, it is unlikely that construction of the Project would contribute to exceedances of the NAAQS and CAAQS for NO_2 because the SCAB is designated as in attainment of the NAAQS and CAAQS for NO_2 and the existing NO_2 concentrations in the area are well below

the NAAQS and CAAQS standards. Nonetheless, because there are nearby existing and proposed receptors that could be affected, the Project could result in potential health effects associated with NO_2 and NO_x.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (See Section 3; CARB 2023k). CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots was discussed in Section 4.2.4, Impacts Analysis, of the Draft EIR and are determined to be a less-than-significant impact.

Health effects associated with PM_{10} and $PM_{2.5}$ include premature death and hospitalization, primarily for worsening of respiratory disease (See Section 3; CARB 2022f). Operation of the Project would exceed the SCAQMD thresholds for PM_{10} and $PM_{2.5}$. As such, the Project would potentially contribute to exceedances of the NAAQS and CAAQS for particulate matter and obstruct the SCAB from coming into attainment for these pollutants. Because the Project has the potential to contribute substantial particulate matter during operation, the Project could result in associated health effects.

In summary, although the Project has the potential to result in health effects associated with emissions of criteria air pollutants as described above, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and methods available to quantitatively evaluate health effects may not be appropriate to apply to emissions associated with the Project, which cannot be estimated with a high-level of accuracy.

6 References

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Appendix C1

Biological Existing Conditions Report

Existing Conditions Report

Inland Empire North Logistics Center Apple Valley

JANUARY 2024

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Acronyms and Abbreviations

Acronym	Definition
amsl	above mean sea level
BSA	biological survey area
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CEQA Guidelines	State of California CEQA Guidelines
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DOD	Department of Defense
FESA	Federal Endangered Species Act
GIS	geographic information system
GLA	Glenn Lukos Associates
HU	Hydrologic Unit
HUC	Hydrologic Unit Code
ISA	International Society of Arboriculture
MBTA	Migratory Bird Treaty Act
NABA	North American Butterfly Association
OHWM	ordinary high water mark
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1 Introduction

This report documents the results of surveys conducted to identify potential special-status biological resources within the Inland Empire North Logistics Center Apple Valley Project (Project) located in the town of Apple Valley (Town), San Bernardino County, California. Figure 1, Project Location, shows the regional location of the Project and Figure 2, Project Site, shows the site vicinity.

The purpose of this report is to describe the existing condition of biological resources within the Project in terms of vegetation communities, plants, wildlife, wildlife habitats, and aquatic resources.

1.1 Project Description

1.1.1 Project Location

The approximately 201.1-acre Project, including the 178.7-acre Project boundary and 22.4 acres of off-site improvements extending beyond the Project boundary (hereafter referred to as the off-site improvement areas) is located in the northwestern part of the Town, which is within the Victor Valley/High Desert region of San Bernardino County. The Project boundary is located directly east of Interstate (I) 15, north of Falchion Road and south of Norco Street. Off-site improvements to roadways immediately adjacent to the Project boundary and would occur at Falchion Road between Outer Highway 15 and Apple Valley Road, Norco Street between Outer Highway 15 and Apple Valley Road, Outer Highway 15 between Falchion Road and Norco Street, and Apple Valley Road between Falchion Road and Norco Street with proposed off-site improvements located along the Outer Highway 15 (see Figures 1 and 2).

The Project consists of eight Assessor's Parcel Numbers 047-203-103, 047-203-108, 047-203-110, 047-205-105, 047-205-129, 047-205-130, 047-206-133, and 047-206-134. Specifically, the Project is located in Sections 26, 34, and 35 of Township 6N, Range 4W, as depicted on the U.S. Geological Survey Victorville, California 7.5-minute topographic quadrangle map. Regional access to the Project is provided via I-15, which is located adjacent to the Project's western boundary.

1.1.2 Project Characteristics

1.1.2.1 Project Components

The Project would include construction of two industrial/warehouse buildings and associated improvements totaling approximately 2,604,446 square feet within the 177.74-acre parcel. The Project's associated improvements would include loading docks, truck and vehicle parking, and landscaped areas.

Off-Site Improvements

Off-site improvements to roadways are located within the 22.4-acre off-site improvement areas and would occur at Falchion Road between Outer Highway 15 and Apple Valley Road, Norco Street between Outer Highway 15 and Apple Valley Road, Outer Highway 15 between Falchion Road and Norco Street, and Apple Valley Road between Falchion Road and Norco Street.

Site Access and Circulation

Access to the Project would be provided via driveways off Outer Highway 15 to Falchion Road and Norco Street along the eastern boundary of the Project boundary. Paved passenger vehicle parking areas would be provided within areas east and west of Buildings 1 and 2, while tractor-trailer stalls and loading docks would be surrounding Buildings 1 and 2 to the north and south, and east.

The Project would include several improvements to the local circulation system, including improvements to Falchion Road and Outer Highway 15 and the construction of Norco Road and Apple Valley Road. These improvements would occur along the immediate frontage of the Project. The ultimate design of these roadway improvements is not yet available and would be determined by the Town's Engineering Department. To account for all possible development scenarios that may occur, the proposed roadway improvements are assumed to occur within the entirety of the 22.4-acre off-site improvement areas.

In addition, the Project would involve a General Plan Amendment to modify the Town's Circulation Element to realign Apple Valley Road. Apple Valley Road is Major Divided Arterial roadway with a 128-foot right-of-way. From the Project site's southern boundary at Falchion Road, Apple Valley Road has not yet been constructed but is planned to traverse north through the Project site to Stoddard Wells Road. The proposed General Plan Amendment would shift the proposed alignment slightly to the east. The Project would involve the construction of this roadway along the Project's frontage between Falchion Road and Norco Street. The ultimate construction of Apple Valley Road north of the Project site between Norco Street and Stoddard Wells Road would be constructed at a future time by the Town or future developers and subject to additional environmental review pursuant to CEQA. It is not necessary for Project implementation and is unrelated to the Project.

Utility Improvements

Given the vacant, undeveloped nature of the Project site, both wet and dry utilities, including domestic water, sanitary sewer, storm drainage, and electricity, would need to be extended onto the Project site.

Lateral utility connections proposed within the existing Apple Valley Road south of the Project were previously analyzed during environmental review pursuant to CEQA for the Apple Valley 143 project (Town of Apple Valley 2023). It is assumed that the Project will tie into the proposed water line at Falchion Road, and any street and utility improvements along the existing Apple Valley Road previously analyzed for the Apple Valley 143 Project were not analyzed as part of the Project.

Operations

A tenant for the proposed industrial warehouse building has not yet been identified; however, the Project would operate as a warehouse and/or distribution facility with two industrial/warehouse buildings. Business operations would be expected to be conducted within the enclosed buildings, with the exception of the entrance and exit of trucks and passenger vehicles accessing the site, passenger and truck parking, the loading and unloading of trailers within designated truck courts/loading area, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week.

1.1.2.2 Project Construction

Construction of the Project is anticipated to last approximately 22 months.

Construction activities would include site preparation (e.g., vegetation clearing, grubbing, tree removal, discing), grading, building construction, paving, and architectural coating.

Construction activities would generally occur across six phases: site preparation (e.g., vegetation clearing, grubbing, tree removal, discing), grading, building construction/utility installation, paving, and architectural coating. With the exception of architectural coating (which would only occur on the Project site), all phases would occur both on the Project site and within the Off-Site Street and Utility Improvements.

For on-site and off-site development, the Project was assumed to have a balanced cut and fill. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week.

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2 Regulatory Setting

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. The FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to "take" any listed species; "take" is defined as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the intentional and unintentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Currently, the Migratory Birds office considers nests that support eggs, nestlings, or juveniles to be active. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

2.1.3 Clean Water Act

The Clean Water Act (CWA) is the major federal legislation governing water quality, providing guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires an applicant for a federal license or permit that may result in a discharge of pollutants into waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The State Water Resources Control Board and Regional Water Quality Control Boards (RWQCBs) administer the 401 certification program in California. Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found in 33 Code of Federal Regulations (CFR) Parts 320 to 332. Guidelines for implementation are

referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic ecosystem only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

The definition of waters of the United States establishes the geographic scope for authority under Section 404 of the CWA; however, the CWA does not specifically define waters of the United States, leaving the definition open to statutory interpretation and agency rulemaking. The definition of what constitutes "waters of the United States" (provided in 33 CFR Section 328.3[a]) has changed multiple times over the past few decades, starting with the United States v. Riverside Bayview Homes Inc. court ruling in 1985. Subsequent court proceedings, rule makings, and congressional acts in 2001 (Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers), 2006 (Rapanos v. United States), 2015 (Clean Water Rule), 2018 (suspension of the Clean Water Rule), 2019 (formal repeal of the Clean Water Rule), 2020 (Navigable Waters Protection Rule), and 2021 (Pasqua Tribe et al v. United States Environmental Protection Agency resulting in remand and vacatur of the Navigable Waters Protection Rule and a return to "the pre-2015 regulatory regime") have attempted to provide greater clarity to the term and its regulatory implementation. On December 30, 2022, the agencies announced the final Revised Definition of "Waters of the United States" rule (Rule) (88 CFR 3004–3144). The Rule was published in the Federal Register on January 18, 2023, and became effective on March 20, 2023, restoring federal jurisdiction over waters that were protected prior to 2015 under the Clean Water Act for traditional navigable waters, the territorial seas, interstate waters, and upstream water resources that significantly affect those waters. The Rule represents a re-expansion of federal jurisdiction over certain water bodies and wetlands previously exempt pursuant to the 2020 Navigable Waters Protection Rule. The Rule also considers various subsequent court decisions, including two notable Supreme Court decisions.

There are two key changes that the Rule incorporates. Firstly, the Rule reinstates the "Significant Nexus" test. The "Significant Nexus" test refers to waters that either alone, or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas (86 FR 69372–69450). The "Significant Nexus" test attempts to establish a scientific connection between smaller water bodies (such as ephemeral or intermittent tributaries) and larger, more traditional navigable waters (such as rivers). Significant nexus evaluations take into consideration hydrologic and ecologic factors including, but not limited to, volume, duration, and the frequency of surface water flow in the resource and its proximity to a traditional navigable water, and the functions performed by the resource on adjacent wetlands. Second, the Rule adopts the "Relatively Permanent Standard" test. To meet the "Relatively Permanent Standard," water bodies must be relatively permanent, standing, or continuously flowing and have a continuous surface connection to such waters.

On May 25, 2023, the Supreme Court issued its long-anticipated decision in Sackett v. U.S. Environmental Protection Agency, in which it rejected the U.S. Environmental Protection Agency's claim that "waters of the United States," as defined in the CWA, include wetlands with an ecologically significant nexus to traditional navigable waters. The Supreme Court held that only those wetlands with a continuous surface water connection to traditional navigable waterways would be afforded federal protection under the CWA. Specifically, to assert jurisdiction over an adjacent wetland under the CWA, a party must establish that (1) the adjacent body of water constitutes water(s) of the United States (i.e., a relatively permanent body of water connected to traditional interstate navigable waters) and (2) the wetland has a continuous surface connection with that water, making it

difficult to determine where the water ends and the wetland begins. The Rule will need to be modified by the Biden administration in light of this decision.

The term "wetlands" (a subset of waters of the United States) is defined in 33 CFR, Section 328.3(c)(16), as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(c)(7) as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

On August 30, 2023, EPA released guidance further clarifying the definition of waters of the U.S. based on the Sackett v EPA ruling.

2.2 State

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Sections 2050–2068) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, under CESA state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by a project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

On October 21, 2019, the California Fish and Game Commission (Commission) received a petition from the Center for Biological Diversity to list western Joshua tree (*Yucca brevifolia*).[1] On November 1, 2019, the Commission referred the petition to CDFW for evaluation. CDFW evaluated the scientific information presented in the petition and other relevant information possessed by CDFW at the time of review and prepared a report for submittal to the Commission (CDFW 2020). The report states that CDFW recommended that the Commission accept the petition for further consideration of western Joshua tree under the CESA. On September 22, 2020, the Commission accepted the candidacy proposal for western Joshua tree, effective October 9, 2020. When a plant or wildlife species is granted candidacy under the CESA, the species is given the same protection as a threatened or endangered species while the Commission evaluates whether formal listing as threatened or endangered under the CESA is warranted.

[1] On October 21, 2019, the California Fish and Game Commission received a petition to list the following as threatened under the CESA: (1) western Joshua tree (*Yucca brevifolia*) throughout its California range, or, in the event the Commission determines that listing of western Joshua tree throughout its California range is not warranted, then (2) the western Joshua tree population within the northern part of western Joshua tree's California range, or (3) the western Joshua tree population within the southern part of western Joshua tree's California range.

In listing western Joshua tree as a candidate species under CESA, the Commission directed CDFW staff to evaluate whether the species should be formally listed under CESA. In March 2022, CDFW staff presented its findings to the Commission and recommended against the listing, citing the species widespread distribution and lack of data regarding the extent to which climate changes are expected to affect the species. This information was presented to the Commission on June 15–16, 2022. The Commission voted on the proposed listing at this meeting, but the vote resulted in a 2–2 tie. The Commission discussed western Joshua tree's listing status at its October 12–13, 2022 meeting; however, it was decided at this meeting to extend Joshua tree's candidate status discussion until their February 23, 2023, meeting, which was anticipated to be the final meeting before a listing decision was made. On July 1, 2023, the Western Joshua Tree Conservation Act was passed. While western Joshua tree is a candidate species, take for western Joshua tree can be received through payment of pre-determined mitigation fees.

2.2.2 California Fish and Game Code

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of CDFW to maintain viable populations of all native species. Toward that end, CDFW has designated certain vertebrate species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

Sections 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code, Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to CDFW must include a complete certified California Environmental Quality Act (CEQA) document.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see Section 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this

State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take. CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

Nesting Birds

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

2.2.3 California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. The act also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

The State of California CEQA Guidelines (CEQA Guidelines) Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or . . . [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under the FESA, CESA, and other California Fish and Game Code provisions, and includes lists developed by other organizations, including for example the Audubon Watch List Species. Guidance documents prepared by other agencies, including the Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as California Rare Plant Rank (CRPR) 1 and 2 by the California Native Plant Society (CNPS), and potentially some CRPR 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service."

2.2.4 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Act, the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code, Section 13260[a]). The State Water Resources Control Board defines a waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). All waters of the United States are waters of the state. Waters of the state include wetlands, and the State Water Resources Control Board definition of wetlands includes the following:

1. Natural wetlands
2. Wetlands created by modification of a surface water of the state
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration
    b. Specifically identified in a water quality control plan as a wetland or other water of the state
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape
    d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

Wetlands that may not meet all of USACE's wetland delineation criteria are considered wetland waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). Additionally, aquatic resources that USACE determines to not be waters of the United States because they lack a significant nexus to a traditional navigable water or are above the OHWM limit of federal jurisdiction may also be considered waters of the state. If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

2.2.5 California Desert Native Plants Act

The purpose of the California Desert Native Plants Act (CDNPA) is to protect certain species of California desert native plants from unlawful harvesting on both public and privately owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants

unless a person has a valid permit or wood receipt and the required tags and seals. The appropriate permits, tags and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee. More information on the CDNPA, including the species protected under the law, is available by reading the provisions of the law.

2.3 Local

2.3.1 San Bernardino County General Plan and Development Code

The County of San Bernardino General Plan contains the goals and policies that guide future development within San Bernardino County (County of San Bernardino 2007a). San Bernardino County is broken into three distinct geographic planning regions: the valley, the mountains, and the desert. The Project site occurs within the Desert Planning Region of San Bernardino County. The Desert Planning Region has two goals and policies: (1) to preserve open lands by working with the Bureau of Land Management and (2) to ensure that off-highway vehicle use is managed to protect environmentally sensitive resources.

The Project would also need to comply with the Development Code. The San Bernardino Development Code (County of San Bernardino 2007b) implements the goals and policies of the General Plan. Chapter 88.01.060, Desert Native Plant Protection, of the San Bernardino County Development Code is a subset of the Plant Protection and Management Code (Chapter 88.01 of the Development Code) and focuses on the conservation of specified desert plant species.

2.3.2 Town of Apple Valley General Plan

The Town's Biological Resources Element (Town of Apple Valley 2009) contain goals and policies that address biological resources. The following goals and policies pertain to biological resources and are relevant to the Project:

Goal 1. Establish a pattern of community development that supports a functional, productive, and balanced relationship between the manmade environment and the natural environment.

Policy 1.A. Habitat for endangered, threatened, and sensitive species shall continue to be protected and preserved as Open Space by the Town.

Policy 1.B. The Town shall promote the use of native vegetation for landscaping to enhance and create viable habitat for local species.

Policy 1.C. The Town shall continue to promote biodiversity by protecting natural communities with high habitat value, protecting habitat linkages to prevent further fragmentation, and encouraging an appreciation for the natural environment and biological resources.

Goal 2. The Town shall work with local, state, and regional agencies to protect, preserve, and manage biological resources, especially threatened, endangered, and sensitive plants and wildlife species and their habitats.

Policy 2.A. The Town shall coordinate with CDFG [California Department of Fish and Game] and USFWS when working on projects that are proposed to be located within or adjacent to linkage areas or special survey areas.

Policy 2.B. The Town shall support and cooperate with other agencies in establishing multiple use corridors that link open space areas through drainage channels and utility easements, thereby encouraging the connectivity of natural communities.

Policy 2.C. The Town shall work with CDFG and the USFWS to approve and implement a MSHCP [Multiple Species Habitat Conservation Plan] for the Town and Sphere of Influence.

Policy 2.D. The Town shall work with CDFG and USFWS to ensure that state and federal protections required by the Migratory Bird Treaty Act addressed during the planning process.

Policy 2.E. The Town shall work with CDFG, RWQCB and ACOE [USACE] to ensure that state and federal jurisdictional areas are properly identified.

2.3.3 Apple Valley Municipal Code, Chapter 9.76: Plant Protection and Management Policy

Chapter 9.76 of the Apple Valley Municipal Code contains the Town's Protected Plant Policies (Town of Apple Valley 2022). This chapter establishes policies governing the removal of protected plants, including:

1. Desert native plants with stems 2 inches or greater in diameter or 6 feet or greater in height:
    a. Smoke tree (*Dalea spinosa*)
    b. All species of the family *Agavaceae* (century plants, nolinas, yuccas). Including the following known to Apple Valley:
        i. Mojave yucca (*Yucca schidigera*)
        ii. Lord's candle (*Yucca whipplei*)
        iii. Barrel cactus (*Ferocactus acanthodes*)
    c. All species of the genus *Prosopis* (mesquites)
2. Creosote rings, 10 feet or greater in diameter
3. All Joshua trees (mature and immature)
4. All plants protected or regulated by the CDNPA

Additionally, Section 9.76.010 of the Apple Valley Municipal Code states the following:

> Prior to the issuance of a native tree or plant removal permit in conjunction with a development permit and/or approval of a land use application which authorizes such removal, a plot plan shall be approved by the appropriate Town Review Authority (County Certified Plant Expert, Planning Commission or Town Council) for each site indicating exactly which trees or plants are authorized to be removed. The required information can be added to any other required plot plan.

Prior to issuance of development permits in areas with native trees or plants that are subject to the provisions of this Chapter, a pre-construction inspection shall be conducted by the appropriate authority.

2.3.3.1 Findings for Removal of Desert Native Plants

Per Apple Valley Municipal Code Section 9.76.010:

The Reviewing Authority shall authorize the removal of a native tree or plant subject to provisions of this Chapter only if the following findings are made:

A. The removal of the native tree or plant does not have a significant adverse impact on any proposed mitigation measures, soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff and wildlife habitats.
B. The removal of the native tree or plant is justified for one of the following reasons:
    a. The location of the native tree (excluding Joshua Trees) or plant and/or its dripline interferes with the reasonable improvement of the site with an allowed structure, sewage disposal area, paved area or other approved improvement or ground disturbing activity. Also such improvements have been designed in such a manner as to save as many healthy native trees and/or plants as reasonably practicable in conjunction with the proposed improvements.
    b. The location of the native tree or plant and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property.
    c. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the Town Engineer.
    d. The native tree or plant or its presence interferes with or is causing extensive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements.
    e. The condition or location of the native plant or tree is adjacent to and in such close proximity to an existing structure that the native plant or tree has or will sustain significant damage.

2.3.3.2 Findings for Transplanting of Desert Native Plants

Per Apple Valley Municipal Code Section 9.76.010:

The Town Manager, or designee, or other Reviewing Authority, shall only authorize the transplanting of desert native plants … subject to the provisions of this Chapter only if one or more of the following findings are made:

1. The desert native plants are to be transplanted in a manner approved by the Town Manager, or designee, or other Reviewing Authority, including any requirement for the issuance of plant tag seals and/or wood receipts.

2. The desert native plant is to be transplanted to another property within the same plant habitat under the supervision of a Desert Native Plant Expert and the removal of such plant will not adversely affect the desert environment on the subject site.
3. Any desert native plant on the site which is determined by the Town Manager, or designee, or other Reviewing Authority, as requiring transplanting has or will be transplanted or stockpiled for transplanting in accordance with methods approved by Town Manager, or designee. A Desert Native Plant Expert shall supervise and manage any required transplanting of desert native plants.

2.3.3.3 Protection of Joshua Trees

As stated in Section 9.76.040, existing Joshua Trees shall not be:

> disturbed, moved (transplanted or otherwise), removed or destroyed unless such disturbance, move, removal or destruction is first reviewed and approved by the Town of Apple Valley. The Town Manager, or designee, shall be responsible for review and approval of any request to disturb, move (transplant or otherwise), remove or destroy any existing Joshua Tree located on any property within any zoning district in the Town of Apple Valley. Forms for such review shall be available within the Planning Division.

Section 9.76.040 also states that:

> Anyone submitting an application to disturb, move, remove or destroy an existing Joshua Tree shall use all means necessary to retain and preserve such Tree(s) in its native (present) location in considering and presenting said Tree Disturbance application. This application shall take into consideration lot configuration, potential property development (buildable envelope), onsite circulation and all associated and related infrastructure needed to support construction within the buildable envelope. Further, persons submitting an application for a discretionary review or for any subdivision of land within the Town of Apple Valley upon which a Joshua Tree(s) is present, shall use all reasonable means available to retain and preserve the Tree(s) in its native (present) location in considering and presenting said application or subdivision request with regard to lot location and configuration, potential property development (buildable envelope), circulation system and all associated and related infrastructure.

2.3.3.4 Retention in Place of Joshua Trees

As stated in Section 9.76.040, "Joshua Tree(s) which conforms to the following [criteria] shall be preserved in place unless its removal, transplantation or destruction is approved as prescribed within this Section 9.76.040 of the Town of Apple Valley Municipal Code." The criteria are as follows:

1. A Joshua Tree that is known, by historic record, including pictures or written description, to be at least forty (40) years old.
2. A Joshua Tree which has a width of at least fifteen (15) feet as measured from the furthest point of outstretched branches (measured parallel to the ground).
3. A Joshua Tree which is at least fifteen (15) feet in height as measured from the base of the trunk to the highest point of the Tree.

4. A Joshua Tree which has a trunk measuring at least twelve (12) inches in diameter as measured four (4) feet from the ground.

Joshua Trees that do not conform to the above criteria must be preserved but may be transplanted to another location on the same property or may be made available for adoption through the Town's Joshua Tree Preservation and Adoption Program.

Additionally, Section 9.76.040 states:

> For any Joshua Tree(s) which conform to the criteria listed [above], for which the property owner/applicant has made a request for a Building Permit, application for a discretionary review or application for a subdivision of land within the Town of Apple Valley, said owner/applicant shall submit, as part of the application for approval, documentation of their best efforts to retain and preserve all Joshua Tree(s) within the limits of the development or subdivision in its native (present) location. Such documentation of best effort shall include how alternative lot configurations (including building envelopes on lots with existing Tree(s)), circulation, physical or environmental constraints of the site, allow no alternative subdivision configuration which would retain and preserve the Tree(s) in its native (present) location.

2.3.3.5 Transplanting of Joshua Trees

Section 9.76.040 states that a Desert Native Plant Expert (i.e., a California Agricultural Biologist, Registered Forester, International Society of Arboriculture [ISA] Certified Arborist, County-Certified Plant Expert, or others approved by the Town's Building Official) must supervise the initiation and completion of Town-approved transplanting of Joshua trees. Per Section 9.76.040:

> Approval of such transplant must take into consideration the time of year, the plant's original and transplanted physical orientation, prevailing wind direction, soil type of the original and transplanted locations, and other related attributes which may affect the successful transplantation of the Joshua Tree(s) in question as determined by the Town and the retained Botanist.
>
> Joshua Trees that are proposed to be removed shall be transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling and/or transplanting the permittee has submitted and has had the approval of a Joshua Tree maintenance plan prepared by a Desert Native Plant Expert. This plan shall include a schedule for maintenance and a statement by the Desert Native Plant Expert that this maintenance plan and schedule will be implemented under his/her supervision. The schedule shall include the requirement that a maintenance report is required at the end of the project or at six (6) month intervals, evidence to the satisfaction of the Building Official that the Desert Native Plant Expert has supervised the scheduled maintenance to the extent that all transplanted and stockpiled plants have been maintained in such a manner to insure the highest practicable survival rate. In the event that this report is not satisfactory, a tree and plant replacement plan and implementation schedule prepared by a Desert Native Plant Expert may be required by the Building Official.

2.3.3.6 Findings for Removal of Joshua Trees

As stated in Section 9.76.040:

> The Reviewing Authority shall authorize the removal of a Joshua Tree(s) subject to provisions of this Chapter only if the following findings are made:
>
> 1. The removal of the Joshua Tree(s) does not have a significant adverse impact on any proposed mitigation measures, soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff and wildlife habitats.
> 2. The removal of the Joshua Tree(s) is justified for one of the following reasons:
>   a. The location of the Joshua Tree(s) or its dripline interferes with the reasonable improvement of the site with an allowed structure, sewage disposal area, paved area or other approved improvement or ground disturbing activity as determined by the Town Manager, or designee. Also such improvements have been designed in such a manner as to save as many healthy native trees and/or plants as reasonably practicable in conjunction with the proposed improvements.
>   b The location of the native tree or plant and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject to adjoining private property.
>   c The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the Town Engineer.
>   d The native tree or plant, because of its presence, interferes with or is causing extensive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements.
>   e The condition or location of the native plant or tree is adjacent to and in such close proximity to an existing or proposed structure that the native plant or tree has or will sustain significant damage.

3 Methods

Data regarding biological resources present within the 226.9-acre biological survey area (BSA) was obtained through a review of pertinent literature, field reconnaissance, habitat assessments, and protocol/focused surveys, which are described in detail in this section. The BSA includes the Project boundary plus a 100-foot buffer (on-site BSA), and off-site improvement areas plus a 100-foot buffer (off-site BSA) where the off-site improvement areas extend beyond the on-site BSA (Figure 2), For purposes of this report, special-status resources are defined as follows:

- Special-status plant species include the following:
  - Species designated as either rare, threatened, or endangered by CDFW or USFWS and protected under either the CESA (California Fish and Game Code Section 2050 et seq.) or the FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023a) with a CRPR of 1 or 2 (CNPS 2023a)
- Special-status wildlife species include the following:
  - Species designated as either rare, threatened, or endangered by CDFW or USFWS and protected under either the CESA (California Fish and Game Code Section 2050 et seq.) or the FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Animals List (CDFW 2023b) as endangered, threatened, fully protected, or Species of Special Concern
- Special-status vegetation communities are those designated as sensitive by CDFW

3.1 Literature Review

Prior to conducting a field assessment, a literature search and database review were conducted by Dudek biologists to evaluate the natural resources found or potentially occurring within the BSA. The database review included the most recent versions of the California Natural Diversity Database (CNDDB), special-status species lists (CDFW 2023a, 2023b, 2023c, 2023d), and the CNPS Inventory of Rare and Endangered Plants of California (CNPS 2023a). These databases were reviewed to identify sensitive biological resources present or potentially present for the U.S. Geological Survey 7.5-minute quadrangles on which the Project is located (Victorville) and the eight surrounding quadrangles (Apple Valley North, Turtle Valley, Hesperia, Apple Valley South, Helendale, Victorville NW, Baldy Mesa, and Adelanto). The CDFW occurrence data and critical habitat databases were queried using geographic information system (GIS) software based on a 5-mile buffer around the BSA.

3.2 Field Surveys

Glenn Lukos Associates (GLA) biologists Chris Waterston, David Smith, and Joseph Vu conducted an initial biological reconnaissance-level survey within the Project boundary to document biological resources and vegetation communities on June 17 and 23, 2022. Field methods, results, and assumptions are described in detail in Appendix A, GLA Biological/Regulatory Resource Evaluation. This survey included a focused western Joshua tree mapping survey within the Project boundary; however, Dudek conducted an updated western Joshua tree census consistent with requirements from the WJTCA.

Additional field surveys conducted by Dudek biologists included focused special-status plant and desert native plant surveys; protocol presence/absence surveys for the Mojave desert tortoise (*Gopherus agassizii*); Mohave ground squirrel habitat assessment and protocol surveys; western burrowing owl (*Athene cunicularia*) protocol surveys; and a Crotch's bumble bee (*Bombus crotchii*) habitat assessment.

An aquatic resources jurisdictional delineation was also conducted by Dudek biologists (see Appendix B, Aquatic Resources Delineation Report). The purpose of the aquatic resources jurisdictional delineation is to identify and map potential waters of the United States, including wetlands, under USACE jurisdiction, pursuant to Section 404 of the federal CWA; under RWQCB jurisdiction, pursuant to the Section 401 of the CWA and the Porter–Cologne Act; and under CDFW jurisdiction, pursuant to Section 1602 of the California Fish and Game Code.

Table 1 lists the dates, focus, survey area, conditions, and personnel for each survey conducted by Dudek.

Table 1. Survey Conditions

Date	Biologist	Survey Pass	Survey Area	Times	Weather Conditions
Special-Status Plants and Desert Native Plants Focused Surveys and Crotch's Bumble Bee Habitat Assessment					
04/27/2023	KD, ZP	N/A	Off-site BSA*	8:00 a.m.–4:29 p.m.	60–87°F; 0% cloud cover; 0–3 mph wind
05/01/2023	KD, SG, ZP	N/A	On-site BSA	7:12 a.m.–3:55 p.m.	51–63°F; 0% cloud cover; 2–30 mph wind
Western Joshua Tree Focused Survey					
12/06/2023	AC[1], AP	N/A	BSA	NR	NR
12/07/2023	AC[1], AP	N/A	BSA	NR	NR
12/08/2023	AC[1], AP	N/A	BSA	NR	NR
Mojave Desert Tortoise Protocol Surveys					
04/11/2023	RS, CB	N/A	On-Site BSA	10:40 a.m.–2:00 p.m.	72–82°F; 10% cloud cover; 5–20 mph wind
04/13/2023	VG, ZP	N/A	On-Site BSA	8:43 a.m.–4:47 p.m.	51–58°F; 10–20% cloud cover; 3–5 mph wind
04/27/2023	KD, ZP	N/A	On-site BSA	7:15 a.m. – 7:59 a.m.	56–60°F; 0–10% cloud cover; 0–3 mph wind
05/02/2022	KD, KN	N/A	Off-site BSA*	8:21 a.m. – 12:25 p.m.	49–59°F; 0% cloud cover; 1–5 mph wind
06/06/2023	SG, ZP, LB	N/A	On-Site BSA	6:21 a.m.–1:43 p.m.	49–72°F; 0–10% cloud cover; 0–3 mph wind
Mohave Ground Squirrel Protocol Surveys					
04/05/2023-04/09/2023	KF, KF[1]	Pass 1	Project boundary	N/A	51-83°F; 0-20% cloud cover; 3-7 mph wind
05/07/2023-05/11/2023	KF, KF[1]	Pass 2	Project boundary	N/A	54-84°F; 0-30% cloud cover; 1-14 mph wind
06/22/2023-06/26/2023	KF, KF[1]	Pass 3	Project boundary	N/A	58-89°F; 0-10% cloud cover; 1-20 mph wind

Table 1. Survey Conditions

Date	Biologist	Survey Pass	Survey Area	Times	Weather Conditions
Mohave Ground Squirrel Habitat Assessment					
04/19/2023	KF, KF[1]	N/A	Off-site BSA*	Not recorded	59-73°F; 0-1% cloud cover; 2-12 mph wind
Burrowing Owl Surveys					
04/04/2023	SG, ZP	Pass 1 and Burrow Mapping	On-Site BSA	6:17 a.m.–9:56 a.m.	32–42°F; 10–30% cloud cover; 2–8 mph wind
04/06/2023	JR, MM, SC, VG	Pass 1 and Burrow Mapping	On-Site BSA	6:30 a.m.-9:45 a.m.	31–53°F; 0% cloud cover; 1–7 mph wind
04/11/2023	RS, CB	Pass 1 and Burrow Mapping	On-Site BSA	6:00 a.m. – 10:00 a.m.	50–70°F; 0–10% cloud cover; 5–15 mph wind
04/12/2023	RS, CB	Pass 1 and Burrow Mapping	On-Site BSA	6:00 a.m.–9:00 a.m.	52–60°F; 90% cloud cover; 2–5 mph wind
05/12/2023	AJ	Pass 2	On-Site BSA	5:50 a.m.–10:10 a.m.	55–70°F; 0% cloud cover; 0–1 mph wind
05/18/2023	AC	Pass 2	On-Site BSA	8:38 a.m.–9:17 a.m.	75–78°F; 0% cloud cover; 1–2 mph wind
06/05/2023	SC, SL	Pass 3	On-Site BSA	6:30 a.m.–10:00 a.m.	53–83°F; 0% cloud cover; 1–3 mph wind
06/30/2023	ES, LB	Pass 4	On-site BSA	7:30 a.m.–9:30 a.m.	76–81°F; 0% cloud cover; 0–1 mph wind
Aquatic Resources Delineation and Vegetation Mapping					
06/23/2022	AC, BS	N/A	Off-site BSA*	8:12 a.m.–4:01 p.m.	68–91°F; 20% cloud cover; 1–4 mph wind
Aquatic Resources Delineation					
01/17/2023	KD	N/A	On-site BSA	12:30 p.m.–3:30 p.m.	46–50°F; 0–30% cloud cover; 0–10 mph wind
01/27/2023	ES, KD	N/A	On-site BSA	8:00 a.m.–12:10 p.m.	39–52°F; 0% cloud cover; 0–2 mph wind

Notes: °F = degrees Fahrenheit; mph = miles per hour; N.R. = not recorded.
Personnel: AC = Anna Cassady; AC[1] = Aida Castro; AJ = Allison Johnson; AP = Ana Pfleeger; BS = Britney (Strittmater) Schultz; CB = Chelsea Bowers-Doerning; DA = Dylan Ayers; ES = Eilleen Salas; JR = Jacob Rogers; KN = Kimerly Narel; KF = Karla Flores; KF[1] = Karl Fairchild; LB = Luz Badillo; MM = Max Murray; ST = Sarah Tian; SG = Sarah Greely; SC = Shana Carey; VG = Valerie Goodwin; ZP = Zarina Pringle
* Survey data taken from Appendix C, Biological Technical Report, of the Draft Environmental Impact Report: Apple Valley 143 Project, which overlaps and extends beyond the BSA (Town of Apple Valley 2023).

3.2.1 Vegetation Community and Land Cover Mapping

As presented in Appendix A, GLA conducted vegetation mapping within the Project boundary. To supplement existing vegetation mapping, Dudek utilized aerial imagery and existing data from Appendix C, Biological Technical Report,

of the Draft Environmental Impact Report: Apple Valley 143 Project (Town of Apple Valley 2023) within the off-site improvement areas and BSA.

Vegetation community classifications used in this report follow A Manual of California Vegetation, online edition (CNPS 2023b), and the California Natural Community List (CDFW 2023c), where feasible, with modifications made to accommodate the lack of conformity of the observed communities (e.g., developed/disturbed land uses) using Oberbauer et al. (2008). Vegetation communities were classified based on site factors, descriptions, distribution, and characteristic species present within an area. These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages).

Minimum mapping units were established to standardize the scale and appropriate evaluation of stands, as recommended by CDFW (2020). Mapping standards call for a minimum mapping unit of not greater than 10 acres for upland natural communities not considered sensitive, but usually 1 or 2 acres, and 0.25 acres for sensitive vegetation communities and wetland or riparian vegetation communities were used as minimum mapping units. Visible disturbance factors were also noted during vegetation mapping.

3.2.2 Flora

Latin and common names for plant species with a CRPR follow the CNPS Rare Plant Inventory (CNPS 2023a). For plant species without a CRPR, Latin names follow the Jepson Online Interchange for California Floristics (Jepson Flora Project 2023), and common names follow the California Natural Community List (CDFW 2023c) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2023a).

3.2.3 Fauna

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, and other signs were recorded. The site was visually scanned with and without binoculars to identify wildlife. Latin and common names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2021) for birds, American Society of Mammologists (ASM 2023) for mammals, North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies, and Moyle (2002) for fish.

3.2.4 Special-Status and Regulated Resources

3.2.4.1 Special-Status Plant Survey

Based on the existing GLA Biological/Regulatory Resource Evaluation (Appendix A) and the results of the literature review discussed in Section 3.1, 10 special-status plant species were determined to have a high or moderate potential to occur within the BSA based on known species distribution, species-specific habitat preferences, and habitat conditions on site: desert cymopterus (*Cymopterus deserticola*), purple-nerve cymopterus (*Cymopterus multinervatus*), Mojave monkeyflower (*Diplacus mohavensis*), Barstow woolly sunflower (*Eriophyllum mohavense*), sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), Beaver Dam breadroot (*Pediomelum castoreum*), Latimer's woodland-gilia (*Saltugilia latimeri*), San Bernardino aster (*Symphyotrichum defoliatum*), and western Joshua tree (further discussed in Section 3.2.4.2). Therefore, focused surveys were conducted for these species. In addition, focused surveys for desert native plants,

in accordance with the CDNPA and Chapter 9.76 of the Town Municipal Code, were also conducted and are further discussed below in Section 3.2.4.3.

Dudek biologists conducted a focused special-status plant survey within the BSA. The survey dates and biologists for the focused special-status plant surveys within the BSA are included in Table 1. Field survey methods and mapping of rare plants conformed to CNPS Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018), and General Rare Plant Survey Guidelines (Cypher 2002). Western Joshua tree mapping was conducted during separate focused surveys and is discussed in Section 3.2.4.2, Western Joshua Tree Focused Survey.

Reference sites of special-status plants were evaluated to ensure that target species were identifiable during the 2023 surveys. More specifically, desert cymopterus was observed in bloom by a Dudek biologist during a reference check survey in San Bernardino County, east of California city and north of Edwards Air Force Base, in March 2023. There are two research grade observations of purple-nerve cymopterus in bloom in San Bernardino County, in the Mojave National Preserve, in March and April 2023 (iNaturalist 2023a). There are several research grade observations of Mojave monkey flower in bloom in May and April 2023 near Barstow (iNaturalist 2023b). Barstow woolly sunflower was observed by Dudek biologists in San Bernardino County, north of Kramer Junction, in April 2022 in addition to numerous other observations in San Bernardino County April 2023 (iNaturalist 2023c). There are two research grade observations of Sagebrush loeflingia in Inyo County in May 2022 (iNaturalist 2022d). Beaver Dam breadfoot was observed in bloom in April by a Dudek biologist during a reference check survey in San Bernardino County, east of Apple Valley, and north of Lucerne Valley near Barstow Road. Finally, there are several research grade observations of Latimer's woodland-gilia in bloom in San Bernardino County in April 2023 (iNaturalist 2023e). Based on these observations, the target special status plant species would have been identifiable, if present. It should be noted that short-joint beavertail is a conspicuous stem succulent species that can be identified outside the blooming period and therefore was not included in the 2023 reference check.

3.2.4.2 Western Joshua Tree Focused Survey

Per Chapter 9.76 of the Town Municipal Code and the Western Joshua Tree Conservation Act, Dudek's International Society of Arboriculture (ISA) Certified Arborists performed a Joshua tree survey to inventory and evaluate the health and relocation potential for each western Joshua tree located on and within 50 feet of the Project site. The full methods and results are provided in Appendix C, Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan. During the inventory, the GPS position of each Joshua tree found on site was recorded. Dudek ISA Certified Arborists walked the entire site in parallel transects to ensure documentation of each western Joshua tree within the Project site and within 50 feet of the Project site.

Dudek collected the following attributes of each tree:

- Species
- Size class (Size A - < 1m, Size B - >1m and <5m, and Size C - >5m)
- Actual height (meters)

- Health (excellent, good, fair, poor, critical, and dead)[2]
- Live or dead
- Tree maturity (mature if branching occurs, not mature if no branching occurs)
- Flowering or fruiting stage (flowers or fruits present)
- If a tree had a severe bend in the trunk, height was recorded with two measurements, h1 and h2, h1 being the main, upright trunk, and h2 being the remaining, non-vertical trunk or branch. H1 and h2 were then added together to get an overall height and size class. If a tree was found leaning, the height was measured from the base of the tree along the leaning trunk to the top of the furthest leaf.
- All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the main trunk on the north side of each Joshua tree. Tagging on the north side allows for proper orientation during relocation (each relocated Joshua tree will need to be oriented in the same direction as it was in its original location). Photographs for each tree were taken in accordance with CDFW requirements for western Joshua tree photographs and included an object for frame of reference.

3.2.4.3 Desert Native Plant Survey

A desert native plant survey was conducted within the BSA in accordance with the CDNPA and Chapter 9.76 of the Town Municipal Code. The survey dates, biologists, and weather conditions are included in Table 1. All of the desert native plant target species are conspicuous shrubs that would have been identifiable during the survey.

In accordance with the Town of Apple Valley Municipal Code, Chapter 9.76, the following desert native plants were considered target species:

A. The following desert native plants with stems 2 inches or greater in diameter or 6 feet or greater in height:
   1. Smoke tree
   2. All species of the family Agavaceae (century plants, nolina, yuccas, cacti). Including the following known to Apple Valley:
      i. Mojave yucca
      ii. Lord's candle
      iii. Barrel cactus
      iv. All species of the genus Prosopis (mesquites)

[2] **Health Rating Descriptions**
Excellent. Tree has excellent health and strong vigor. No damage. Flowering and fruiting expected. Typically, only given to large, high-quality specimens (taller than 15 feet in height). Transplanting generally not recommended due to size.
Good. Tree has good health and vigor. All branches are alive and healthy. Damage is very localized and minimal. Flowering and fruiting likely, if tree is large enough. Tree is transplantable.
Fair. Tree health is average. Some stressors or damage possible, but any damage is minimal to moderate (e.g., rodent grazing, insect damage). No dead/broken branches. Tree is transplantable.
Poor. Tree is under stress, and overall health is in decline, or tree has taken significant damage. Mortality likely unless stressors relieved and/or conditions change. Broken/dead limbs likely present. Tree is generally not transplantable.
Critical. Tree is in extreme decline. One or more branches dead. One or more branches dying. Physical damage likely present. Damage is significant and extensive. Mortality expected within 2 to 4 years. Tree is not transplantable.
Dead. Tree is dead.

B. Creosote rings, 10 feet or greater in diameter

C. All Joshua trees (mature and immature)

In accordance with the CDNPA, Chapter 3, the following desert native plants were considered target species:

(a) All species of the family Agavaceae (century plants, nolinas, yuccas).

(b) All species of the family Cactaceae (cacti), except for the plants listed in subdivisions (b) and (c) of Section 80072 which may be harvested under a permit obtained pursuant to that section.

(c) All species of the family Fouquieriaceae (ocotillo, candlewood).

(d) All species of the genus Prosopis (mesquites).

(e) All species of the genus Cercidium (*palos verdes*).

(f) *Acacia greggii* (catclaw).

(g) *Atriplex hymenelytra* (desert-holly).

(h) *Dalea spinosa* (smoke tree).

(i) *Olneya tesota* (desert ironwood), including both dead and live desert ironwood.

3.2.4.4 Desert Tortoise Protocol-Level Survey

On April 2, 1990, the Mojave population of the desert tortoise was listed by USFWS as threatened (55 FR 12178–12191). Proposed actions within the range of the desert tortoise fall under purview of FESA. Because the Project lies within the range of the desert tortoise (CDFW 2018) and in the Western Recovery Unit (USFWS 2011), Dudek conducted focused surveys for desert tortoise to determine the status of the species within the BSA. To evaluate the impacts to desert tortoise, protocol surveys were conducted in accordance with the Pre-Project Field Survey Protocol for Potential Desert Tortoise Habitats section included in Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) (USFWS 2010). Biologists surveyed the BSA by walking approximately 10-meter-wide transects for 100% coverage of the BSA.

3.2.4.5 Mohave Ground Squirrel Habitat Assessment

Dipodomys Ecological Consulting biologists conducted a habitat assessment within the off-site BSA for Mohave ground squirrel in addition to a nine-quadrangle query of the CNDDB to determine the locations of historical occurrences of Mohave ground squirrel (included in Appendix D, Mohave Ground Squirrel Protocol Survey Report). The habitat assessment consisted of walking meandering transects while recording vegetation communities and noting the presence of burrows and suitable soil per the Mohave Ground Squirrel Survey Guidelines (CDFG 2010). This 1-day survey was conducted on April 19, 2023.

3.2.4.6 Mohave Ground Squirrel Protocol Survey

Dipodomys Ecological Consulting biologists conducted an initial visual survey within the Project boundary in April 2023 (included in Appendix D). The visual surveys were conducted by driving and walking throughout the Project boundary to identify suitable habitat for Mohave ground squirrel, which is consistent with the methods described in the 2010 CDFW Mohave Ground Squirrel Survey Guidelines (CDFG 2010). Field methods are described in detail in Appendix D. Following an initial visual survey, three 5-day live-trapping surveys for Mohave ground squirrel were conducted between March 15 and July 15 within the Project boundary. The methods used for this trapping effort

followed the most recent CDFW Mohave Ground Squirrel Survey Guidelines issued in 2010 (CDFG 2010). Camera trappings consisted of five camera stations in locations designated by CDFW, and methods are described in detail in Appendix D. Additionally, as described above, Dipodomys Ecological Consulting biologists conducted a habitat assessment within the off-site improvement areas on April 19, 2023.

3.2.4.7 Burrowing Owl Protocol Survey

Dudek conducted protocol burrowing owl surveys within the on-site BSA to determine presence/absence. These surveys were conducted in accordance with Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The protocol states that four survey passes shall be performed, with the first visits occurring between February 15 and April 15 and the remaining three visits, at least 3 weeks apart, between April 15 and July 15, with at least one visit after June 15.

Concurrent with the first pass of the burrowing owl surveys, Dudek biologists walked the entire on-site BSA to identify areas with suitable burrowing owl habitat (i.e., relatively open habitat with low gradients and burrow resources) and mapped all suitable burrows or burrow surrogates (i.e., ground-level cavities with openings of 4 inches in diameter or greater) using Esri Field Maps. Following completion of the first survey pass, which included the burrow survey, polygons were drawn around large clusters of burrow resources and individual burrows that could not be easily clustered were buffered by 25 feet to create a burrowing owl survey area. The remaining three survey passes were conducted within this refined burrowing owl survey area and completed using a combination of pedestrian transects spaced approximately 20 meters apart and spot checks where suitable burrows and the surrounding areas were investigated to determine the status of suitable burrows in these areas. To ensure accurate documentation of observations and prevent inadvertent flushing of potential individuals, the burrows and surrounding area were initially scanned from a distance using binoculars. Any burrowing owl individuals and status of the burrow were documented. If needed, the biologists carefully approached the burrowing owl survey area while scanning the area for burrowing owl individuals and investigating suitably sized burrows for any signs of activity. The use of pedestrian transects or spot checks was determined in the field by the spatial distribution and density of suitable burrows or burrow features.

If observed, any direct observations (visual or audible) or active burrow sign (e.g., molted feathers, pellets, prey remains, whitewash) of burrowing owls was recorded. The surveys were conducted when conditions were suitable for detecting owls (no rain, high winds [greater than 20 mph], dense fog, or temperatures over 90°F). If observed, any burrowing owl sightings, occupied burrows, and burrows with burrowing owl sign were mapped and recorded.

3.2.4.8 Crotch's Bumble Bee Habitat Assessment

On June 6, 2023, the California Department of Fish and Wildlife (CDFW) released the "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species". Due to the potential for Crotch's bumble bee to occur within the BSA, Dudek conducted a Crotch's bumble bee habitat assessment. This included literature review of historical and current species occurrences, documentation of potential foraging, nesting, and/or overwintering resources, a floral survey documenting plant species in bloom and their percent cover, and other items described in "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" (CDFW 2023e). The habitat assessment concluded that the BSA did not contain sufficient floral resources to support Crotch's bumble bee. Therefore, focused surveys for Crotch's bumble bee were not warranted.

3.2.4.9 Aquatic Resources Delineation

Before conducting fieldwork for the aquatic resources delineation, Dudek reviewed aerial maps from the USFWS National Wetlands Inventory (USFWS 2023a), the U.S. Geological Survey (USGS) National Hydrography database (USGS 2023), the Natural Resource Conservation Service (USGS 2023; USDA 2023b), and historical aerials and topographic maps (Google 2023; Historic Aerials Online 2023). Survey datasheets and forms are included in the aquatic resources delineation report provided as Appendix B. The surveys were conducted on foot to visually cover 100% of the BSA. Both current and historical imagery was used to supplement field investigation efforts, particularly on private lands or in areas where anthropogenic impacts have obscured aquatic indicators normally found in the field. Remote sensing was not used during this delineation.

Dudek conducted a delineation of state and federal jurisdictional waters and wetlands within the BSA in accordance with current policies. Federal wetlands were mapped based on the procedures in the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters were mapped at the OHWM based on the procedures defined in A Field Guide to the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b). Waters of the state were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602.

To aid in the delineation and in conformance with the USACE 2008 Field Guide, ten OHWM datasheets (T-17 through T-26) were recorded at potential non-wetland waters within the BSA to determine the OHWM indicators within those features. OHWM datasheets are included in Appendix B. The jurisdictional delineation did not contain any features that met the State Water Resources Control Board wetland criteria, and due to the lack of hydrophytic vegetation and hydric soils, wetland determination data forms were not completed.

The limits of aquatic resources were collected in the field using a Trimble R1 GPS unit and Esri Field Maps mobile application with sub-meter accuracy. The geographic extents were digitized in a GIS based on the GPS data and data collected directly onto field maps using ArcGIS software.

3.2.5 Survey Limitations

Limitations of the surveys include a diurnal bias and the absence of trapping for reptiles, amphibians, and small mammals at night. The surveys were conducted during the daytime to maximize the detection of most wildlife. Most birds are active in the daytime, so diurnal surveys maximize the number of bird observations. Conversely, diurnal surveys usually result in few observations of mammals, many of which may only be active at night. In addition, many species of reptiles and amphibians are secretive in their habits and are difficult to observe using standard meandering transects.

The average rainfall in 2023 was above average, so flora was expected to be at or above the typical abundance. Surveys for special-status plant species adequately covered flora that are known to bloom within the vicinity.

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4 Environmental Setting

The purpose of this section is to describe the general existing conditions within and adjacent to the BSA to document the baseline conditions for this report and subsequent analysis.

4.1 Land Use

The approximately 226.9-acre BSA consists of vacant and undeveloped land, as well as disturbed land, paved and unpaved roads, and portions of the existing mining facility located directly east of the Project boundary.

Land uses surrounding the Project site consist of vacant land, I-15, unpaved roads, and mining operations. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Various unpaved roads and vacant land
- **East:** Aggregate mining operations
- **South:** Falchion Road, Apple Valley Road, various other unpaved roads, and vacant land
- **West:** I-15 and vacant land

In the broader Project vicinity, development includes industrial uses, the County of San Bernardino Refuse Disposal Site, residential uses, and commercial uses.

4.2 Climate

The BSA is located in the Apple Valley/High Desert region in western San Bernardino County. The average annual temperature was not available for Apple Valley; however, average annual temperatures in Victorville range from 46.7°F to 82.6°F. Additionally, the average annual high for Victorville is 109°F and the average annual low is 20°F (ACIS 2023). The average annual precipitation for Apple Valley is 5.47 inches (ACIS 2023). Periods of extended drought are common throughout the region.

4.3 Geology and Topography

The BSA is located in the Town, near Bell Mountain Wash, which lies between Bell Mountain to the east and Quartzite Mountain to the west. The Granite Mountains are approximately 10 miles southeast of the BSA and divide Apple Valley from Lucerne Valley.

The BSA is primarily comprised of even ground with some areas of small hills. The BSA's surface elevation ranges between approximately 2,910 and 3,060 feet above mean sea level (amsl), gradually sloping from east to west toward I-15.

4.4 Soils

According to the U.S. Department of Agriculture Natural Resource Conservation Service's Web Soil Survey (USDA 2023b), the BSA consists of four soil mapping units: the Cajon-Arizo complex, 2% to 15% slopes; Mirage-Joshua

complex, 2% to 5% slopes; pits; and Trigger- Sparkhule-rock outcrop association, steep. These soil mapping units are presented on Figure 3, Soils, and soils series are described in more detail below.

Arizo Series consists of very deep, excessively drained soils formed in mixed alluvium. This series is typically found on recent alluvial fans, inset fans, fan apron, fan skirts, stream terraces, floodplains of intermittent streams and channels at elevations of 750 to 4,600 feet amsl (USDA 2023b). Vegetation associated with this series is mainly creosote bush and burrobush (USDA 2023b).

Cajon Series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. The Cajon soils are on alluvial fans, fan aprons, fan skirts, inset fans and river terraces at elevations of 200 to 4,300 feet amsl. Cajons soils with sandy loam surface textures have moderately rapid to rapid permeability. Vegetation associated with this series includes creosote bush, saltbush, Mormon-tea, Joshua trees, Indian rice grass, annual grasses and forbs (USDA 2023b).

Joshua Series consist of moderately deep, well-drained soils derived from mixed sources. These soils are found on old terraces with a well-developed erosion pavement at elevations ranging from 2,600 to 3,000 feet amsl (USDA 2023a). Vegetation associated with this series includes very sparse stands of creosote bush, white bursage, yucca species, some saltbush, annual grasses and forbs (USDA 2023b).

Mirage Series consists of deep, well-drained soils formed in mixed alluvium, dominantly from granitic sources. These soils are found on old terraces with well-developed erosion pavement at elevations ranging from 2,600 to 3,400 feet amsl. Vegetation associated with this series includes very sparse stands of creosote bush, yucca species, annual grasses and forbs (USDA 2023b).

Sparkhule Series consists of shallow to rock, well-drained soils that formed in residuum from volcanic or granitic rocks. Sparkhule soils are on rock pediments and hills at elevations ranging from 2,300 to 4.500 feet amsl (USDA 2023a). Vegetation associated with this series includes creosote bush, yucca species, annual grasses and forbs (USDA 2023b).

Trigger Series consists of shallow, well drained soils that formed in material weathered from hard sedimentary rocks. Trigger soils are on uplands at elevations ranging from 2,400 to 3,800 feet amsl. Vegetation associated with this series includes creosote bush, cactus, annual grasses and forbs (USDA 2023b).

Pits consist of active mining and excavation.

4.5 Watersheds and Hydrology

The BSA lies primarily within the Bell Mountain Wash subwatershed (Hydrologic Unit Code [HUC] 1809020807) of the Mojave subbasin, (HUC 18090208) (Figure 4, Hydrology; USGS 2023). The Bell Mountain Wash subwatershed is 36.19 square miles (23,160.32 acres) and contains Bell Mountain Wash as the prominent feature in the watershed. Several ephemeral drainages enter Bell Mountain Wash, which flows approximately 1.8 miles southwest before converging with the Mojave River. The Mojave River flows northeast and terminates in Soda Lake near the town of Baker. In addition to the USGS-defined watersheds, the RWQCB also defines watershed boundaries by Hydrologic Units (HUs). The review area is within the South Lahontan Hydrologic Basin, the Mojave HU, and the Upper Mojave Hydrologic Area (Lahontan RWQCB 2021).

5 Results

This section describes the results of the literature review and field surveys within the BSA.

5.1 Vegetation Communities and Land Covers

A total of four vegetation communities and land cover types were mapped within the BSA. As previously discussed in Section 3, Methods, vegetation mapping within the Project boundary was conducted by GLA in 2023, while vegetation mapping within the remaining BSA was completed by Dudek using aerial imagery and existing data from Appendix C, Biological Technical Report, of the Environmental Impact Report: Apple Valley 143 Project (Town of Apple Valley 2023). The spatial distribution of the vegetation communities and land covers are presented on Figure 5. The acreages of the mapped vegetation alliances/associations and other land covers in the BSA are presented in Table 2. Photos of the BSA can be found in Appendix E.

State rankings of 1, 2, or 3 are considered high priority for inventory or special status and impacts to these communities typically require mitigation.

Table 2. Vegetation Communities and Land Cover Types within the BSA

Vegetation Community or Land Cover Type	Floristic Alliance	Association	State Ranking[1]	Acreage
Scrub				
Creosote Bush Scrub	*Larrea tridentata*	*Larrea tridentata*	G5/S5[1]	102.76
Rubber Rabbitbrush Scrub	*Ericameria nauseosa*	*Ericameria nauseosa*	G5/S5[1]	64.84
			Shrub Subtotal[2]	*167.6*
Disturbed and Developed				
Disturbed Habitat	N/A	N/A	N/A	11.07
Urban/Developed	N/A	N/A	N/A	48.23
			Disturbed and Developed Subtotal[2]	*59.3*
			Total[2]	**226.9**

Notes:

[1] The conservation status of a vegetation community is designated by a number from 1 to 5. The numbers have the following meaning (NatureServe 2023):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
N/A = not applicable
SNR = unranked, subnational rank not yet assessed

[2] Totals may not sum due to rounding.

5.1.1 Scrub

5.1.1.1 Creosote Bush Scrub (33.010.00)

The creosote bush shrubland alliance includes creosote bush as the dominant or co-dominant species in the shrub canopy. Creosote bush has an open shrub canopy of less than 3 meters (9.8 feet) tall, with an open to intermittent herbaceous layer of annuals and perennial grasses (CNPS 2023b). Species associated with the creosote bush alliance include bursage (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), allscale scrub (*Atriplex polycarpa*), shadscale (*Atriplex confertifolia*), Nevada joint fir (*Ephedra nevadensis*), and Anderson's boxthorn (*Lycium andersonii*). Emergent trees such as honey mesquite (*Prosopis glandulosa*), and western Joshua tree may be present at low cover.

The creosote bush alliance is ranked by the CDFW as a G5/S5 alliance. This ranking indicates that globally and within California the alliance is widespread, abundant, and secure (CDFW 2023c; NatureServe 2023); therefore, the community is not considered sensitive under CEQA.

The creosote bush scrub alliance occurs throughout the southwestern portion of the BSA, and along the northern border of the BSA.

5.1.1.2 Rubber Rabbitbrush Scrub (35.310.00)

Rubber rabbitbrush alliance communities include rubber rabbitbrush as the dominant or co-dominant shrub in the canopy. Rubber rabbitbrush has an open to continuous shrub canopy less than 3 meters (9.8 feet) in height with a sparse herbaceous layer (CNPS 2023b). Species associated with the rubber rabbitbrush alliance include big sagebrush (*Artemesia tridentata*), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), ephedra (*Ephedra* spp.), California buckwheat (*Eriogonum fasciculatum*), scale broom (*Lepidospartum squamatum*), and antelope bitterbrush (*Purshia tridentata*) (CNPS 2023b). Emergent trees may be present at low cover, including California juniper (*Juniperus californica)*, Jeffrey pine (*Pinus jeffreyi)*, single-leafpinyon (*Pinus monophyla)* or western Joshua tree (CNPS 2023b).

The rubber rabbitbrush alliance is ranked by the CDFW (2023c) as a G5/S5 alliance. This ranking indicates that globally and within California the alliance is widespread and abundant (CDFW 2023c; NatureServe 2023).

The rubber rabbitbrush scrub alliance occurs in the northeastern portion of the BSA.

5.1.2 Disturbed and Developed

5.1.2.1 Disturbed Habitat

Disturbed habitat refers to areas where soils have been recently or repeatedly disturbed by grading, compaction, or clearing of vegetation. Structures are typically not present within disturbed habitats, and these areas provide relatively low value for most plant and wildlife species. When vegetated, disturbed habitat supports predominantly non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance.

Disturbed habitat is not a listed vegetation community under the California Natural Community List (CDFW 2023c), but it has been used in this report because it best describes what was observed in the field. As such, this community is not globally, or state ranked and is not considered a sensitive natural community under CEQA.

Within the BSA, disturbed habitat occurs within the Outer Highway 15 right-of-way and along unpaved roads throughout the BSA.

5.1.2.2 Urban/Developed

Urban or developed land covers refer to areas that have been constructed on or otherwise physically altered to the point where vegetation is no longer present. Urban or developed areas are characterized by permanent or semi-permanent structures, hardscapes, and landscaped areas that require irrigation.

Developed land is not a listed vegetation community under the California Natural Community List (CDFW 2023c), but it has been used in this report because it best describes what was observed in the field. As such, this community is not globally, or state ranked and is not considered a sensitive natural community under CEQA.

Within the BSA, urban/developed areas occur along paved and unpaved roads that run through the BSA including Outer Highway 15, Quarry Road, and Falchion Road, in addition to an existing mining facility in the southeastern corner of the BSA.

5.2 Plants and Wildlife Observed

5.2.1 Plants

A total of 93 species of native or naturalized plants, 80 native (86%) and 13 non-native (14%), were recorded within the on-site BSA. A list of plant species observed by Dudek and GLA biologists is provided in Appendix F, Plant Compendium. A complete compendium of plants observed in the off-site BSA can be found in Appendix C, Biological Technical Report, of the Draft Environmental Impact Report: Apple Valley 143 Project (Town of Apple Valley 2023).

5.2.2 Wildlife

A total of 37 wildlife species, consisting of 34 native species (92%) and 3 non-native species (8%), were recorded within the on-site BSA during surveys (Appendix G, Wildlife Compendium). Birds detected on or in the immediate vicinity of the BSA included bushtit (*Psaltriparus minimus*), house finch (*Haemorhous mexicanus*), lesser nighthawk (*Chordeiles acutipennis*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), turkey vulture (*Cathartes aura*), house sparrow (*Passer domesticus*), mourning dove (*Passer domesticus*), European starling (*Sturnus vulgaris*), barn swallow (*Hirundo rustica*), verdin (*Auriparus flaviceps*), rock wren (*Salpinctes obsoletus*), Bewick's wren (*Thryomanes bewickii*), black-throated sparrow (*Amphispiza bilineata*), Bell's sparrow (*Artemisiospiza belli*), chipping sparrow (*Spizella passerine*), and white-crowned sparrow (*Zonotrichia leucophrys*). .

Mammals detected included desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Otospermophilus beecheyi*), domestic cat (*Felis catus*), black-tailed jackrabbit (*Lepus californicus*), and white-tailed antelope squirrel (*Ammospermophilus* leucurus).

Reptiles detected included common side-blotched lizard (*Uta stansburiana*), zebra-tailed lizard (*Callisaurus draconoides*), desert horned lizard (*Phrynosoma platyrhinos*), desert spiney lizard (*Sceloporus magister*), tiger whiptail (*Aspidoscelis tigris*), gophersnake (*Pituophis catenifer*), western rattlesnake (*Crotalus oreganus*), and Mohave rattlesnake (*Crotalus scutulatus*).

A complete compendium of wildlife observed in the off-site BSA can be found in Appendix C, Biological Technical Report, of the Draft Environmental Impact Report: Apple Valley 143 Project (Town of Apple Valley 2023).

5.3 Special-Status and Regulated Resources

The GLA Biological/Regulatory Resource Evaluation (Appendix A) provides tables of all special-status species whose geographic ranges fall within the general vicinity of the Project boundary. Special-status species' potential to occur within the Project boundary were evaluated based on known species distribution, species-specific habitat preferences, and GLA biologists' knowledge of regional biological resources. Species potentially occurring within the Project boundary are identified as having moderate or high potential to occur based on habitat conditions on site, and species for which there is little or no suitable habitat are identified as not expected to occur or having low potential to occur.

5.3.1 Special-Status Plants

Special-status plants include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW, and species identified as rare by the CNPS (particularly CRPR 1A, presumed extinct in California and either rare or extinct elsewhere; CRPR 1B, rare, threatened, or endangered in California and elsewhere; CRPR 2A, plants presumed extirpated in California but common elsewhere; and CRPR 2B, rare, threatened, or endangered in California but common elsewhere).

GLA biologists initially evaluated the potential for special-status plant species to occur within the Project boundary (Appendix A). According to the report, species were considered based on a number of factors, including (1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project (i.e., within the USGS "Victorville" 7.5-minute quadrangle); and (2) any other species that are known to occur within the vicinity of the Project boundary, or for which potentially suitable habitat occurs on site. Of the 21 special-status plant species identified in the database queries as potentially occurring in the vicinity, six species were either documented by GLA as occurring within the Project boundary or were determined by GLA to have some potential to occur within the Project boundary: beaver dam breadroot, crowned muilla (*Muilla coronata*), Mojave fish-hook cactus (*Sclerocactus polyancistrus*), solitary blazing star (*Mentzelia eremophila*), western Joshua tree, and white pygmy-poppy (*Canbya candida*). An analysis of these species and their potential to occur is included in the GLA Biological/Regulatory Resource Evaluation (Appendix A). Of these species recommended by GLA, all are CRPR 4 species except for beaver dam breadroot, which is a CRPR 1B species. CRPR 4 species are not considered special-status, and therefore, only beaver dam breadroot was included as a target species for the 2023 focused rare plant surveys.

Additionally, Dudek conducted an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status plant species to occur within the BSA, and identified the following nine species as either occurring within the BSA or having a moderate or high potential to occur within the BSA: desert cymopterus, purple nerve cymopterus, Mojave monkey flower, Barstow woolly sunflower, sagebrush loeflingia, short-joint beavertail, Latimer's woodland-gilia, San Bernardino aster, and western Joshua tree. Therefore, these species were also included as target species for 2023 focused rare plant surveys.

One special-status plant species, western Joshua tree, was observed within the BSA. Western Joshua tree is a state candidate for listing and is further discussed in Section 5.3.1.1. No other listed and/or CRPR 1 or 2 plants were observed during the focused surveys. Due to focused surveys being conducted during the appropriate blooming period, all other special-status plants are not expected to occur. In addition, there is no USFWS-designated critical habitat for listed plant species overlapping the BSA (USFWS 2023b).

Details of the western Joshua tree are below in Table 3.

Table 3. Special-Status Plant Species Observed or with Moderate or High Potential to Occur within the BSA

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Yucca brevifolia	western Joshua tree	None/SC/None	Great Basin grassland, Great Basin scrub, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland, Sonoran desert scrub, Valley and foothill grassland/perennial leaf succulent/Apr–May/ 1,310–6,560	Present. This species was observed within the BSA.

Notes: CRPR = California Rare Plant Rank; BSA = biological survey area.
Status Designations
State
SC: State listed candidate species

5.3.1.1 Western Joshua Tree

Western Joshua tree is a California state candidate for listing. Western Joshua tree is a monocot tree in the asparagus family (*Agavaceae*) that occurs within Joshua tree woodland, Great Basin grassland and scrub, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, and valley and foothill grassland. This species occurs in San Bernardino County and other southern and eastern counties in California between 1,310 and 6,560 feet amsl (CNPS 2023b). This species typically blooms between April and May, but is a conspicuous tree and identifiable at any time of year.

A total of 298 western Joshua tree individuals were recorded within the BSA (Figure 6, Joshua Tree Inventory). Of the Joshua tree individuals recorded, 283 individuals were found within the proposed Project boundary, while 15 were found adjacent (within 50 feet) to the limits of the Project. Trees in the tree survey area vary in size and stature according to age and location. Further details on phenological data are provided in Appendix C.

5.3.1.2 Desert Native Plants

In addition to western Joshua tree, two desert native plants were observed within the BSA during the focused desert native plant survey: one Wiggins' cholla (*Cylindropuntia echinocarpa*) and one Mojave yucca (*Yucca schidigera*) (Figure 7, Special-Status Plants and Burrow Surveys).

5.3.2 Special-Status Wildlife

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW and those designated as Species of Special Concern by CDFW

GLA biologists initially evaluated the potential for special-status wildlife species to occur within the Project boundary before survey were conducted (Appendix A). According to the report, species were considered based on a number of factors, including (1) species identified by the CNDDB as occurring (either currently of historically) on or in the vicinity of the Project; and (2) any other species that are known to occur within the vicinity of the Project boundary, or for which potentially suitable habitat occurs on site. Of the 31 special-status wildlife species identified in the database queries as potentially occurring in the vicinity, eight species were determined by GLA to have a moderate potential to occur within the Project boundary before survey were conducted: Crotch's bumble bee, burrowing owl, Le Conte's thrasher (*Toxostoma lecontei*), loggerhead shrike (*Lanius ludovicianus*) Mohave ground squirrel, Mojave desert tortoise, pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*). The details of these species are presented below in Table 4. Those special-status wildlife species that are not expected or have low potential to occur within the Project boundary are discussed in Appendix A but are not discussed further in this report as no significant direct or indirect impacts are expected. After focused surveys and habitat assessments were conducted for some special-status species, the potential to occur within the BSA changed, as noted in Table 4.

Table 4. Special Status Wildlife with Moderate Potential to Occur in the BSA

Scientific Name	Common Name	Status (Federal/ State)	Habitat Requirements	Potential to Occur Before Surveys	Potential to Occur After Surveys
Invertebrates					
Bombus crotchii	Crotch's bumble bee	Federal: None State: SCE	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Moderate potential to occur.	Not expected to occur.
Reptiles					
Gopherus agassizii	Desert tortoise	Federal: FT State: ST	Requires firm ground to dig burrows, or rocks to shelter among. Found in arid sandy or gravelly locations along riverbanks, washes, sandy dunes, alluvial fans, canyon bottoms, desert oases, rocky hillsides, creosote flats and hillsides.	Moderate potential to occur.	Moderate potential to occur.
Birds					
Athene cunicularia	Burrowing owl	Federal: BCC State: SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal	Moderate potential to occur.	Moderate potential to occur.

Table 4. Special Status Wildlife with Moderate Potential to Occur in the BSA

Scientific Name	Common Name	Status (Federal/ State)	Habitat Requirements	Potential to Occur Before Surveys	Potential to Occur After Surveys
			dunes, desert floors, and some artificial, open areas as a yearlong resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.		
Toxostoma lecontei	Le Conte's thrasher	Federal: BCC State: SSC	Desert scrub, mesquite, tall riparian brush and, locally, chaparral.	Moderate potential to occur.	Moderate potential to occur.
Lanius ludovicianus	Loggerhead shrike	Federal: BCC State: SSC	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs	Moderate potential to occur.	Moderate potential to occur.
Mammals					
Xerospermophilus mohavensis	Mohave ground squirrel	Federal: None State: ST	Mojave creosote scrub, desert saltbush scrub, desert sink scrub, desert greasewood scrub, shadscale scrub, and Joshua tree woodland.	Moderate potential to occur.	Not expect to occur.
Antrozous pallidus	Pallid bat	Federal: None State: SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Moderate potential to forage within the Project site but not roost.	Moderate potential to forage within desert scrub habitat of the BSA but is not expected to roost.

Table 4. Special Status Wildlife with Moderate Potential to Occur in the BSA

Scientific Name	Common Name	Status (Federal/ State)	Habitat Requirements	Potential to Occur Before Surveys	Potential to Occur After Surveys
Corynorhinus townsendii	Townsend's big-eared bat	Federal: None State: SSC	Coniferous forests and woodlands, deciduous riparian woodland, semi-desert and montane shrublands.	Moderate potential to forage within the Project site but not roost.	Moderate potential to forage within desert scrub habitat of the BSA but is not expected to roost.

Source: GLA 2023.
Note: CNDDB = California Natural Diversity Database.
Status Designations
Federal
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
FE: Federally listed as endangered
FPD: Federally proposed for delisting
FT: Federally listed as threatened
State
FP: California Fully Protected Species
SCE: State candidate for listing as endangered
SE: State listed as endangered
SSC: California Species of Special Concern
ST: State listed as threatened
WL: California Watch List Species

No special-status wildlife species were observed within the BSA. In addition, there is no USFWS-designated critical habitat for listed wildlife species overlapping the BSA (USFWS 2023b). Suitable habitat for Crotch's bumblebee was not detected during the habitat assessment. Protocol-level surveys for Mohave ground squirrel were negative. Therefore, these species are not expected to occur and will not be analyzed further. Focused surveys for burrowing owl and Mojave desert tortoise were negative, but potentially suitable burrows for both species were detected. These are transient species and may still incidentally occur within the BSA. As such, these species will be analyzed further.

Burrowing Owl

Burrowing owl is a California Species of Special Concern. With a relatively wide-ranging distribution throughout the west, burrowing owls are considered to be habitat generalists (Lantz et al. 2004). In California, burrowing owls are yearlong residents of open, dry grassland and desert habitats and grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner et al. 1990). Preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993).

The presence of burrows is the most essential component of burrowing owl habitat as they are required for nesting, roosting, cover, and catching prey (Coulombe 1971; Martin 1973; Green and Anthony 1989; Haug et al. 1993). In California, western burrowing owls most commonly live in burrows created by California ground squirrels. Burrowing owls may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse), useable burrows are available, and foraging habitat occurs in close proximity (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can be used for nesting and roosting.

Although the BSA contains open scrub areas that may support this species, burrowing owl was not observed during focused surveys. However, numerous burrows that are potentially suitable for nesting were mapped (Figure 7). Mapped burrows were at least 4 inches in diameter, and all were natural earthen burrows. No active burrowing owl sign (i.e., feathers, whitewash, or pellets) were observed within the BSA. The nearest mapped CNDDB record is approximately 4.5 miles southwest of the BSA, from 2008 (CDFW 2023d). Based on the discussion above, burrowing owl has a moderate potential to occur within the BSA.

LeConte's Thrasher

LeConte's thrasher is a USFWS Bird of Conservation Concern and a California Species of Special Concern. LeConte's thrasher is found from below sea level up to 1,600 meters (5,250 feet) amsl in Southern California deserts in southern Mono County to the Mexican border (Dobkin and Granholm 2005; Sheppard 1996).

Preferred habitat for LeConte's thrasher is open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; LeConte's thrasher also occurs in western Joshua tree habitat with scattered shrubs (Dobkin and Granholm 2005). This species prefers gently rolling to well-drained slopes occupied by saltbush and joint fir (*Ephedra* sp.) with bare ground or sparse grass (Fitton 2008). These conditions are generally found on bajadas or alluvial fans where the slopes are bisected by dry washes (Fitton 2008). Much of the LeConte's thrasher's diet consists of insects found within leaf litter under desert shrubs; therefore, habitat must contain a sufficient ground cover (Sheppard 1996).

LeConte's thrasher was not observed during biological surveys. However, the BSA supports suitable foraging habitat (desert scrub) and nesting habitat (spiny shrubs and cactus). The nearest mapped CNDDB record is approximately 1.8 miles southwest of the BSA near the Mojave River from 2017 (CDFW 2023d). Based on the discussion above, LeConte's thrasher has a moderate potential to occur within the BSA.

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a USFWS Bird of Conservation Concern and a California Species of Special Concern. It is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). The species is a yearlong resident in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. In California, although shrikes are widespread at the lower elevations in the state, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or human-made structures (such as the tops of chain-link fences or barbed wire) that provide a location to impale prey upon for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along woodland edges, grasslands with sufficient perch and butcher sites, scrublands, and open canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. For nesting, the height of shrubs and presence of canopy cover are most important (Yosef 1996).

Loggerhead shrike was not observed during biological surveys. However, the BSA supports open habitat with scattered shrubs and trees that may provide suitable nesting and foraging habitat for loggerhead shrike. The nearest mapped CNDDB record is approximately 2.6 miles southwest of the BSA near the Mojave River from 2006 (CDFW 2023d). Based on the discussion above, loggerhead shrike has a moderate potential to occur within the BSA.

Crotch's Bumblebee

Crotch's bumblebee is a state candidate for listing as threatened. The Crotch's bumblebee is distributed in coastal California, east towards the Sierra-Cascade Crest, and is less commonly in western Nevada (Koch 2012). It occurs in grassland and scrub communities that contain *Phacelia, Clarkia, Eriogonum, Eschscholzia and Antirrhinum* species, which have been identified as genera with preferred nectar sources.

The BSA contains scrub communities that could potentially support the preferred plant genera. However, the only historical record within the 9 USGS 7.5-minute quadrangle area containing the BSA is approximately 4 miles northeast of the BSA near Bell Mountain from 1944 (CDFW 2023d). Additionally, Dudek conducted a focused habitat assessment for this species concurrently with rare plant surveys, and determined there were no suitable floral resources on site to support this species. Therefore, this species is not expected to occur within the BSA.

Mohave Ground Squirrel

Mohave ground squirrel is a State of California threatened species. This species' distribution range is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties (Zeiner et al. 1990). Mohave ground squirrels generally inhabit areas where the soil is friable and sandy or gravelly. Mohave ground squirrels occur in desert scrub habitats dominated by creosote bush and desert saltbush scrub at elevations between 1,800 and 5,000 feet amsl.

No Mohave ground squirrels were captured or detected during protocol surveys conducted by Dipodomys Ecological Consulting (see Appendix D for details on the methods and results of this survey effort). A habitat assessment for Mohave ground squirrel conducted over the off-site BSA determined that while marginally suitable habitat is present, the species is not expected to occur in this area. This area lacks connectivity to core populations of the species, and the Mohave ground squirrel population densities in the southern portion of its range (i.e., where the Project is located) are relatively low. Finally, the more recent known occurrence of the species was documented in 2011 approximately 9 miles southwest of the Project boundary across the Mojave River. Given the low-quality habitat present in the off-site BSA, as well as a lack of connectivity to core populations and low population densities of Mohave ground squirrel in the vicinity of the Project site, protocol surveys were not warranted in the off-site BSA. Based on the discussion above, this species is not expected to occur within the BSA.

Pallid Bat

Pallid pat is a State of California Species of Special Concern. This species is widespread throughout the western United States; southern British Columbia, Canada; and mainland and Baja California, Mexico (Hermanson and O'Shea 1983; Hall 1981). The pallid bat is locally common in arid deserts (especially the Sonoran life zone) and grasslands throughout the western United States and also occurs in shrublands, woodlands, and forests at elevations up to 2,440 meters (8,000 feet) (Hermanson and O'Shea 1983; Hall 1981). Although this species prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging, it has been observed far from such areas (Hermanson and O'Shea 1983).

Pallid bat has a moderate potential to forage within desert scrub habitat of the BSA but is not expected to roost.

Townsend's Big-Eared Bat

Townsend's big-eared bat is a State of California Species of Special Concern. The Townsend's big-eared bat ranges throughout the western United States; British Columbia, Canada; and Mexico (Kunz and Martin 1982). Within California, Townsend's big-eared bat occurs throughout the state, with the exception of alpine and subalpine areas of the Sierra Nevada

Townsend's big-eared bat has a moderate potential to forage within desert scrub habitat of the BSA but is not expected to roost.

Mojave Desert Tortoise

Desert tortoise is a federally and state-listed threatened species. The range of the Mohave population of the desert tortoise includes portions of the Mojave Desert and the Colorado Desert in Southern California (parts of Inyo, Kern, Los Angeles, San Bernardino, and Riverside Counties), southern Nevada (Clark, Esmeralda, Nye, and Lincoln Counties), northwestern Arizona (Mohave County), and southwestern Utah (Washington County).

Typical habitat for desert tortoise in the Mojave Desert is creosote bush scrub where precipitation ranges from 2 to 8 inches, with relatively high diversity of perennial plants and high productivity of ephemeral plants. Throughout most of the Mojave Desert, desert tortoises occur most commonly on gently sloping terrain with sandy gravel soils and where there is sparse cover of low-growing shrubs, which allows for the establishment of herbaceous plants. Soils must be friable enough for digging burrows, but firm enough that burrows do not collapse (USFWS 2008). Although populations of desert tortoise are not generally known to inhabit elevations much above 4,000 feet amsl, they occur from below sea level to an elevation of 7,300 feet amsl. Occupied habitat varies from flats and slopes dominated by creosote bush scrub at low elevations, to rocky slopes in blackbrush and juniper woodland ecotones at higher elevations (USFWS 2008).

Although the BSA contains suitable sandy soils and ephemeral washes within Mojave Desert habitat, desert tortoise was not observed during focused surveys. However, potentially suitable burrows and sign were mapped within the Project boundary (Figure 7). On site, there were 11 burrows with a rank 4 designation, indicating that they are suitable for desert tortoise and in good condition, but with no active sign, and six burrows with a rank 5 designation, indicating that they may have been used by desert tortoise in the past, but have no active sign and have since deteriorated. Additionally, the BSA contains 11 areas supporting desert tortoise pallet sites, i.e., shallow burrows or bank overhangs often consisting of caliche substrate where desert tortoise may temporarily take shelter. Finally, there was one incidence of what is potentially desert tortoise scat within the BSA (Figure 7). Furthermore, the nearest CNDDB occurrence was from 2005 and is mapped approximately 1 mile south of the BSA (CDFW 2023d). Based on the discussion above, desert tortoise has a moderate potential to occur within the BSA. Desert tortoise survey forms are included as Appendix H.

5.3.3 Potential Aquatic Resources

The jurisdictional aquatic resources delineation identified seven ephemeral drainages comprising approximately 1.93 acres within the BSA (Appendix B). Of that total, 1.68 acres are non-wetland waters of the state (below ordinary high-water mark) under RWQCB jurisdiction and streambed under CDFW. An additional 0.25 acres are solely jurisdictional streambed under CDFW (below and above ordinary high-water mark, to top of bank). The ephemeral drainages present are not likely subject to USACE jurisdiction because these features do not meet the relatively permanent standard as a water of the Unites States. A further breakdown of jurisdictional aquatic features is provided in Table 5, and the spatial distribution of jurisdictional aquatic features is presented on Figure 8, Potential Aquatic Resources.

Table 5. Aquatic Resource Summary for the BSA

Feature Name	Non-Wetland Waters of the State (RWQCB/CDFW) (acres)	Jurisdictional Streambed (CDFW) (acres)
NWW-05	0.25	0.25
NWW-06	0.89	1.00
NWW-07	0.19	0.34
NWW-08	0.07	0.07
NWW-09	0.24	0.24
NWW-11	0.02	0.02
NWW-12	0.02	0.02
Total[1]	**1.68**	**1.93**

Notes: RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.
1 Totals may not sum due to rounding.

5.4 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal.

The BSA is not mapped as an essential connectivity area, natural landscape block, or linkage for the California Desert Linkage Network. While it is approximately 1 mile northeast of an area mapped as a linkage for the California Desert Linkage Network, it should be noted that Highway 15, which is mapped as a wildlife movement barrier by CDFW, separates the BSA from the northern and western portion of this area. Additionally, the southern portion of this linkage is generally surrounded by urban development. The BSA falls within lands mapped as Rank 1 (i.e., lands that have limited connectivity opportunity) (CDFW 2019).

According to CDFW (2019), rank 1 is defined as:

> Areas where land use may limit options for providing connectivity (e.g., agriculture, urban) or no connectivity importance has been identified in models. Includes lakes. Some Department of Defense (DOD) lands are also in this category because they have been excluded from models due to lack of conservation opportunity, although they may provide important connectivity habitat.

Additionally, due to the undeveloped land on the BSA, there are opportunities for wildlife to move across the site when migrating through the region. However, the BSA does not currently function as a corridor or linkage between two larger habitat blocks. Although the BSA may function as local dispersal habitat for wildlife movement and/or foraging/hunting, the Project would not create a significant impediment to wildlife movement that would warrant a wildlife corridor study.

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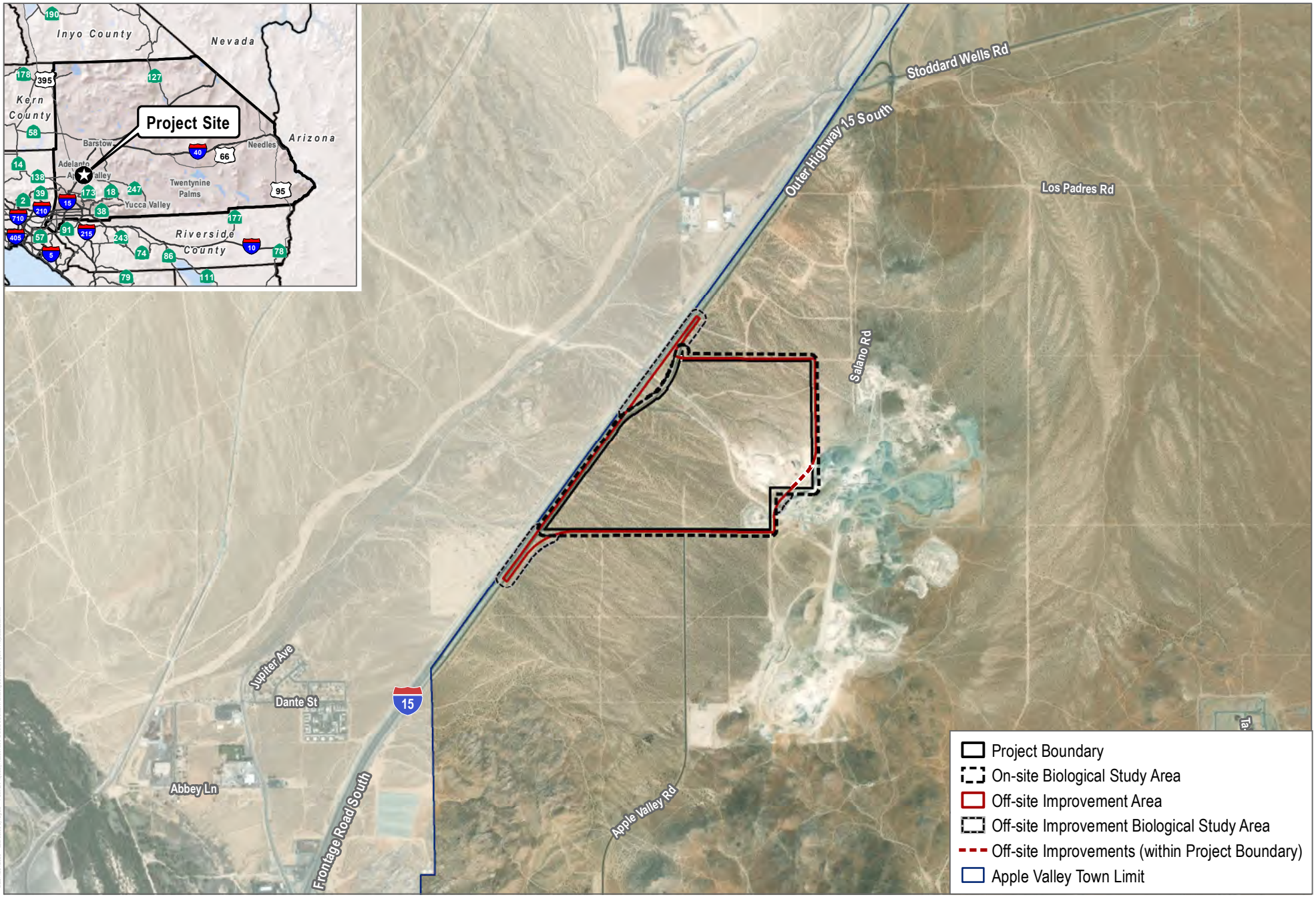

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Inland Empire North Logistics Center Apple Valley Project

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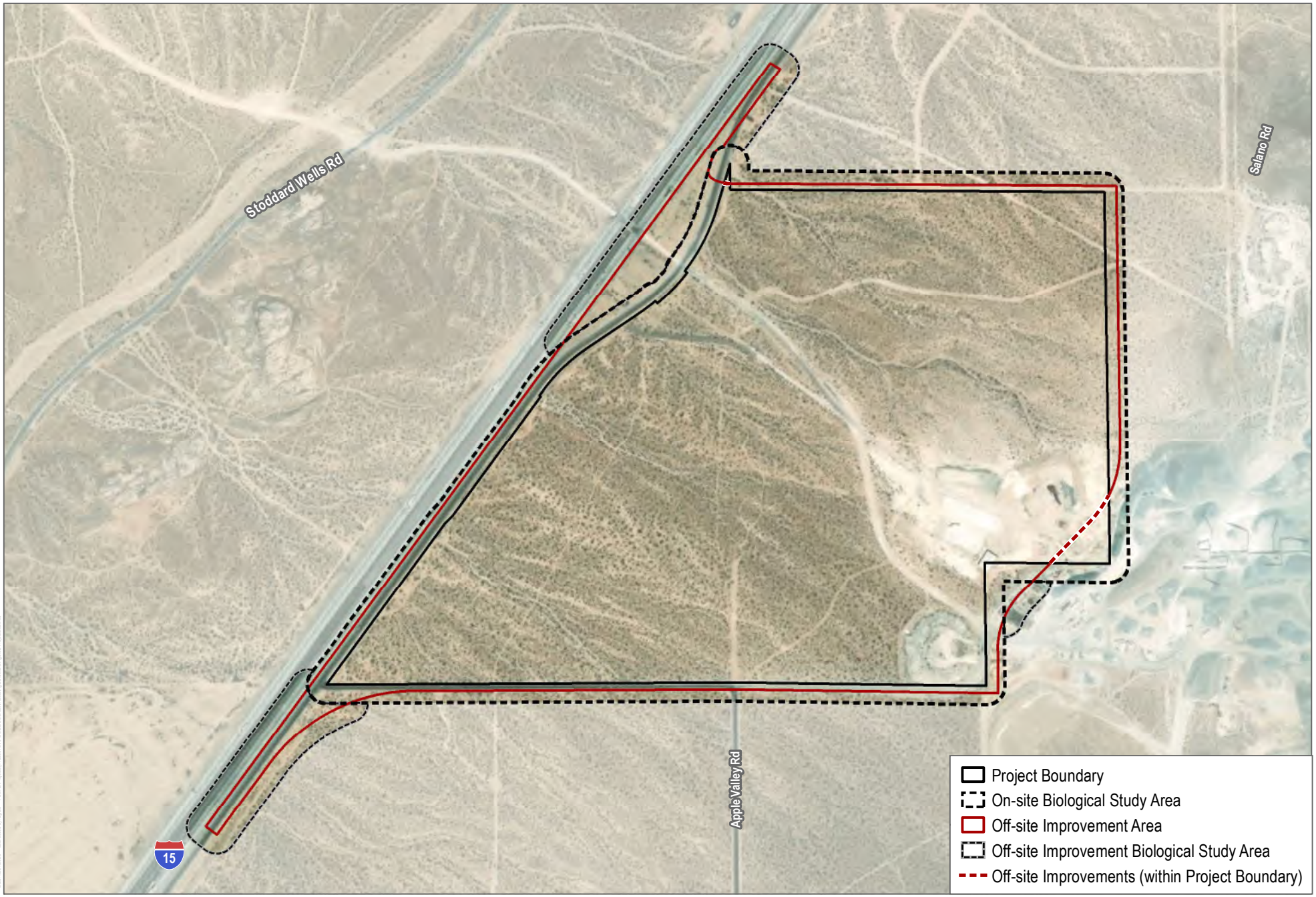

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

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FIGURE 2

Project Site

Inland Empire North Logistics Center Apple Valley Project

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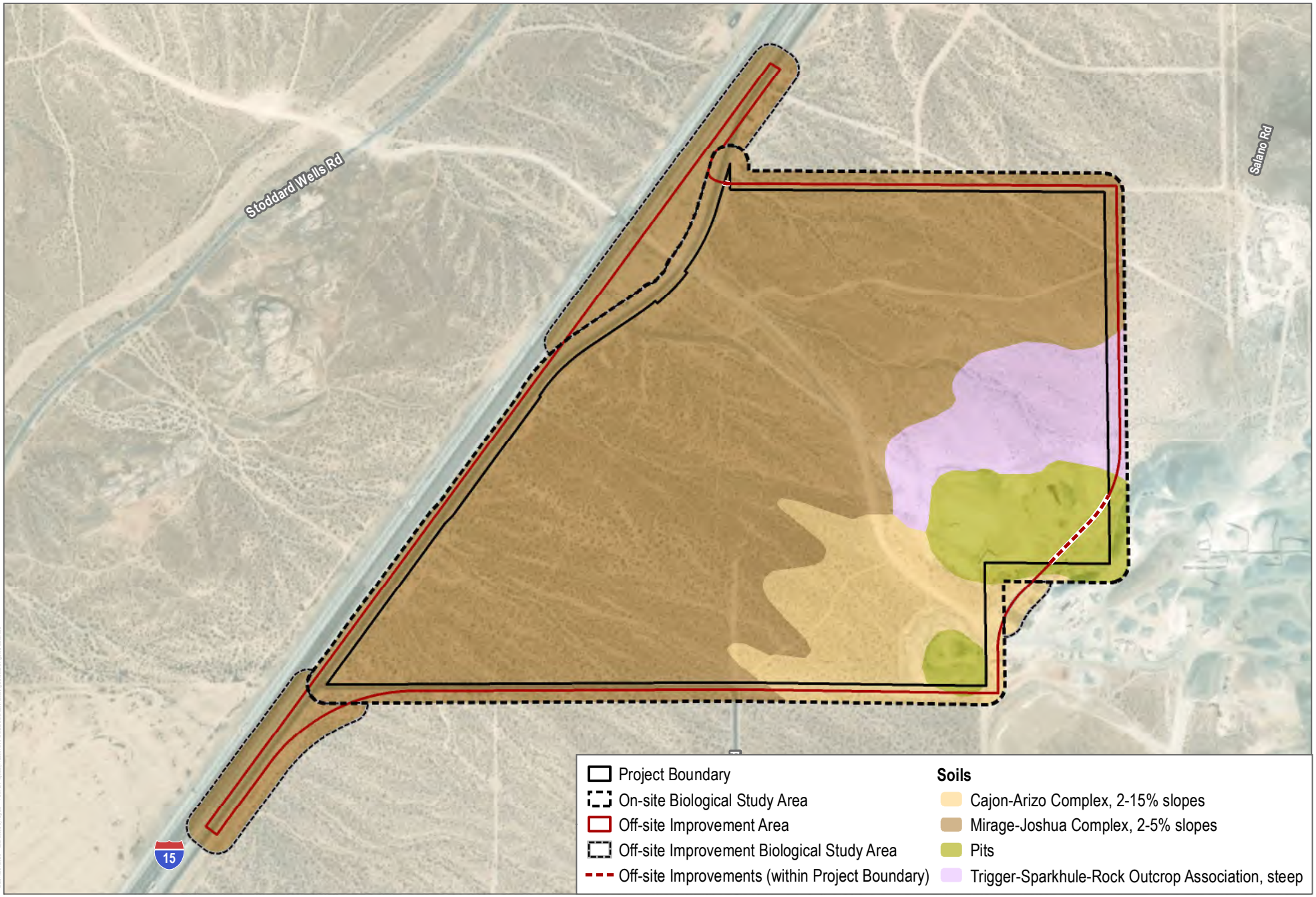

SOURCE: USDA NRCS Soils; County of San Bernardino; Open Street Map; ESRI World Imagery 2022

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FIGURE 3

Soils

Inland Empire North Logistics Center Apple Valley Project

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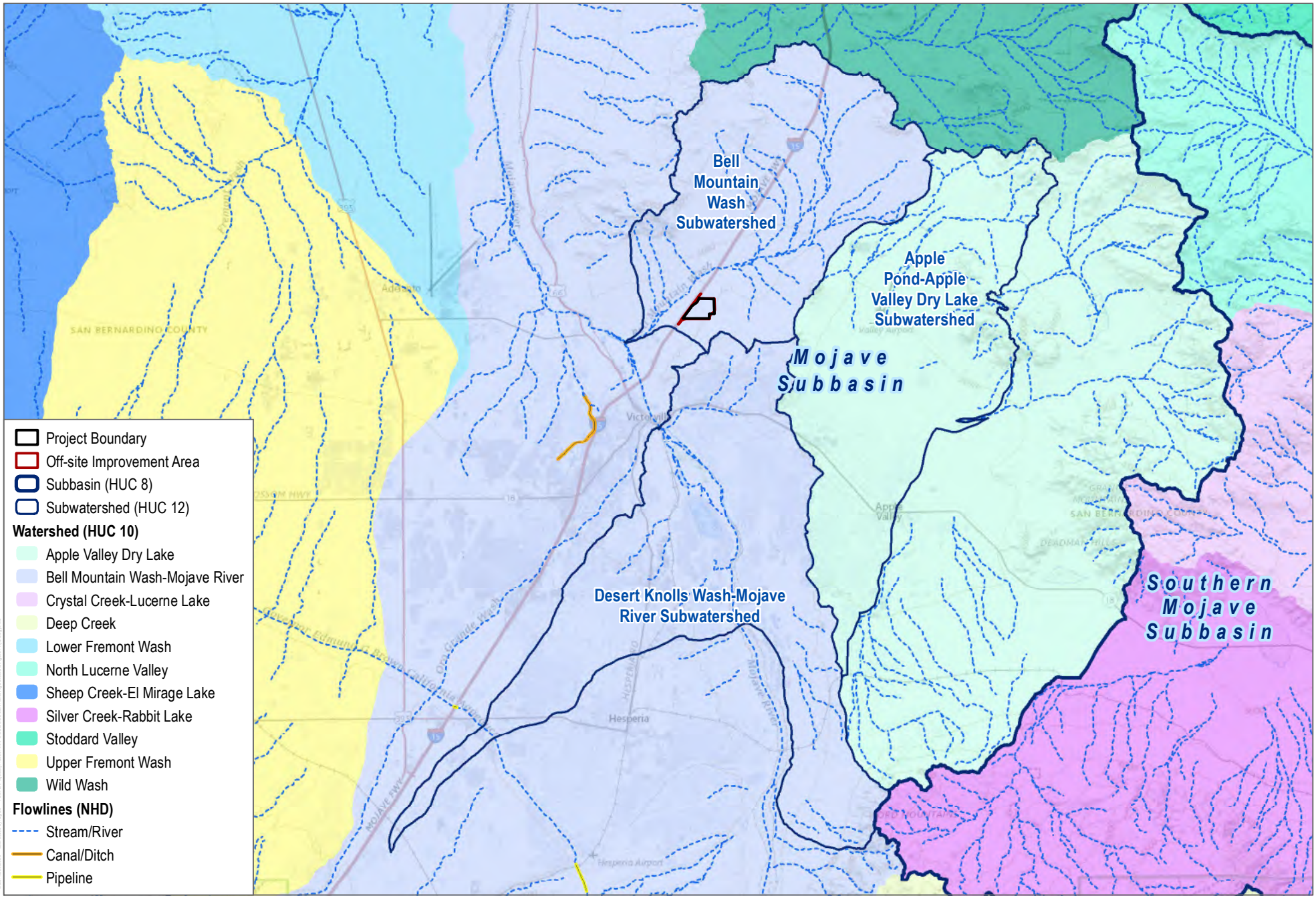

SOURCE: USGS; County of San Bernardino; Open Street Map; ESRI World Imagery 2022

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FIGURE 4

Hydrology

Inland Empire North Logistics Center Apple Valley Project

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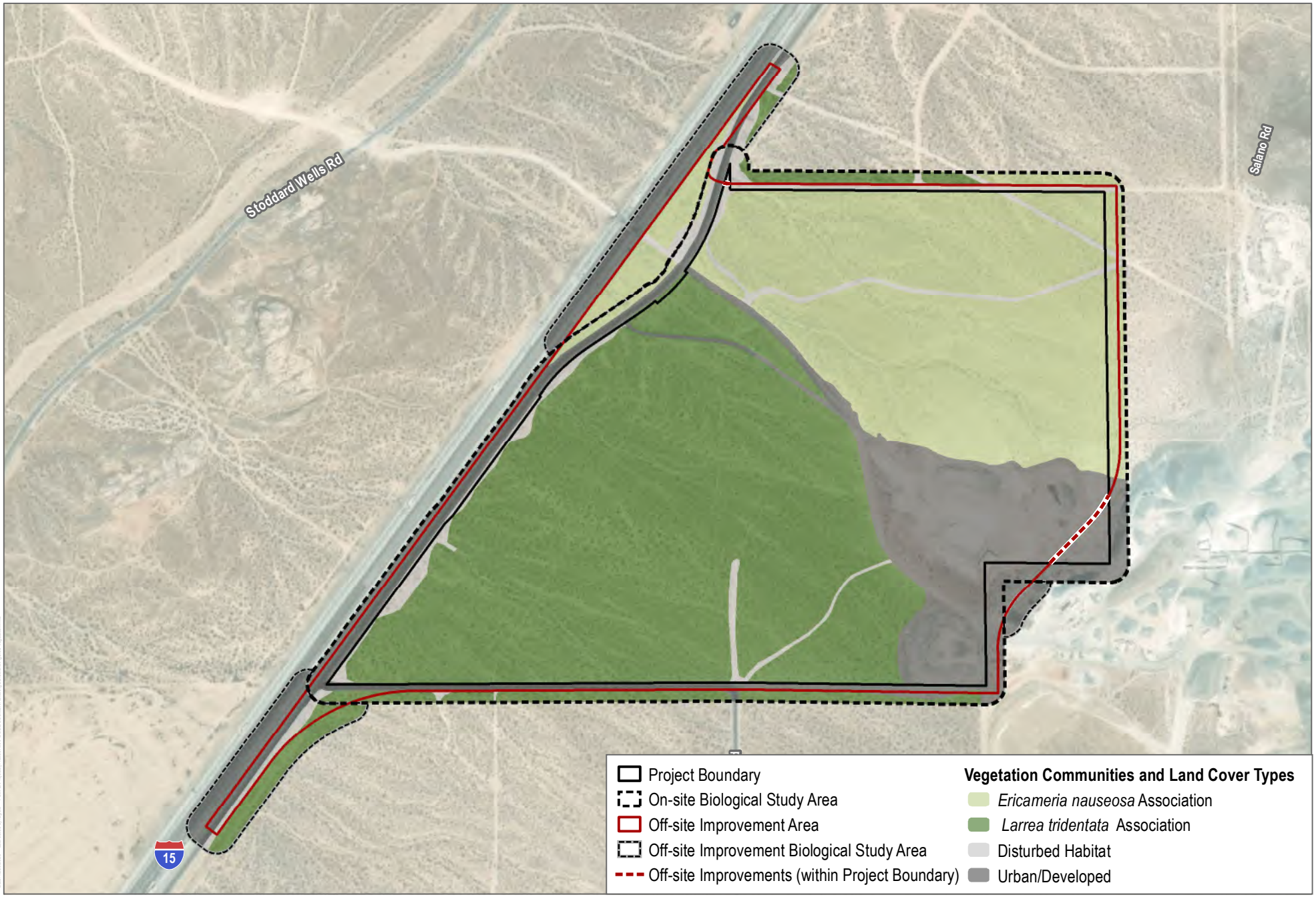

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

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FIGURE 5

Vegetation Commuities and Land Cover Types

Inland Empire North Logistics Center Apple Valley Project

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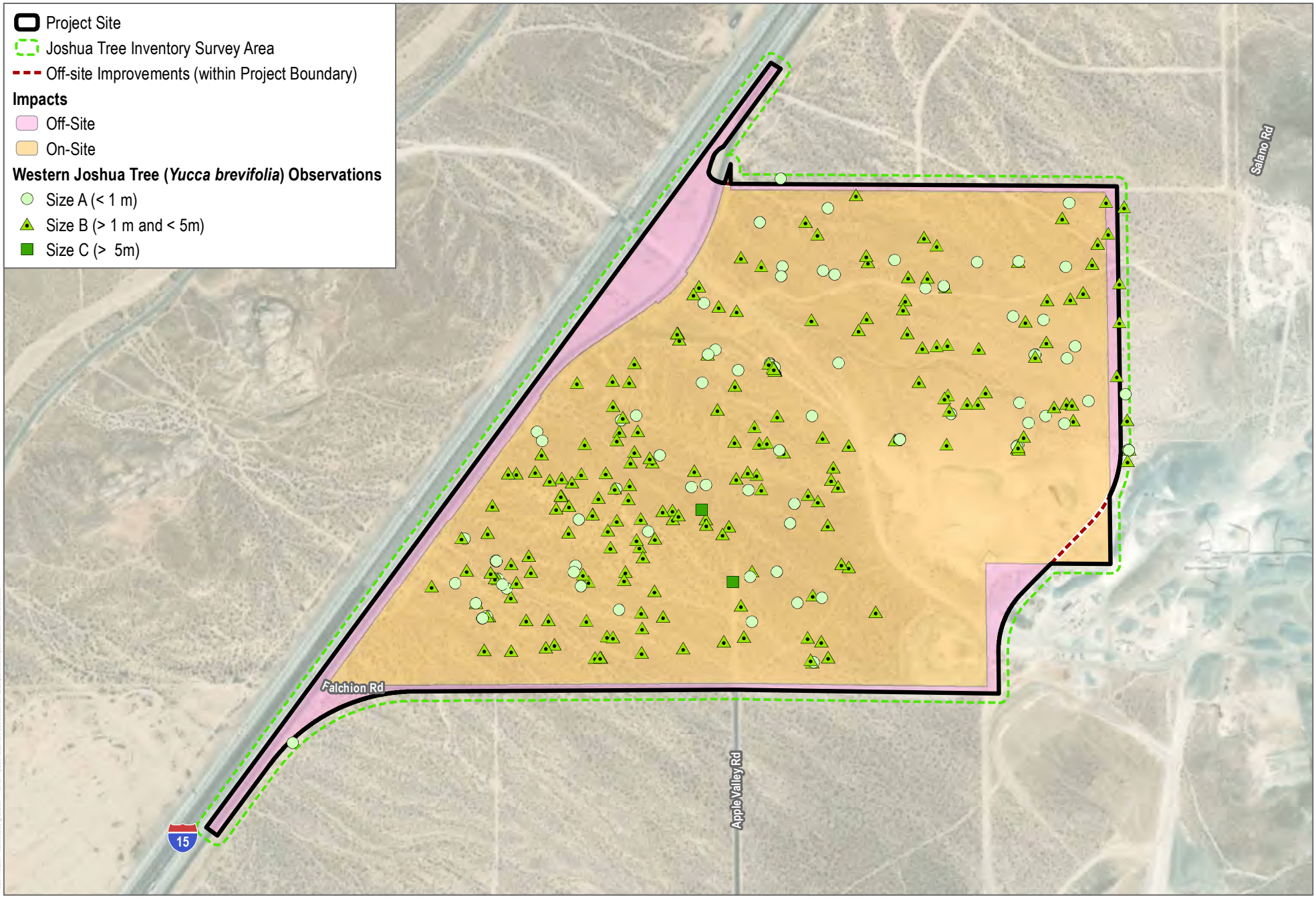

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

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FIGURE 6

Joshua Tree Inventory

Inland Empire North Logistics Center Apple Valley Project

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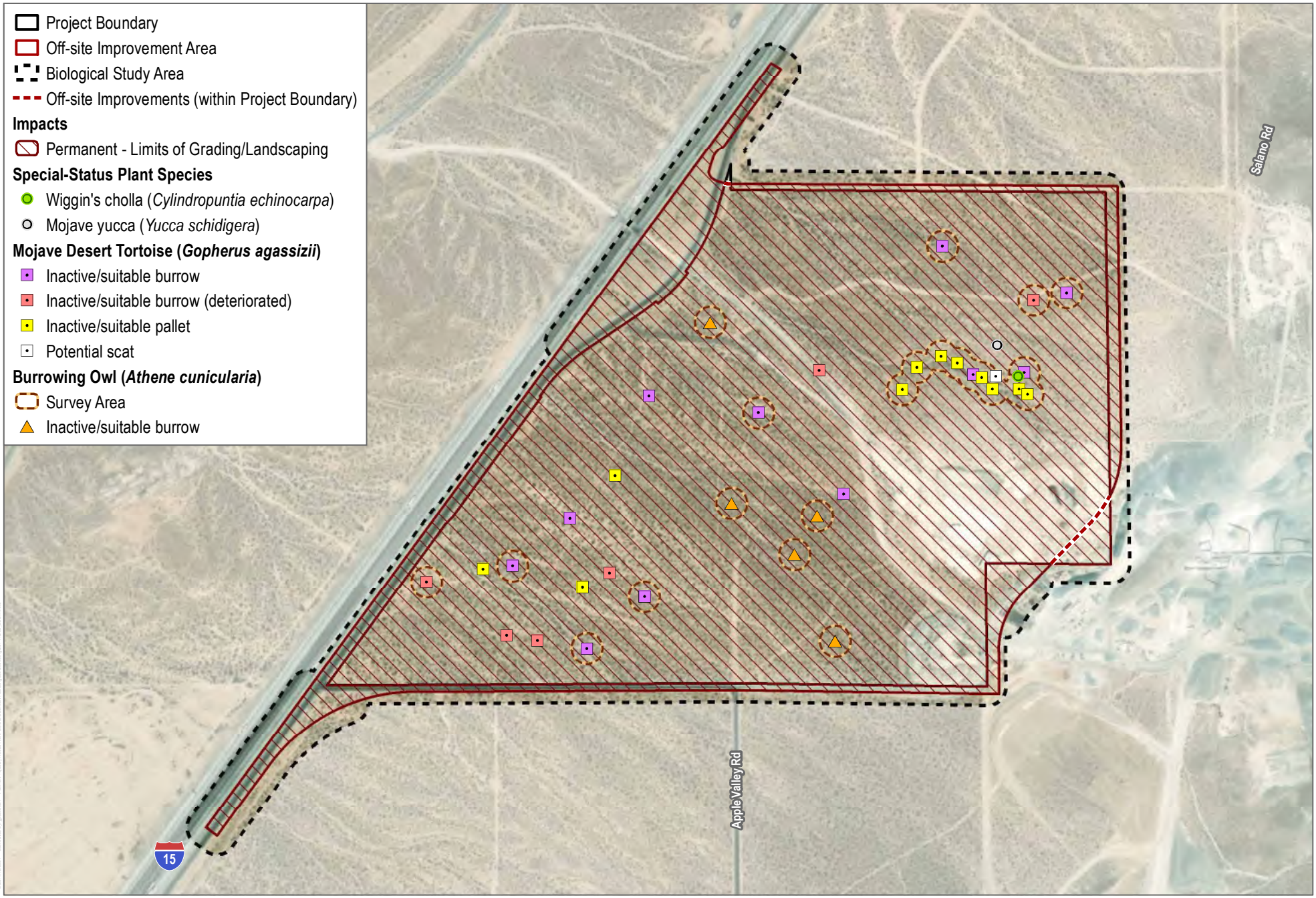

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

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FIGURE 7

Special-Status Plants and Burrow Surveys

Inland Empire North Logistics Center Apple Valley Project

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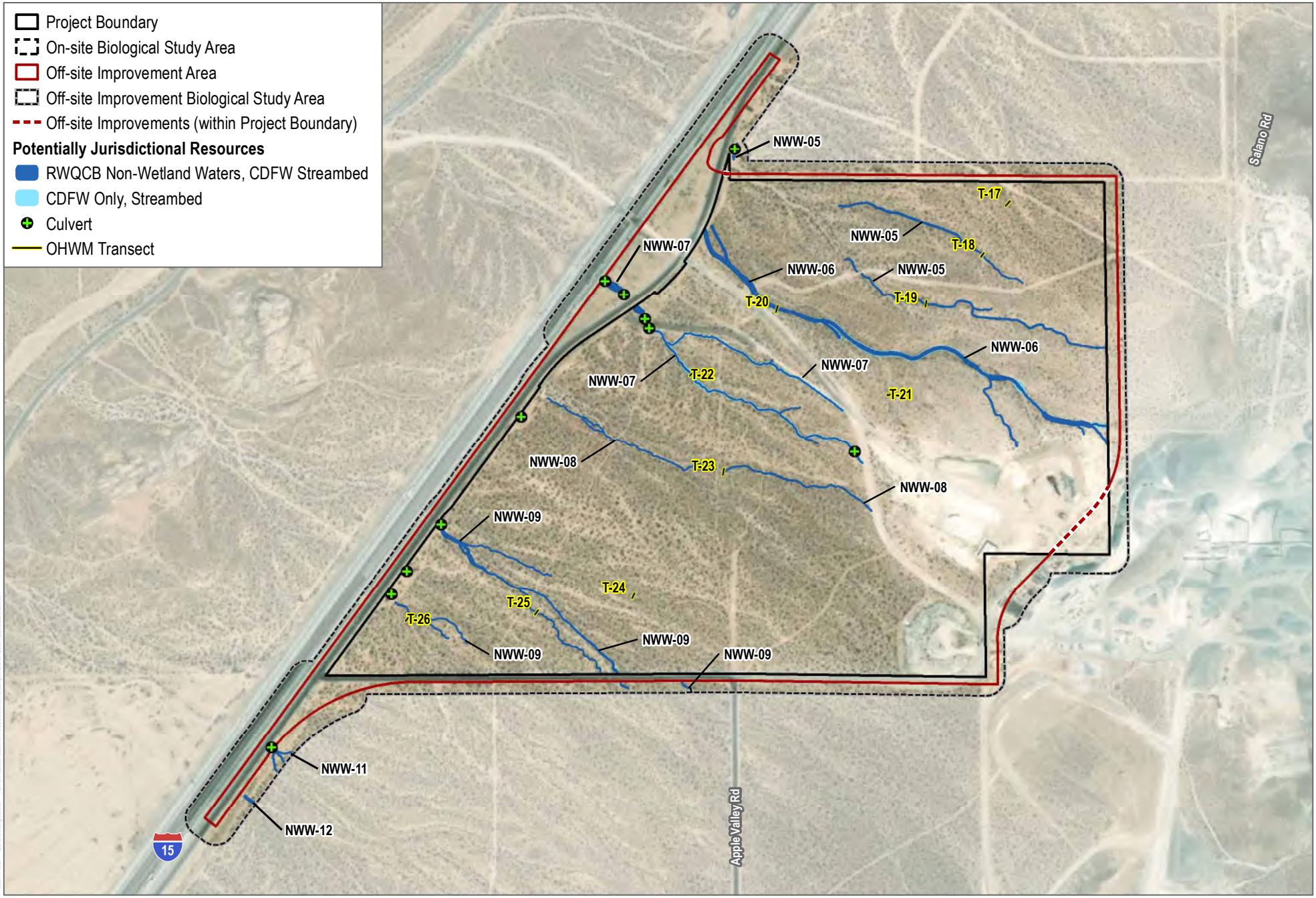

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

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FIGURE 8

Potential Aquatic Resources

Inland Empire North Logistics Center Apple Valley Project

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Appendix A

GLA Biological/Regulatory Resource Evaluation

GLENN LUKOS ASSOCIATES

Regulatory Services

August 23, 2023

Herb Krumsick
FGFW IV LLC
150 North Market Street
Wichita, Kansas 67206

SUBJECT: Results of a Biological/Regulatory Resource Evaluation for the Approximately 177.74-Acre Portion of the 404.17-Acre Inland Empire North Logistics Center located in the Town of Apple Valley, San Bernardino County, California

Dear Mr. Krumsick:

The approximately 404.17-acre Inland Empire North Logistics Center Project (Project) is located in San Bernardino County, California, with a 226.43-acre portion located within the City of Victorville and a 177.74-acre portion located within the Town of Apple Valley. All analyses presented in this report are for the 177.74-acre portion of the Project located within the Town of Apple Valley.

Glenn Lukos Associates, Inc. (GLA) visited the approximately 177.74-acre portion of the Project located in the Town of Apple Valley on June 17 and 23, 2022, to assess the current conditions of the Project site, potential for presence of sensitive biological resources, and to conduct an inventory of western Joshua trees.

Sensitive resources considered for this analysis include special-status species (e.g., threatened and endangered, species of concern, etc.), special-status habitats, nesting birds, waters of the United States (including wetlands) subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) and the Regional Water Quality Control Board, and waters of the State (including riparian vegetation) subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW). Impacts to special-status species and habitats must be addressed during project review under the California Environmental Quality Act (CEQA). In addition, federally listed species (threatened or endangered) are regulated by the U.S. Fish and Wildlife Service (USFWS) pursuant to the Federal Endangered Species Act (FESA). Species listed as threatened or endangered by the State of California are regulated by CDFW pursuant to the California Endangered Species Act (CESA). Wildlife that are assigned other designations by CDFW (i.e., species of concern, fully-protected species, etc.), and plants given special status by the California

Native Plant Society (CNPS) are not granted additional protection, except that impacts to these species may need to be evaluated pursuant to CEQA.

1.0 SITE LOCATION AND DESCRIPTION

An approximately 177.74-acre portion of the Project is located in the Town of Apple Valley, San Bernardino County, California [Exhibit 1 – Regional Map]. The Project site is located east of the Interstate 15 (I-15) freeway just south of the Stoddard Wells Road exit and is within Section 26, Township 6 North, Range 4 West on the U.S. Geological Survey (USGS) topographic map Victorville, California 7.5-minute topographic quadrangle map [Exhibit 2 – Vicinity Map]. Adjacent land uses include active mining and quarries to the east, undeveloped lands to the north and south, and I-15 freeway to the west. Exhibit 3 provides an aerial image of the Project site, including the Project boundary.

2.0 METHODOLOGY

GLA biologists Chris Waterston, David Smith, and Joseph Vu visited the property on June 17 and 23, 2022, to conduct a site review. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project site by direct observation, including the use of binoculars. The Project site was walked following transects spaced appropriately in order to provide complete coverage of the site. The Project site was inspected to determine whether any special-status species, habitats, or potential jurisdictional aquatic resources are present on site.

In addition to site reconnaissance, evaluation of the Project included a review of the California Natural Diversity Database (CNDDB) for the Victorville quadrangle and surrounding quadrangles[1], and a review of the 2023 California Native Plant Society (CNPS) on-line inventory[2].

2.1 Western Joshua Tree Inventory

Pursuant to the *County of San Bernardino Municipal Code Title 8 Division 3 Chapter 88.01 Plant Protection and Management* and the *Town of Apple Valley Ordinance 9.76.040 Joshua Trees,* and as part of the surveys conducted for the Project site, GLA biologist David Smith performed an inventory survey of all Joshua trees (*Yucca brevifolia*) at the site, including dead trees. The Joshua tree inventory was performed on June 17 and 23, 2022. Each western Joshua tree was mapped and given a specific identifying number. Data was collected for each tree, including height and canopy measurements, and a health rating assessment. The health rating was based on the appearance of the tree, including the presence of dead branches and/or damage to the tree. Trees

[1] California Department of Fish and Wildlife. March 2023. Natural Diversity Database: RareFind 5.
[2] California Native Plant Society. 2023. Online Inventory of Rare and Endangered Plants of California (v9.5).

were placed in one of the following five categories based on the percentage of living branches: Very Good (greater than 75%), Average (60% to 75%), Poor (45% to 60%), Very Poor (less than 45%) and Dead (0%). The results of the Joshua tree inventory are provided in Section 3.8 below.

3.0 RESULTS

3.1 Existing Conditions

The Project site is currently undeveloped and consists of a series of small rolling hills with an elevation range of approximately 2,894 feet above mean sea level (AMSL) in the southwest to approximately 3,023 feet AMSL in the east.

3.1.1 Vegetation Mapping

Three vegetation community/land use types are present within the Project site. The first is *Larrea tridentata* Shrubland Alliance (Creosote Bush Scrub), which occurs throughout the southwestern portion of the Project site. The second vegetation type is *Ericameria nauseosa* Shrubland Alliance (Rubber Rabbitbrush Scrub), which occurs in the northeastern portion of the Project site. The remainder of the site is developed [Exhibit 4 - Vegetation Map]. Table 3-1 provides a summary of vegetation alliances/land uses and the corresponding acreage. Detailed descriptions of each vegetation type follow the table.

Table 3-1. Summary of Vegetation/Land Use Types for the Project Site

VEGETATION/LAND USE TYPE	TOTAL (acres)
Larrea tridentata Shrubland Alliance (Creosote Bush Scrub)	95.34
Ericameria nauseosa Shrubland Alliance (Rubber Rabbitbrush Scrub)	57.72
Developed	24.69
Total	**177.74**

***Larrea tridentata* Shrubland Alliance (Creosote Bush Scrub)**

Approximately 95.34 acres of the Project site are vegetated with creosote brush scrub. Dominant species include creosote bush (*Larrea tridentata*), cheese bush (*Ambrosia salsola*), white bur-sage (*Ambrosia dumosa*), short-pod mustard (*Hirschfeldia incana*), western Joshua tree, desert trumpet (*Eriogonum inflatum*), teddybear cholla (*Cylindropuntia bigelovii*), barrel cactus (*Ferocactus cylindraceus*), rattlesnake sandmat (*Euphorbia albomarginata*), sandpaper plant

(*Petalonyx thurberi*), Nevada ephedra (*Ephedra nevadensis*), fourwing saltbush (*Atriplex canescens* ssp. *canescens*), and Mojave yucca (*Yucca schidigera*).

***Ericameria nauseosa* Shrubland Alliance (Rubber Rabbitbrush Scrub)**

Approximately 57.72 acres of the Project site are vegetated with rubber rabbitbrush scrub. Dominant species include rubber rabbitbrush (*Ericameria nauseosa*), desert mallow (*Sphaeralcea ambigua*), desert trumpet (*Eriogonum inflatum*), big sagebrush (*Artemisia tridentata*), and Nevada ephedra (*Ephedra nevadensis*).

Developed

Approximately 24.69 acres of the Project site is developed with an industrial/mining facility.

3.1.2 Wildlife Species

Wildlife species detected onsite include American crow (*Corvus brachyrhynchos*), western kingbird (*Tyrannus verticalis*), black-throated sparrow (*Amphispiza bilineata*), house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), Say's phoebe (*Sayornis saya*), black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), zebra-tailed lizard (*Callisaurus draconoides*), and great basin fence lizard (*Sceloporus occidentalis longipes*).

3.2 Special-Status Plants

One special-status plant species was observed onsite during the general survey: western Joshua tree (State Candidate for Listing [SC]). Other special-status species have potential to occur on site, but were not observed during the general biological survey, including beaver dam breadroot (*Pediomelum castoreum*), crowned muilla (*Muilla coronata*), Mojave fish-hook cactus (*Sclerocactus polyancistrus*), solitary blazing star (*Mentzelia eremophila*), and white pygmy-poppy (*Canbya candida*).

Table 3-2 provides a summary of all plants considered for this analysis. Species were considered based on a number of factors, including: 1) species identified by the March 2023 CNDDB as occurring (either currently of historically) on or in the vicinity of the Project; and 2) any other species that are known to occur within the vicinity of the Project, or for which potentially suitable habitat occurs on site.

Table 3-2. Special-Status Plants Evaluated for the Project

Species Name	Status	Habitat Requirements	Potential for Occurrence
Beaver Dam breadroot *Pediomelum castoreum*	Federal: None State: None CNPS: Rank 1B.2	Sandy soils in washes and roadcuts, in Joshua tree woodland and Mojavean desert scrub.	Moderate potential to occur.
Bluish spike-moss *Selaginella asprella*	Federal: None State: None CNPS: Rank 4.3	Granitic and rocky soils in cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland, subalpine coniferous forest, and upper montane coniferous forest.	Does not occur due to a lack of suitable habitat.
Booth's evening-primrose *Eremothera boothii* ssp. *boothii*	Federal: None State: None CNPS: Rank 2B.3	Joshua tree woodland and pinyon and juniper woodland.	Not expected to occur.
Crowned muilla *Muilla coronata*	Federal: None State: None CNPS: Rank 4.2	Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland	Moderate potential to occur.
Desert cymopterus *Cymopterus deserticola*	Federal: None State: None CNPS: Rank 1B.2	Sandy soils in Joshua tree woodland and Mojavean desert scrub.	Does not occur due to a lack of suitable habitat.
Latimer's woodland-gilia *Saltugilia latimeri*	Federal: None State: None CNPS: Rank 1B.2	Rocky or sandy, often granitic soils (sometimes washes) in chaparral, Mojavean desert scrub, and Pinyon and juniper woodland.	Does not occur due to a lack of suitable habitat.
Mojave fish-hook cactus *Sclerocactus polyancistrus*	Federal: None State: None CNPS: Rank 4.2	Usually carbonate soils. Great basin scrub, Joshua tree woodland, Mojavean desert scrub	Low potential to occur.
Mojave monkeyflower *Diplacus mohavensis*	Federal: None State: None CNPS: Rank 1B.2	Sandy or gravelly, often in washes. Joshua tree woodland, Mojavean desert scrub.	Does not occur due to a lack of suitable habitat.
Mojave paintbrush *Castilleja plagiotoma*	Federal: None State: None CNPS: Rank 4.3	Great basin scrub (alluvial), Joshua tree woodland, Lower montane coniferous forest, Pinyon and juniper woodland	Does not occur due to a lack of suitable habitat.
Mojave spineflower *Chorizanthe spinosa*	Federal: None State: None CNPS: Rank 4.2	Sometimes alkaline soil. Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, Playas	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Pinyon rockcress *Boechera dispar*	Federal: None State: None CNPS: Rank 2B.3	Granitic, gravelly soils in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	Does not occur due to a lack of suitable habitat.
Ribbed cryptantha *Johnstonella (Cryptantha) costata*	Federal: None State: None CNPS: Rank 4.3	Sandy soils in desert dunes, Joshua tree woodland, Mojavean desert scrub, and Sonoran desert scrub.	Does not occur due to a lack of suitable habitat.
Sagebrush loeflingia *Loeflingia squarrosa* var. *artemisiarum*	Federal: None State: None CNPS: Rank 2B.2	Sandy soils in desert dunes, Great Basin scrub, and Sonoran desert scrub.	Does not occur due to a lack of suitable habitat.
San Bernardino aster *Symphyotrichum defoliatum*	Federal: None State: None CNPS: Rank 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic).	Does not occur due to a lack of suitable habitat.
San Bernardino Mountains dudleya *Dudleya abramsii* ssp. *affinis*	Federal: None State: None CNPS: Rank 1B.2	Granitic, quartzite, or carbonate soils in pebble (pavement) plain, Pinyon and juniper woodland, and upper montane coniferous forest.	Does not occur due to a lack of suitable habitat.
Short-joint beavertail *Opuntia basilaris* var. *brachyclada*	Federal: None State: None CNPS: Rank 1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	Not expected to occur.
Solitary blazing star *Mentzelia eremophila*	Federal: None State: None CNPS: Rank 4.2	Mojavean desert scrub	Moderate potential to occur.
Southern mountains skullcap *Scutellaria bolanderi* ssp. *austromontana*	Federal: None State: None CNPS: Rank 1B.2	Mesic soils in chaparral, cismontane woodland, lower montane coniferous forest.	Does not occur due to a lack of suitable habitat.
Torrey's Box-thorn *Lycium torreyi*	Federal: None State: None CNPS: Rank 4.2	Sandy, rocky, washes, streambanks, desert valleys. Mojavean desert scrub and Sonoran desert scrub.	Does not occur due to a lack of suitable habitat.
White pygmy-poppy *Canbya candida*	Federal: None State: None CNPS: Rank 4.2	Gravelly, sandy, and granitic soils in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.	Moderate potential to occur.
Yucca brevifolia Western Joshua Tree	Federal: None State: Candidate Threatened CNPS: None	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinon and juniper woodlands, and Sonoran desert scrub	Present on Project site.

Federal
FE – Federally Endangered
FT – Federally Threatened

State
SE – State Endangered
ST – State Threatened
SC – State Candidate for Listing

CNPS Rare Plant Rank
Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.
Rank 2 – Plants rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 – Plants about which more information is needed.
Rank 4 – Plants of limited distribution (a watch list).

CNPS Threat Rank Extensions
.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur on-site due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected on-site incidentally or through focused surveys.

3.3 Special-Status Animals

No special-status animals were observed on site during the general survey. Several special-status animal species have potential to occur on site: desert tortoise (*Gopherus agassizii*), burrowing owl (*Athene cunicularia*), Le Conte's thrasher (*Toxostoma lecontei*), loggerhead shrike (*Lanius ludovicianus*), Mohave ground squirrel (*Xerospermophilus mohavensis*), Crotch bumblebee (*Bombus crotchii*), pallid bat (*Antrozous pallidus*), hoary bat (*Lasiurus cinereus*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Table 3-3 provides a summary of all species considered for the report. Species were considered based on a number of factors, including: 1) species identified by the March 2023 CNDDB as occurring (either currently of historically) on or in the vicinity of the Project; and 2) any other special-status species that are known to occur within the vicinity of the Project, or for which potentially suitable habitat occurs on site.

Table 3-3. Special-Status Animals Evaluated for the Project

Species Name	Status	Habitat Requirements	Potential for Occurrence
Invertebrates			
Crotch bumble bee *Bombus crotchii*	Federal: None State: CE	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Moderate potential to occur.
San Emigdio blue butterfly *Plebulina emigdionis*	Federal: None State: S1S2	Montane desert canyons where shadscale scrub is present.	Does not occur due to a lack of suitable habitat.
Victorville shoulderband *Helminthoglypta mohaveana*	Federal: None State: S1	Terrestrial habitats along water features.	Does not occur due to a lack of suitable habitat.
Fish			
Mohave tui chub *Siphateles bicolor mohavensis*	Federal: FE State: SE, FP	Associated with deep pools and slough-like areas of the Mojave River, in areas with aquatic ditchgrass (*Riparia maritima*).	Does not occur due to a lack of suitable habitat.
Amphibians			
Arroyo toad *Anaxyrus californicus*	Federal: FE State: SSC	Breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravely terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Does not occur due to a lack of suitable habitat.
California red-legged frog *Rana draytonii*	Federal: FT State: SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Does not occur due to a lack of suitable habitat.
Reptiles			
Coast horned lizard *Phrynosoma blainvillii*	Federal: None State: SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Desert tortoise *Gopherus agassizii*	Federal: FT State: ST	Requires firm ground to dig burrows, or rocks to shelter among. Found in arid sandy or gravelly locations along riverbanks, washes, sandy dunes, alluvial fans, canyon bottoms, desert oases, rocky hillsides, creosote flats and hillsides.	Moderate potential to occur.
Western pond turtle *Emys marmorata*	Federal: None State: SSC	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Does not occur due to a lack of suitable habitat.
Birds			
Burrowing owl *Athene cunicularia*	Federal: BCC State: SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Moderate potential to occur.
Golden eagle *Aquila chrysaetos*	Federal: BGA State: FP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Does not occur due to a lack of suitable habitat.
Gray vireo *Vireo vicinior*	Federal: BCC State: SSC	Desert scrub, mixed juniper or pinyon pine and oak scrub associations, and chaparral, in hot, arid mountains and high plains scrubland.	Not expected to occur.
Le Conte's thrasher *Toxostoma lecontei*	Federal: BCC State: SSC	Desert scrub, mesquite, tall riparian brush and, locally, chaparral.	Moderate potential to occur.
Least Bell's vireo *Vireo bellii pusillus*	Federal: FE State: SE	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Loggerhead shrike *Lanius ludovicianus*	Federal: BCC State: SSC	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Moderate potential to occur.
Long-eared owl *Asio otus*	Federal: None State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Does not occur due to a lack of suitable habitat.
Prairie falcon *Falco mexicanus*	Federal: BCC State: WL	Breeds in mountainous regions and shortgrass prairies, nesting on cliff ledges.	Does not occur due to a lack of suitable habitat.
Southwestern willow flycatcher *Empidonax traillii extimus*	Federal: FE State: SE	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Does not occur due to a lack of suitable habitat.
Summer tanager *Piranga rubra*	Federal: None State: SSC	Low-elevation willow and cottonwood woodlands, and in higher-elevation mesquite and saltcedar stands.	Does not occur due to a lack of suitable habitat.
Swainson's hawk *Buteo swainsoni*	Federal: BCC State: ST	Summer in wide open spaces of the American West. Nest in grasslands, but can use sage flats and agricultural lands. Nests are placed in lone trees.	Does not occur due to a lack of suitable habitat.
Tricolored blackbird *Agelaius tricolor*	Federal: BCC State: CE, SSC	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Does not occur due to a lack of suitable habitat.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Federal: FT, BCC State: SE	Dense, wide riparian woodlands with well-developed understories.	Does not occur due to a lack of suitable habitat.
Yellow warbler *Setophaga petechia*	Federal: BCC State: SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Yellow-breasted chat *Icteria virens*	Federal: None State: SSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Does not occur due to a lack of suitable habitat.
Mammals			
Hoary bat *Lasiurus cinereus*	Federal: None State: None WBWG: M	Prefers trees at the edge of clearings, but have been found in trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.	Moderate potential to forage within the Project site but not roost.
Mohave ground squirrel *Xerospermophilus mohavensis*	Federal: None State: ST	Mojave creosote scrub, desert saltbush scrub, desert sink scrub, desert greasewood scrub, shadscale scrub, and Joshua tree woodland.	Moderate potential to occur.
Mohave river vole *Microtus californicus mohavensis*	Federal: None State: SSC	Moist habitats including meadows, freshwater marshes and irrigated pastures in the vicinity of the Mojave River.	Does not occur due to a lack of suitable habitat.
Pallid bat *Antrozous pallidus*	Federal: None State: SSC WBWG: H	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Moderate potential to forage within the Project site but not roost.
San Diego pocket mouse *Chaetodipus fallax pallidus*	Federal: None State: SSC	In desert wash, desert scrub, desert succulent scrub, pinyon-juniper woodland. Sandy herbaceous areas, usually in association with rocks or coarse gravel.	Does not occur due to a lack of suitable habitat.
Silver-haired bat *Lasionycteris noctivagans*	Federal: None State: None WBWG: M	Temperate, northern hardwoods with ponds or streams nearby. Roost in hollow snags and bird nests.	Does not occur due to a lack of suitable habitat.
Townsend's big-eared bat *Corynorhinus townsendii*	Federal: None State: SSC WBWG: H	Coniferous forests and woodlands, deciduous riparian woodland, semi-desert and montane shrublands.	Moderate potential to forage within the Project site but not roost.

Federal
FE – Federally Endangered
FT – Federally Threatened
FPT – Federally Proposed Threatened
FSC – Federal Species of Concern

State
SE – State Endangered
ST – State Threatened
SSC – California Species of Special Concern
CFP – California Fully-Protected Species

Western Bat Working Group (WBWG)

H – High Priority
LM – Low-Medium Priority
M – Medium Priority
MH – Medium-High Priority

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur on-site due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected on-site incidentally or through focused surveys

3.4 Special-Status Habitats

A review of the March 2023 CNDDB did not identify any special-status habitats as occurring within the vicinity of the Project site. In addition, the Project site does not support any other special-status habitats including wetland or riparian resources.

3.5 Nesting Birds

The Project site contains vegetation (shrubs and herbaceous vegetation) with the potential to support nesting birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act and California Fish and Game Code.[3] As long as trees, shrubs, and herbaceous vegetation with the potential to support nesting birds are removed from September 16 to January 31 (outside of the nesting season), then no further actions are recommended. If vegetation must be removed during the nesting season (February 1 through September 15), a nesting bird survey should be conducted prior to any removals to prevent any impacts to active nests. If active nests are identified onsite, then adequate buffers should be provided around the nests, as determined by a qualified biologist, until the nests are no longer active.

[3] The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

3.6 Critical Habitat

The Project site does not occur within any areas mapped as designated or proposed Critical Habitat by the USFWS.

3.7 Potential Jurisdictional Waters

The Project site contains several small unvegetated ephemeral tributaries to Bell Mountain Wash, which is located in the 226.43-acre portion of the overall 404.17-acre Project site located in the City of Victorville.. Bell Mountain Wash is ephemeral and only conveys flows in response to major storm events. Flows ultimately discharge into the Mojave River, located less than two miles from the Project site, which flows northwest and terminates in Soda Lake near the town of Baker, California.

3.8 Joshua Tree Inventory

GLA mapped 144 western Joshua trees at the Project site [Exhibit 5 - Joshua Tree Survey Map], including 129 live trees and 15 dead trees. The data collected for each inventoried tree are provided below in Table 3-4.

Table 3-4. Results of Joshua Tree Inventory

Tree #	*Tree Field ID#	Height (Feet)	Canopy Diameter (Feet)	Health Rating	Notes
1	100	8	6	Very Good (greater than 75%)	
2	101	7	4	Very Good (greater than 75%)	
3	102	9	5	Very Good (greater than 75%)	
4	103	8	4	Very Good (greater than 75%)	
5	104	3	1	Very Good (greater than 75%)	
6	105	2	1	Very Good (greater than 75%)	
7	106	12	10	Poor (45% to 60%)	
8	108	2	1	Very Good (greater than 75%)	
9	109	4	2	Very Good (greater than 75%)	
10	110	0	0	Dead (0%)	Downed
11	111	5	2	Very Good (greater than 75%)	
12	112	4	2	Very Good (greater than 75%)	
13	113	5	2	Very Good (greater than 75%)	
14	114	9	5	Very Good (greater than 75%)	
15	115	4	2	Very Good (greater than 75%)	
16	116	3	1	Very Good (greater than 75%)	
17	117	3	1	Very Good (greater than 75%)	

Tree #	*Tree Field ID#	Height (Feet)	Canopy Diameter (Feet)	Health Rating	Notes
18	118	0	0	Dead (0%)	Downed
19	119	7	2	Average (60% to 75%)	
20	120	1	1	Very Good (greater than 75%)	
21	121	5	2	Very Good (greater than 75%)	
22	122	11	6	Average (60% to 75%)	
23	123	12	6	Average (60% to 75%)	Branching of one additional trunk.
24	124	8	5	Average (60% to 75%)	
25	125	7	3	Very Good (greater than 75%)	
26	126	13	4	Very Good (greater than 75%)	
27	127	8	3	Average (60% to 75%)	
28	128	5	2	Very Good (greater than 75%)	
29	129	4	1	Very Good (greater than 75%)	
30	130	7	3	Very Good (greater than 75%)	
31	131	0	0	Dead (0%)	Downed
32	132	2	1	Very Good (greater than 75%)	
33	133	6	2	Very Good (greater than 75%)	
34	134	2	0	Dead (0%)	Standing. Crown missing.
35	135	7	3	Very Good (greater than 75%)	
36	136	6	2	Very Good (greater than 75%)	
37	137	1	1	Very Good (greater than 75%)	
38	138	9	3	Very Good (greater than 75%)	
39	139	4	1	Very Good (greater than 75%)	Branching of one additional trunk
40	140	4	2	Very Good (greater than 75%)	
41	141	8	2	Very Good (greater than 75%)	
42	142	2	1	Very Good (greater than 75%)	
43	143	1	1	Very Good (greater than 75%)	
44	144	8	3	Very Good (greater than 75%)	Branching of one additional trunk
45	145	5	2	Very Good (greater than 75%)	
46	146	4	1	Very Good (greater than 75%)	
47	147	0	0	Dead (0%)	Downed
48	148	1	1	Very Good (greater than 75%)	Branching of one additional trunk
49	149	3	1	Very Good (greater than 75%)	
50	150	4	2	Very Good (greater than 75%)	
51	151	8	2	Very Good (greater than 75%)	
52	152	9	8	Dead (0%)	
53	153	9	4	Very Good (greater than 75%)	

Tree #	*Tree Field ID#	Height (Feet)	Canopy Diameter (Feet)	Health Rating	Notes
54	154	18	7	Dead (0%)	
55	155	12	5	Very Good (greater than 75%)	
56	156	2	2	Very Good (greater than 75%)	
57	157	2	1	Very Good (greater than 75%)	
58	158	6	3	Very Good (greater than 75%)	
59	159	6	3	Average (60% to 75%)	
60	160	0	0	Dead (0%)	Downed
61	161	0	0	Dead (0%)	Downed
62	162	6	2	Very Good (greater than 75%)	
63	163	20	10	Poor (45% to 60%)	Partially downed
64	164	5	2	Very Good (greater than 75%)	
65	165	2	1	Very Good (greater than 75%)	
66	166	18	10	Very Poor (less than 45%)	Partially downed
67	167	5	2	Very Good (greater than 75%)	
68	168	12	6	Very Good (greater than 75%)	
69	169	0	0	Dead (0%)	Downed
70	170	1	1	Very Good (greater than 75%)	
71	171	6	4	Poor (45% to 60%)	Partially downed
72	172	5	2	Average (60% to 75%)	
73	173	4	2	Very Good (greater than 75%)	
74	174	16	12	Average (60% to 75%)	
75	175	5	2	Very Good (greater than 75%)	
76	176	8	3	Very Good (greater than 75%)	
77	177	3	2	Very Good (greater than 75%)	
78	178	4	2	Very Good (greater than 75%)	
79	179	6	3	Very Good (greater than 75%)	
80	180	4	2	Very Good (greater than 75%)	
81	181	7	4	Very Good (greater than 75%)	
82	182	3	2	Very Good (greater than 75%)	
83	183	9	3	Very Good (greater than 75%)	
84	184	4	2	Very Good (greater than 75%)	
85	185	7	0	Dead (0%)	
86	186	2	1	Very Good (greater than 75%)	
87	187	9	3	Very Good (greater than 75%)	
88	188	4	2	Very Good (greater than 75%)	
89	189	10	3	Average (60% to 75%)	
90	190	6	2	Very Poor (less than 45%)	Branching of one additional trunk
91	191	3	2	Very Good (greater than 75%)	
92	192	4	2	Very Good (greater than 75%)	
93	193	3	2	Very Good (greater than 75%)	

Tree #	*Tree Field ID#	Height (Feet)	Canopy Diameter (Feet)	Health Rating	Notes
94	194	15	10	Very Good (greater than 75%)	
95	195	4	2	Very Good (greater than 75%)	
96	196	7	3	Very Good (greater than 75%)	Clonal recruitment of one smaller specimen 3' tall, 2' wide
97	197	6	2	Very Good (greater than 75%)	
98	198	2	1	Very Good (greater than 75%)	
99	199	3	1	Very Poor (less than 45%)	
100	300	1	1	Very Good (greater than 75%)	
101	301	5	2	Very Good (greater than 75%)	
102	302	3	1	Very Good (greater than 75%)	
103	303	3	2	Very Good (greater than 75%)	
104	304	1	1	Average (60% to 75%)	
105	305	3	2	Very Good (greater than 75%)	
106	306	7	3	Very Good (greater than 75%)	
107	307	4	2	Very Good (greater than 75%)	
108	308	4	1	Average (60% to 75%)	
109	309	7	2	Very Good (greater than 75%)	
110	310	10	3	Poor (45% to 60%)	
111	311	7	3	Very Good (greater than 75%)	
112	312	5	3	Very Good (greater than 75%)	
113	313	2	2	Very Good (greater than 75%)	
114	315	7	2	Dead (0%)	Mostly downed
115	316	2	2	Very Good (greater than 75%)	
116	317	5	2	Very Good (greater than 75%)	
117	318	1	1	Very Good (greater than 75%)	
118	319	10	3	Very Good (greater than 75%)	
119	320	2	2	Very Good (greater than 75%)	
120	321	8	3	Very Good (greater than 75%)	Branching of two additional trunks
121	322	3	2	Very Good (greater than 75%)	
122	323	2	1	Very Good (greater than 75%)	
123	324	6	3	Very Good (greater than 75%)	
124	325	4	2	Very Good (greater than 75%)	
125	326	2	1	Very Good (greater than 75%)	
126	327	1	1	Very Good (greater than 75%)	
127	328	5	2	Very Good (greater than 75%)	
128	329	3	2	Very Good (greater than 75%)	
129	330	0	0	Dead (0%)	Downed

Tree #	*Tree Field ID#	Height (Feet)	Canopy Diameter (Feet)	Health Rating	Notes
130	331	12	4	Very Good (greater than 75%)	Branching of two additional trunks
131	332	10	2	Average (60% to 75%)	
132	333	4	2	Very Good (greater than 75%)	
133	334	3	2	Very Good (greater than 75%)	
134	335	4	2	Very Good (greater than 75%)	
135	336	4	0	Dead (0%)	
136	337	4	2	Very Good (greater than 75%)	
137	338	15	7	Very Poor (less than 45%)	Branching of one additional trunk
138	339	6	2	Average (60% to 75%)	
139	340	3	2	Very Good (greater than 75%)	
140	341	5	3	Very Good (greater than 75%)	
141	342	6	3	Very Good (greater than 75%)	
142	343	6	2	Very Good (greater than 75%)	
143	344	4	0	Dead (0%)	
144	345	4	2	Very Good (greater than 75%)	

*Tree ID= the number assigned in the field during the survey.

4.0 CONCLUSIONS

4.1 Special-Status Animals

The Project site contains suitable habitat for Le Conte's thrasher (Species of Special Concern [SCC]), loggerhead shrike (SSC), burrowing owl (SSC), desert tortoise (Federally and State Endangered), Mohave ground squirrel (State Threatened), pallid bat (SSC), hoary bat (SSC), Townsend's big-eared bat (SSC), and Crotch bumble bee (State Candidate Endangered).

4.2 Special Status Plants

As noted above, the Project site contains suitable habitat for several special status plants including beaver dam breadroot, crowned muilla, Mojave fish-hook cactus, **s**olitary blazing star, and white pygmy-poppy.

4.3 Nesting Birds

The Project site contains vegetation and bare ground with the potential to support native nesting birds. As discussed above, the California Fish and Game Code prohibits mortality of native birds, including eggs.

4.4 Potential Jurisdictional Waters

As noted above the Project site contains several small ephemeral drainages that appear to be tributary to Bell Mountain Wash to the west. The Bell Mountain Wash and its tributaries are potentially jurisdictional for the Corps, Regional Board, and CDFW.

4.5 Western Joshua Tree

As noted above, 144 western Joshua trees were mapped during the western Joshua tree survey and inventory effort conducted within the Project site [Exhibit 5 - Joshua Tree Survey Map].

If you have any questions regarding this report, please call me (949) 837-0404 or via email at jvu@wetlandpermitting.com.

Sincerely,

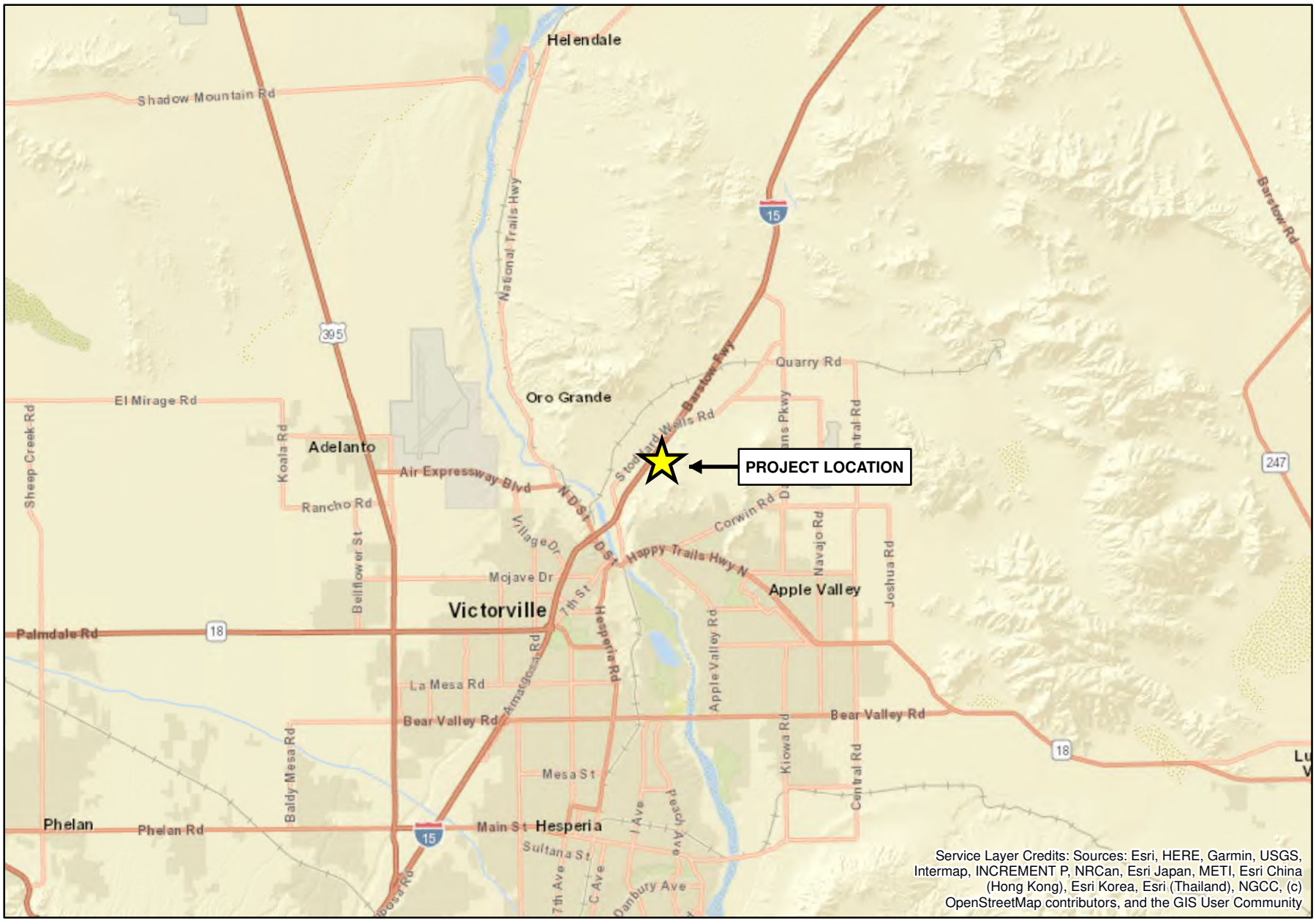
GLENN LUKOS ASSOCIATES, INC.



Joseph Vu
Biologist

P:1588-1a.bio ex cond Apple Valley

Source: ESRI World Street Map



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N

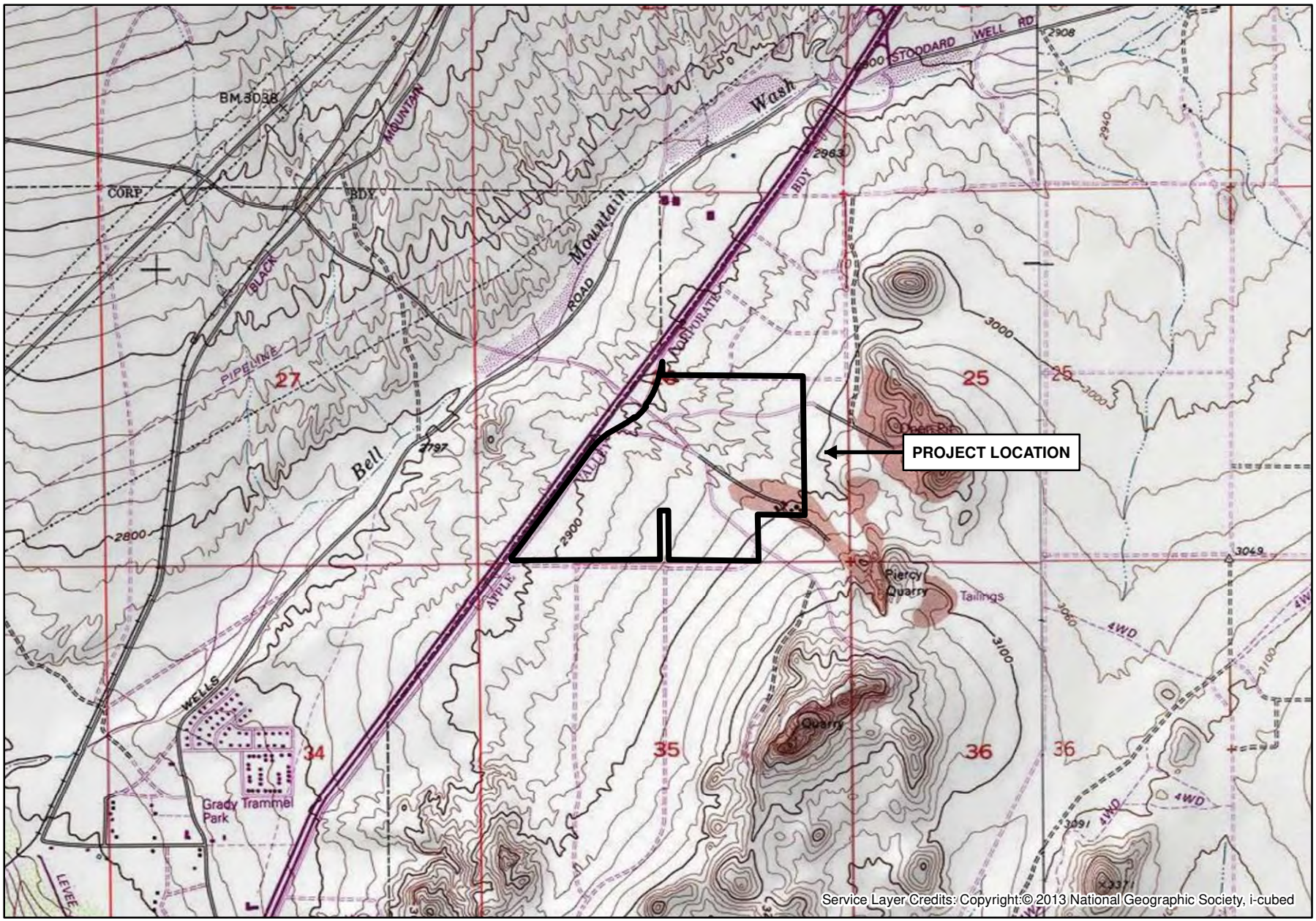
0 2 4 8 Miles

INLAND EMPIRE NORTH LOGISTICS CENTER

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



INLAND EMPIRE NORTH LOGISTICS CENTER

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2





Approximate Project Site

N

0 175 350 700

Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: July 15, 2022

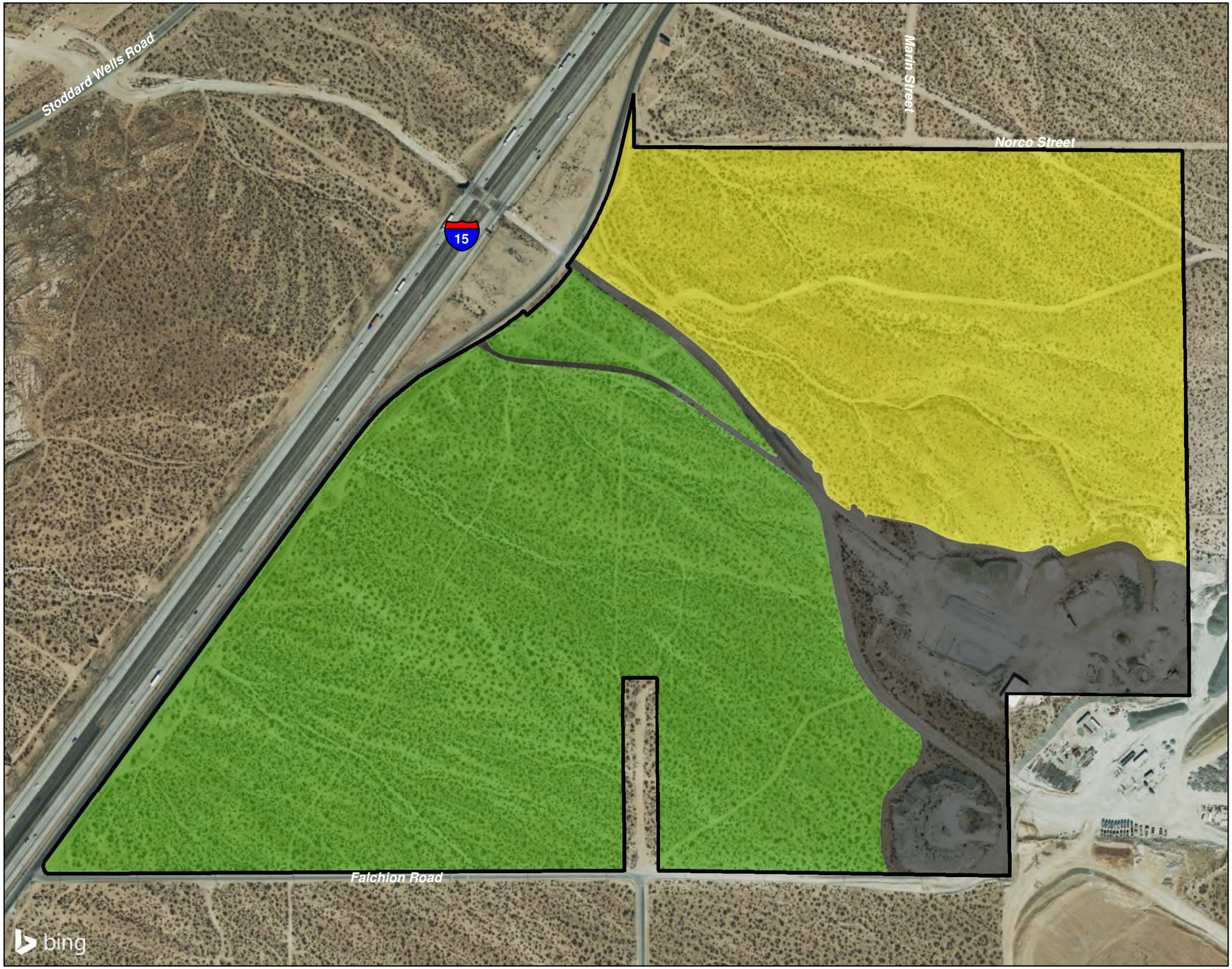
INLAND EMPIRE NORTH LOGISTICS CENTER

Aerial Map

GLENN LUKOS ASSOCIATES

Exhibit 3

X:\1100 AFTER THE REST\1588-01CARN\GIS\1588-1_Aerial_East.mxd





Approximate Project Site

Larrea tridentata Shrubland Alliance (Creosote Bush Scrub)

Ericameria nauseosa Shrubland Alliance (Rubber Rabbitbrush Scrub)

Developed

N

0 175 350 700

Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: July 15, 2022

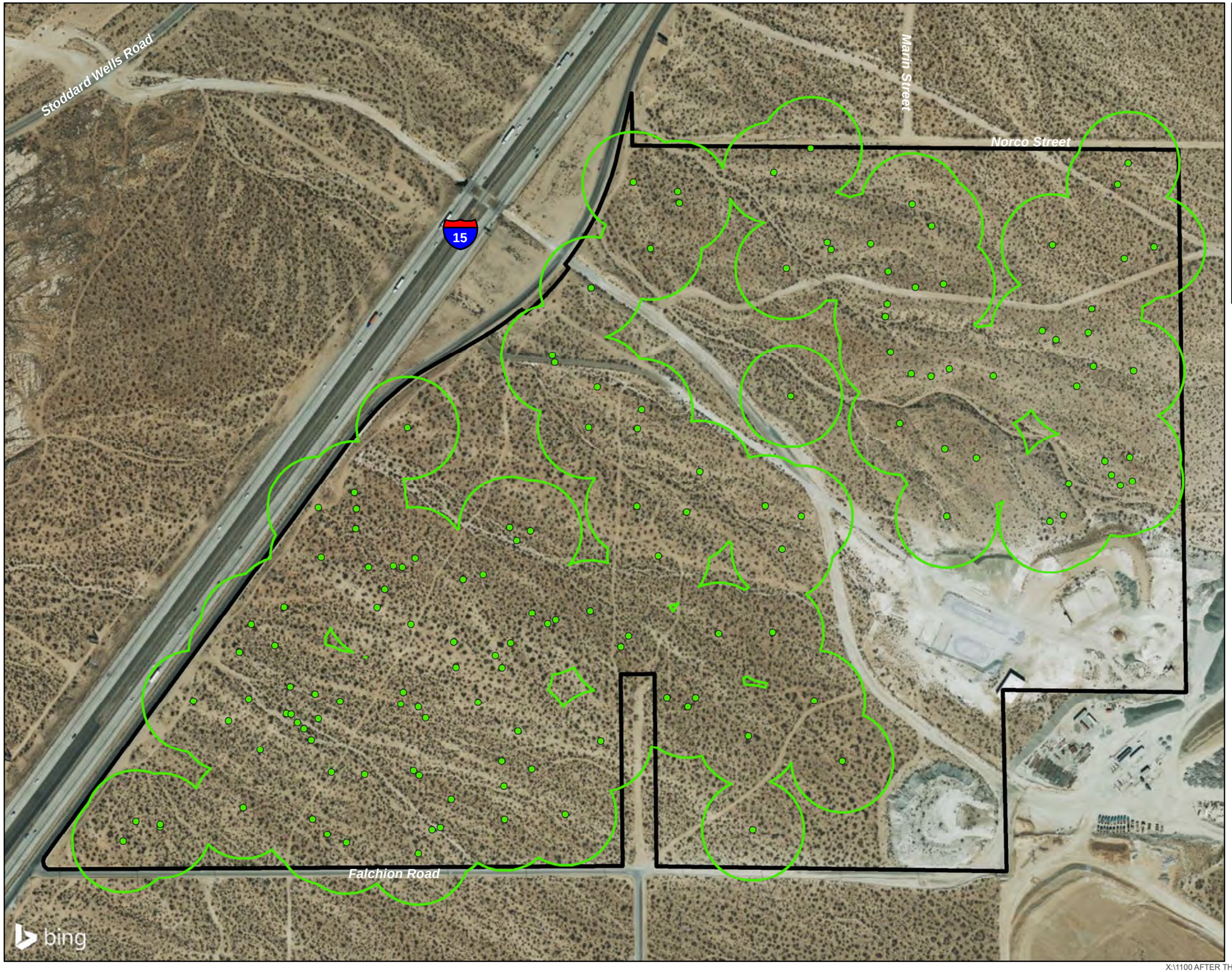
INLAND EMPIRE NORTH LOGISTICS CENTER

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 4

X:\1100 AFTER THE REST\1588-01CARN\GIS\VegetationGIS\1588-1_Vegetation_East.mxd





Approximate Project Site

Joshua Tree Location (144)

186 Foot Western Joshua Tree Seed Bank Buffer

N

0 175 350 700

Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: September 7, 2022

INLAND EMPIRE NORTH LOGISTICS CENTER

Joshua Tree Inventory Map

GLENN LUKOS ASSOCIATES

Exhibit 5

X:\1100 AFTER THE REST\1588-01CARN\GIS\JoshuaTreesGIS\1588-1_JoshuaTreeInventory_East.mxd

Appendix B

Aquatic Resources Delineation Report

Aquatic Resources Delineation Report

Inland Empire North Logistics Center Apple Valley Project

JANUARY 2024

Prepared for:

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AJD	Approved Jurisdictional Determination
APT	Antecedent Precipitation Tool
ARC	antecedent runoff condition
ARDR	Aquatic Resources Delineation Report
CDFW	California Department of Fish and Wildlife
EPA	U.S. Environmental Protection Agency
HUC	Hydrologic Unit Code
I	Interstate
NETR	Nationwide Environmental Title Research, LLC
NHD	National Hydrography Dataset
NWI	National Wetlands Inventory
NWW	non-wetland water
OHWM	ordinary high water mark
PDSI	Palmer Drought Severity Index
project	Inland Empire North Logistics Center Apple Valley Project
RWQCB	Regional Water Quality Control Board
TNW	traditional navigable water
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1 Introduction

This Aquatic Resources Delineation Report (ARDR) was prepared in accordance with the U.S. Army Corps of Engineers (USACE) Los Angeles District Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This ARDR and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This ARDR presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed Inland Empire North Logistics Center Apple Valley Project (project) located in the Town of Apple Valley, San Bernardino County, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code (collectively defined as jurisdictional aquatic resources).

1.1 Disclaimer Statement

This ARDR presents Dudek's best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review areas using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, and/or CDFW regulation. This ARDR serves as a request for the USACE to complete an Approved Jurisdictional Determination (AJD). Appendix A provides the required form associated with the AJD request.[1]

1.2 Contact Information

Contact information for the project applicant and agent are provided in Table 1.[2] Access to the review area (defined in Section 2, Review Area Description and Landscape Setting) is not restricted, but if a site visit is requested, the project applicant or agent will accompany regulatory staff to the review area.[3]

1 Minimum Standards Item 1 (Request for Jurisdictional Determination)
2 Minimum Standards Item 2 (Contact Information)
3 Minimum Standards Item 3 (Site Access Statement)

Table 1. Contact Information

Project Applicant	Synergy Consulting	**Agent**	Dudek
Contact Name	Jessica Haughton	**Contact Name**	Megan Enright
Address	1818 Library Street, Suite 500 Reston, Virginia 20190	**Address**	605 Third Street Encinitas, California 92024
Phone	702.330.1715	**Phone**	760.420.7833
Email	jhaughton@synergyconsultingca.com	**Email**	menright@dudek.com

2 Review Area Description and Landscape Setting[4]

The approximately 226.9-acre review area is located within the Town of Apple Valley in San Bernardino County (Figure 1, Project Location)[5]. The review area consists of 19 property parcels (Table 2), including the project boundary plus a 100-foot buffer, and off-site improvement areas plus a 100-foot buffer where the off-site improvement areas extend beyond the project boundary buffer. The approximate center of the project is at latitude 34.575069, longitude -117.267789. Directions to the review area are as follows: From Victorville, travel northwest on U.S. Highway 18 and turn right on Stoddard Wells Road. Continue on the Interstate (I) 15 Frontage Road and turn right onto Quarry Road to enter the review area.[6]

Topography within the review area ranges from approximately 2,910 to 3,060 feet above mean sea level (Figure 1). The review area decreases in elevation toward I-15. Similarly, drainage patterns within the review area trend southeast to northwest toward I-15. Adjacent land uses include I-15 to the west, the quarry to the southeast, and undeveloped land to the north, south, and partially the east. The review area is mapped on Sections 26, 34, and 35 of Township 6 North, Range 4 West, within the Victorville 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle maps (Figure 1).

Table 2. Review Area Assessor's Parcel Numbers

Accessor's Parcel Numbers						
047220101	047205105	047220107	047205110	047205131	047205129	047220108
047220106	047220201	047220211	047220210	047220209	047203108	047205130
047203103	047206133	047206134	047205121	047203110		

2.1 Soils[7]

Soil types within the review area are present in Table 3 and shown on Figure 2, Soils. The National Technical Committee for Hydric Soils defines hydric soils; the Changes in Hydric Soils Database Selection Criteria (77 Federal Register 12234) outlines the current four hydric soil criteria. The hydric soils are indicated by shading on Table 3 below (USDA 2023a, 2023b).

Table 3. Soils Mapped within the Review Area

Soil Series/Unit	Soil Map Unit	Hydric Rating	Acreage
Cajon/Arizo	Cajon-Arizo Complex, 2–15% Slopes	Not Hydric	23.30
Mirage/Joshua	Mirage-Joshua Complex, 2–5% Slopes	Not Hydric	170.08
Pits	Pits	Hydric	16.06

4 Minimum Standards Item 10 (Description of Existing Field Conditions)
5 Minimum Standard Item 14 (Site Location Map)
6 Minimum Standards Item 4 (Directions)
7 Minimum Standards Item 13 (Soil Descriptions)

Table 3. Soils Mapped within the Review Area

Soil Series/Unit	Soil Map Unit	Hydric Rating	Acreage
Trigger/Sparkhule	Trigger-Sparkhule-Rock Outcrop Association, Steep	Not Hydric	17.46
		Total	**226.90**

Sources: USDA 2023a, 2023b.
Note: Shaded row denotes hydric soils.

2.2 Vegetation

Table 4 provides the vegetation communities and land cover acreages within the review area. Vegetation mapping was conducted by Glenn Lukos Associates in June 2022 within the project boundary and supplemented by Dudek using aerial imagery and existing data from Appendix C, Biological Technical Report of the Draft Environmental Impact Report: Apple Valley 143 Project (Town of Apple Valley 2023) within the off-site improvement areas and review area buffer. Two vegetation communities, *Larrea tridentata* Shrubland Alliance (Creosote Bush Scrub), and *Ericameria nauseosa* Shrubland Alliance (Rubber Rabbitbrush Scrub), and two land cover types, disturbed habitat and urban/developed land, were mapped in the review area.

Table 4. Vegetation Communities and Land Cover Types in the Review Area

Vegetation Community/Land Cover Type	Total Acreage
Ericameria nauseosa Shrubland Alliance (Rubber Rabbitbrush Scrub)	64.84
Larrea tridentata Shrubland Alliance (Creosote Bush Scrub)	102.76
Disturbed Habitat	11.07
Urban/Developed	48.23
Total	**226.90**

2.3 Watershed

The review area is within the Mojave subbasin (Hydrologic Unit Code [HUC] 8 18090208), Bell Mountain Wash-Mojave River watershed (HUC-10 1809020807), and the Bell Mountain Wash subwatershed (HUC-12 180902080705) (Figure 3, Hydrology) (USGS 2023). The Mojave subbasin comprises approximately 4,618 square miles and is entirely within San Bernardino County (USGS 2023). The primary geographic and surface hydrologic feature of the watershed is the Mojave River, which flows north for approximately 120 miles until it reaches Silver Dry Lake near the community of Baker. Some reaches of the Mojave River flow underground in the confined riverbed channel (Lahontan RWQCB 2021). The features within the review area drain across I-15 to the primary feature in the Bell Mountain Wash HUC 12, the Bell Mountain Wash, which flows northeast to southwest and drains into the Mojave River, a traditional navigable water (TNW), approximately 1.71 miles southwest (USGS 2023).

In addition to the USGS-defined watersheds noted above, the RWQCB also defines watershed boundaries by Hydrologic Units. The review area is within the South Lahontan Hydrologic Basin, the Mojave Hydrologic Unit, and the Upper Mojave Hydrologic Area (Lahontan RWQCB 2021).

2.4 Review Area Alterations, Current and Past Land Use

Dudek utilized Google Earth Pro (Google Earth 2023), Nationwide Environmental Title Research, LLC (NETR) Online Historic Aerials (NETR Online 2023), and the University of California, Santa Barbara (UCSB n.d.) database to assess historic and ongoing land uses within the review area. Quarry Road, the established dirt road that bisects the review area from I-15, was already established in the earliest aerial image available (i.e., January 1953) along with portions of the quarry/mining area in the eastern portion of the review area. The remainder of the review area, as well as the area to the north and south, was generally undeveloped on open space in January 1953 while I-15 was already constructed along the western boundary (NETR Online 2023). Other dirt roads are visible transecting the review area as early as January 1953 and expand throughout the years to the extent observed during the site visits. Normal circumstances were assumed to be present within the review area.

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3 Precipitation Data and Analysis[8]

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2022). To determine what constitutes a "typical year," USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from -4 (extreme drought) to +4 (very wet) (NOAA 2021) to assess drought conditions (i.e., PDSI Class). The APT determines wet versus dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Supplement). If the antecedent runoff condition (ARC) score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with an ARC score of 10 to 14; conditions are wetter than normal when an ARC score is greater than 14 (USACE 2020).

Table 5 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, ARC score, and antecedent precipitation condition. Based on the APT output provided in Appendix B and summarized in Table 5, the precipitation and climatic conditions for the review area were within the normal range during the time of the delineation.

Table 5. Antecedent Precipitation Tool Data for the Review Area

Survey Date	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
1/17/2023	-1.39	Wet Season	14	Normal Conditions
1/27/2023	-1.39	Wet Season	14	Normal Conditions

Notes: PDSI = Palmer Drought Severity Index; ARC = antecedent runoff condition.

Additionally, according to the U.S. Department of Agriculture Agricultural Applied Climate Information System (USDA 2023c), the area around the review area receives an average of 5.40 inches of precipitation annually.

8 Minimum Standards Item 11 (Discussion of Hydrology)

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4 Investigation Methods[9]

The jurisdictional delineation was conducted by Dudek biologists in January 2023 (Table 6). Prior to conducting the jurisdictional delineation, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data (USFWS 2023) and USGS National Hydrography Dataset (NHD) (USGS 2023) was reviewed to determine if the review area contained any features mapped by USFWS. Site-specific topographical data were reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands. Jurisdictional boundaries were mapped in the field using Esri Collector on a mobile device. Data from an unpublished existing jurisdictional delineation conducted by Dudek in June 2022 were used to supplement field investigation efforts, specifically within the off-site improvement area along I-15 and Falchion Road. In addition, both current and historical imagery were used to supplement field investigation efforts throughout the project boundary and were primarily relied upon for delineation of the southernmost off-site improvement area. Remote sensing was not used for the delineation.

Table 6. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions
01/17/2023	8:30 a.m.–3:26 p.m.	DA, KD, SG	41°F–48°F; 0% cloud cover; 5–12 mph wind
01/27/2023	8:00 a.m.–12:00 p.m.	KD, ES	40°F–52°F; 0% cloud cover; 0–7 mph wind

Personnel: DA = Dylan Ayers; KD = Kathleen Dayton; SG = Sarah Greely; Eilleen Salas.
Note: mph = miles per hour.

4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on topographical maps in conjunction with Esri Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual (USACE 2008b).

Wetland Determination Forms were not taken throughout the review area given the lack of drainages with vegetation communities where a predominance of hydrophytic vegetation was present to meet USACE three-parameter wetlands parameters. OHWM data forms, based on the updated OHWM data sheets (USACE 2010), were completed at representative cross sections of non-wetland waters to capture their characteristics and widths. All data forms can be found in Appendix C.

[9] Minimum Standards Item 8 (Dates of Field Work), Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide), Item 12 (Statement Regarding Use of Remote Sensing), Item 18 (Data Forms) and Item 19 (Methods)

4.2 Regional Water Quality Control Board

Waters of the state regulated by RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). As described by SWRCB (2021), wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979). CDFW also regulates riparian vegetation communities that occur beyond the limits of regulated streambeds.

5 Description of Observed Potential Aquatic Resources[10]

The following descriptions document the presence or absence of aquatic resource indicators within the review area per the methodologies discussed in Section 4, Investigation Methods. Figure 4, Potential Aquatic Resources, illustrates the location and extent of the features within the review area.[11] A description of these features and their observed OHWM indicators is provided below. Appendix C contains the data forms completed during the site visits, which are also summarized below. Representative photographs of these potential resources are provided in Appendix D.[12] The ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is included in Appendix E.[13]

Non-Wetland Water 5

Non-Wetland Water (NWW) 05 is a feature composed of two drainages located in the northern portion of the review area. Cross sections T-18 and T-19 recorded the following indicators of an OHWM: a break in bank slope, a change in average sediment texture, and a change in vegetation cover between the active floodplain and adjacent uplands (Appendix C). These drainages initiate within the review area and generally flow east to west; however, the indicators noted above are inconsistent in the downstream segment of the feature (Photo Number 6, Appendix D; Figure 4). Flows were observed near a culvert at the I-15 frontage road that may convey flows across I-15 toward Bell Mountain Wash, approximately 0.31 miles northwest (Figure 4). NWW-05 did not contain invertebrates, algae, fish, and/or other aquatic taxa that could indicate consistent and/or permanent flows on site. Furthermore, flowing or standing water was not observed within the feature. As such, it appears NWW-05 only conveys ephemeral flows that only drain for short durations in direct response to precipitation or rainfall events.

Non-Wetland Water 6

NWW-06 is a feature located in the northern portion of the review area that appears to collect runoff from the aggregate mining facility in and adjacent to the eastern portion of the review area. These drainages flow southeast to northwest and may cross an I-15 culvert crossing to reach Bell Mountain Wash, approximately 0.31 miles northwest (Figure 4). Cross section T-20 recorded the following indicators of an OHWM: a break in bank slope, a change in average sediment texture, and a change in vegetation cover between the active floodplain and adjacent uplands (Appendix C). NWW-06 did not contain invertebrates, algae, fish, and/or other aquatic taxa that could indicate consistent and/or permanent flows on site. Furthermore, flowing or standing water was not observed within the feature. As such, it appears NWW-06 only conveys ephemeral flows that only drain for short durations in direct response to precipitation or rainfall events.

Non-Wetland Water 7

NWW-07 is a feature located in the central northwestern portion of the review area that appears to collect runoff from dirt roads surrounding and leading up to the aggregate mining facility. The drainages generally flow from

10 Minimum Standards Item 6 (Aquatic Resource Narrative)
11 Minimum Standards Items 7 and 16 (Delineation Maps)
12 Minimum Standards Item 17 (Ground Photos)
13 Minimum Standards Items 9 (Table Listing All Aquatic Resources) and 15 (ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet)

southeast to northwest, traveling across several culvert inlets and outlets on site, before reaching the I-15 frontage road (Photo Number 12, Appendix D). Flows continue off site across I-15 toward Bell Mountain Wash, approximately 0.31 miles northwest (Figure 4). Cross section T-22 recorded the following indicators of an OHWM: a break in bank slope, a change in average sediment texture, and a change in vegetation cover between the active floodplain and adjacent uplands (Appendix C). NWW-07 did not contain invertebrates, algae, fish, and/or other aquatic taxa that could indicate consistent and/or permanent flows on site. Furthermore, flowing or standing water was not observed within the feature. As such, it appears NWW-07 only conveys ephemeral flows that only drain for short durations in direct response to precipitation or rainfall events.

Non-Wetland Water 8

NWW-08 is a feature located in the central portion of the review area that appears to collect runoff from a dirt road surrounding and leading up to the aggregate mining facility. Cross section T-23 recorded the following indicators of an OHWM: a break in bank slope, a change in average sediment texture, and a change in vegetation cover between the active floodplain and adjacent uplands (Appendix C). The feature generally flows east to west before draining off site near the I-15 frontage road (Appendix D). Flow may cross an I-15 culvert crossing to reach Bell Mountain Wash, approximately 0.31 miles northwest (Figure 4). NWW-08 did not contain invertebrates, algae, fish, and/or other aquatic taxa that could indicate consistent and/or permanent flows on site. Furthermore, flowing or standing water was not observed within the feature. As such, it appears NWW-08 only conveys ephemeral flows that only drain for short durations in direct response to precipitation or rainfall events.

Non-Wetland Water 9

NWW-09 is a braided feature located near the southwest segment of the review area. These drainages initiate on site and generally flow southeast to northwest before draining off site at a I-15 frontage road culvert inlet (Photo Number 20, Appendix D). Flows continue off site across I-15 toward Bell Mountain Wash, approximately 0.43 miles northwest (Figure 4). Cross section T-25 recorded the following indicators of an OHWM: a break in bank slope, a change in average sediment texture, and a change in vegetation cover between the active floodplain and adjacent uplands (Appendix C; Photo Number 19, Appendix D). NWW-09 did not contain invertebrates, algae, fish, and/or other aquatic taxa that could indicate consistent and/or permanent flows on site. Furthermore, flowing or standing water was not observed within the feature. As such, it appears NWW-09 only conveys ephemeral flows that only drain for short durations in direct response to precipitation or rainfall events.

Non-Wetland Water 11

NWW-11 is a braided feature located in the southwest corner of the review area. These drainages appear to initiate off site, generally flowing southeast to northwest before draining into a culvert at the I-15 frontage road. Flows continue off site across I-15 toward Bell Mountain Wash, approximately 0.46 miles northwest (Figure 4). Cross section T-25 provides representative OHWM data for NWW-11 given the similar conditions observed via aerials within NWW-09 (i.e., similar aquatic resource type and indicators). The recorded indicators of an OHWM at cross section T-25 include a break in bank slope, a change in average sediment texture, and a change in vegetation cover between the active floodplain and adjacent uplands (Appendix C). Based on a review of current and historic aerials (Google Earth 2023), NWW-11 appears to convey similar ephemeral flows as those observed in the primary project boundary.

Non-Wetland Water 12

NWW-12 is a feature located in the southwest corner of the review area. The feature appears to initiate off site, generally flowing southeast to northwest toward the I-15 frontage road. Flow may cross an I-15 culvert crossing to reach Bell Mountain Wash, approximately 0.49 miles northwest (Figure 4). Cross section T-25 provides representative OHWM data for NWW-12 given the similar conditions observed via aerials within NWW-09 (i.e., similar aquatic resource type and indicators). The recorded indicators of an OHWM at cross section T-25 include a break in bank slope, a change in average sediment texture, and a change in vegetation cover between the active floodplain and adjacent uplands (Appendix C). Based on a review of current and historic aerials (Google Earth 2023), NWW-12 appears to convey similar ephemeral flows as those observed in the primary project boundary.

Other Features

In addition to the non-wetland features describes above, multiple upland swales were also observed within the review area. These features lacked sufficient indicators of an OHWM and/or a defined bed and bank during field investigations, which excludes them from consideration as potential jurisdictional waters or jurisdictional streambed. Therefore, they are not depicted in Figure 4 or discussed further. Cross sections T-16, T-19, T-22, and T-24 were collected to demonstrate the lack of an OHWM and/or indicators of a defined bed and bank and describes these non-jurisdictional features. Additionally, photos of these areas are provided in Appendix D and photo locations are depicted on Figure 4.

5.1 Waters of the United States (USACE)

On August 29, 2023, the U.S. Environmental Protection Agency (EPA) and USACE issued a final rule to amend the final Revised Definition of "Waters of the United States" rule (88 CFR 3004–3144; published in the Federal Register on January 18, 2023, and effective on March 20, 2023) to conform with the *Sackett v. EPA* decision. Some of the key changes to the rule included the removal of the significant nexus test from consideration when identifying tributaries and other waters as federally protected and the revision of the adjacency test when identifying federally jurisdictional wetlands. Under the EPA's new definition, a "waters of the U.S." is a relatively permanent, standing, or continuously flowing body of water that has an apparent surface connection to a TNW.

The seven ephemeral drainages present within the review area did not appear to meet the definition of a "waters of U.S.," specifically 33 CFR 328.3(a)(3), as the features do not appear to be "relatively permanent, standing or continuously flowing bodies of water." As previously discussed and shown in Appendix D, the features throughout the review area appear to convey ephemeral flows that only drain for short durations in direct response to precipitation or rainfall events, and permanent or consistent flow was not distinguishable during field observation or in a review of recent and historic aerials (Google Earth 2023). Therefore, all features present are not anticipated to be subject to USACE jurisdiction because these features do not meet the relatively permanent standard as a water of the U.S. However, a final determination will be made by USACE during the AJD process.

5.2 Waters of the State (RWQCB)

Approximately 1.68 acres of non-wetland waters potentially regulated by the RWQCB are present within the review area. Contrary to the USACE, the RWQCB regulates all surface waters under the Porter-Cologne Water Quality Control

Act. All seven ephemeral drainages have been identified as waters of the state. Table 7 lists the features within the review area that are RWQCB jurisdictional.

Table 7. Potential RWQCB Aquatic Resources Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet
Non-Wetland Waters		
NWW-05	34.5784194, -117.2652843	0.25
NWW-06	34.5765027, -117.2661094	0.89
NWW-07	34.5760376, -117.2692687	0.19
NWW-08	34.5750324, -117.2701210	0.07
NWW-09	34.5733813, -117.2731468	0.24
NWW-11	34.5706874, -117.2768704	0.02
NWW-12	34.5700568, -117.2773633	0.02
	Grand Total	**1.68**

Notes: RWQCB = Regional Water Quality Control Board; NWW = non-wetland water.

5.3 CDFW Jurisdiction

All the features described in Section 5.2, Waters of the State (RWQCB), have been identified as streambed potentially regulated by CDFW. Because CDFW regulates from bank to bank, certain portions of the review area where the top of a channel bank extended beyond the OHWM are subject to regulation by CDFW as streambed. These areas are displayed in the Figure 4. The total acreage of CDFW jurisdictional areas are listed in Table 8.

Table 8. Potential CDFW Aquatic Resources Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
Streambed		
NWW-05	34.5784194, -117.2652843	0.25
NWW-06	34.5765027, -117.2661094	1.00
NWW-07	34.5760376, -117.2692687	0.34
NWW-08	34.5750324, -117.2701210	0.07
NWW-09	34.5733813, -117.2731468	0.24
NWW-11	34.5706874, -117.2768704	0.02
NWW-12	34.5700568, -117.2773633	0.02
	Grand Total	**1.93**

Notes: CDFW = California Department of Fish and Wildlife; NWW = non-wetland water.
[1] Totals may not sum due to rounding.

5.4 National Wetland Inventory and National Hydrography Dataset

The review area contains one resource from the USFWS NWI database mapped as intermittent riverine (USFWS 2023) (Figure 3). This feature generally overlaps with portions of NWW-06 and NWW-07. The review area contains six resources from the USGS NHD database mapped as ephemeral stream/river features (USGS 2023) (Figure 3). These features generally overlap with portions of NWW-05, NWW-06, NWW-07, and NWW-09. USGS NHD also maps one additional ephemeral stream/river feature near the southern corner of the property boundary within the review area; however, it does not correspond with any observed potential aquatic features. Neither USFWS NWI or USGS NHD map any features within the delineated extent of NWW-11 or NWW-12.

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6 Results and Conclusions

Based on the jurisdictional delineation and review of relevant information provided in this ARDR, seven non-wetland water features were delineated within the review area. These features may be regulated by RWQCB and CDFW. In total, 1.68 acres of non-wetland waters (below OHWM) fall under RWQCB jurisdiction and 1.93 acres of CDFW Streambed (below and above OHWM, to top of bank) occurs in the review area. As noted in Section 5, Description of Observed Potential Aquatic Resources, all the features within the review area do not appear to meet the definition of a waters of the U.S., specifically 33 CFR 328.3(a)(3), as the features do not appear to be "relatively permanent, standing or continuously flowing bodies of water." As such, the features may not be regulated by USACE via the AJD process. This ARDR can be used by those agencies to determine if they would regulate the features described herein. The GIS data for the delineation are provided digitally (Appendix F). [14]

[14] Minimum Standards Item 20 (Digital Data)

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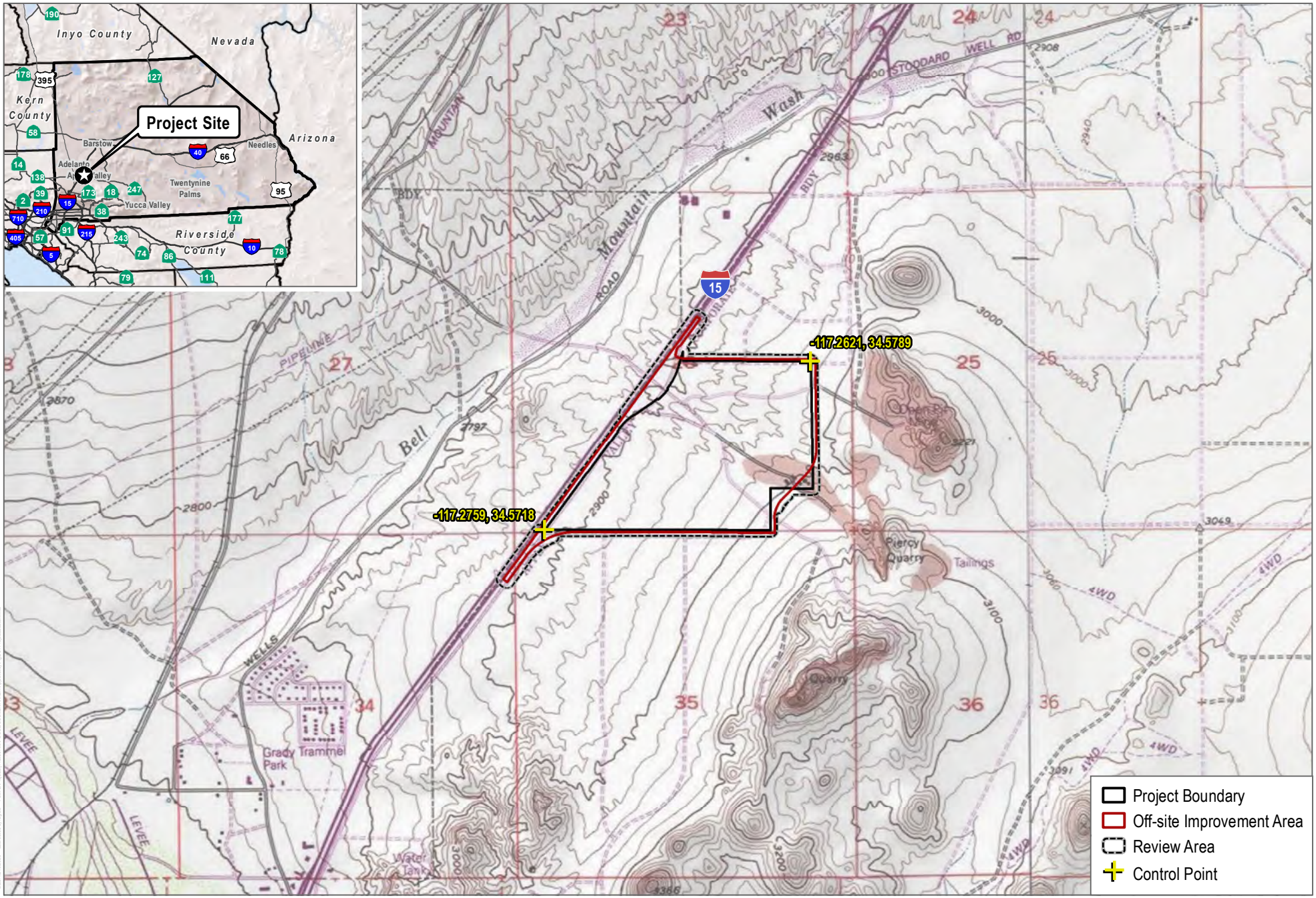

SOURCE: USGS 7.5-Minute Series Victorville Quadrangle; Township 6N / Range 4W / Sections 26, 34, 35; County of San Bernardino

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

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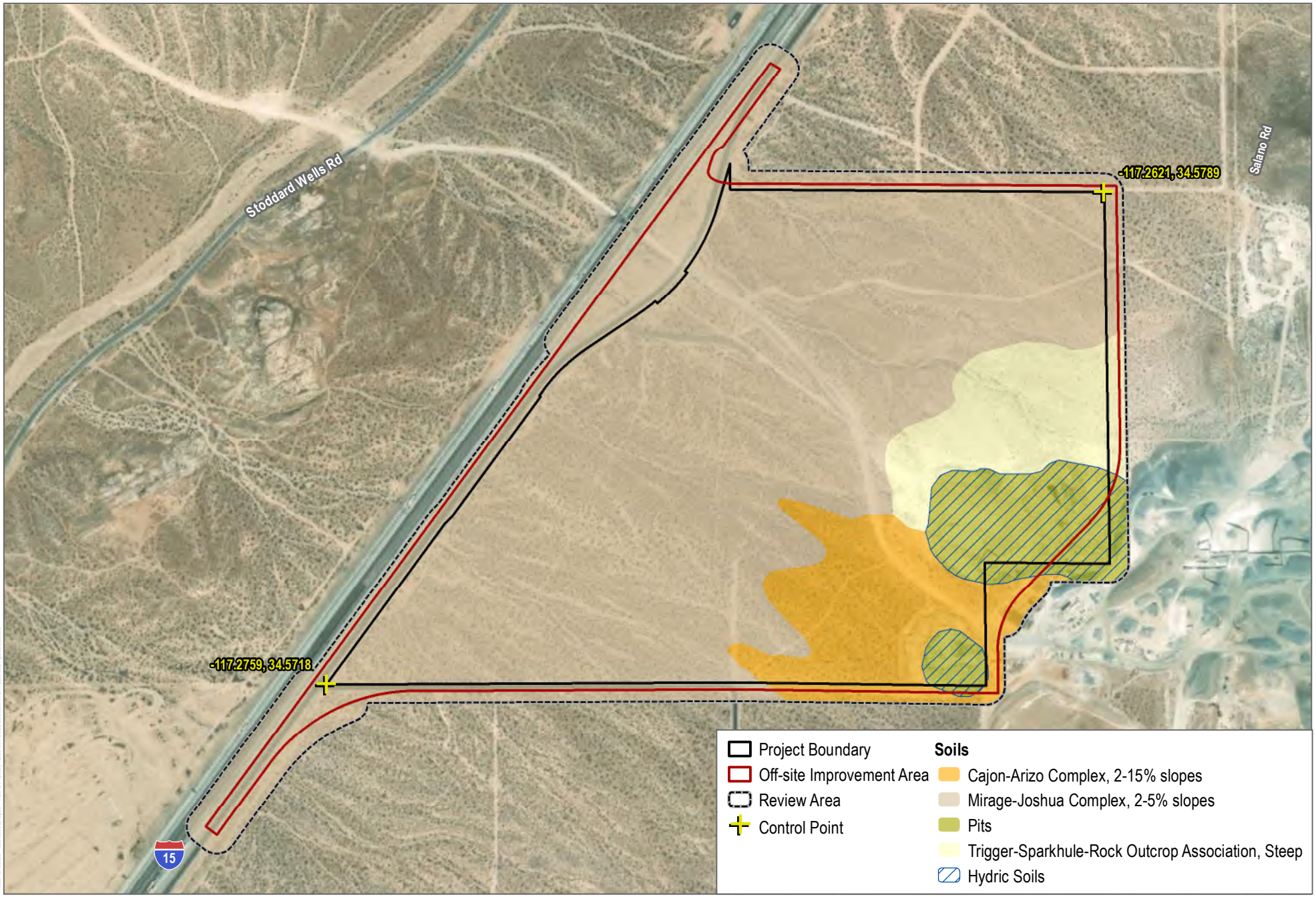

SOURCE: County of San Bernardino; USDA NRCS; Open Street Map; ESRI World Imagery 2022

DUDEK

0 300 600 Feet

FIGURE 2

Soils

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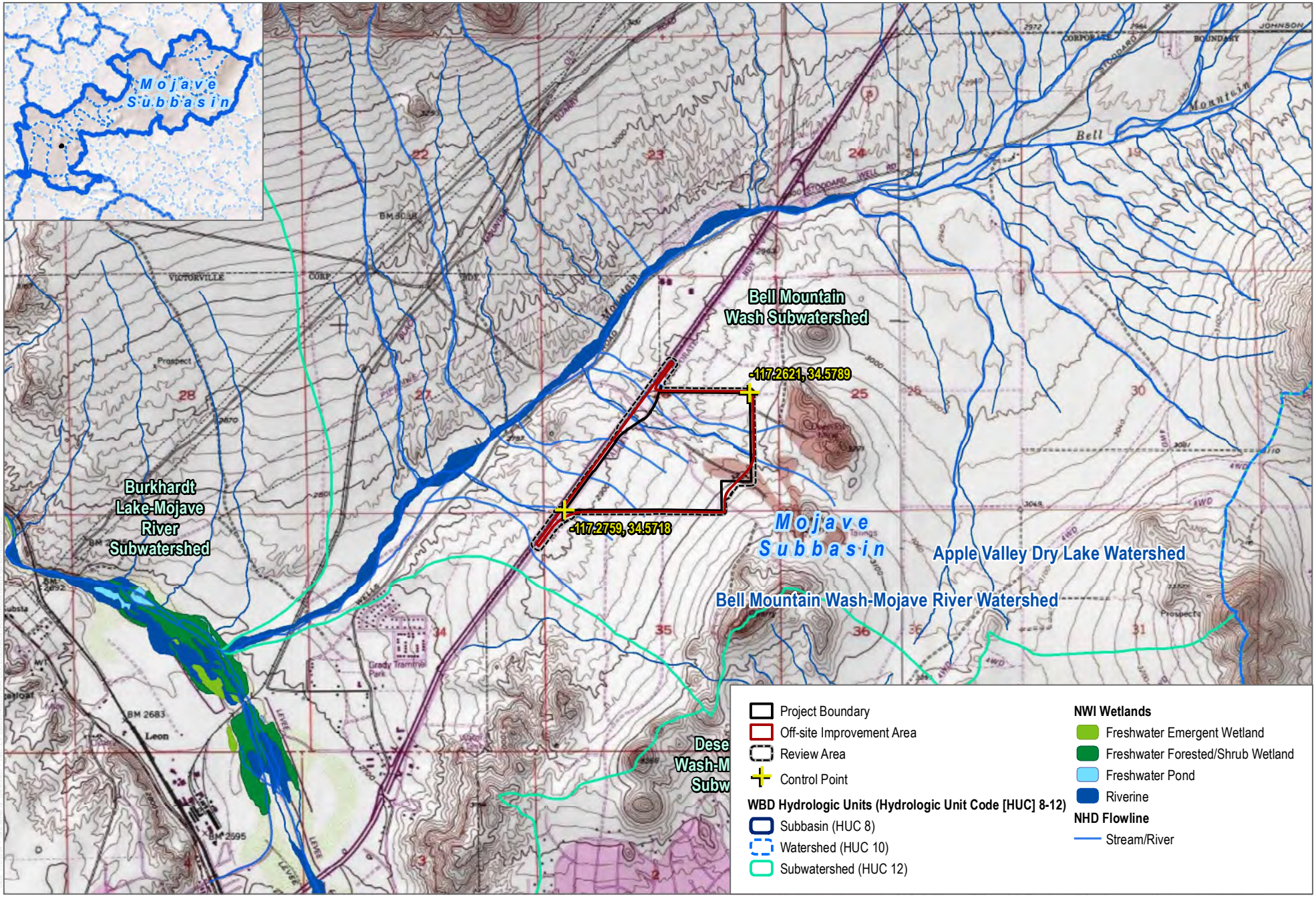

SOURCE: USGS 2023; NWI 2023; RWQCB 2023; USGS Topo Maps 2023

DUDEK

0 0.25 0.5 Miles

FIGURE 3

Hydrology

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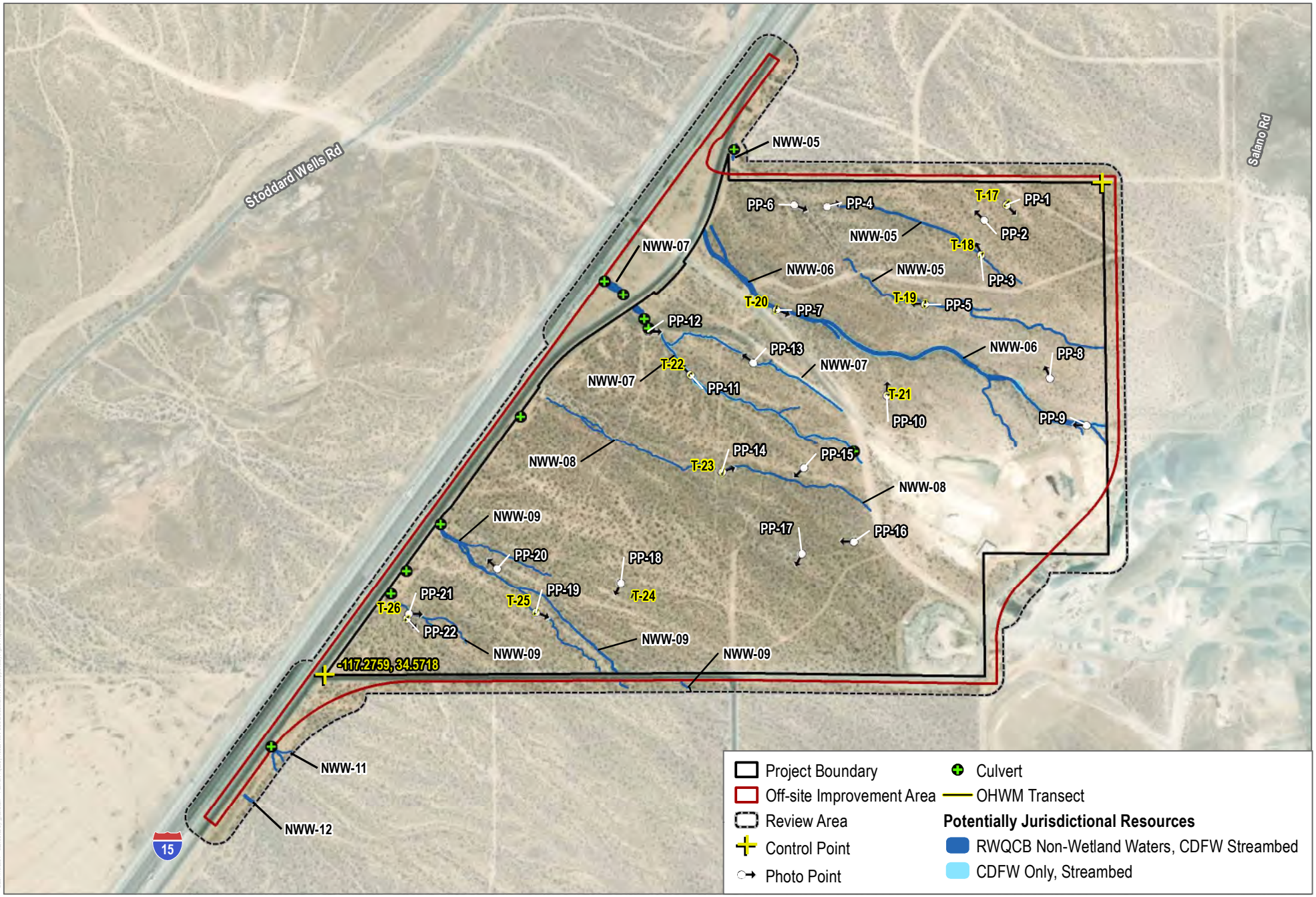

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

DUDEK

0 300 600 Feet

FIGURE 4

Potential Aquatic Resources

Inland Empire North Logistics Center Apple Valley Aquatic Resources Delineation Report

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Appendix A

Request for a Jurisdictional Determination

U.S. Army Corps of Engineers (USACE)

REQUEST FOR JURISDICTIONAL DETERMINATION (JD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0024 Expires 2024-04-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the review area that are or that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary, however, if the information is not provided there may be some delay in processing your request. Failure to provide this information will not result in an adverse action.
System of Record Notice (SORN): The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website:
http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. To (*District Name*): Los Angeles District

2. I am requesting a JD on property located at (*Street Address*): East of I-15, from Norco St. to just south of Falchion Rd.

City/Township/Parish: Apple Valley County: San Bernardino State: California

Acreage of Parcel/Review Area for JD: 226.9

Section: 26, 34, and 35 Township: 6 North Range: 4 West

Latitude (*decimal degrees*): 34.575069 °

Longitude (*decimal degrees*): -117.267789 °

(*For linear projects, please include the center point of the proposed alignment.*)

3. Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. ☐ I currently own this property. ☐ I plan to purchase this property.

☒ I am an agent/consultant acting on behalf of the requester.

☐ Other (*please explain*):

N/A

5. Reason for request: (*check as many as applicable*)

- [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- [ ] I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- [ ] A Corps JD is required in order to obtain my local/state authorization.
- [x] I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- [ ] I believe that the site may be comprised entirely of dry land.
- [ ] Other:

N/A

6. Type of determination being requested:

- [x] I am requesting an approved JD.
- [ ] I am requesting a preliminary JD.
- [ ] I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
- [ ] I am unclear as to which JD I would like to request and require additional information to inform my decision.

7. Typed or Printed Name: Jessica Haughton Daytime Phone No.: 702-330-1715

Company Name: Synergy Consulting Email Address: jhaughton@synergyconsultingca.com

Address: 1818 Library Street, Suite 500, Reston, VA 20190

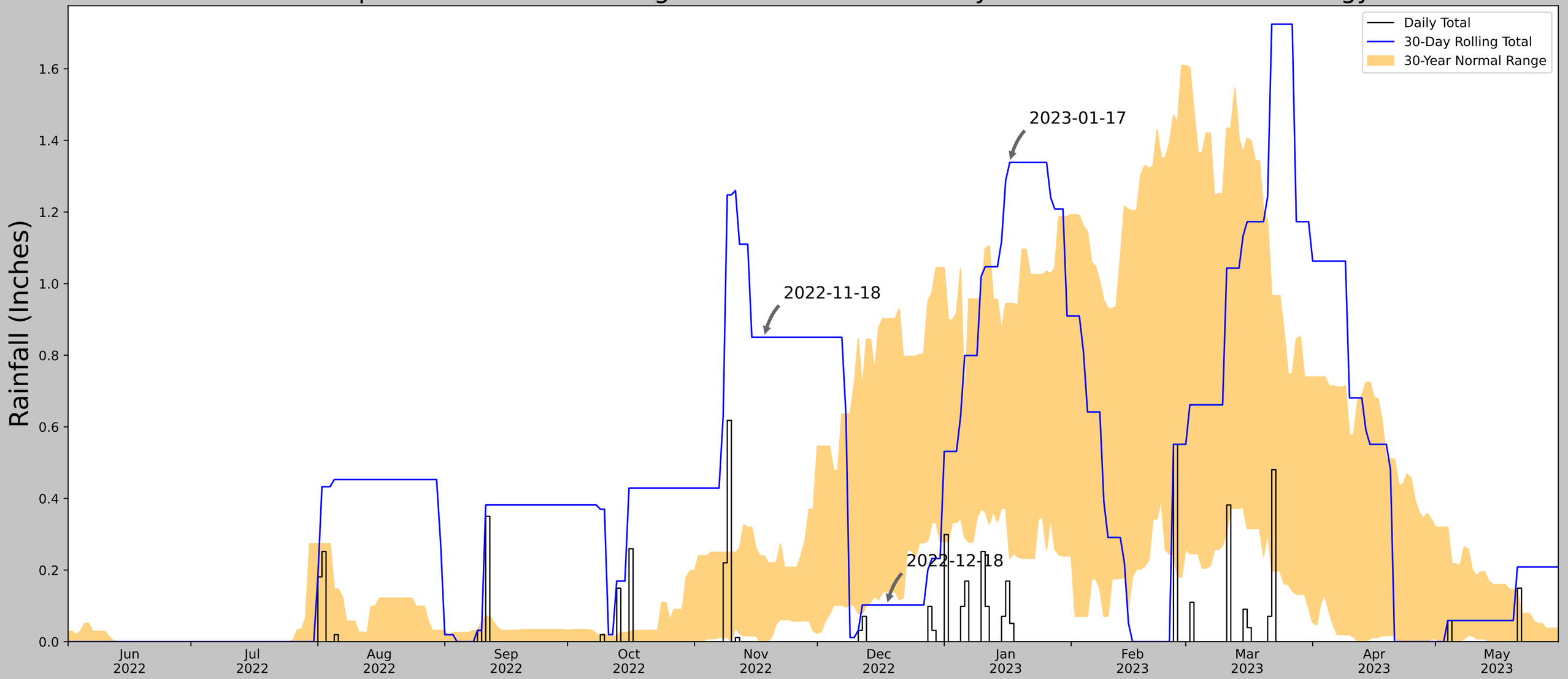
By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature:	Date:

Appendix B

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.581553, -117.273892
Observation Date	2023-01-17
Elevation (ft)	2820.099
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Wet Season

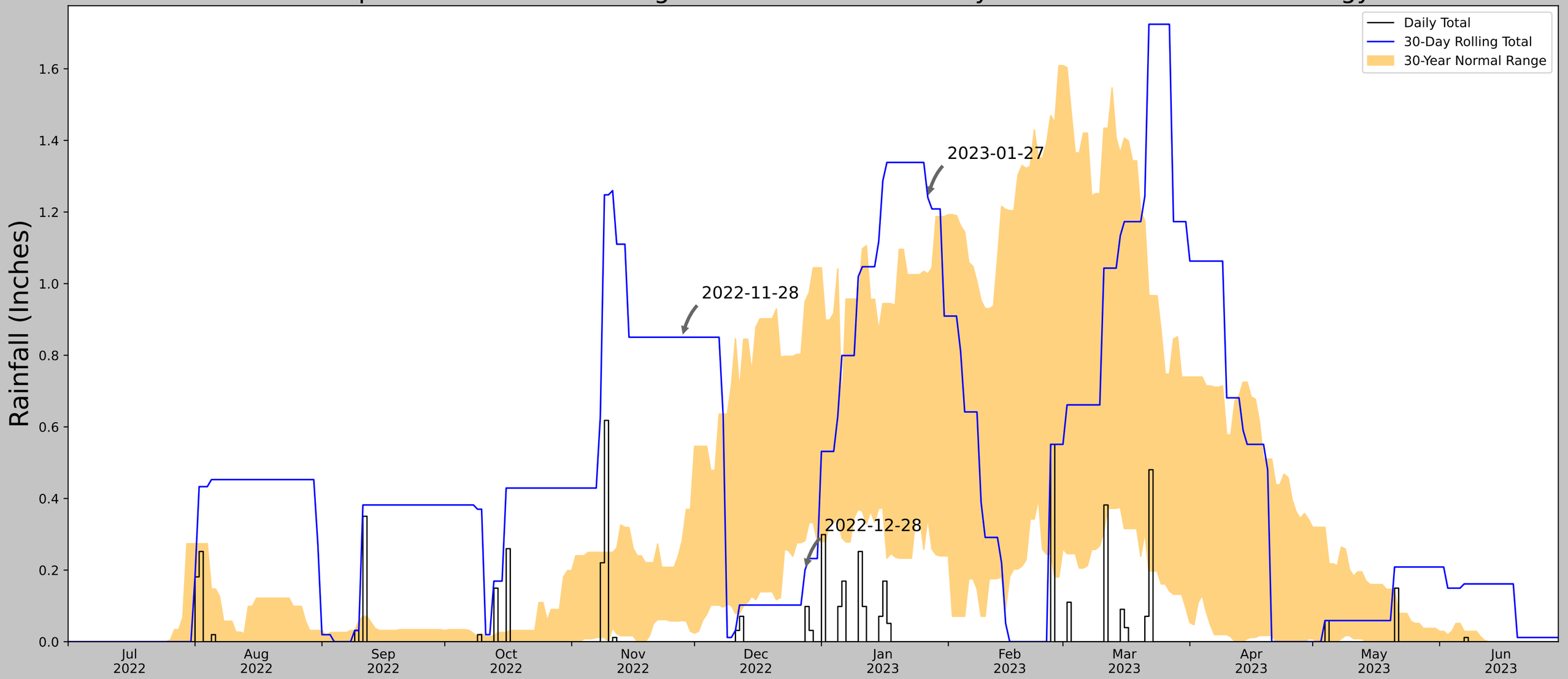
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-01-17	0.233071	0.944488	1.338583	Wet	3	3	9
2022-12-18	0.13937	0.901969	0.102362	Dry	1	2	2
2022-11-18	0.0	0.240157	0.850394	Wet	3	1	3
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
VICTORVILLE	34.5292, -117.2928	2879.921	3.774	59.822	1.924	11065	90
APPLE VALLEY 2.6 SSW	34.4957, -117.2353	2880.906	4.009	0.985	1.808	96	0
APPLE VALLEY 1.9 N	34.556, -117.2111	2935.039	5.005	55.118	2.528	1	0
APPLE VALLEY 2.6 SE	34.5043, -117.1808	2940.945	6.604	61.024	3.375	1	0
EL MIRAGE	34.5892, -117.6303	2950.131	19.647	70.21	10.221	188	0
LYTLE CREEK RS	34.2383, -117.4708	2729.987	22.517	149.934	13.509	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.581553, -117.273892
Observation Date	2023-01-27
Elevation (ft)	2820.099
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-01-27	0.346457	1.027559	1.240158	Wet	3	3	9
2022-12-28	0.28189	0.95	0.200787	Dry	1	2	2
2022-11-28	0.059055	0.283465	0.850394	Wet	3	1	3
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
VICTORVILLE	34.5292, -117.2928	2879.921	3.774	59.822	1.924	11065	90
APPLE VALLEY 2.6 SSW	34.4957, -117.2353	2880.906	4.009	0.985	1.808	96	0
APPLE VALLEY 1.9 N	34.556, -117.2111	2935.039	5.005	55.118	2.528	1	0
APPLE VALLEY 2.6 SE	34.5043, -117.1808	2940.945	6.604	61.024	3.375	1	0
EL MIRAGE	34.5892, -117.6303	2950.131	19.647	70.21	10.221	188	0
LYTLE CREEK RS	34.2383, -117.4708	2729.987	22.517	149.934	13.509	2	0

Appendix C
Data Forms

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: N/A
Investigator(s): A. Cassady and E. Salas

Date: 1/27/23 **Time:** 0923
Town: Apple Valley **State:** CA
Photo begin file#: 1 **Photo end file#:** 1

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.578611, -117.263611

Potential anthropogenic influences on the channel system:

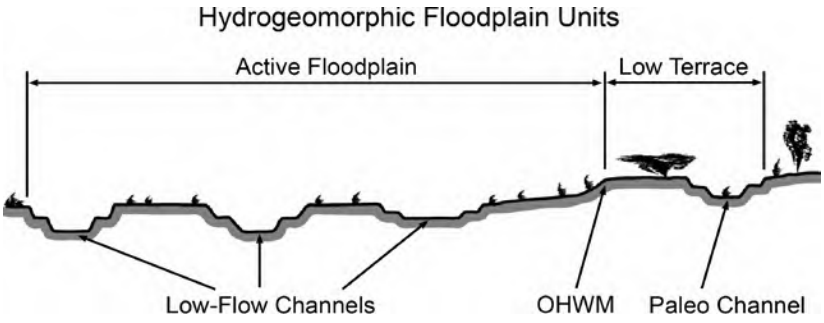
Aggregate plant located directly east of the review area. I-15 to the west of review area. Surrounding area to data point is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

Brief site description:

Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Lower topographic area between two gentle slopes.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

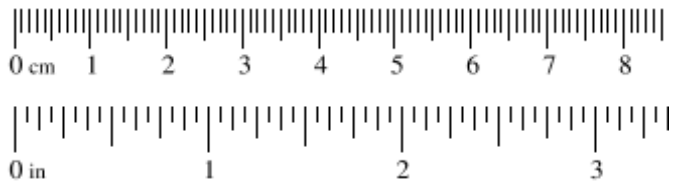


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

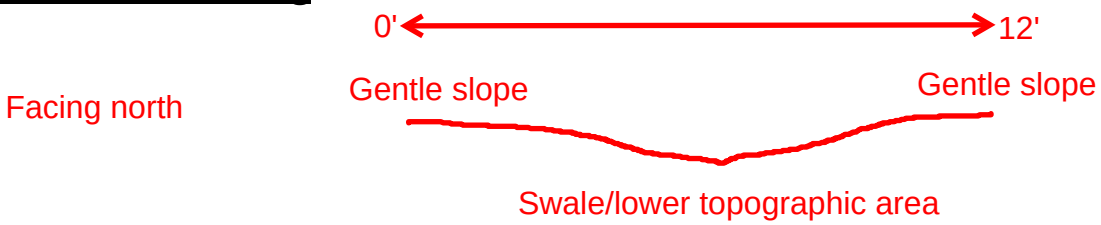
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-17 **Date:** 1/27/23 **Time:** 0923

Cross section drawing:



OHWM

GPS point: 34.576944, -117.272778

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☑ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Swale-like feature (i.e., slight concave/lower topographic area) that does not appear to sustain sufficient flows to create a break in bank slope and/or bed and bank. Average sediment texture and vegetation species did not differ from the concave area to the adjacent slopes. A slight change in vegetation cover is visible (generally unvegetated to vegetated uplands); however, no other OHWM indicators are present. Data was collected after a recent rain event.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: IE North Logistics Center **Cross section ID:** T-17 **Date:** 1/27/23 **Time:** 0923

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: NWW-05
Investigator(s): A. Cassady and E. Salas

Date: 1/27/23 **Time:** 0900
Town: Apple Valley **State:** CA
Photo begin file#: 3 **Photo end file#:** 3

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.577778, -117.264167

Potential anthropogenic influences on the channel system:

Dirt road located upstream/east of feature. Aggregate plant located directly east of the review area. I-15 to the west of review area. Surrounding area to data point is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

Brief site description:

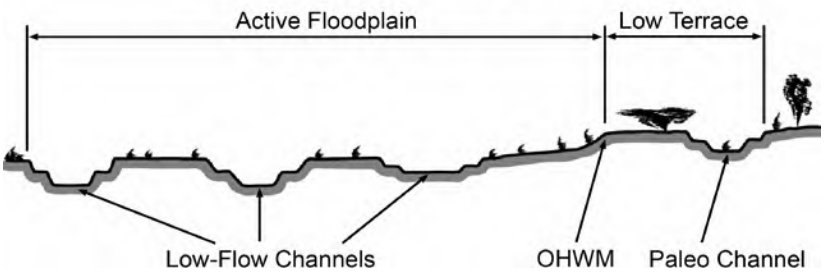
Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Braided feature within creosote bush scrub.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

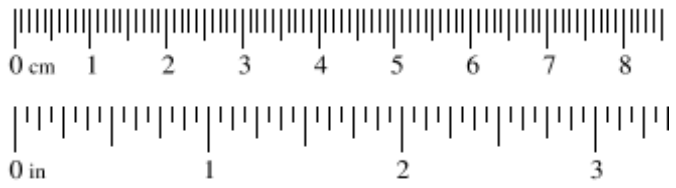


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-18 **Date:** 1/27/23 **Time:** 0900

Cross section drawing:

Facing northwest (downstream)



OHWM

GPS point: 34.577778, -117.264167

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 1-foot-wide OHWM defined by a change in average sediment texture, change in vegetation cover, and break in bank slope. Data collected after recent rain event.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Low flow channel is indistinguishable from active floodplain/OHWM.

Project ID: IE North Logistics Center **Cross section ID:** T-18 **Date:** 1/27/23 **Time:** 0900

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☑ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☑ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Approximately 1-foot-wide AF with defined break in bank slope, less than 1' vertical depth from uplands to AF.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Sand w/ pebbles

Total veg cover: 6 % Tree: 0 % Shrub: 6 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☑ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

No true low terrace, continues from AF to uplands which are mapped as creosote bush scrub. Uplands defined by soil development and surface relief.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: NWW-05
Investigator(s): A. Cassady and D. Ayers

Date: 1/17/23 **Time:** 1035
Town: Apple Valley **State:** CA
Photo begin file#: 5 **Photo end file#:** 5

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.577211, -117.26522

Potential anthropogenic influences on the channel system:

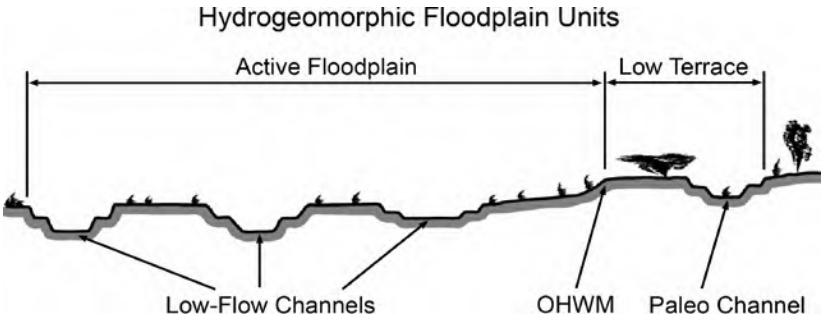
Dirt road transects the feature. Aggregate plant located directly east of the review area. I-15 to the west of review area. Surrounding area is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

Brief site description:

Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Feature within creosote bush scrub.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

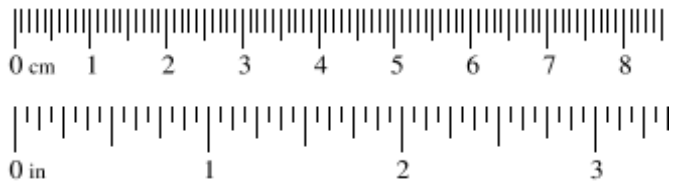


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-19 **Date:** 1/17/23 **Time:** 1035

Cross section drawing:



OHWM

GPS point: 34.577211, -117.26522

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 3-foot-wide OHWM defined by a change in average sediment texture, change in vegetation cover, and break in bank slope. Data collected after recent rain event.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: Within AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Low flow channel is indistinguishable from active floodplain/OHWM.

Project ID: IE North Logistics Center **Cross section ID:** T-19 **Date:** 1/17/23 **Time:** 1035

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine sand w/ pebbles

Total veg cover: 2 % Tree: 0 % Shrub: 2 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☑ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Approximately 3-foot-wide AF with defined break in bank slope. Sediment texture consist of fine sand with cobbles/pebbles intermixed throughout.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 20 % Tree: 0 % Shrub: 20 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☑ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

No true low terrace, continues from AF to uplands which are mapped as creosote bush scrub. Uplands defined by soil development and surface relief.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: NWW-06
Investigator(s): A. Cassady and S. Greely

Date: 1/17/23 **Time:** 1055
Town: Apple Valley **State:** CA
Photo begin file#: 7 **Photo end file#:** 7

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.576944, -117.267778

Potential anthropogenic influences on the channel system:

Dirt road transects the feature. Feature appears to collect runoff from aggregate plant located directly east of the review area. I-15 to the west of review area. Surrounding area is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

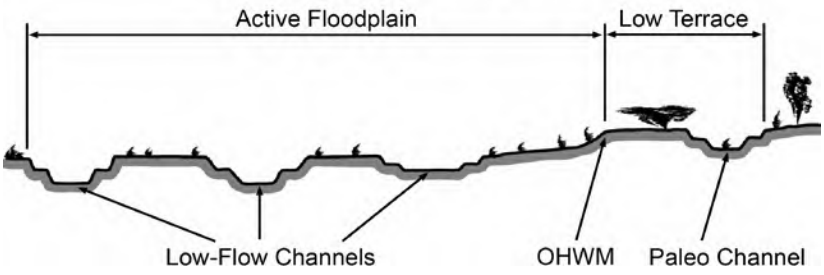
Brief site description:

Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Braided feature within creosote bush scrub.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

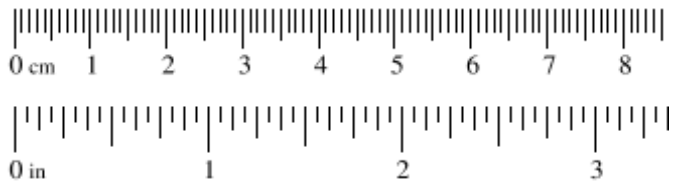


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

Wentworth Size Classes

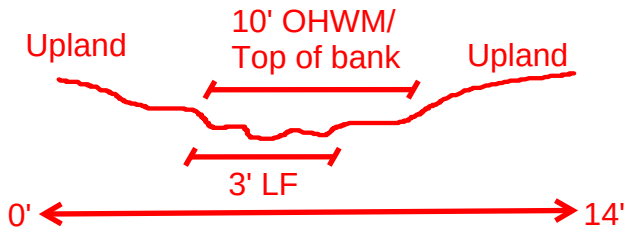
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-20 **Date:** 1/17/23 **Time:** 1055

Cross section drawing:

Facing west (downstream)



OHWM

GPS point: 34.576944, -117.267778

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 10-foot-wide OHWM defined by a change in average sediment texture, change in vegetation cover, and break in bank slope. One approximately 3-foot-wide LF channel observed within the OHWM with various ripples throughout. Data collected after recent rain event.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: Within AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine silt

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 3-foot-wide LF channel within OHWM defined by various ripples throughout. Sediment texture consist of fine silt.

Project ID: IE North Logistics Center **Cross section ID:** T-20 **Date:** 1/17/23 **Time:** 1055

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- ☑ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☑ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Approximately 10-foot-wide AF with defined break in bank slope. Ripples present within LF and AF throughout.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 35 % Tree: 0 % Shrub: 35 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☑ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

No true low terrace, continues from AF to uplands which are mapped as creosote bush scrub. Uplands defined by soil development and surface relief. Sediment texture consist of fine sand with cobbles intermixed.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: N/A
Investigator(s): A. Cassady and D. Ayers
Date: 1/17/23
Town: Apple Valley
Photo begin file#: 10
Time: 1253
State: CA
Photo end file#: 10

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.575861, -117.265957

Potential anthropogenic influences on the channel system:

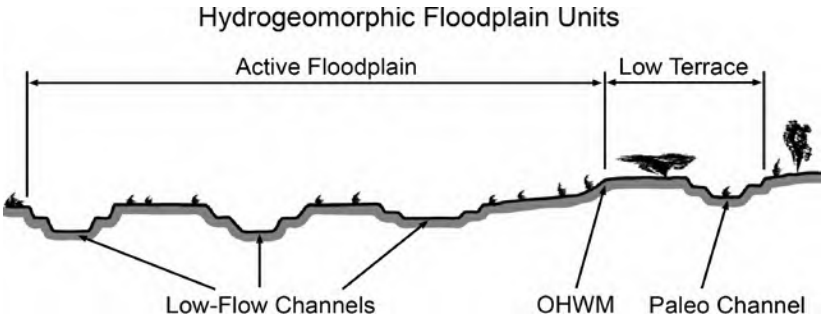
Aggregate plant located directly east of this area/the review area. I-15 to the west of review area. Surrounding area to data point is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

Brief site description:

Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Lower topographic area between two slopes.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

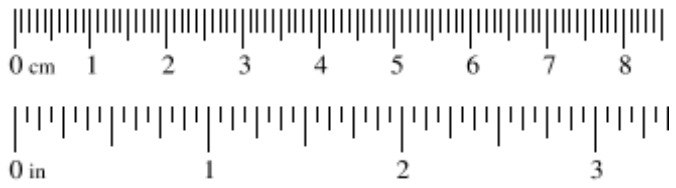


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

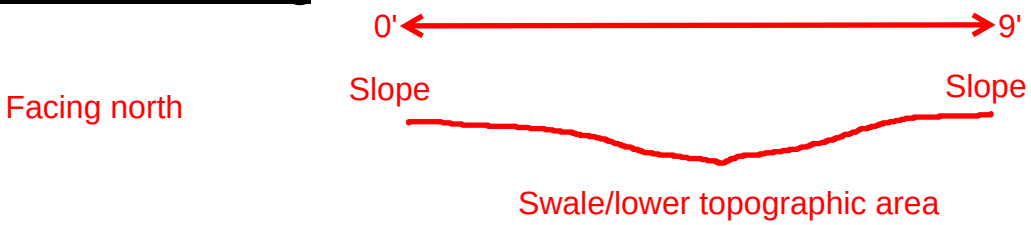
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-21 **Date:** 1/17/23 **Time:** 1253

Cross section drawing:



OHWM

GPS point: 34.575861, -117.265957

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Swale-like feature (i.e., slight concave/lower topographic area) in between slopes that does not appear to sustain sufficient flows to create a break in bank slope and/or bed and bank. Vegetation species did not differ from the concave area to the adjacent slopes. A slight change in sediment texture is visible; however, no other OHWM indicators are present. Data was collected after a recent rain event.

Floodplain unit:

- [ ] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

N/A

Project ID: IE North Logistics Center **Cross section ID:** T-21 **Date:** 1/17/23 **Time:** 1253

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: NWW-07
Investigator(s): A. Cassady and K. Dayton

Date: 1/17/23 **Time:** 1322
Town: Apple Valley **State:** CA
Photo begin file#: 11 **Photo end file#:** 11

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.576111, -117.269167

Potential anthropogenic influences on the channel system:

Dirt road located adjacent/north of the feature. Feature appears to collect runoff from aggregate plant/road located directly east of the review area. I-15 to the west of review area. Surrounding area is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

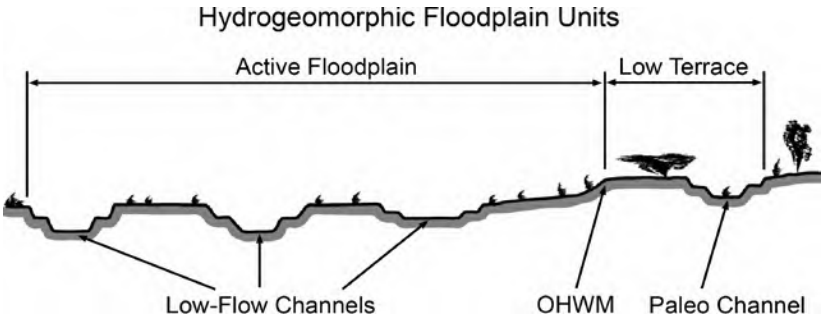
Brief site description:

Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Braided feature within creosote bush scrub.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

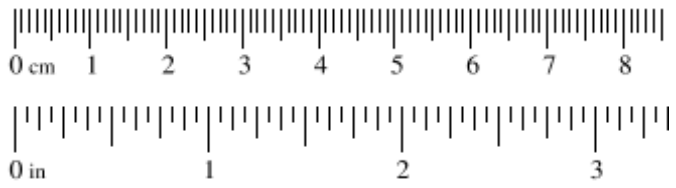


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

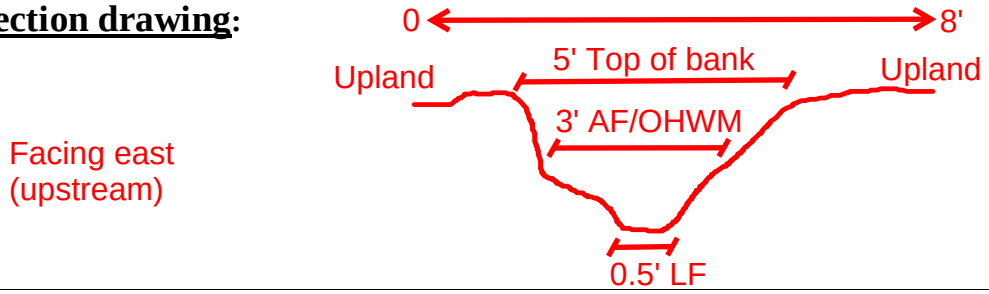
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-22 **Date:** 1/17/23 **Time:** 1322

Cross section drawing:



OHWM

GPS point: 34.576111, -117.269167

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 3-foot-wide OHWM defined by a change in average sediment texture, change in vegetation cover, and break in bank slope. One approximately 0.5-foot-wide LF channel observed within the OHWM. Data was collected after recent rain event.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: Within OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine silt

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 0.5-foot-wide LF channel within OHWM with drainage patters (i.e., ripples/wet sediment flows visible), sediment texture consist of fine silt with some granules present throughout.

Project ID: IE North Logistics Center **Cross section ID:** T-22 **Date:** 1/17/23 **Time:** 1322

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 5 % Tree: 0 % Shrub: 5 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Approximately 3-foot-wide AF with defined break in bank slope (one bank of feature is steep/incised). Drift and debris present as dead plant matter.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 30 % Tree: 0 % Shrub: 30 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☑ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

No true low terrace, continues from AF to uplands which are mapped as creosote bush scrub. Uplands defined by soil development and surface relief. Sediment texture consist of fine sand with some pebbles intermixed.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: NWW-08
Investigator(s): A. Cassady and D. Ayers

Date: 1/17/23 **Time:** 1336
Town: Apple Valley **State:** CA
Photo begin file#: 14 **Photo end file#:** 14

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.574765, -117.268867

Potential anthropogenic influences on the channel system:

Feature appears to collect runoff from aggregate plant/road located directly east of the feature/review area. I-15 to the west of review area. Surrounding area is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

Brief site description:

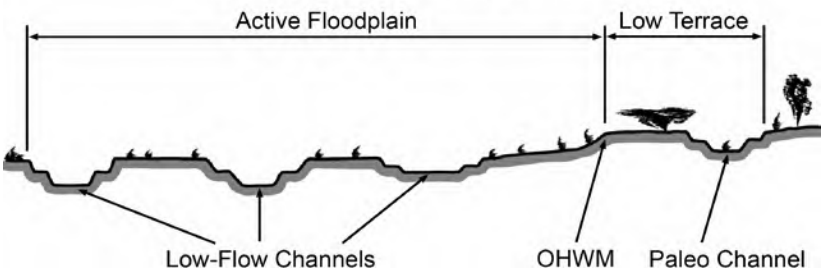
Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Braided feature within creosote bush scrub.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

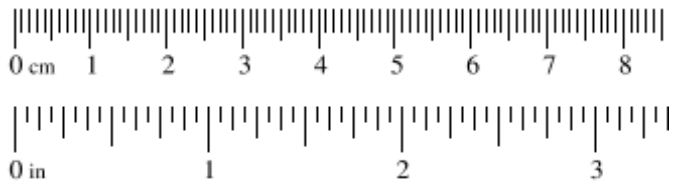


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

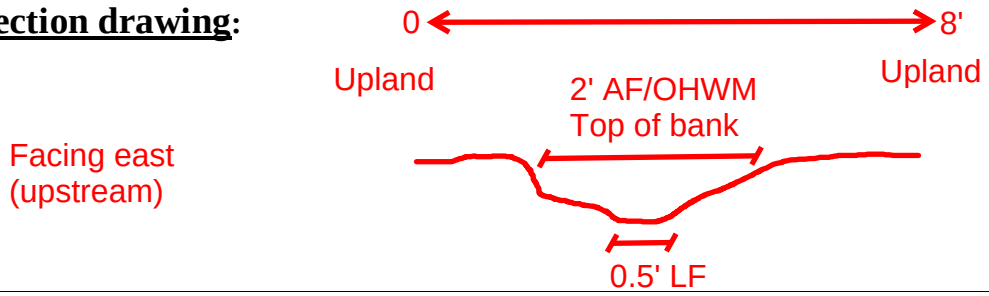
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-23 **Date:** 1/17/23 **Time:** 1336

Cross section drawing:



OHWM

GPS point: 34.574765, -117.268867

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 2-foot-wide OHWM defined by a change in average sediment texture, change in vegetation cover, and break in bank slope. One approximately 0.5-foot-wide LF channel observed within the OHWM. Data was collected after recent rain event.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: Within OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Approximately 0.5-foot-wide LF channel within OHWM. Sediment texture consist of fine sand with some granules present throughout.

Project ID: IE North Logistics Center **Cross section ID:** T-23 **Date:** 1/17/23 **Time:** 1336

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: Same as OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 4 % Tree: 0 % Shrub: 4 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Approximately 2-foot-wide AF defined by a break in bank slope.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: Just above AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 30 % Tree: 0 % Shrub: 30 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☑ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

No true low terrace, continues from AF to uplands which are mapped as creosote bush scrub. Uplands defined by soil development and surface relief.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: N/A
Investigator(s): A. Cassady and K. Dayton

Date: 1/27/23 **Time:** 0917
Town: Apple Valley **State:** CA
Photo begin file#: 18 **Photo end file#:** 18

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.572778, -117.270278

Potential anthropogenic influences on the channel system:

Dirt road/aggregate plant located directly east of area/the review area. I-15 to the west of review area. Surrounding area is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

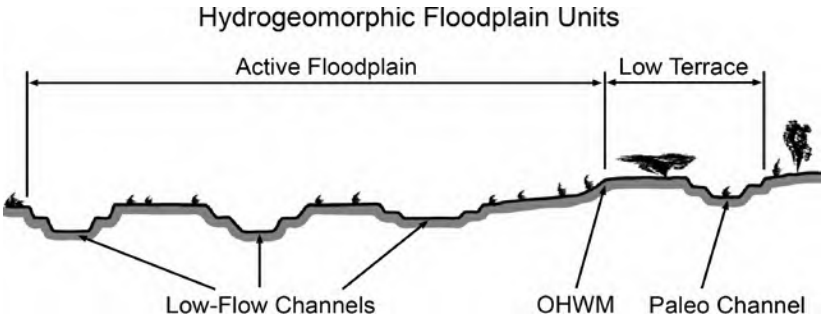
Brief site description:

Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Lower topographic area between two gentle slopes.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

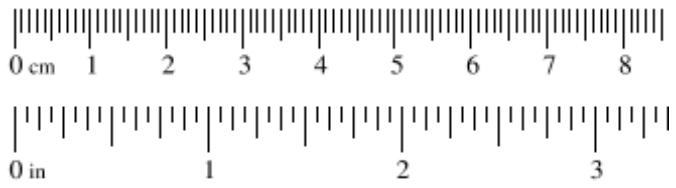


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

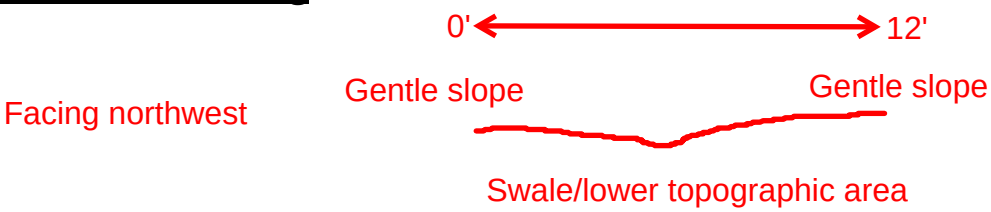
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-24 **Date:** 1/27/23 **Time:** 0917

Cross section drawing:



OHWM

GPS point: 34.572778, -117.270278

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☑ Other: Drainage signature
- ☐ Other: _____

Comments:

Swale-like feature (i.e., slight concave/lower topographic area). Data collected after recent rain event which appears to have created drainage signature; however, average sediment texture, vegetation cover, and vegetation species did not differ from the concave area to the adjacent slopes. See Appendix D, Photo Point Number 18. No other OHWM indicators are present.

Floodplain unit:

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Project ID: IE North Logistics Center **Cross section ID:** T-24 **Date:** 01/27/23 **Time:** 0917

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: NWW-09
Investigator(s): A. Cassady and K. Dayton

Date: 1/27/23 **Time:** 0949
Town: Apple Valley **State:** CA
Photo begin file#: 19 **Photo end file#:** 19

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.5725, -117.271944

Potential anthropogenic influences on the channel system:

Dirt roads transect the feature. Aggregate plant located directly east of the review area. I-15 to the west of review area. Surrounding area is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

Brief site description:

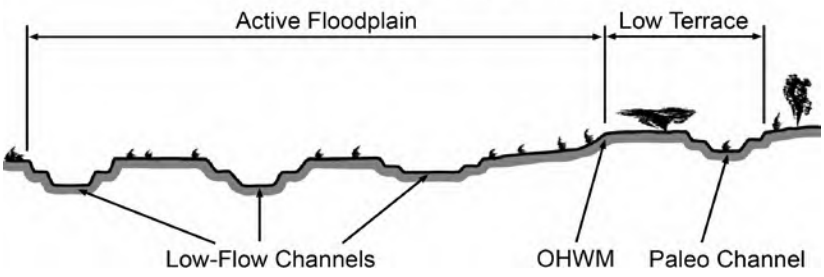
Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Braided feature within creosote bush scrub.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

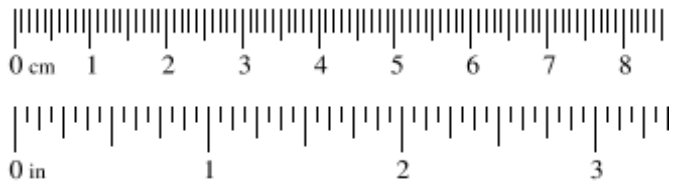


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

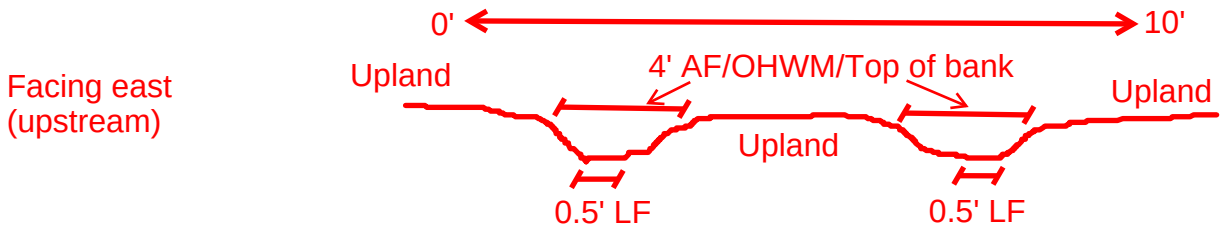
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-25 **Date:** 1/27/23 **Time:** 0949

Cross section drawing:



OHWM

GPS point: 34.5725, -117.271944

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Braided feature with various drainages with a defined OHWM. The OHWM's are approximately 4-foot-wide and defined by a change in average sediment texture, change in vegetation cover, and break in bank slope. Approximately 0.5-foot-wide LF channels observed within the OHWM. Data was collected after recent rain event.

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: Within AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

LF channels approximately 0.5-foot-wide within OHWM distinguished by visible ripples throughout.

Project ID: IE North Logistics Center **Cross section ID:** T-25 **Date:** 1/27/23 **Time:** 0949

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: Same as AF/OHWM

Characteristics of the floodplain unit:

Average sediment texture: Coarse sand

Total veg cover: 2 % Tree: 0 % Shrub: 2 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Approximately 4-foot-wide AF defined by a break in bank slope. Drift and debris present as dead plant matter.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: Above OHWM

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 30 % Tree: 0 % Shrub: 30 % Herb: 0 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☑ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

No true low terrace, continues from AF to uplands which are mapped as creosote bush scrub. Uplands defined by soil development and surface relief.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: IE North Logistics Center
Project Number: N/A (Dudek Project No. 14802)
Stream: N/A
Investigator(s): A. Cassady and S. Greely
Date: 1/17/23
Town: Apple Valley
Photo begin file#: 22
Time: 1333
State: CA
Photo end file#: 22

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:
IE North Logistics Center Apple Valley ARDR (Dudek 2023)

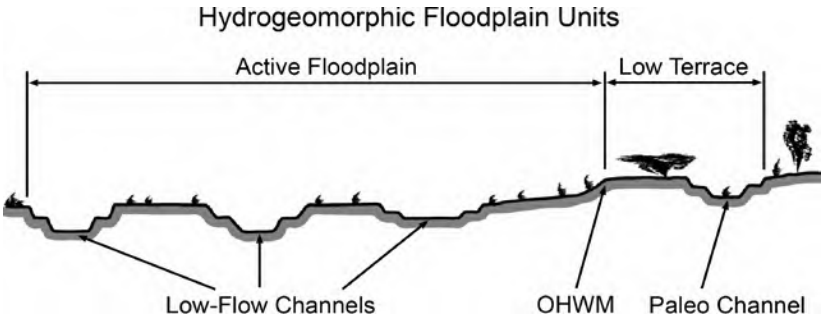
Projection: NAD 83 **Datum:** WGS 84
Coordinates: 34.5725, -117.274444

Potential anthropogenic influences on the channel system:
I-15 direct to the west of the data point area. Surrounding area is undeveloped; however, signs of off-road vehicle usage was observed throughout the review area.

Brief site description:
Primarily undeveloped site adjacent I-15 with braided and wash features throughout. Aggregate plant located directly east of the review area. Lower topographic area between two gentle slopes.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☑ Soils maps
- ☑ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

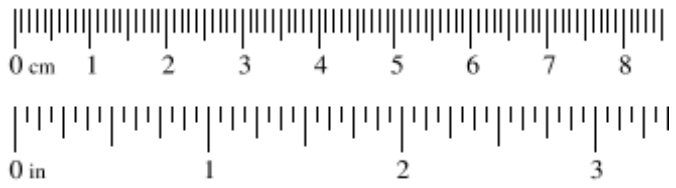


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

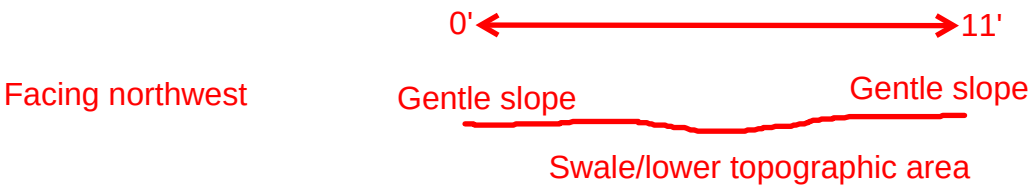
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: IE North Logistics Center **Cross section ID:** T-26 **Date:** 1/17/23 **Time:** 1333

Cross section drawing:



OHWM

GPS point: 34.5725, -117.274444

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [ ] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Swale-like feature (i.e., slight concave/lower topographic area) in between slopes that does not appear to sustain sufficient flows to create a break in bank slope and/or bed and bank. Vegetation species did not differ from the concave area to the adjacent slopes. A slight change in sediment texture is visible; however, no other OHWM indicators are present. Data was collected after a recent rain event.

Floodplain unit:

- [ ] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

N/A

Project ID: IE North Logistics Center **Cross section ID:** T-26 **Date:** 01/17/23 **Time:** 1333

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

N/A

Appendix D
Review Area Photos

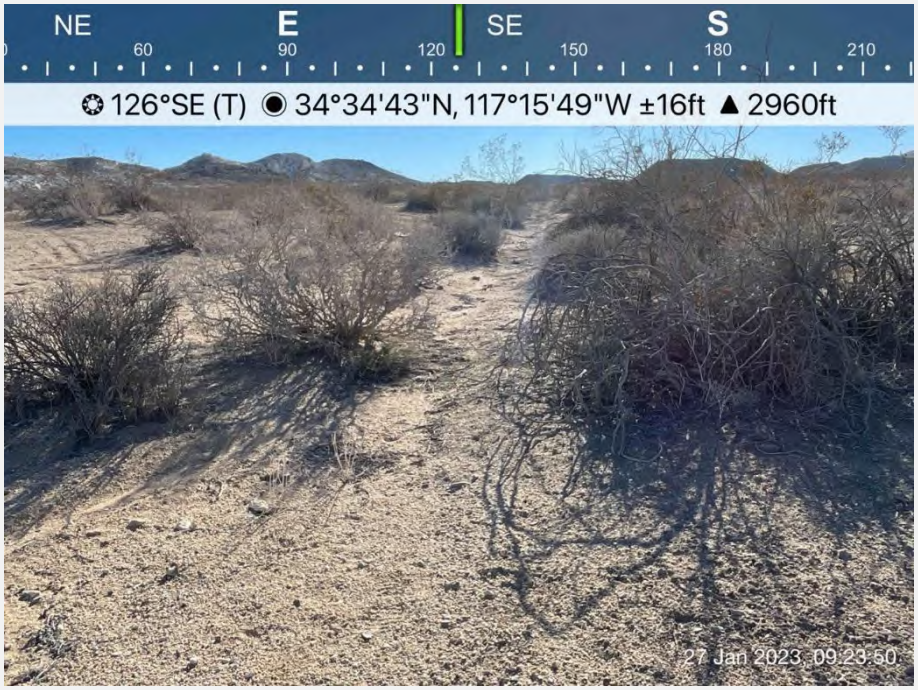


Photo Number 1. Overview of Transect (T)-17 which described a non-jurisdictional swale area facing southeast.

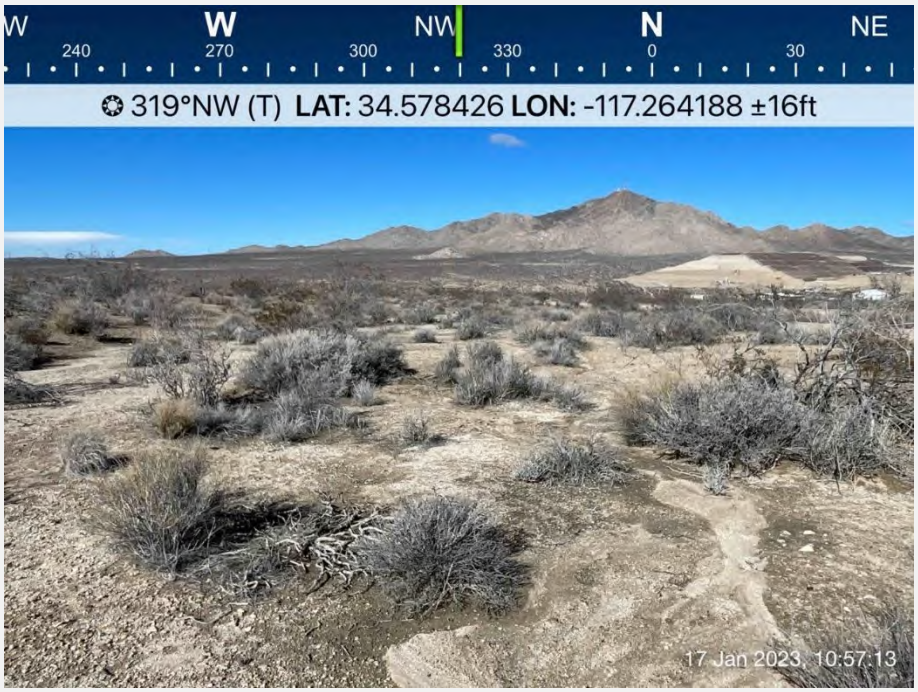


Photo Number 2. View of a non-jurisdictional swale area facing northwest.



Photo Number 3. Overview of T-18 collected at NWW-05 facing northwest.

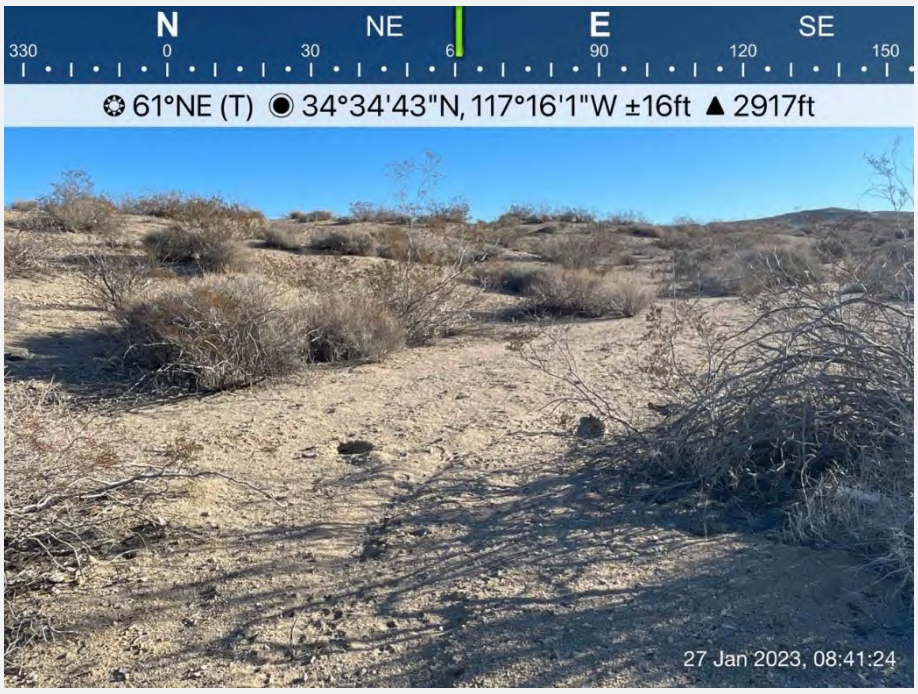


Photo Number 4. Northeast view of the downstream segment of NWW-05 where feature loses definition.



Photo Number 5. View of T-19 collected at NWW-05 facing west.

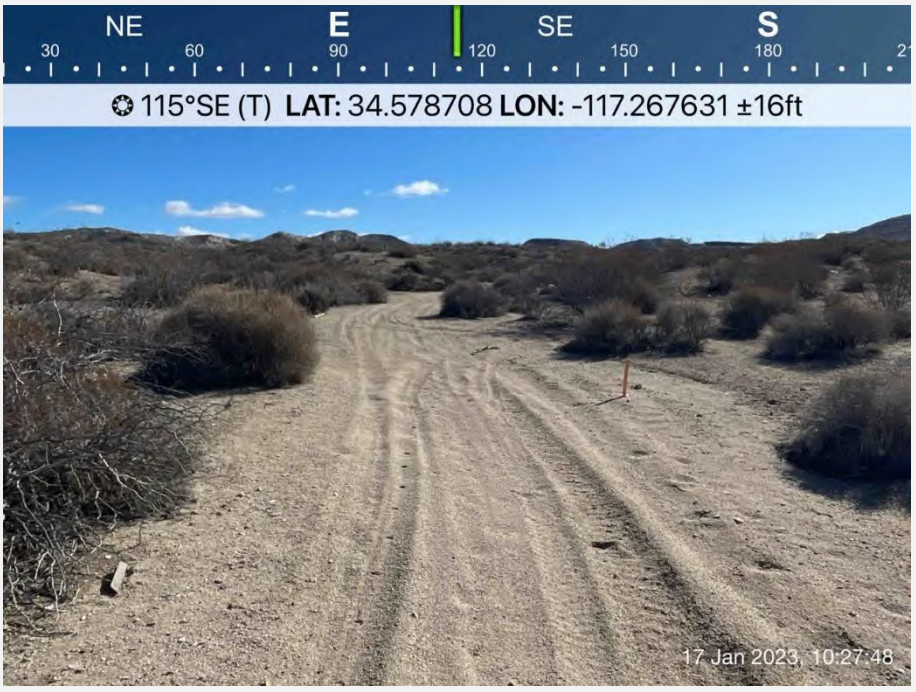


Photo Number 6. View of disturbance within the review area facing east/southeast.



Photo Number 7. View of T-20 collected at NWW-06 facing east/southeast.



Photo Number 8. View of a non-jurisdictional swale area facing northwest.



Photo Number 9. View upstream segment of NWW-06 facing west.



Photo Number 10. View of T-21 which described a non-jurisdictional swale area facing north.



Photo Number 11. View of T-22 collected at NWW-07 facing south/southwest.



Photo Number 12. View of downstream NWW-07 drains into and across dirt road. Photo taken facing east.



Photo Number 13. View of NWW-07 facing south.



Photo Number 14. View of T-23 collected at NWW-08 facing northeast/east.

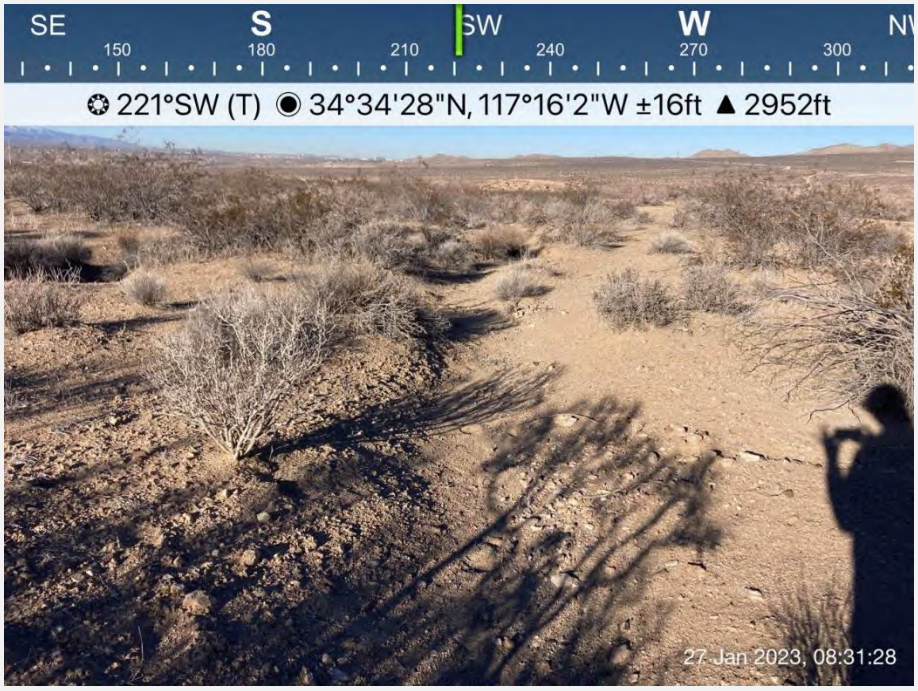


Photo Number 15. View of a non-jurisdictional swale area facing southwest.

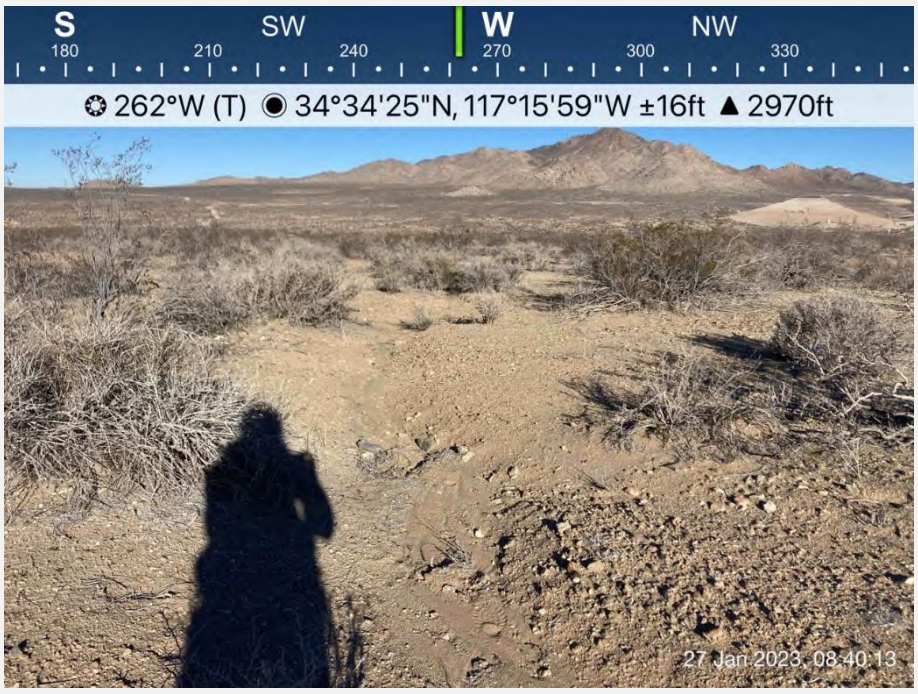


Photo Number 16. View of a non-jurisdictional swale area facing west.



Photo Number 17. View of a non-jurisdictional swale area facing south/southwest.



Photo Number 18. View of T-24 collected at a non-jurisdictional swale area facing south/southwest.



Photo Number 19. View of T-25 collected at NWW-09 facing east.



Photo Number 20. View of a non-jurisdictional area facing northwest.



Photo Number 21. Additional view of NWW-09 facing east.



Photo Number 22. View of T-26 collected at a non-jurisdictional swale area facing southeast.

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Appendix E

ORM Bulk Upload Aquatic Resource or Consolidated Excel Spreadsheet

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
NWW-05	CALIFORNIA	R6		Area	0.25	ACRE	NON-WOTUS-TRIB.NEGATIVE.A3	34.57841940	-117.26528430	N/A
NWW-06	CALIFORNIA	R6		Area	0.89	ACRE	NON-WOTUS-TRIB.NEGATIVE.A3	34.57650270	-117.26610940	N/A
NWW-07	CALIFORNIA	R6		Area	0.19	ACRE	NON-WOTUS-TRIB.NEGATIVE.A3	34.57603760	-117.26926870	N/A
NWW-08	CALIFORNIA	R6		Area	0.07	ACRE	NON-WOTUS-TRIB.NEGATIVE.A3	34.57503240	-117.27012100	N/A
NWW-09	CALIFORNIA	R6		Area	0.24	ACRE	NON-WOTUS-TRIB.NEGATIVE.A3	34.57338130	-117.27314680	N/A
NWW-11	CALIFORNIA	R6		Area	0.02	ACRE	NON-WOTUS-TRIB.NEGATIVE.A3	34.57068740	-117.27687040	N/A
NWW-12	CALIFORNIA	R6		Area	0.02	ACRE	NON-WOTUS-TRIB.NEGATIVE.A3	34.57005680	-117.27736330	N/A

Appendix F

GIS Data (Provided Electronically)

Appendix C

Joshua Tree Preservation, Protection, and Relocation Plan and Desert Native Plant Relocation Plan

Joshua Tree Preservation, Protection, and Relocation Plan

Inland Empire North Logistics Center Project

JANUARY 2024

Prepared for:

SYNERGY CONSULTING
1818 Library Street, Suite 500
Reston, Virginia 20190
Contact: Jessica Haughton

Prepared by:

DUDEK

38 North Marengo Avenue
Pasadena, California 91101
Contact: Chris Kallstrand
ISA Certified Arborist, No. WE-8208A

Printed on 30% post-consumer recycled material.

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APPENDICES

A Joshua Tree Locations
B Joshua Tree Information Matrix
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D Joshua Tree Impacts

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
amsl	above mean sea level
AVDC	Apple Valley Development Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
DNPS	Desert Native Plant Specialist
ISA	International Society of Arboriculture
ITP	Incidental Take Permit
Joshua Tree Plan	Joshua Tree Preservation, Protection, and Relocation Plan
Project	Inland Empire North Logistics Center Project
Town	Town of Apple Valley
WJT	western Joshua tree
WJTCA	Western Joshua Tree Conservation Act

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1 Introduction

The purpose of this Joshua Tree Preservation, Protection, and Relocation Plan (Joshua Tree Plan) for the proposed Inland Empire North Logistics Center Project (Project) is to provide detailed specifications for Synergy Consulting to meet the requirements of Chapter 9.76 of the Town of Apple Valley's (Town) Development Code (Town of Apple Valley 2010) and the evolving California Department of Fish and Wildlife (CDFW) requirements to protect, preserve, and mitigate impacts to western Joshua trees (*Yucca brevifolia*) as a result of the proposed Project.

On September 22, 2020, the California Fish and Game Commission granted approval of the petition for candidacy of the western Joshua tree, marking the effective commencement of this status on October 9, 2020 (CDFW 2020). The acceptance of candidacy under the California Endangered Species Act endows the western Joshua tree with equivalent protection as that afforded to threatened or endangered species. This protection is sustained during the period in which the California Fish and Game Commission conducts an evaluation to determine whether formal listing as threatened or endangered under California Endangered Species Act is warranted.

Within this assessment interval, the removal or disturbance of western Joshua trees necessitates the acquisition of a 2081 Incidental Take Permit (ITP) issued by CDFW. Until recently, obtaining a 2081 ITP represented the principal avenue for obtaining permissions to undertake activities impacting western Joshua trees. A significant development occurred with the enactment of the Western Joshua Tree Conservation Act (WJTCA) in July 2023, which introduced an additional permitting mechanism for activities involving western Joshua trees.

Under the WJTCA, the act regards the relocation of western Joshua trees as a minimization measure, in contrast to the previous Section 2081 ITP process, where relocation was viewed as an experimental approach. Specifically, the WJTCA outlines the following provisions related to relocation:

> (4)(A) The department [CDFW] may require the permittee to relocate one or more of the western Joshua trees. The permittee shall implement measures to assist the survival of relocated trees and shall comply with any other reasonable measures required by the department to facilitate the successful relocation and survival of the western Joshua trees, including, but not limited to:
>
> > (i) A requirement that the relocated western Joshua tree is placed in a location and with proper orientation to improve its survival.
> >
> > (ii) A requirement that western Joshua trees are relocated between October and March.
> >
> > (iii) Adherence to performance criteria to ensure that relocated trees have at least an 80-percent survivability rate.
> >
> > (iv) A requirement that a desert native plant specialist be on site to oversee relocation.
>
> (B) The department [CDFW] may limit relocation to certain size classes of trees.

Furthermore, Chapter 9.76 of the Apple Valley Development Code (AVDC) states that "it is in the public interest to promote the continued health of this Town's abundant and diverse plant resources by providing regulations and guidelines for the management of the plant resources in the Town of Apple Valley on property or combinations of

property under private or public ownership…." Additionally, the Town's Interim Local Policy and Procedures on the Western Joshua Tree states the following for any property within any zoning district in the Town:

- After submittal, Town Staff will complete a pre-site inspection to determine the presence or absence of the Western Joshua Tree (WJT).
  - If the proposed grading/construction is withing 40-feet of a WJT, the Applicant may seek a determination from a Desert Native Plant Specialist (DNPS) to attest to and confirm the avoidance of the WJT with a reduced separation distance. The report must contain the findings and avoidance recommendations of the DNPS.
  - If it is determined that the proposed development activity would require a take of the WJT, the project may be redesigned to avoid impact to the tree, or the applicant must obtain an Incidental Take Permit from the CDFW before the project can proceed.

If a development is subject to the California Environmental Quality Act (CEQA), the Applicant must identify if the WJT will be protected, relocated, or removed.

In addition to local regulations, per CDFW, Dudek evaluated all Joshua trees located within 50 feet of the proposed Project. Furthermore, as requested by CDFW, Dudek collected relevant Joshua tree data including height, mortality, maturity, and presence of flowers or fruit.

As such, this Joshua Tree Plan addresses the requirements of the Town's Plant Protection and Management policy, requested CDFW Joshua tree information, and the proposed mitigation required by CDFW under the WTJCA and provides details regarding the site's Joshua trees, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees requiring removal and relocation.

1.1 Applicability

The provisions of this Joshua Tree Plan apply toward the protection and removal of Joshua trees located within the Town of Apple Valley, California, as defined in the Town's Plant Protection and Management policy (AVDC 9.76).

1.2 Project Location

The approximately 178-acre Project site is located in the northwestern part of the Town, which is within the Victor Valley Region of San Bernardino County (Figure 1, Regional Map; Figure 2, Project Vicinity). The Project site is located directly east of I-15, north of Falchion Road and south of Norco Street. Regional access to the Project site is provided via I-15, which is located adjacent to the Project site's western boundary. Off-site improvements to roadways are located within the vicinity of the Project and would occur at Falchion Road between Outer Highway 15 and Apple Valley Road, Norco Street between Outer Highway 15 and Apple Valley Road, Outer Highway 15 between Falchion Road and Norco Street, and Apple Valley Road between Falchion Road and Norco Street (see Figure 3, Site Plan).

The site consists of Assessor's Parcel Number 0472-031-08. Specifically, the Project site is located in Section 26, Township 6N, Range 4W, as depicted on the U.S. Geological Survey Victorville, California 7.5-minute topographic quadrangle map.

1.3 Project Components

The Project would include construction of two industrial/warehouse buildings and associated improvements on a 177.74-acre site. Building 1 would be approximately 1,507,326 square feet while Building 2 would be approximately 1,097,120 square feet. The Project's associated improvements would include loading docks, truck and vehicle parking, and landscaped areas (Figure 3, Site Plan).

Off-Site Improvements

Off-site improvements to roadways are located within the 22.4-acre off-site improvement areas and would occur at Falchion Road between Outer Highway 15 and Apple Valley Road, Norco Street between Outer Highway 15 and Apple Valley Road, Outer Highway 15 between Falchion Road and Norco Street, and Apple Valley Road between Falchion Road and Norco Street.

Site Access and Circulation

Access to the Project would be provided via driveways off Outer Highway 15 to Falchion Road and Norco Street along the eastern boundary of the Project boundary. Paved passenger vehicle parking areas would be provided within areas east and west of Buildings 1 and 2, while tractor-trailer stalls and loading docks would be surrounding Buildings 1 and 2 to the north and south, and east.

The Project would include several improvements to the local circulation system, including improvements to Falchion Road and Outer Highway 15 and the construction of Norco Road and Apple Valley Road. These improvements would occur along the immediate frontage of the Project. The ultimate design of these roadway improvements is not yet available and would be determined by the Town's Engineering Department. To account for all possible development scenarios that may occur, the proposed roadway improvements are assumed to occur within the entirety of the 22.4-acre off-site improvement areas.

In addition, the Project would involve a General Plan Amendment to modify the Town's Circulation Element to realign Apple Valley Road. Apple Valley Road is Major Divided Arterial roadway with a 128-foot right-of-way. From the Project site's southern boundary at Falchion Road, Apple Valley Road has not yet been constructed but is planned to traverse north through the Project site to Stoddard Wells Road. The proposed General Plan Amendment would shift the proposed alignment slightly to the east. The Project would involve the construction of this roadway along the Project's frontage between Falchion Road and Norco Street. The ultimate construction of Apple Valley Road north of the Project site between Norco Street and Stoddard Wells Road would be constructed at a future time by the Town or future developers and subject to additional environmental review pursuant to CEQA. It is not necessary for Project implementation and is unrelated to the Project.

Utility Improvements

Given the vacant, undeveloped nature of the Project site, both wet and dry utilities, including domestic water, sanitary sewer, storm drainage, and electricity, would need to be extended onto the Project site.

Lateral utility connections proposed within the existing Apple Valley Road south of the Project were previously analyzed during environmental review pursuant to CEQA for the Apple Valley 143 project (Town of Apple Valley 2023). It is assumed that the Project will tie into the proposed water line at Falchion Road, and any street and utility

improvements along the existing Apple Valley Road previously analyzed for the Apple Valley 143 Project were not analyzed as part of the Project.

Operations

A tenant for the proposed industrial warehouse building has not yet been identified; however, the Project would operate as a warehouse and/or distribution facility with two industrial/warehouse buildings. Business operations would be expected to be conducted within the enclosed buildings, with the exception of the entrance and exit of trucks and passenger vehicles accessing the site, passenger and truck parking, the loading and unloading of trailers within designated truck courts/loading area, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week.

Project Construction

Construction of the Project is anticipated to last approximately 22 months.

Construction activities would include site preparation (e.g., vegetation clearing, grubbing, tree removal, discing), grading, building construction, paving, and architectural coating.

Construction activities would generally occur across six phases: site preparation (e.g., vegetation clearing, grubbing, tree removal, discing), grading, building construction/utility installation, paving, and architectural coating. With the exception of architectural coating (which would only occur on the Project site), all phases would occur both on the Project site and within the Off-Site Street and Utility Improvements.

For on-site and off-site development, the Project was assumed to have a balanced cut and fill. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week.

1.4 Site Characteristics

The Project site consists of vacant and undeveloped land, as well as disturbed land, paved and unpaved roads, and portions of the existing mining facility located directly east of the Project boundary.

Land uses surrounding the Project site consist of vacant land, I-15, unpaved roads, and mining operations. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Various unpaved roads and vacant land
- **East:** Aggregate mining operations
- **South:** Falchion Road, Apple Valley Road, various other unpaved roads, and vacant land
- **West:** I-15 and vacant land

In the broader Project vicinity, development includes industrial uses, the County of San Bernardino Refuse Disposal Site, residential uses, and commercial uses.

Climate

The Project site is located in the Apple Valley/High Desert region in western San Bernardino County. The average annual temperature was not available for Apple Valley; however, average annual temperatures in Victorville range from 46.7°F to 82.6°F. Additionally, the average annual high for Victorville is 109°F and the average annual low is 20°F (ACIS 2023). The average annual precipitation for Apple Valley is 5.47 inches (ACIS 2023). Periods of extended drought are common throughout the region.

Topography and Soils

The Project site is located in the Town, near Bell Mountain Wash, which lies between Bell Mountain to the east and Quartzite Mountain to the west. The Granite Mountains are approximately 10 miles southeast of the site and divide Apple Valley from Lucerne Valley.

The site is composed of undeveloped vacant lands and portions of an existing mining facility. The off-site improvement areas include dirt and paved roadways (specifically Outer Highway 15 or I-15 frontage road, Norco Road, Falchion Road, and Quarry Road), as well as undeveloped vacant lands immediately adjacent to these roadways. Topography within the site is generally flat with some areas of small hills. Elevation ranges from approximately 2,910 feet above mean sea level (amsl) to 3,060 feet amsl, generally sloping from east to west toward I-15. Adjacent land uses include various unpaved roads and vacant land to the north, I-15 to the west, Falchion Road, Apple Valley Road, various other unpaved roads, and vacant land to the south, and aggregate mining operations to the east.

According to the U.S. Department of Agriculture's Natural Resource Conservation Service's Web Soil Survey (USDA 2023), the site consists of four soil mapping units: Cajon-Arizo complex, 2%–15% slopes; Mirage-Joshua complex, 2%–5% slopes; pits; and Trigger-Sparkhule-rock outcrop association, steep.

Vegetation

The Project site supports four vegetation communities or land cover types. Vegetation communities and land uses mapped within the site include creosote bush scrub, rubber rabbitbrush scrub, disturbed habitat, and urban/developed areas. Vegetation mapping within the Project boundary was conducted by GLA in 2023, while vegetation mapping within the remaining biological survey area (Project site, off-site improvement areas, and 100-foot buffer) was completed by Dudek using aerial imagery and existing data.

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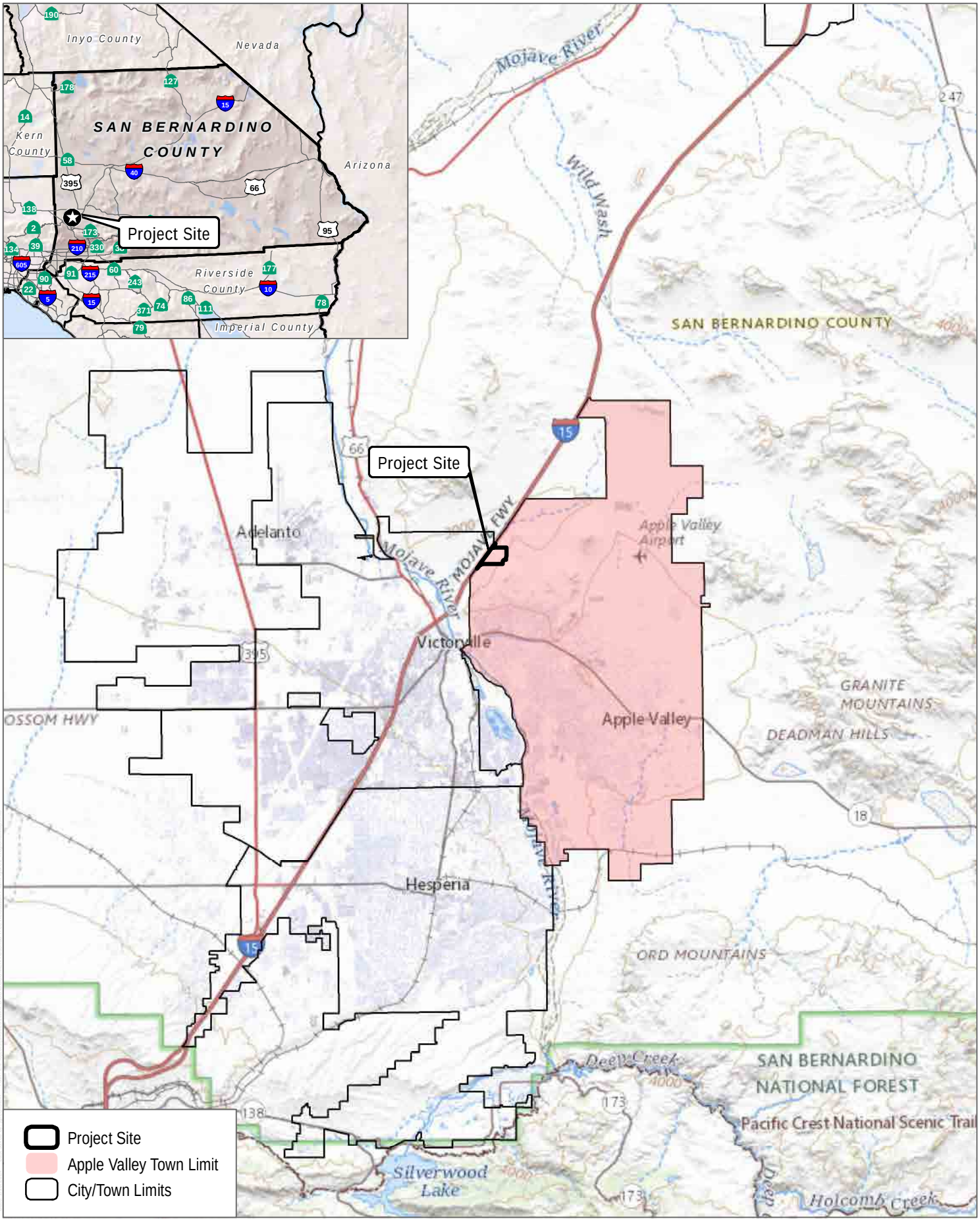

SOURCE: USGS Topo 2020

DUDEK

0 2 4 Miles

FIGURE 1

Regional Map

Inland Empire North Logistics Center Apple Valley Project

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SOURCE: Bing Maps (accessed 2022)

DUDEK

0 330 660 Feet

FIGURE 2

Project Vicinity

Inland Empire North Logistics Center Apple Valley Project

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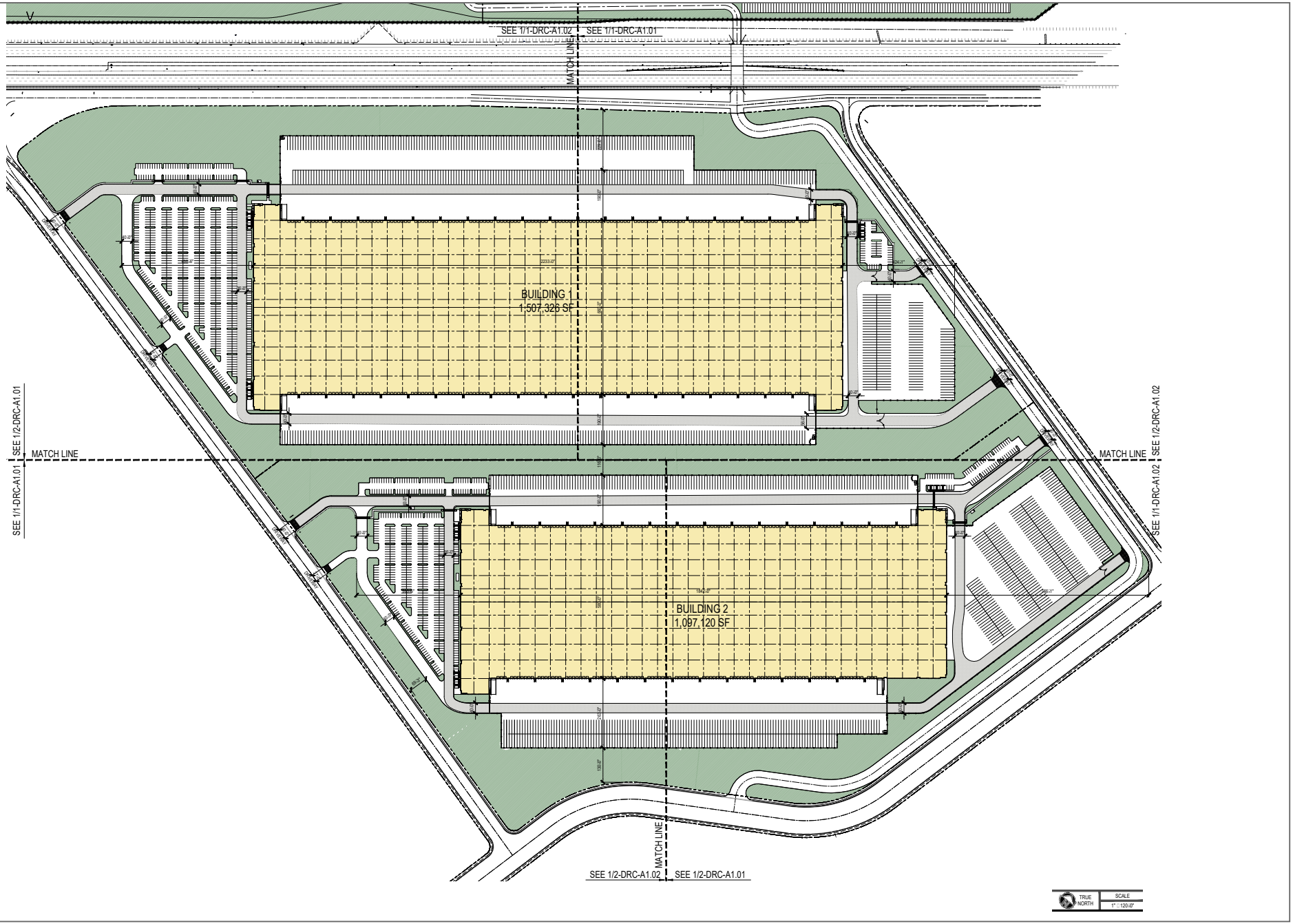

SOURCE: David Evans and Associates Inc 2023; LHA 2023; Synergy Consulting 2023

DUDEK

FIGURE 3

Site Plan

Inland Empire North Logistics Center Apple Valley Project

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2 Policy and Permits

2.1 Town of Apple Valley

2.1.1 City Policy

Per Chapter 9.76 of the Town of Apple Valley's Development Code (Town of Apple Valley 2010) Plant Protection and Management, "It is the stated intent and desire of the Town Council of the Town of Apple Valley to recognize and preserve the contribution that Joshua Trees have made to the desert environment and, more specifically, to the Town's "Better Way of Life". In conformance with this recognition, no existing Joshua Tree shall be disturbed, moved (transplanted or otherwise), removed or destroyed unless such disturbance, move, removal or destruction is first reviewed and approved by the Town of Apple Valley. The Town Manager, or designee, shall be responsible for review and approval of any request to disturb, move (transplant or otherwise), remove or destroy any existing Joshua Tree located on any property within any zoning district in the Town of Apple Valley." (Town of Apple Valley 2010). Chapter 9.76 continues by stating "Further, while it is the intent and desire of the Town to preserve and protect all Joshua Trees, this intent and desire shall be balanced against the community's need for growth and the development rights of individual property owners. To achieve this preservation and protection, while protecting both the property rights of property owners and the community's desert environment, anyone applying to disturb, move, remove or destroy an existing Joshua Tree shall use all means necessary to retain and preserve such Tree(s) in its native (present) location in considering and presenting said Tree Disturbance application."

Furthermore, Chapter 9.76 states the following regarding retention and transplantation:

> **Retention:**
>
> The following shall be the minimum criteria for the preservation of Joshua Trees in place. While Joshua Trees which do not conform to the following criteria must be preserved, they may be transplanted to another location on the same property or may be made available for adoption through the Town's Joshua Tree Preservation and Adoption Program. A Joshua Tree(s) which conforms to the following shall be preserved in place unless its removal, transplantation or destruction is approved as prescribed within this Section 9.76.040 of the Town of Apple Valley Municipal Code. For any Joshua Tree(s) which conform to the criteria listed below, for which the property owner/applicant has made a request for a Building Permit, application for a discretionary review or application for a subdivision of land within the Town of Apple Valley, said owner/applicant shall submit, as part of the application for approval, documentation of their best efforts to retain and preserve all Joshua Tree(s) within the limits of the development or subdivision in its native (present) location. Such documentation of best effort shall include how alternative lot configurations (including building envelopes on lots with existing Tree(s)), circulation, physical or environmental constraints of the site, allow no alternative subdivision configuration which would retain and preserve the Tree(s) in its native (present) location.
>
> 1. A Joshua Tree that is known, by historic record, including pictures or written description, to be at least forty (40) years old.

2. A Joshua Tree which has a width of at least fifteen (15) feet as measured from the furthest point of outstretched branches (measured parallel to the ground).
3. A Joshua Tree which is at least fifteen (15) feet in height as measured from the base of the trunk to the highest point of the Tree.
4. A Joshua Tree which has a trunk measuring at least twelve (12) inches in diameter as measured four (4) feet from the ground.

Transplantation: Transplanting approved by the Town of Apple Valley must be initiated and completed under the supervision of a Desert Native Plant Expert (1). Approval of such transplant must take into consideration the time of year, the plant's original and transplanted physical orientation, prevailing wind direction, soil type of the original and transplanted locations, and other related attributes which may affect the successful transplantation of the Joshua Tree(s) in question as determined by the Town and the retained Botanist. Joshua Trees that are proposed to be removed shall be transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling and/or transplanting the permittee has submitted and has had the approval of a Joshua Tree maintenance plan prepared by a Desert Native Plant Expert (1). This plan shall include a schedule for maintenance and a statement by the Desert Native Plant Expert that this maintenance plan and schedule will be implemented under his/her supervision.

The schedule shall include the requirement that a maintenance report is required at the end of the project or at six (6) month intervals, evidence to the satisfaction of the Building Official that the Desert Native Plant Expert has supervised the scheduled maintenance to the extent that all transplanted and stockpiled plants have been maintained in such a manner to insure the highest practicable survival rate. In the event that this report is not satisfactory, a tree and plant replacement plan and implementation schedule prepared by a Desert Native Plant Expert may be required by the Building Official.

2.1.2 City Permits

Per the Town's 2010 Plant Protection and Management Code (Chapter 9.76), a removal permit is required for the removal of any native tree or plant that is subject to the provisions the code. Chapter 9.76.010, Removal Permit, states the following:

1. A removal permit shall be required for the removal of any native tree or plant that is subject to the provisions of this Chapter. Disturbing, moving (transplanting or otherwise), removal or destruction of an existing Joshua Tree(s) shall be subject to the provisions of Section 9.76.040.
2. A land use application, a building permit and all other development permits (e.g., grading, mobile home setdowns, etc.), shall consider and include a review of any proposed application and/or development permit shall be a permit for the removal of native trees or plants, if such land use application or development permit specifically reviews and approves such removals. Such reviews shall consider and require compliance with the provisions of this Chapter.
3. The reviewing authority may require certification from an appropriate tree expert or desert native plant expert that such tree removals are appropriate, supportive of a healthy environment and are in compliance with the provisions of this Chapter.

4. Removals of native trees or plants that are not requested in conjunction with a land use application or development permit may be accomplished only under a permit issued by the Town of Apple Valley Planning Division, subject to the provisions of this Chapter.
5. The Building Official shall require a pre-construction inspection prior to approval of development permits. The duration of a plant or tree removal permit when issued in conjunction with a land use application and/or a development permit shall be coterminous with the duration of the associated application or permit, unless otherwise specified. The Reviewing Authority shall specify the expiration date for all other tree and/or plant.

2.1.3 Findings for Removals

Per the Town's 2010 Plant Protection and Management Code (Chapter 9.76), the Reviewing Authority shall authorize the removal of a native tree or plant subject to provisions of Chapter 9.76 only if the following findings are made:

1. The removal of the native tree or plant does not have a significant adverse impact on any proposed mitigation measures, soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff and wildlife habitats.
2. The removal of the native tree or plant is justified for one of the following reasons:
    a. The location of the native tree (excluding Joshua Trees) or plant and/or its dripline interferes with the reasonable improvement of the site with an allowed structure, sewage disposal area, paved area or other approved improvement or Town of Apple Valley Development Code 2010 Adopted April 27, 2010, Chapter 9.76 Plant Protection and Management 3 ground disturbing activity. Also, such improvements have been designed in such a manner as to save as many healthy native trees and/or plants as reasonably practicable in conjunction with the proposed improvements.
    b. The location of the native tree or plant and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property.
    c. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the Town Engineer.
    d. The native tree or plant or its presence interferes with or is causing extensive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements.
    e. The condition or location of the native plant or tree is adjacent to and in such close proximity to an existing structure that the native plant or tree has or will sustain significant damage.

2.2 California Department of Fish and Wildlife

2.2.1 Western Joshua Tree Conservation Act

Background

The WJTCA was enacted in July 2023 with the primary objective of preserving the western Joshua tree and its associated habitat, while aligning with the state's broader renewable energy and housing priorities.

The WJTCA introduces a streamlined permitting framework that applies to specific development activities and mandates the collection of mitigation fees. These fees are intended to facilitate the acquisition and preservation of western Joshua tree habitat, as well as to support conservation measures aimed at safeguarding the western Joshua tree. The underlying goal is to counterbalance the adverse impacts on western Joshua trees resulting from authorized projects and to promote species conservation on a landscape scale.

Under the WJTCA, CDFW is authorized to perform the following key functions:

- Issue permits for the trimming and removal of hazardous or deceased western Joshua trees
- Grant permits for the incidental take of western Joshua trees, contingent upon the fulfillment of specific conditions
- Establish agreements with counties or cities to delegate limited authority for the issuance of the aforementioned permits, provided that predetermined conditions are met

Furthermore, the WJTCA instructs CDFW to develop a comprehensive conservation plan for the western Joshua tree by the conclusion of 2024.

The WJTCA institutes two categories of mitigation fees, reduced fees and standard fees, depending on the geographical location, as defined in the California Fish and Game Code (Section 1927). It empowers CDFW to issue permits for the incidental take of one or more western Joshua trees, subject to compliance with stipulated conditions. Permit holders may opt to remit specified fees in lieu of undertaking mitigation activities. Additionally, the WJTCA authorizes CDFW to issue permits for the removal of deceased western Joshua trees and the trimming of live western Joshua trees under specific circumstances.

Notably, all in-lieu fees collected under the WJTCA are directed to the Western Joshua Tree Conservation Fund, with the explicit purpose of allocation to CDFW. These funds are designated exclusively for the acquisition, conservation, and management of western Joshua tree conservation lands, as well as the execution of other initiatives designed to safeguard the western Joshua tree.

Permitting

The initial step in the Project permitting process necessitates the comprehensive survey and documentation of western Joshua trees located on the Project site and within a 50-foot radius surrounding the Project site. This census must adhere to precise specifications outlined on CDFW’s official website.

Simultaneously, a permit application, available on CDFW's website, must be completed. The application mandates that the applicant complies with CEQA. There are no stipulated statutory deadlines governing the permitting process; however, CDFW is committed to expeditiously processing the applications upon receipt. Upon successful processing of the application by CDFW, the permittee will be issued an invoice for the mandatory mitigation fee. This fee is to be remitted via check or money order, with the invoice securely attached, following the precise instructions provided by CDFW.

3 Joshua Tree Survey

3.1 Joshua Tree Survey Methods

Per Chapter 9.76 of the AVDC and the WJTCA, Dudek's International Society of Arboriculture (ISA) Certified Arborists performed a Joshua tree survey to inventory and evaluate the health and relocation potential for each Joshua tree located on and within 50 feet of the Project site (Appendix A, Joshua Tree Locations). The inventory was conducted by ISA Certified Arborists Ana Pfleeger, Aida Castro, and Hansen LeClair on December 6 through December 8, and December 12, 2023. During the inventory, the GPS position of each Joshua tree found on site was recorded. Dudek Certified Arborists walked the entire site in parallel transects to ensure documentation of each Joshua tree on site.

Dudek collected the following attributes of each tree:

- Species
- Size class (Size A - < 1m, Size B - >1m and <5m, and Size C - >5m)
- Actual height (meters)
- Health (excellent, good, fair, poor, critical, and dead)[1]
- Live or dead
- Tree maturity (mature if branching occurs, not mature if no branching occurs)
- Flowering or fruiting stage (flowers or fruits present)

If a tree had a severe bend in the trunk, height was recorded with two measurements, h1 and h2, h1 being the main, upright trunk, and h2 being the remaining, non-vertical trunk or branch. H1 and h2 were then added together to get an overall height and size class. If a tree was found leaning, the height was measured from the base of the tree along the leaning trunk to the top of the furthest leaf.

All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the main trunk on the north side of each Joshua tree. Tagging on the north side allows for proper orientation during relocation (each relocated Joshua tree will need to be oriented in the same direction as it was in its original location). Photographs for each tree were taken in accordance with CDFW requirements for western Joshua tree photographs and included an object for frame of reference.

[1] **Health Rating Descriptions**
Excellent. Tree has excellent health and strong vigor. No damage. Flowering and fruiting expected. Typically, only given to large, high-quality specimens (taller than 15 feet in height). Transplanting generally not recommended due to size.
Good. Tree has good health and vigor. All branches are alive and healthy. Damage is very localized and minimal. Flowering and fruiting likely, if tree is large enough. Tree is transplantable.
Fair. Tree health is average. Some stressors or damage possible, but any damage is minimal to moderate (e.g., rodent grazing, insect damage). No dead/broken branches. Tree is transplantable.
Poor. Tree is under stress, and overall health is in decline, or tree has taken significant damage. Mortality likely unless stressors relieved and/or conditions change. Broken/dead limbs likely present. Tree is generally not transplantable.
Critical. Tree is in extreme decline. One or more branches dead. One or more branches dying. Physical damage likely present. Damage is significant and extensive. Mortality expected within 2 to 4 years. Tree is not transplantable.
Dead. Tree is dead.

3.2 Joshua Tree Survey Findings

Dudek's arborists recorded 298 Joshua trees within and adjacent to (within 50 feet of) the limits of the Project site (Appendix A), as presented in Appendix B, Joshua Tree Information Matrix. In total, 283 Joshua trees are located within the Project site, and 15 additional trees located within 50 feet of the Project site (survey area). Trees in the tree survey area vary in size and stature according to age and location. Most of the trees within the survey area fall into CDFW's size class B, which are those trees between 1 and 5 meters in height (71%). Most of the trees with the survey area are immature (58%). Because the survey was conducted in the fall, none of the trees were found to be flowering or fruiting. The health of the Joshua trees varies across the site and ranges from good to dead. In total, 122 trees (41%) exhibit good health, 36 trees (12%) exhibit fair health, six trees (2%) exhibit poor health, three trees (1%) exhibit very poor health, and 131 trees (44%) are dead. Individual attributes of each tree are presented in Appendix B, and individual photographs are presented in Appendix C, Individual Joshua Tree Photographs.

3.3 Project Impacts – Joshua Trees

There is wide variation in tolerance to construction impacts among tree species, and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for the proposed Project include those trees with protected zones within 50 feet of proposed improvements and identified disturbance areas (as defined in the proposed Project site plan). The impact discussion in this section identifies all impacts to protected Joshua trees that are anticipated to occur based on an evaluation of tree locations compared with the proposed Project site plan. Trees identified for removal are graphically presented in Appendix D, Joshua Tree Impacts, and the proposed Project site plan is presented in Figure 3.

Based on grading and development plans for the proposed Project, it is estimated that 283 trees will require removal to accommodate the proposed Project. The proposed Project would preserve all 15 of the remaining Joshua trees found within 50 feet of the Project site. Table 1 summarizes impact determinations for Joshua trees within the tree survey area that are subject to regulation under the Town code.

Table 1. Summary of Protected Tree Impact Determinations

Health	Impact Determination		Total (number)
	Removal (number)	No Impact (number)	
Good	115	7	122
Fair	36	0	36
Poor	6	0	6
Very poor	3	0	3
Dead	123	8	131
Total	**283**	**15**	**298**

4 Town of Apple Valley Requirements

4.1 Plot Plan Requirements

Section F of Chapter 9.76.01(o) of the Town of Apple Valley Plant Protection and Management Code states the following:

> Prior to the issuance of a native tree or plant removal permit in conjunction with a development permit and/or approval of a land use application which authorizes such removal, a plot plan shall be approved by the appropriate Town Review Authority (County Certified Plant Expert, Planning Commission or Town Council) for each site indicating exactly which trees or plants are authorized to be removed. The required information can be added to any other required plot plan. Prior to issuance of development permits in areas with native trees or plants that are subject to the provisions of this Chapter, a pre-construction inspection shall be conducted by the appropriate authority. Such pre-construction inspections may be combined with any other required inspection.

As such, Appendix D details the post-construction status of each mapped and evaluated Joshua tree found on the proposed Project site.

4.2 Relocation and Protection of Trees

Each tree was evaluated for its relocation potential. Due to the low success rate of mature Joshua tree relocation, only single-stemmed trees in good health and less than 15 feet in height were selected. Based on Project-related impacts, 283 Joshua trees would be directly impacted by the proposed Project. Of the 283 direct impacts, 57 Joshua trees met the defined criteria for improved likelihood of post-transplant success. As such, the site contains 57 potentially relocatable trees, which are required to be transplanted per Section 9.76.040 of the AVDC. It is recommended that all 57 potentially transplantable western Joshua trees be relocated in accordance with the relocation specifications detailed in Section 4.3. As of the date of this Joshua Tree Plan, relocation of western Joshua trees is not a CDFW requirement. However, it should be noted that relocation of additional trees may be requested by CDFW following review of the WJTCA ITP Application. As of the date of this report, the final relocation locations for the 57 potentially relocatable WJT's is unknown. However, on-site relocation planting spots for the 57 Joshua trees should be prioritized over off-site planting spots when possible and as spacing allows. Should it be found that all of the transplantable trees cannot be accommodated on site, any remaining trees, shall be entered into an adoption program or planted at a suitable off-site location. The final relocation locations will be provided at later date.

Furthermore, based on the impact analysis, none of the Joshua trees on the Project site would be preserved, but all 15 of the remaining Joshua trees, found within 50 feet of the Project site, will be. As such, it is recommended that they be protected in place in accordance with the tree protection measures identified in this Joshua Tree Plan.

4.3 Relocation Specifications

The following sections provide details and recommended specifications for the relocation, storage, and care of western Joshua trees in the post-development landscape for the 57 potentially relocatable western Joshua trees required by the city and any additional trees that may be required by CDFW.

4.3.1 Salvage

Joshua trees have fragile, shallow root systems that are easily damaged during the salvaging and relocation process. During excavation of the root ball, it is important that as much of the existing root structure as possible be captured so that an intact root ball is maintained during the salvaging and relocation process. The following sections include recommendations to help increase the chances of successful salvage/relocation.

4.3.1.1 Contractor

Joshua tree salvage and relocation should be completed by an experienced Joshua tree relocation specialist.

4.3.1.2 Pre-salvage Meeting

Prior to initiating Joshua tree salvage, all contractors involved in salvage activities should attend a site meeting with the Project arborist. The Project arborist should provide the contractor(s) with a copy of the Joshua Tree Plan and review all relevant components of the Joshua Tree Plan.

4.3.1.3 Salvage Timing

To increase the chances of successful relocation, trees should be relocated October through February. To increase Joshua tree survivability, the trees should not be dug out and/or salvaged in warmer months (April through September). However, should Project limitations and timing require a date not during the recommended October through February salvage period, salvaged trees should be stored in a temporary, on-site location, per the recommendations in Section 4.4, Storage.

4.3.1.4 Pre-irrigation

Prior to Joshua tree digging, each identified Joshua tree relocation candidate should be pre-watered. Specifically, each tree should be watered 24 hours prior to relocation. Pre-watering thoroughly soaks the root ball of each tree.

4.3.1.5 Equipment Sanitization

Equipment should be sterilized prior to digging up and transplanting each tree. Equipment sterilization reduces the likelihood of pathogens being passed from tree to tree.

4.3.1.6 Digging

Tree relocation is best completed through the use of machinery. A front-end loader or hydraulic tree spade is recommended. The hydraulic tree spade may be best used in instances where the soil type is sandy or silty.

However, hand-digging of smaller Joshua trees (1 to 2 feet in height) is acceptable. The goal of relocation is to maintain a high root-to-shoot ratio. Joshua tree excavation should capture as much of the root ball as possible; however, due to the tree's shallow root system, holes do not need to be deep in order to do so. In general, the holes may range from 12 to 18 inches in depth for smaller trees (1 to 2 feet tall) to 24 to 36 inches deep for larger trees. The entire root ball should be removed intact, if possible.

4.3.1.7 Root Maintenance

All attempts should be made to minimize exposure of the root ball to air; it is recommended that exposed roots be kept wet at all times during the relocation process. Damaged and exposed roots should be cleaned and dusted with sulfur or a fungicide to decrease the likelihood of root pathogens.

4.4 Storage

All Joshua trees recommended for relocation could be transplanted to off-site locations or throughout the Project site depending on the WJTCA ITP process. If the trees are relocated, all 57 trees may be stored within a temporary storage location approved by a qualified arborist. The temporary storage location should be based on the development schedule. The storage location should be determined at a later date once the final schedule is confirmed. Trees requiring storage or stockpiling in the short term (i.e., 1 to 4 weeks) should adhere to the storage recommendations provided in the Section 4.4.1 through 4.4.6.

4.4.1 Storage

Trees stored for longer than 2 weeks should be temporarily stored in shallow ditches, backfilled with native soils, and tamped down. The shallow ditches should be dug prior to tree relocation, and the final depth should be comparable to the depth at which each Joshua tree was dug. Temporary storage trench depths should be approximately 12 to 24 inches deep, depending on the size of the tree's root ball. It is recommended that trench widths be 1 foot larger than the root ball of the tree, and long enough to accommodate the tree, with enough room for equipment between each tree. Multiple trenches may be required to accommodate all salvaged trees.

4.4.2 Storage Direction

During storage, all trees should be oriented in the same direction that they were prior to removal. Each Joshua tree should be tagged on its northern side and be reoriented with the tagged side facing north. Prior to tree relocation, each tag should be inspected to ensure that it is securely attached to the tree.

4.4.3 Stabilization

Larger plants, over 5 feet tall, may require stabilization until the roots have had the opportunity to become reestablished. To support larger trees, guy-wire staking may be necessary. Guy-wires should be connected to the ground (i.e., preferably via a "dead-man" anchor below grade) and attached to the trunk or limbs with an expandable, non-abrasive connector. Multiple guy-wires may be required (i.e., recommended three equally spaced around the root ball for stability).

4.4.4 Irrigation

Stored trees should be watered one to two times per week during the storage period to ensure tree health and increase relocation success. During the storage period, the trees should be watered by hand or by temporary irrigation. Should temporary irrigation be installed, the use of drip emitters is recommended. Irrigation emitters should be spaced according to the watering zone specified for each tree. The total amount of water required for each tree is dependent on the season and tree size. Irrigation needs may range from 2 to 20 gallons per watering cycle and is dependent on ambient daytime temperatures and rainfall totals. Additionally, persistent wet soil may cause mildew and root rot. As such, soil moisture levels should be routinely checked at the time of watering and allowed to dry out between watering cycles. The irrigation schedule should be adjusted to meet the conditions described above.

4.4.5 Duration

Trees should not be stockpiled or stored for longer than 45 days.

4.4.6 Summer Salvage: Temporary Shade Structure

Per Section 4.3.1.3, Salvage Timing, should Project limitations and timing require an earlier start date than the recommended October through February salvage period, salvaged trees should be stored as described in Section 4.3.1, Salvage. Furthermore, to reduce tree stress and reduce the risk of post-transplant mortality, the salvaged trees should be stored underneath a temporary shade structure. The temporary shade structure should be sufficient in size to cover the salvaged trees and provide protection from the direct heat of the summer sun. The shade structure should use a minimum 30% shade cloth to shade the trees during the warmer months. The shade structure should be attached to galvanized steel structural poles (or similar) to ensure the shade structure is structurally stable. The shade structure should be installed per the manufacturer's recommendations. Due to the potential for high winds, the shade structure should be attached to the ground using diagonal "dead-man" cable supports and concrete-post footings. The shade structure should be of adequate height to cover the trees. For trees that are greater than 10 feet in height, individual shade structures may be established for each tree. The remaining trees, under 10 feet in height, may be stored under a contiguous structure. In addition to the temporary shade structure, all salvaged trees should be relocated and maintained per the recommendations specified throughout this Joshua Tree Plan.

4.5 Transplant Planting

The following sections detail transplanting guidelines for the salvaged Joshua trees.

4.5.1 Site Preparation

Prior to tree transplantation, each receiver location should be dug. Planting locations should be finalized once the final landscape plan has been developed and approved. Prior to digging, the sites should be flagged for identification by the Project arborist or registered botanist. In general, the receiving hole may range from 12 to 18 inches in depth for smaller trees (1 to 2 feet tall) to 24 to 36 inches deep for larger trees. The width of the

hole should be approximately 1 foot larger than the root ball of the transplanted tree. Holes may require additional digging prior to Joshua tree installation.

4.5.2 Pre-watering

A water and root hormone mixture should be prepared prior to transplanting the trees. The mixture should be composed of vitamin B1, which is commonly sold by nurseries. The mixture should be mixed per the manufacturer's directions, which is typically at a 1:250 ratio (B1-to-water ratio). The receiving hole should be filled with the diluted mixture of rooting hormone and water and allowed to drain prior to placing the tree in the hole.

4.5.3 Planting Direction

Proper orientation of the relocated trees is important to the success of the salvaged trees. Improper planting can result in sunburn and growth distortion. As such, the north side of each tree should be clearly marked/tagged prior to digging, and each tree should be replanted (and stored) in the same orientation as it was in prior to removal.

4.5.4 Planting

Prior to final installation, the hole size should be inspected by the Project arborist to ensure that the planting hole is, at a minimum, 1 foot wider than the root ball and is neither too deep nor too shallow. The hole may require minor adjustments prior to installation. The depth of the hole should be less than the height of the root ball. If the hole is inadvertently dug too deep, soil should be added and compacted by hand or foot. Breaking up compacted soil in a large area around the tree (outside the drip line of the tree) provides the newly emerging roots room to expand into loose soil. This should hasten root growth, translating into quicker establishment. Once the size of the hole is finalized, the tree should be lowered into the hole in the proper orientation, backfilled with native soil, and watered again. Following backfilling and placement, the root ball should be tamped down into the hole to eliminate water pockets.

Following planting, a water basin should be installed approximately 1 foot outside of the pre-determined watering zone. The watering basin should be approximately 3 to 4 inches in height and surround the tree. The basin should be left intact throughout the establishment period.

4.5.5 Post-transplant Stabilization

Larger plants, over 5 feet tall, may require stabilization until the roots have had the opportunity to become reestablished. To support larger trees, guy-wire staking may be necessary. Guy-wires should be connected to the ground (i.e., preferably via a "dead-man" anchor below grade) and attached to the trunk or limbs with an expandable, non-abrasive connector. Multiple guy-wires may be required (i.e., recommended three equally spaced around the root ball for stability). Guy-wires should be removed once the tree is determined to be established by the Project arborist.

4.6 Post-relocation Care

4.6.1 Irrigation

Trees that have been relocated to their final planting location should be watered one to two times per week for an initial 2 to 3 months, depending on the season, rainfall totals, tree size, and watering zone size. Irrigation should be adjusted seasonally, with a goal of removing the transplanted trees from supplemental irrigation after 2 years have passed and growth has resumed. The total amount of water required for each tree is dependent on the season and tree size. Persistent wet soil may cause mildew and root rot. As such, soil moisture levels should be routinely checked at the time of watering, and the soil should be allowed to drain and dry out between watering cycles. Watering should be accomplished by hand or by a temporary irrigation system. During irrigation, the tree basin should be filled and allowed to fully drain. Irrigation needs may range from 2 to 20 gallons per watering. The watering cycle should be adjusted based on tree health and season.

4.6.2 Stabilization

Trees that have been stabilized should be routinely inspected by the Project arborist to ensure that the guy-wires and straps are not damaging the trees. The expandable, non-abrasive connectors should be adjusted, as needed, to minimize damage to the trees. The guy-wires can be removed once the Project arborist has determined that the trees have become established. In general, little to no movement should be observed for the root ball when the tree is gently pushed. Once the roots are well established, it is important to remove the tree stakes. This encourages a natural strengthening of the tree trunk so it can support the weight of the branches as they begin grow and spread.

4.6.3 Fertilization

Post-transplantation fertilization is not required.

4.7 Monitoring and Reporting

Tree relocation, stockpiling, maintenance, and watering should be monitored by a Certified Arborist or registered botanist.

4.7.1 Monitoring

The Town requires an approved Joshua Tree maintenance plan and schedule prepared by a Desert Native Plant Expert to ensure that the transplanted trees “have been maintained in such a manner to insure the highest practicable survival rate.” For the initial 3 months following transplantation, weekly monitoring by a Certified Arborist or registered botanist should occur to ensure that the watering needs of each relocated tree are being met. Following the initial 3-month monitoring period, the relocated trees should be monitored on a monthly basis for 9 months. Following the first year of monitoring, the trees should be monitored quarterly (every 3 months) for 3 years to ensure tree establishment. Monitoring may be adjusted based on tree health and observations by the Project arborist. The monitoring period should begin once all trees have been installed. CDFW does not define a minimum post-transplantation monitoring period. However, an annual inspection and report for 4 years is recommended.

4.7.2 Reporting

The Town requires a maintenance report at the end of the Project or at 6-month intervals. Additionally, annual reports should be prepared at the end of each calendar year to document the status of the transplantation program and the health/survivability of the relocated trees. Reports of all monitoring should be submitted to the Town and CDFW if reporting is required. Monitoring should track the location, health, and status of each transplanted Joshua tree. The monitoring arborist or registered botanist should include recommendations for maintenance and irrigation, should they be needed.

4.8 Transplantation Success Criteria

The Town does not define a minimum success ratio for transplanted Joshua trees. However, per CDFW requirements, adherence to an 80% survivability rate is required should relocation occur. As such, the transplantation program would be considered successful if, after four growing seasons (4 years)—including two growing seasons with supplemental irrigation and two without the transplanted trees maintain a minimum of 80% survivability. In total, the relocation would be considered successful if a total of 47 WJTs successfully survived four growing seasons. Should the surviving number of trees drop below 80%, it is recommended that trees be obtained from a local adoption program or from a local nursery to meet the 4-year, 80% threshold. The Town or CDFW may define alternative minimum success criteria. The final 80% survivability rate will be based on the total number of western Joshua trees required for relocation by CDFW or the town of Apple Valley, should relocation be required.

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5 California Department of Fish and Wildlife Mitigation

The following section details the proposed mitigation program described within the ITP Application for the Project (Item No. 9).

5.1 Proposed Minimization and Mitigation

As described in Section 1, Introduction, under the WJTCA, relocation of western Joshua trees is considered a minimization measure, in contrast to the previous Section 2081 ITP process, where relocation was viewed as an experimental approach. Relocation in the WJTCA is described as follows:

> (4) (A) The department [CDFW] may include permit conditions that require the permittee to relocate one or more of the western Joshua trees. If relocation is required, the permittee shall implement measures to assist the survival of relocated trees, and to comply with any other reasonable measures required by the department to facilitate the successful relocation and survival of the western Joshua trees. These relocation measures shall include, but are not limited to, all of the following:
>
> (i) A requirement that the relocated western Joshua tree is placed in a location and with proper orientation to improve its survival.
>
> (ii) A requirement that western Joshua trees are relocated at a time that maximizes their survival when feasible.
>
> (iii) A requirement that a desert native plant specialist be onsite to oversee relocation

Beyond the option of relocation, the California Fish and Game Commission also established the Western Joshua Tree Conservation Fund. This dedicated fund provides for the acquisition, preservation, and responsible management of western Joshua tree conservation lands, as well as the facilitation of various other initiatives aimed at the conservation of western Joshua trees.

Regarding the acquisition of permits for the incidental take of western Joshua trees, permittees are required to remit an in-lieu fee contingent on the Project's geographical location. This fee structure is divided into two categories: the reduced mitigation fee area, characterized by lower mitigation fees, and the standard fee area, where mitigation fees are comparatively higher. The Project site is situated within the reduced mitigation fee area. The reduced fees are as follows:

- Trees 5 meters or greater in height: $1,000
- Trees 1 meter or greater but less than 5 meters in height: $200
- Trees less than 1 meter in height: $150

Mitigation for Direct Impacts

Mitigation for direct impacts to 283 western Joshua trees will be fulfilled through the WJTCA in-lieu fee program. As described, the Project is located in the reduced mitigation fee area. Table 2 summarizes the impacts to western Joshua trees by height class, the mitigation fee per tree by height class, and the total cost of mitigation. Note that CDFW calculates the mitigation fee and sends an invoice to the applicant after the application is submitted.

Table 2. In-Lieu Mitigation Fees for Impacts to Western Joshua Trees

Western Joshua Tree Height Class	Count of Western Joshua Trees	Mitigation Fee Per Tree by Height Class	Total Cost
5 meters or greater in height	4	$1,000	$4,000
1 meter to less than 5 meters in height	201	$200	$40,200
Less than 1 meter in height	78	$150	$11,700
Total	**283**	**N/A**	**$55,900**

In addition, 57 western Joshua trees may be relocated, as described herein, as an avoidance and minimization measure.

6 Tree Protection

For Joshua trees that do not require relocation and that will be preserved, the following measures are recommended to protect the remaining Joshua trees so that they have protected zones (crown/canopy width plus 6 feet) around each tree within and immediately adjacent to (within 25 feet of) all active construction areas. For protected trees on site that remain within undisturbed areas, similar tree protection measures are recommended to ensure against potential inadvertent disturbance.

6.1 Tree Protection Measures prior to Construction

Fencing: Orange polyethylene construction fencing, no less than 4 feet in height, with tree protection signs, shall be erected around all undisturbed trees (or tree groups). The protective fencing shall be installed at the protected zone boundary of each tree (or tree group), which is defined as 6 feet beyond the tree crown/canopy dripline. The intent of protective fencing is to prevent root damage and/or compaction of the soil by grading equipment. An ISA Certified Arborist may be required on site if grading activities occur within a tree's protected zone. Fencing shall be secured to 6-foot-tall, heavy-gauge T-bar posts pounded into the ground a minimum of 18 inches and spaced a minimum of 8 feet on center. Fencing shall be attached to the T-bar posts, with minimum 14-gauge wire fastened to the top, middle, and bottom of each post. Tree protection signs shall be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities in the vicinity of the protected tree(s) are complete.

Preconstruction Meeting: A preconstruction meeting shall be held between all contractors (including grading, tree removal/pruning, and builders) and an ISA Certified Arborist or registered botanist. The meeting shall focus on instructing the contractors on tree protection practices and on answering any questions. All equipment operators and spotters, assistants, and those directing operators from the ground shall provide written acknowledgment of having received tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish these tasks.

6.2 Protection and Maintenance during Construction

Once construction activities have begun, the following protection measures shall be followed:

Equipment Operation and Storage: Contractors shall avoid heavy equipment operation around protected trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and consequently reduces water penetration into the soil. All heavy equipment and vehicles shall, at minimum, stay out of the fenced protected tree zone except where specifically approved in writing and under the supervision of a Certified Arborist or registered botanist.

Materials Storage and Disposal: Contractors shall not store or discard any supplies or materials, including paint, lumber, and concrete overflow, within the protected zone, and shall remove all foreign debris within the protected zone. However, the contractors shall leave the duff, mulch, chips, and other organic material around the retained trees for water retention and nutrient supply. In addition, the contractors shall avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulic, brake, and transmission fluids,

paint, paint thinners, and glycol (anti-freeze) shall be disposed of properly. Contractors shall ensure that equipment is parked at outside of the protected zone to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the trees could result in tree decline and mortality.

Grade Changes: Contractors shall ensure that grade changes, including adding fill, are not permitted within the protected zone without special written authorization and under supervision by an ISA Certified Arborist or registered botanist. Lowering the grade within the protected zone would necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the trees. Adding soil, even temporarily, on top of the existing grade would compact the soil further and decrease water and air availability to the tree roots. Contractors shall ensure that grade changes made outside of the protected tree zone will not create conditions that allow water to pond at the base of the tree. Water trapped at the base of a tree could lead to root rot and other detrimental tree impacts.

Moving Construction Materials: Contractors shall ensure that care is exercised when moving construction equipment and supplies near undisturbed Joshua trees, especially overhead. Contractors shall ensure that damage to the trees is avoided when transporting or moving construction materials and working around trees (even outside of the fenced protected zone). Contractors shall flag aboveground tree parts that could be damaged (e.g., low limbs, scaffold branches, and trunks) with high-visibility flagging, such as fluorescent red or orange flagging.

Trenching: Except where specifically approved in writing beforehand, all trenching shall be outside the fenced protected zone. Where trenching is necessary in areas that contain roots from retained trees, contractors shall use trenching techniques that include the use of either a root pruner (Dosko root pruner or equivalent) or an Air-Spade to limit root impacts. An ISA Certified Arborist or registered botanist shall ensure that all pruning cuts are clean and sharp to minimize ripping, tearing, and fracturing of the root system. Root damage caused by backhoes, earthmovers, dozers, or graders is severe and may result in tree mortality. Use of root-pruning and Air-Spade equipment shall be accompanied only by hand removal of soil from trench locations. The trench shall be made no deeper than necessary to accommodate the intended materials.

Irrigation/Hand Watering: Irrigation/hand watering of retained Joshua trees on site shall seek to mimic natural rainfall patterns in Southern California. As such, irrigation/hand watering is not required unless recommended by the monitoring ISA Certified Arborist or registered botanist.

Inspection/Reporting: An ISA Certified Arborist or registered botanist shall inspect the preserved trees adjacent to grading and construction activity on a monthly basis for the duration of the proposed Project's construction period. A site observation report summarizing site conditions, observations, tree health, and recommendations for minimizing tree damage shall be submitted by the ISA Certified Arborist or registered botanist following each inspection. Annual monitoring reports to document year-end conditions shall also be submitted.

6.3 Maintenance after Construction

Following completion of the construction activity within 20 feet of the protected zones of undisturbed Joshua trees, the tree protection fencing may be removed, and the following measures may be performed to sustain and enhance the vigor of the trees:

Pruning: Regular pruning of the trees is not required.

Watering: The retained trees should not require regular irrigation/hand watering, other than during the 12 months following substantial root pruning, if applicable. Supplemental irrigation/hand watering for the retained trees that sustained root pruning and any newly planted trees may be necessary, especially in years with low winter rainfall.

Watering Adjacent Plant Material: All watering near retained Joshua trees and adjacent vegetation should mimic natural rainfall patterns. Supplemental irrigation of adjacent plant material should not be required.

Monitoring: For the initial 3 months, weekly monitoring by an ISA Certified Arborist or registered botanist is recommended to ensure that the watering needs of each tree is being met. Following the initial 3-month monitoring period, it is recommended that the trees be monitored on a monthly basis for 9 months. Following the first year of monitoring, it is recommended that the trees be monitored quarterly (every 3 months) for 3 years. Following each monitoring visit, a site observation report summarizing site conditions, observations, tree health, and recommendations for promoting tree health should be submitted. Any tree mortality will be noted, and any tree dying during the monitoring period will be replaced with the same species as specified per Town replacement standards.

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7 Fees

Per Chapter 9.76 of the AVDC, where permits or reviews are required and they are not incorporated into other review or permit procedures, fees will be paid in accordance with the Town's fee schedule. In addition to the Town required fees, per Section 5 of this report, mitigation for direct impacts to 283 western Joshua trees will be fulfilled through the WJTCA in-lieu fee program. As described, the Project site is in the reduced mitigation fee area. Table 2 summarizes the impacts to western Joshua trees by height class, the mitigation fee per tree by height class, and the total cost of mitigation. However, note that CDFW calculates the mitigation fee and sends an invoice to the applicant after the application is submitted.

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8 Desert Native Plants

In addition to western Joshua trees, the site contains other desert native plants that are protected by the Town of Apple Valley Plant Protection and Management Policy (Chapter 9.76), the County of San Bernardino's Desert Native Plant Protection, and the state Desert Native Plants Act (i.e., Food and Agricultural Code 80001 et seq.). Based on the results of the surveys conducted by GLA and Dudek from June 2022 to June 2023, one Wiggins' cholla (*Cylindropuntia echinocarpa*) and one Mojave yucca (*Yucca schidigera)* were found on site.

In accordance with the California Desert Native Plants Act and Town of Apple Valley Chapter 9.76 (Plant Protection and Management Policy), a native plant removal permit must be obtained from the Town prior to the removal of the Wiggin's cholla, Mojave yucca, and western Joshua tree. No further mitigation is required; however, permit conditions may require salvage or that the species be incorporated into the landscape plan of the Project. Any approved land use application and/or development permit will be the permit for the removal of Wiggin's cholla, Mojave yucca, and western Joshua tree once the Town approves it.

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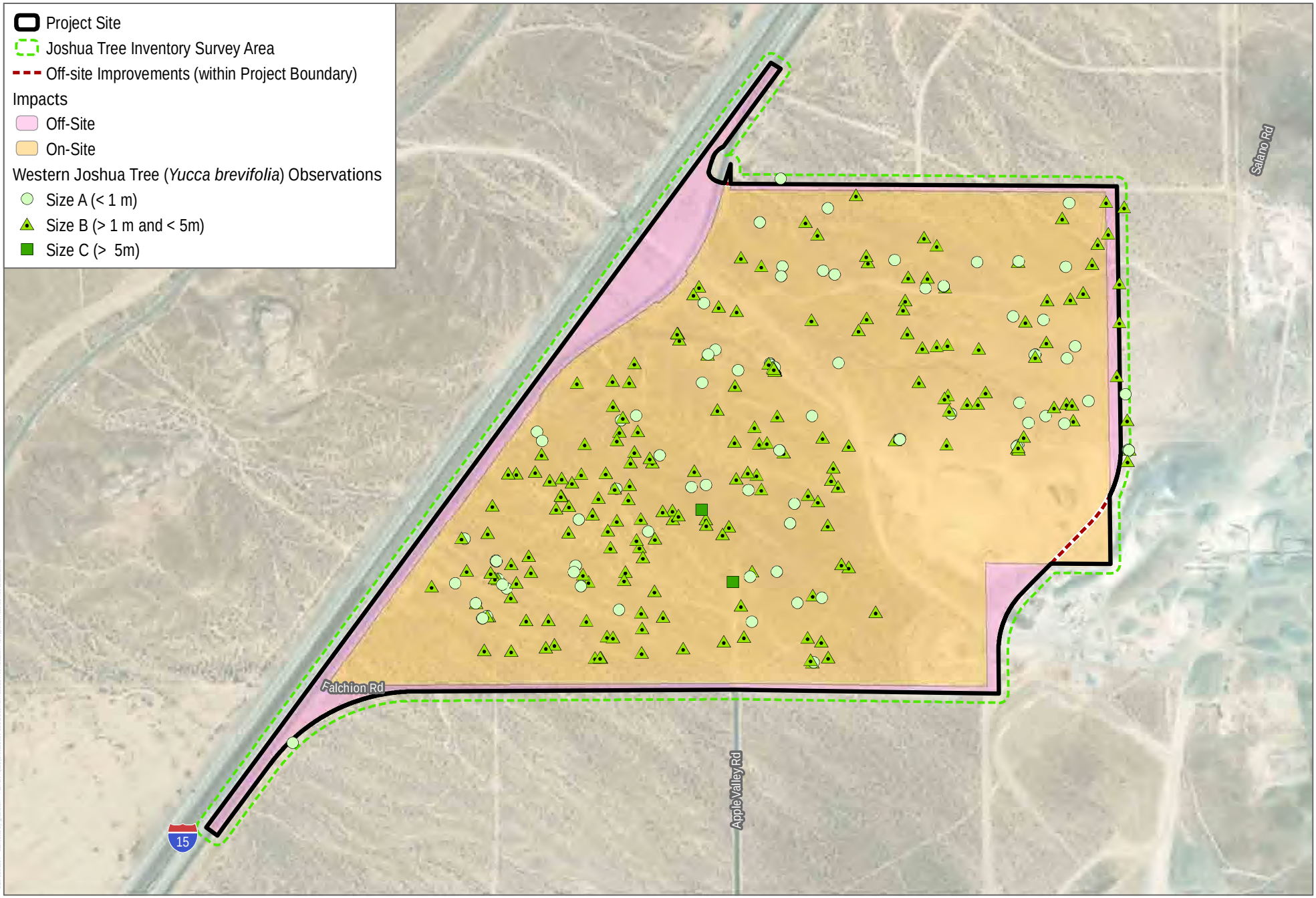
Appendix A

Joshua Tree Locations



SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

DUDEK

0 300 600 Feet

APPENDIX A

Joshua Tree Locations

Inland Empire North Logistics Center Apple Valley Project

Appendix B

Joshua Tree Information Matrix

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15m of Construction	Latitude	Longitude
1	Size B (> 1 m and < 5m)	4.88	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_1	Project Site	Yes	34.57228	-117.27
2	Size B (> 1 m and < 5m)	3.66	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_2	Project Site	Yes	34.57221	-117.271
3	Size B (> 1 m and < 5m)	1.37	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_3	Project Site	Yes	34.5722	-117.271
4	Size B (> 1 m and < 5m)	2.44	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_4	Project Site	Yes	34.5722	-117.271
5	Size B (> 1 m and < 5m)	1.83	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_5	Project Site	Yes	34.57232	-117.273
6	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_6	Project Site	Yes	34.57233	-117.273
7	Size A (< 1 m)	0.61	Dead	No	None	Dead	No		None	IENLA-A_WJT_Tree_7	50-ft Buffer	Yes	34.57099	-117.277
9	Size B (> 1 m and < 5m)	1.19	Live	No	None	Good	Yes	Relocate with tree 10	Direct	IENLA-A_WJT_Tree_9	Project Site	Yes	34.57302	-117.273
10	Size A (< 1 m)	0.88	Live	No	None	Good	Yes	Relocate with tree 9	Direct	IENLA-A_WJT_Tree_10	Project Site	Yes	34.57302	-117.273
11	Size A (< 1 m)	0.61	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_11	Project Site	Yes	34.5728	-117.273
12	Size A (< 1 m)	0.3	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_12	Project Site	Yes	34.5728	-117.273
13	Size B (> 1 m and < 5m)	1.52	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_13	Project Site	Yes	34.57283	-117.273
14	Size A (< 1 m)	0.91	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_14	Project Site	Yes	34.57283	-117.273
15	Size B (> 1 m and < 5m)	2.13	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_15	Project Site	Yes	34.57283	-117.273
16	Size B (> 1 m and < 5m)	1.25	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_16	Project Site	Yes	34.57277	-117.272
17	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_17	Project Site	Yes	34.57236	-117.272
18	Size B (> 1 m and < 5m)	4.27	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_18	Project Site	Yes	34.57241	-117.272
19	Size B (> 1 m and < 5m)	2.16	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_19	Project Site	Yes	34.57277	-117.272
20	Size B (> 1 m and < 5m)	1.52	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_20	Project Site	Yes	34.57275	-117.271
21	Size B (> 1 m and < 5m)	3.66	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_21	Project Site	Yes	34.57252	-117.271
22	Size B (> 1 m and < 5m)	2.44	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_22	Project Site	Yes	34.57251	-117.271
23	Size B (> 1 m and < 5m)	1.19	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_23	Project Site	Yes	34.57287	-117.27
24	Size B (> 1 m and < 5m)	1.37	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_24	Project Site	Yes	34.57264	-117.27
25	Size B (> 1 m and < 5m)	1.77	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_25	Project Site	Yes	34.5728	-117.27
26	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_26	Project Site	Yes	34.57234	-117.27
27	Size B (> 1 m and < 5m)	3.35	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_27	Project Site	Yes	34.57243	-117.269
28	Size B (> 1 m and < 5m)	3.05	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_28	Project Site	Yes	34.57318	-117.27
29	Size B (> 1 m and < 5m)	1.46	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_29	Project Site	Yes	34.57335	-117.271
30	Size B (> 1 m and < 5m)	1.52	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_30	Project Site	Yes	34.57347	-117.271
31	Size A (< 1 m)	0.58	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_31	Project Site	Yes	34.57291	-117.271
32	Size B (> 1 m and < 5m)	2.74	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_32	Project Site	Yes	34.57332	-117.271
33	Size B (> 1 m and < 5m)	4.27	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_33	Project Site	Yes	34.57343	-117.271
34	Size A (< 1 m)	0.91	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_34	Project Site	Yes	34.57326	-117.271
35	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_35	Project Site	Yes	34.57348	-117.272
36	Size B (> 1 m and < 5m)	2.74	Live	Yes	None	Good	Yes		Direct	IENLA-A_WJT_Tree_36	Project Site	Yes	34.57332	-117.273
37	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_37	Project Site	Yes	34.5731	-117.273
38	Size B (> 1 m and < 5m)	4.88	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_38	Project Site	Yes	34.57359	-117.273
39	Size A (< 1 m)	0.15	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_39	Project Site	Yes	34.57363	-117.273
40	Size A (< 1 m)	0.46	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_40	Project Site	Yes	34.57364	-117.273
41	Size A (< 1 m)	0.46	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_41	Project Site	Yes	34.57364	-117.273
42	Size A (< 1 m)	0.64	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_42	Project Site	Yes	34.57337	-117.273
43	Size B (> 1 m and < 5m)	2.74	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_43	Project Site	Yes	34.57337	-117.273
44	Size B (> 1 m and < 5m)	1.37	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_44	Project Site	Yes	34.57339	-117.273
45	Size A (< 1 m)	0.55	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_45	Project Site	Yes	34.57329	-117.273
46	Size A (< 1 m)	0.61	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_46	Project Site	Yes	34.57323	-117.273
47	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_47	Project Site	Yes	34.57346	-117.273
48	Size B (> 1 m and < 5m)	2.9	Live	Yes	None	Good	Yes		Direct	IENLA-A_WJT_Tree_48	Project Site	Yes	34.5735	-117.273

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15m of Construction	Latitude	Longitude
49	Size A (< 1 m)	0.55	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_49	Project Site	Yes	34.57332	-117.274
50	Size B (> 1 m and < 5m)	4.88	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_50	Project Site	Yes	34.57327	-117.274
51	Size B (> 1 m and < 5m)	1.19	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_51	Project Site	Yes	34.57398	-117.274
52	Size A (< 1 m)	0.34	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_52	Project Site	Yes	34.57396	-117.274
53	Size B (> 1 m and < 5m)	1.04	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_53	Project Site	Yes	34.57405	-117.273
54	Size B (> 1 m and < 5m)	1.37	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_54	Project Site	Yes	34.57371	-117.272
55	Size A (< 1 m)	0.85	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_55	Project Site	Yes	34.57356	-117.272
56	Size A (< 1 m)	0.94	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_56	Project Site	Yes	34.57346	-117.272
57	Size B (> 1 m and < 5m)	1.52	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_57	Project Site	Yes	34.57382	-117.271
58	Size B (> 1 m and < 5m)	3.66	Live	Yes	None	Very Poor	No		Direct	IENLA-A_WJT_Tree_58	Project Site	Yes	34.57408	-117.271
59	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_59	Project Site	Yes	34.57367	-117.27
60	Size B (> 1 m and < 5m)	3.96	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_60	Project Site	Yes	34.57383	-117.27
61	Size B (> 1 m and < 5m)	3.66	Live	Yes	None	Good	Yes		Direct	IENLA-A_WJT_Tree_61	Project Site	Yes	34.57394	-117.27
62	Size C (> 5m)	5.18	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_62	Project Site	Yes	34.5733	-117.269
63	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_63	Project Site	Yes	34.57396	-117.27
64	Size A (< 1 m)	0.58	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_64	Project Site	Yes	34.57405	-117.27
65	Size A (< 1 m)	0.79	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_65	Project Site	Yes	34.57424	-117.271
66	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_66	Project Site	Yes	34.57445	-117.273
67	Size B (> 1 m and < 5m)	1.04	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_67	Project Site	Yes	34.57405	-117.272
68	Size B (> 1 m and < 5m)	3.51	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_68	Project Site	Yes	34.57431	-117.271
69	Size B (> 1 m and < 5m)	3.81	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_69	Project Site	Yes	34.57431	-117.271
70	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_70	Project Site	Yes	34.57422	-117.271
71	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_71	Project Site	Yes	34.57424	-117.27
72	Size B (> 1 m and < 5m)	3.35	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_72	Project Site	Yes	34.57435	-117.27
73	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_73	Project Site	Yes	34.57436	-117.27
74	Size B (> 1 m and < 5m)	1.52	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_74	Project Site	Yes	34.57423	-117.27
75	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_75	Project Site	Yes	34.57428	-117.27
76	Size C (> 5m)	5.33	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_76	Project Site	Yes	34.57437	-117.269
77	Size B (> 1 m and < 5m)	2.13	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_77	Project Site	Yes	34.57423	-117.269
78	Size B (> 1 m and < 5m)	2.44	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_78	Project Site	Yes	34.57415	-117.269
79	Size A (< 1 m)	0.98	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_79	Project Site	Yes	34.5747	-117.269
80	Size B (> 1 m and < 5m)	1.22	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_80	Project Site	Yes	34.57453	-117.271
81	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_81	Project Site	Yes	34.57455	-117.271
82	Size B (> 1 m and < 5m)	4.88	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_82	Project Site	Yes	34.57458	-117.272
83	Size B (> 1 m and < 5m)	4.88	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_83	Project Site	Yes	34.57459	-117.272
84	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_84	Project Site	Yes	34.57444	-117.272
85	Size B (> 1 m and < 5m)	1.37	Live	No	None	Very Poor	No		Direct	IENLA-A_WJT_Tree_85	Project Site	Yes	34.5744	-117.272
86	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_86	Project Site	Yes	34.57492	-117.273
87	Size B (> 1 m and < 5m)	2.74	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_87	Project Site	Yes	34.57492	-117.273
88	Size B (> 1 m and < 5m)	2.44	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_88	Project Site	Yes	34.57494	-117.272
89	Size B (> 1 m and < 5m)	1.98	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_89	Project Site	Yes	34.57482	-117.272
90	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_90	Project Site	Yes	34.57484	-117.272
91	Size B (> 1 m and < 5m)	4.57	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_91	Project Site	Yes	34.57478	-117.272
92	Size B (> 1 m and < 5m)	1.55	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_92	Project Site	Yes	34.57491	-117.271
93	Size B (> 1 m and < 5m)	4.57	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_93	Project Site	Yes	34.57492	-117.271
94	Size A (< 1 m)	0.61	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_94	Project Site	Yes	34.57468	-117.271
95	Size B (> 1 m and < 5m)	1.86	Live	Yes	None	Fair	No	Mistagged at 94	Direct	IENLA-A_WJT_Tree_95	Project Site	Yes	34.57469	-117.271

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15m of Construction	Latitude	Longitude
96	Size B (> 1 m and < 5m)	3.05	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_96	Project Site	Yes	34.57474	-117.271
97	Size A (< 1 m)	0.64	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_97	Project Site	Yes	34.57473	-117.269
98	Size B (> 1 m and < 5m)	1.52	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_98	Project Site	Yes	34.57494	-117.269
99	Size A (< 1 m)	0.88	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_99	Project Site	Yes	34.57516	-117.27
100	Size B (> 1 m and < 5m)	3.2	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_100	Project Site	Yes	34.57507	-117.27
101	Size B (> 1 m and < 5m)	1.46	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_101	Project Site	Yes	34.57513	-117.27
102	Size B (> 1 m and < 5m)	1.68	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_102	Project Site	Yes	34.57523	-117.27
103	Size B (> 1 m and < 5m)	4.88	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_103	Project Site	Yes	34.57507	-117.271
104	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_104	Project Site	Yes	34.5754	-117.271
105	Size B (> 1 m and < 5m)	1.07	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_105	Project Site	Yes	34.57534	-117.271
106	Size B (> 1 m and < 5m)	1.8	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_106	Project Site	Yes	34.5752	-117.272
107	Size A (< 1 m)	0.76	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_107	Project Site	Yes	34.57553	-117.272
108	Size A (< 1 m)	0.7	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_108	Project Site	Yes	34.57539	-117.272
109	Size B (> 1 m and < 5m)	1.07	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_109	Project Site	Yes	34.57552	-117.271
110	Size B (> 1 m and < 5m)	1.52	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_110	Project Site	Yes	34.57553	-117.27
111	Size B (> 1 m and < 5m)	1.04	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_111	Project Site	Yes	34.57573	-117.271
112	Size A (< 1 m)	0.15	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_112	Project Site	Yes	34.57576	-117.27
113	Size A (< 1 m)	0.91	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_113	Project Site	Yes	34.57671	-117.269
114	Size A (< 1 m)	0.3	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_114	Project Site	Yes	34.57664	-117.269
115	Size B (> 1 m and < 5m)	4.88	Live	Yes	None	Poor	No		Direct	IENLA-A_WJT_Tree_115	Project Site	Yes	34.57664	-117.269
116	Size B (> 1 m and < 5m)	1.22	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_116	Project Site	Yes	34.57686	-117.27
117	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_117	Project Site	Yes	34.57653	-117.27
118	Size A (< 1 m)	0.91	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_118	Project Site	Yes	34.57623	-117.269
119	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_119	Project Site	Yes	34.57583	-117.269
120	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_120	Project Site	Yes	34.57625	-117.271
121	Size B (> 1 m and < 5m)	1.52	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_121	Project Site	Yes	34.57627	-117.271
122	Size B (> 1 m and < 5m)	4.88	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_122	Project Site	Yes	34.57624	-117.272
123	Size B (> 1 m and < 5m)	4.57	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_123	Project Site	Yes	34.5759	-117.271
124	Size A (< 1 m)	0.3	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_124	Project Site	Yes	34.57569	-117.271
125	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_125	Project Site	Yes	34.57695	-117.27
126	Size B (> 1 m and < 5m)	3.05	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_126	Project Site	Yes	34.57696	-117.27
127	Size B (> 1 m and < 5m)	3.96	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_127	Project Site	Yes	34.57734	-117.269
128	Size A (< 1 m)	0.3	Live	No	None	Poor	No		Direct	IENLA-A_WJT_Tree_128	Project Site	Yes	34.5774	-117.269
129	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_129	Project Site	Yes	34.57753	-117.269
130	Size B (> 1 m and < 5m)	1.22	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_130	Project Site	Yes	34.57764	-117.269
131	Size B (> 1 m and < 5m)	1.52	Dead	Yes	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_131	Project Site	Yes	34.5764	-117.268
132	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_132	Project Site	Yes	34.5764	-117.268
133	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_133	Project Site	Yes	34.57643	-117.268
134	Size B (> 1 m and < 5m)	2.44	Dead	Yes	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_134	Project Site	Yes	34.57643	-117.268
135	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_135	Project Site	Yes	34.57644	-117.268
136	Size B (> 1 m and < 5m)	2.44	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_136	Project Site	Yes	34.57645	-117.268

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15m of Construction	Latitude	Longitude
137	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_137	Project Site	Yes	34.57644	-117.268
138	Size A (< 1 m)	0.91	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_138	Project Site	Yes	34.57645	-117.268
139	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_139	Project Site	Yes	34.5765	-117.268
140	Size A (< 1 m)	0.61	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_140	Project Site	Yes	34.57648	-117.268
141	Size A (< 1 m)	0.3	Dead	No	None	Dead	No	Previously removed and piled by unknown party	Direct	IENLA-A_WJT_Tree_141	Project Site	Yes	34.5765	-117.268
142	Size A (< 1 m)	0.91	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_142	Project Site	Yes	34.5764	-117.269
143	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_143	Project Site	Yes	34.57529	-117.267
144	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_144	Project Site	Yes	34.57541	-117.267
145	Size A (< 1 m)	0.3	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_145	Project Site	Yes	34.57573	-117.267
146	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_146	Project Site	Yes	34.57618	-117.269
147	Size B (> 1 m and < 5m)	1.52	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_147	Project Site	Yes	34.57573	-117.268
148	Size B (> 1 m and < 5m)	2.44	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_148	Project Site	Yes	34.57497	-117.267
149	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_149	Project Site	Yes	34.57558	-117.268
150	Size B (> 1 m and < 5m)	3.96	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_150	Project Site	Yes	34.57536	-117.269
151	Size B (> 1 m and < 5m)	4.88	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_151	Project Site	Yes	34.57533	-117.268
152	Size B (> 1 m and < 5m)	3.66	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_152	Project Site	Yes	34.57534	-117.268
153	Size A (< 1 m)	0.3	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_153	Project Site	Yes	34.57523	-117.268
154	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_154	Project Site	Yes	34.5752	-117.268
155	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_155	Project Site	Yes	34.57479	-117.267
156	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_156	Project Site	Yes	34.57469	-117.267
157	Size B (> 1 m and < 5m)	4.57	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_157	Project Site	Yes	34.57482	-117.269
158	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_158	Project Site	Yes	34.57491	-117.268
159	Size B (> 1 m and < 5m)	2.44	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_159	Project Site	Yes	34.57487	-117.268
160	Size B (> 1 m and < 5m)	2.44	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_160	Project Site	Yes	34.57457	-117.267
161	Size B (> 1 m and < 5m)	1.52	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_161	Project Site	Yes	34.57448	-117.267
162	Size A (< 1 m)	0.61	Live	No	None	Poor	No		Direct	IENLA-A_WJT_Tree_162	Project Site	Yes	34.57444	-117.268
163	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_163	Project Site	Yes	34.57466	-117.268
164	Size A (< 1 m)	0.91	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_164	Project Site	Yes	34.57465	-117.268
165	Size B (> 1 m and < 5m)	1.52	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_165	Project Site	Yes	34.57412	-117.267
166	Size A (< 1 m)	0.61	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_166	Project Site	Yes	34.57415	-117.268
167	Size B (> 1 m and < 5m)	3.05	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_167	Project Site	Yes	34.57412	-117.269
168	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_168	Project Site	Yes	34.57401	-117.269
169	Size B (> 1 m and < 5m)	2.44	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_169	Project Site	Yes	34.57355	-117.267
170	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_170	Project Site	Yes	34.57351	-117.267
171	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_171	Project Site	Yes	34.57346	-117.268
172	Size A (< 1 m)	0.3	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_172	Project Site	Yes	34.57338	-117.268
173	Size A (< 1 m)	0.61	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_173	Project Site	Yes	34.57344	-117.268
174	Size B (> 1 m and < 5m)	3.05	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_174	Project Site	Yes	34.5731	-117.267
175	Size A (< 1 m)	0.91	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_175	Project Site	Yes	34.57306	-117.267
176	Size A (< 1 m)	0.3	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_176	Project Site	Yes	34.57299	-117.268
177	Size B (> 1 m and < 5m)	4.57	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_177	Project Site	Yes	34.57296	-117.269
178	Size A (< 1 m)	0.3	Live	No	None	Poor	No		Direct	IENLA-A_WJT_Tree_178	Project Site	Yes	34.57272	-117.268

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15m of Construction	Latitude	Longitude
179	Size B (> 1 m and < 5m)	3.96	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_179	Project Site	Yes	34.5725	-117.269
180	Size B (> 1 m and < 5m)	1.22	Dead	Yes	None	Dead	No	Pieces scattered	Direct	IENLA-A_WJT_Tree_180	Project Site	Yes	34.57248	-117.267
181	Size B (> 1 m and < 5m)	1.83	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_181	Project Site	Yes	34.57243	-117.267
182	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Good	Yes		Direct	IENLA-A_WJT_Tree_182	Project Site	Yes	34.57285	-117.266
183	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No	2 stem	Direct	IENLA-A_WJT_Tree_183	Project Site	Yes	34.57219	-117.267
184	Size B (> 1 m and < 5m)	1.22	Live	No	None	Poor	No	H1 2', H2 2'	Direct	IENLA-A_WJT_Tree_184	Project Site	Yes	34.57215	-117.267
185	Size A (< 1 m)	0.3	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_185	Project Site	Yes	34.57212	-117.267
186	Size B (> 1 m and < 5m)	3.05	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_186	Project Site	Yes	34.57211	-117.267
187	Size A (< 1 m)	0.94	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_187	Project Site	Yes	34.5765	-117.267
188	Size B (> 1 m and < 5m)	1.52	Live	No	None	Good	Yes	Relocate with tree 189	Direct	IENLA-A_WJT_Tree_188	Project Site	Yes	34.57537	-117.266
189	Size A (< 1 m)	0.85	Live	No	None	Good	Yes	Relocate with tree 188	Direct	IENLA-A_WJT_Tree_189	Project Site	Yes	34.57538	-117.266
190	Size A (< 1 m)	0.18	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_190	Project Site	Yes	34.57537	-117.266
191	Size B (> 1 m and < 5m)	1.25	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_191	Project Site	Yes	34.57622	-117.265
192	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_192	Project Site	Yes	34.5753	-117.265
193	Size B (> 1 m and < 5m)	1.01	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_193	Project Site	Yes	34.57579	-117.265
194	Size A (< 1 m)	0.82	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_194	Project Site	Yes	34.57575	-117.265
195	Size B (> 1 m and < 5m)	2.13	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_195	Project Site	Yes	34.57602	-117.265
196	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_196	Project Site	Yes	34.57598	-117.265
197	Size B (> 1 m and < 5m)	1.19	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_197	Project Site	Yes	34.57589	-117.265
198	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_198	Project Site	Yes	34.57589	-117.264
199	Size B (> 1 m and < 5m)	2.59	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_199	Project Site	Yes	34.57523	-117.264
200	Size B (> 1 m and < 5m)	1.22	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_200	Project Site	Yes	34.57526	-117.264
201	Size A (< 1 m)	0.37	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_201	Project Site	Yes	34.57528	-117.264
202	Size A (< 1 m)	0.21	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_202	Project Site	Yes	34.57526	-117.264
203	Size B (> 1 m and < 5m)	3.35	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_203	Project Site	Yes	34.57521	-117.264
204	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_204	Project Site	Yes	34.57541	-117.264
205	Size B (> 1 m and < 5m)	2.13	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_205	Project Site	Yes	34.57606	-117.264
206	Size B (> 1 m and < 5m)	2.01	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_206	Project Site	Yes	34.57714	-117.267
207	Size A (< 1 m)	0.55	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_207	Project Site	Yes	34.5759	-117.264
208	Size A (< 1 m)	0.91	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_208	Project Site	Yes	34.5756	-117.264
209	Size B (> 1 m and < 5m)	1.31	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_209	Project Site	Yes	34.57564	-117.263
210	Size A (< 1 m)	0.82	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_210	Project Site	Yes	34.57559	-117.263
211	Size A (< 1 m)	0.46	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_211	Project Site	Yes	34.57571	-117.263
212	Size B (> 1 m and < 5m)	1.37	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_212	Project Site	Yes	34.57583	-117.263
213	Size B (> 1 m and < 5m)	1.22	Live	Yes	None	Very Poor	No		Direct	IENLA-A_WJT_Tree_213	Project Site	Yes	34.5767	-117.264
214	Size B (> 1 m and < 5m)	1.1	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_214	Project Site	Yes	34.57676	-117.265
215	Size B (> 1 m and < 5m)	3.35	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_215	Project Site	Yes	34.57674	-117.265
216	Size B (> 1 m and < 5m)	1.89	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_216	Project Site	Yes	34.57672	-117.265
217	Size B (> 1 m and < 5m)	1.52	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_217	Project Site	Yes	34.57693	-117.266
218	Size B (> 1 m and < 5m)	2.29	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_218	Project Site	Yes	34.57716	-117.266
219	Size B (> 1 m and < 5m)	1.52	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_219	Project Site	Yes	34.57698	-117.267
220	Size B (> 1 m and < 5m)	1.83	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_220	Project Site	Yes	34.57729	-117.266
221	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_221	Project Site	Yes	34.57658	-117.263
222	Size A (< 1 m)	0.55	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_222	Project Site	Yes	34.5766	-117.263
223	Size A (< 1 m)	0.34	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_223	Project Site	Yes	34.5766	-117.263
224	Size B (> 1 m and < 5m)	1.22	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_224	Project Site	Yes	34.57588	-117.263
225	Size B (> 1 m and < 5m)	1.83	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_225	Project Site	Yes	34.57587	-117.263

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15m of Construction	Latitude	Longitude
226	Size B (> 1 m and < 5m)	1.68	Live	No	None	Good	No		None	IENLA-A_WJT_Tree_226	50-ft Buffer	Yes	34.5752	-117.262
227	Size A (< 1 m)	0.3	Live	No	None	Good	No		None	IENLA-A_WJT_Tree_227	50-ft Buffer	Yes	34.5752	-117.262
228	Size A (< 1 m)	0.3	Live	No	None	Good	No		None	IENLA-A_WJT_Tree_228	50-ft Buffer	Yes	34.5752	-117.262
229	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		None	IENLA-A_WJT_Tree_229	50-ft Buffer	Yes	34.57504	-117.262
231	Size B (> 1 m and < 5m)	2.47	Live	Yes	None	Good	No		None	IENLA-A_WJT_Tree_231	50-ft Buffer	Yes	34.57563	-117.262
232	Size A (< 1 m)	0.91	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_232	Project Site	Yes	34.57592	-117.262
233	Size A (< 1 m)	0.76	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_233	Project Site	Yes	34.57655	-117.263
234	Size B (> 1 m and < 5m)	1.16	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_234	Project Site	Yes	34.57679	-117.263
235	Size B (> 1 m and < 5m)	2.8	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_235	Project Site	Yes	34.57709	-117.264
236	Size A (< 1 m)	0.7	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_236	Project Site	Yes	34.57716	-117.264
237	Size B (> 1 m and < 5m)	1.83	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_237	Project Site	Yes	34.57742	-117.266
238	Size A (< 1 m)	0.46	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_238	Project Site	Yes	34.57712	-117.263
239	Size A (< 1 m)	0.73	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_239	Project Site	Yes	34.57673	-117.263
240	Size A (< 1 m)	0.76	Dead	No	None	Dead	No		None	IENLA-A_WJT_Tree_240	50-ft Buffer	Yes	34.57602	-117.262
241	Size B (> 1 m and < 5m)	1.25	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_241	Project Site	Yes	34.57628	-117.262
242	Size B (> 1 m and < 5m)	1.37	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_242	Project Site	Yes	34.5774	-117.263
243	Size B (> 1 m and < 5m)	1.01	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_243	Project Site	Yes	34.57742	-117.263
244	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		None	IENLA-A_WJT_Tree_244	50-ft Buffer	Yes	34.57708	-117.262
245	Size B (> 1 m and < 5m)	2.74	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_245	Project Site	Yes	34.57751	-117.263
246	Size B (> 1 m and < 5m)	4.11	Dead	Yes	None	Dead	No		None	IENLA-A_WJT_Tree_246	50-ft Buffer	Yes	34.57765	-117.262
247	Size B (> 1 m and < 5m)	1.19	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_247	Project Site	Yes	34.57728	-117.269
248	Size B (> 1 m and < 5m)	1.46	Live	No	None	Good	No		None	IENLA-A_WJT_Tree_248	50-ft Buffer	Yes	34.57876	-117.262
251	Size A (< 1 m)	0.73	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_251	Project Site	Yes	34.57882	-117.263
252	Size B (> 1 m and < 5m)	1.49	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_252	Project Site	Yes	34.57861	-117.263
253	Size B (> 1 m and < 5m)	3.2	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_253	Project Site	Yes	34.57884	-117.262
254	Size B (> 1 m and < 5m)	2.44	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_254	Project Site	Yes	34.57838	-117.262
255	Size B (> 1 m and < 5m)	1.37	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_255	Project Site	Yes	34.57823	-117.262
256	Size A (< 1 m)	0.85	Live	No	None	Good	No		None	IENLA-A_WJT_Tree_256	50-ft Buffer	Yes	34.57921	-117.268
257	Size B (> 1 m and < 5m)	2.13	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_257	Project Site	Yes	34.57793	-117.262
258	Size A (< 1 m)	0.61	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_258	Project Site	Yes	34.57789	-117.263
259	Size B (> 1 m and < 5m)	1.07	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_259	Project Site	Yes	34.5776	-117.265
260	Size A (< 1 m)	0.3	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_260	Project Site	Yes	34.57761	-117.265
261	Size A (< 1 m)	0.3	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_261	Project Site	Yes	34.57762	-117.265
262	Size A (< 1 m)	0.91	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_262	Project Site	Yes	34.57759	-117.265
263	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_263	Project Site	Yes	34.57775	-117.265
264	Size B (> 1 m and < 5m)	2.13	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_264	Project Site	Yes	34.57776	-117.266
265	Size A (< 1 m)	0.91	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_265	Project Site	Yes	34.5778	-117.267
266	Size A (< 1 m)	0.61	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_266	Project Site	Yes	34.57786	-117.267
267	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_267	Project Site	Yes	34.57794	-117.268
268	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_268	Project Site	Yes	34.57806	-117.269
269	Size A (< 1 m)	0.3	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_269	Project Site	Yes	34.57793	-117.268
270	Size A (< 1 m)	0.3	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_270	Project Site	Yes	34.57779	-117.268
271	Size B (> 1 m and < 5m)	3.05	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_271	Project Site	Yes	34.57808	-117.266
272	Size B (> 1 m and < 5m)	1.22	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_272	Project Site	Yes	34.57798	-117.266
273	Size A (< 1 m)	0.91	Live	No	None	Good	Yes		Direct	IENLA-A_WJT_Tree_273	Project Site	Yes	34.57801	-117.266
274	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Fair	No		Direct	IENLA-A_WJT_Tree_274	Project Site	Yes	34.57797	-117.264
275	Size A (< 1 m)	0.3	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_275	Project Site	Yes	34.57798	-117.264

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15m of Construction	Latitude	Longitude
276	Size A (< 1 m)	0.91	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_276	Project Site	Yes	34.57797	-117.264
277	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Good	No		Direct	IENLA-A_WJT_Tree_277	Project Site	Yes	34.57821	-117.265
278	Size B (> 1 m and < 5m)	1.83	Dead	Yes	None	Dead	No		Direct	IENLA-A_WJT_Tree_278	Project Site	Yes	34.5784	-117.267
279	Size A (< 1 m)	0.61	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_279	Project Site	Yes	34.57858	-117.268
280	Size B (> 1 m and < 5m)	1.52	Dead	No	None	Dead	No		Direct	IENLA-A_WJT_Tree_280	Project Site	Yes	34.57858	-117.267
281	Size B (> 1 m and < 5m)	3.96	Live	Yes	None	Poor	No		Direct	IENLA-A_WJT_Tree_281	Project Site	Yes	34.57833	-117.265
282	Size B (> 1 m and < 5m)	2.44	Live	No	None	Fair	No		Direct	IENLA-A_WJT_Tree_282	Project Site	Yes	34.57897	-117.267
283	Size A (< 1 m)	0.61	Live	No	None	Good	No		Direct	IENLA-A_WJT_Tree_283	Project Site	Yes	34.57877	-117.267
AV143_104	Size B (> 1 m and < 5m)	1.68	Dead	Yes	None	Dead	No		Direct	AV143_WJT_Tree_104	Project Site	Yes	34.57866	-117.269
AV143_105	Size A (< 1 m)	0.61	Live	No	None	Good	No		Direct	AV143_WJT_Tree_105	Project Site	Yes	34.57853	-117.269
AV143_106	Size B (> 1 m and < 5m)	4.88	Dead	Yes	None	Dead	No		Direct	AV143_WJT_Tree_106	Project Site	Yes	34.57842	-117.269
AV143_107	Size C (> 5m)	5.03	Dead	Yes	None	Dead	No		Direct	AV143_WJT_Tree_107	Project Site	Yes	34.57834	-117.269
AV143_108	Size C (> 5m)	5.49	Dead	Yes	None	Dead	No		Direct	AV143_WJT_Tree_108	Project Site	Yes	34.57541	-117.273
AV143_109	Size B (> 1 m and < 5m)	1.52	Dead	No	None	Dead	No		Direct	AV143_WJT_Tree_109	Project Site	Yes	34.57542	-117.272
AV143_110	Size B (> 1 m and < 5m)	3.66	Dead	Yes	None	Dead	No		Direct	AV143_WJT_Tree_110	Project Site	Yes	34.57296	-117.275
AV143_111	Size B (> 1 m and < 5m)	1.98	Live	No	None	Good	Yes		Direct	AV143_WJT_Tree_111	Project Site	Yes	34.57352	-117.274
AV143_112	Size B (> 1 m and < 5m)	3.35	Live	No	None	Good	Yes		Direct	AV143_WJT_Tree_112	Project Site	Yes	34.57427	-117.273
AV143_113	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		Direct	AV143_WJT_Tree_113	Project Site	Yes	34.57434	-117.274
AV143_114	Size B (> 1 m and < 5m)	2.44	Live	Yes	None	Good	No		Direct	AV143_WJT_Tree_114	Project Site	Yes	34.57209	-117.275
AV143_115	Size A (< 1 m)	0.61	Live	No	None	Good	No		Direct	AV143_WJT_Tree_115	Project Site	Yes	34.57194	-117.272
AV143_116	Size B (> 1 m and < 5m)	4.27	Live	Yes	None	Good	No		Direct	AV143_WJT_Tree_116	Project Site	Yes	34.57212	-117.272
AV143_117	Size B (> 1 m and < 5m)	1.37	Dead	Yes	None	Dead	No		Direct	AV143_WJT_Tree_117	Project Site	Yes	34.57214	-117.273
AV143_118	Size B (> 1 m and < 5m)	3.05	Live	Yes	None	Good	Yes		Direct	AV143_WJT_Tree_118	Project Site	Yes	34.57198	-117.271
AV143_119	Size B (> 1 m and < 5m)	1.52	Dead	Yes	None	Dead	No		None	AV143_WJT_Tree_119	50-ft Buffer	Yes	34.57167	-117.267
AV143_120	Size B (> 1 m and < 5m)	1.37	Live	No	None	Good	No		None	AV143_WJT_Tree_120	50-ft Buffer	Yes	34.57162	-117.27
AV143_123	Size B (> 1 m and < 5m)	1.52	Dead	Yes	None	Dead	No		None	AV143_WJT_Tree_123	50-ft Buffer	Yes	34.57167	-117.274
AV143_125	Size B (> 1 m and < 5m)	1.22	Dead	No	None	Dead	No		None	AV143_WJT_Tree_125	50-ft Buffer	Yes	34.57171	-117.274

Appendix C
Individual Joshua Tree Photographs



IENLA-A_WJT_Tree_2



IENLA-A_WJT_Tree_3



IENLA-A_WJT_Tree_4



IENLA-A_WJT_Tree_5



IENLA-A_WJT_Tree_6



IENLA-A_WJT_Tree_7



IENLA-A_WJT_Tree_9



IENLA-A_WJT_Tree_10



IENLA-A_WJT_Tree_11



IENLA-A_WJT_Tree_12



IENLA-A_WJT_Tree_13



IENLA-A_WJT_Tree_14



IENLA-A_WJT_Tree_15



IENLA-A_WJT_Tree_16



IENLA-A_WJT_Tree_17



IENLA-A_WJT_Tree_18



IENLA-A_WJT_Tree_19



IENLA-A_WJT_Tree_20



IENLA-A_WJT_Tree_21



IENLA-A_WJT_Tree_22



IENLA-A_WJT_Tree_23



IENLA-A_WJT_Tree_24



IENLA-A_WJT_Tree_25



IENLA-A_WJT_Tree_26



IENLA-A_WJT_Tree_27



IENLA-A_WJT_Tree_28



IENLA-A_WJT_Tree_29



IENLA-A_WJT_Tree_30



IENLA-A_WJT_Tree_31



IENLA-A_WJT_Tree_32



IENLA-A_WJT_Tree_33



IENLA-A_WJT_Tree_34



IENLA-A_WJT_Tree_35



IENLA-A_WJT_Tree_36



IENLA-A_WJT_Tree_37



IENLA-A_WJT_Tree_38



IENLA-A_WJT_Tree_39



IENLA-A_WJT_Tree_40



IENLA-A_WJT_Tree_41



IENLA-A_WJT_Tree_42



IENLA-A_WJT_Tree_43



IENLA-A_WJT_Tree_44



IENLA-A_WJT_Tree_45



IENLA-A_WJT_Tree_46



IENLA-A_WJT_Tree_47



IENLA-A_WJT_Tree_48



IENLA-A_WJT_Tree_49



IENLA-A_WJT_Tree_50



IENLA-A_WJT_Tree_51



IENLA-A_WJT_Tree_52



IENLA-A_WJT_Tree_53



IENLA-A_WJT_Tree_54



IENLA-A_WJT_Tree_55



IENLA-A_WJT_Tree_56



IENLA-A_WJT_Tree_57



IENLA-A_WJT_Tree_58



IENLA-A_WJT_Tree_59



IENLA-A_WJT_Tree_60



IENLA-A_WJT_Tree_61



IENLA-A_WJT_Tree_62



IENLA-A_WJT_Tree_63



IENLA-A_WJT_Tree_64



IENLA-A_WJT_Tree_65



IENLA-A_WJT_Tree_66



IENLA-A_WJT_Tree_67



IENLA-A_WJT_Tree_68



IENLA-A_WJT_Tree_69



IENLA-A_WJT_Tree_70



IENLA-A_WJT_Tree_71



IENLA-A_WJT_Tree_72



IENLA-A_WJT_Tree_73



IENLA-A_WJT_Tree_74



IENLA-A_WJT_Tree_75



IENLA-A_WJT_Tree_76



IENLA-A_WJT_Tree_77



IENLA-A_WJT_Tree_78



IENLA-A_WJT_Tree_79



IENLA-A_WJT_Tree_80



IENLA-A_WJT_Tree_81



IENLA-A_WJT_Tree_82



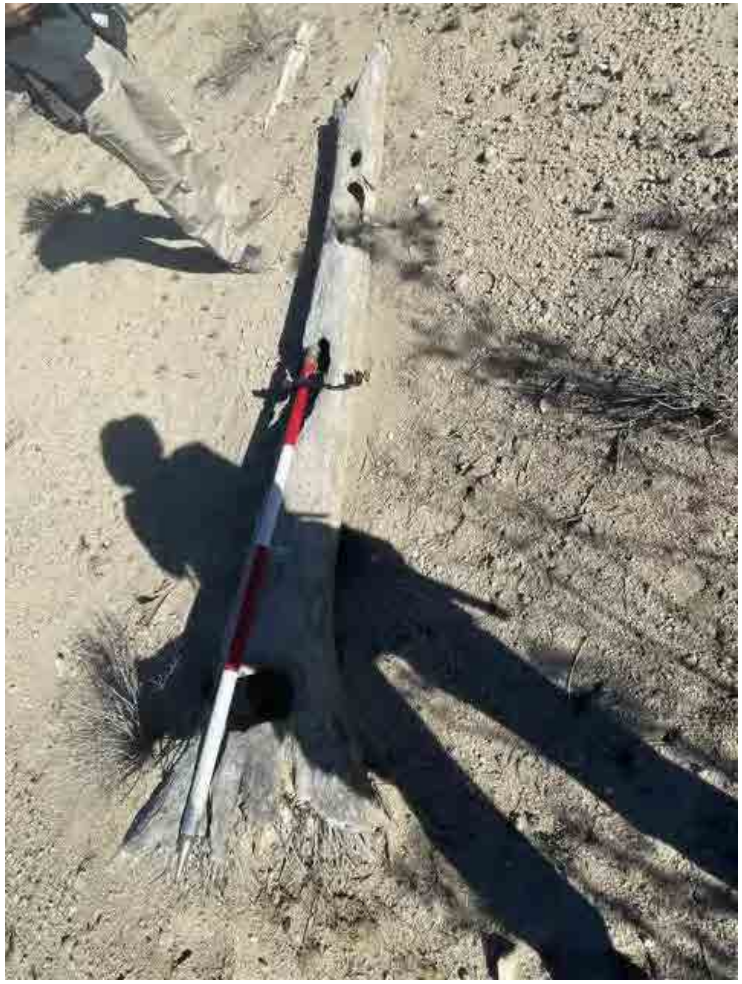
IENLA-A_WJT_Tree_83



IENLA-A_WJT_Tree_84



IENLA-A_WJT_Tree_85



IENLA-A_WJT_Tree_86



IENLA-A_WJT_Tree_87



IENLA-A_WJT_Tree_88



IENLA-A_WJT_Tree_89



IENLA-A_WJT_Tree_90



IENLA-A_WJT_Tree_91



IENLA-A_WJT_Tree_92



IENLA-A_WJT_Tree_93



IENLA-A_WJT_Tree_94



IENLA-A_WJT_Tree_95



IENLA-A_WJT_Tree_96



IENLA-A_WJT_Tree_97



IENLA-A_WJT_Tree_98



IENLA-A_WJT_Tree_99



IENLA-A_WJT_Tree_100



IENLA-A_WJT_Tree_101



IENLA-A_WJT_Tree_102



IENLA-A_WJT_Tree_103



IENLA-A_WJT_Tree_104



IENLA-A_WJT_Tree_105



IENLA-A_WJT_Tree_106



IENLA-A_WJT_Tree_107



IENLA-A_WJT_Tree_108



IENLA-A_WJT_Tree_109



IENLA-A_WJT_Tree_110



IENLA-A_WJT_Tree_111



IENLA-A_WJT_Tree_112



IENLA-A_WJT_Tree_113



IENLA-A_WJT_Tree_114



IENLA-A_WJT_Tree_115



IENLA-A_WJT_Tree_116



IENLA-A_WJT_Tree_117



IENLA-A_WJT_Tree_118



IENLA-A_WJT_Tree_119



IENLA-A_WJT_Tree_120



IENLA-A_WJT_Tree_121



IENLA-A_WJT_Tree_122



IENLA-A_WJT_Tree_123



IENLA-A_WJT_Tree_124



IENLA-A_WJT_Tree_125



IENLA-A_WJT_Tree_126



IENLA-A_WJT_Tree_127



IENLA-A_WJT_Tree_128



IENLA-A_WJT_Tree_129



IENLA-A_WJT_Tree_130



IENLA-A_WJT_Tree_131



IENLA-A_WJT_Tree_132



IENLA-A_WJT_Tree_133



IENLA-A_WJT_Tree_134



IENLA-A_WJT_Tree_135



IENLA-A_WJT_Tree_136



IENLA-A_WJT_Tree_137



IENLA-A_WJT_Tree_138



IENLA-A_WJT_Tree_139



IENLA-A_WJT_Tree_140



IENLA-A_WJT_Tree_141



IENLA-A_WJT_Tree_142



IENLA-A_WJT_Tree_143



IENLA-A_WJT_Tree_144



IENLA-A_WJT_Tree_145



IENLA-A_WJT_Tree_146



IENLA-A_WJT_Tree_147



IENLA-A_WJT_Tree_148



IENLA-A_WJT_Tree_149



IENLA-A_WJT_Tree_150



IENLA-A_WJT_Tree_151



IENLA-A_WJT_Tree_152



IENLA-A_WJT_Tree_153



IENLA-A_WJT_Tree_154



IENLA-A_WJT_Tree_155



IENLA-A_WJT_Tree_156



IENLA-A_WJT_Tree_157



IENLA-A_WJT_Tree_158



IENLA-A_WJT_Tree_159



IENLA-A_WJT_Tree_160



IENLA-A_WJT_Tree_161



IENLA-A_WJT_Tree_162



IENLA-A_WJT_Tree_163



IENLA-A_WJT_Tree_164



IENLA-A_WJT_Tree_165



IENLA-A_WJT_Tree_166



IENLA-A_WJT_Tree_167



IENLA-A_WJT_Tree_168



IENLA-A_WJT_Tree_169



IENLA-A_WJT_Tree_170



IENLA-A_WJT_Tree_171



IENLA-A_WJT_Tree_172



IENLA-A_WJT_Tree_173



IENLA-A_WJT_Tree_174



IENLA-A_WJT_Tree_175



IENLA-A_WJT_Tree_176



IENLA-A_WJT_Tree_177



IENLA-A_WJT_Tree_178



IENLA-A_WJT_Tree_179



IENLA-A_WJT_Tree_180



IENLA-A_WJT_Tree_181



IENLA-A_WJT_Tree_182



IENLA-A_WJT_Tree_183



IENLA-A_WJT_Tree_184



IENLA-A_WJT_Tree_185



IENLA-A_WJT_Tree_186



IENLA-A_WJT_Tree_187



IENLA-A_WJT_Tree_188



IENLA-A_WJT_Tree_189



IENLA-A_WJT_Tree_190



IENLA-A_WJT_Tree_191



IENLA-A_WJT_Tree_192



IENLA-A_WJT_Tree_193



IENLA-A_WJT_Tree_194



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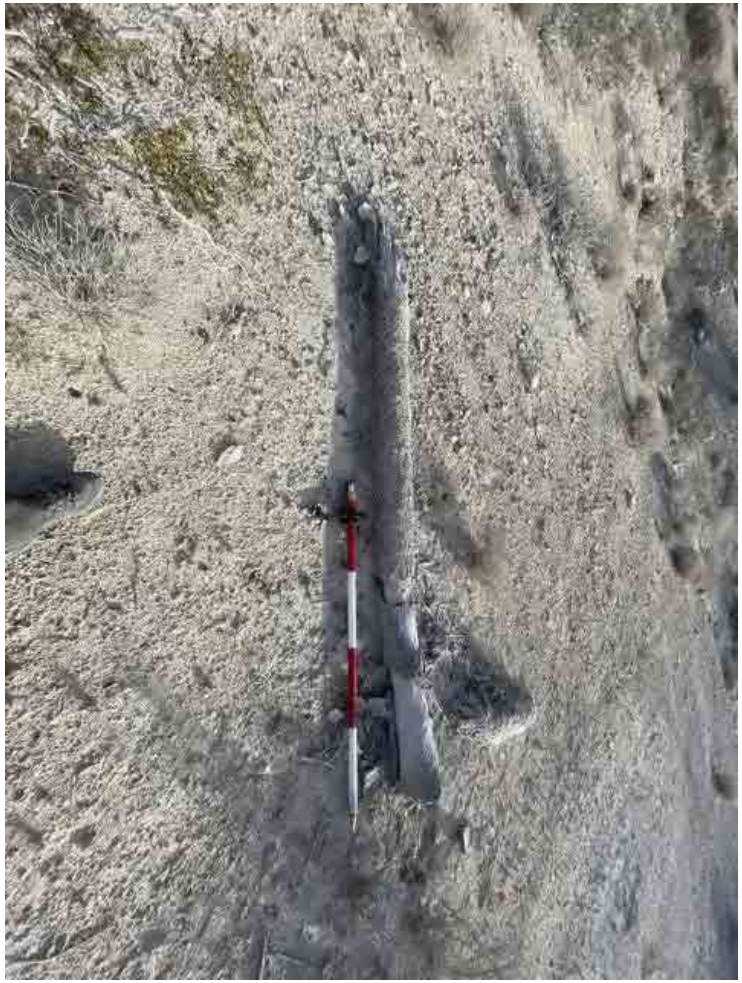
IENLA-A_WJT_Tree_197



IENLA-A_WJT_Tree_198



IENLA-A_WJT_Tree_199



IENLA-A_WJT_Tree_200



IENLA-A_WJT_Tree_201



IENLA-A_WJT_Tree_202



IENLA-A_WJT_Tree_203



IENLA-A_WJT_Tree_204



IENLA-A_WJT_Tree_205



IENLA-A_WJT_Tree_206



IENLA-A_WJT_Tree_207



IENLA-A_WJT_Tree_208



IENLA-A_WJT_Tree_209



IENLA-A_WJT_Tree_210



IENLA-A_WJT_Tree_211



IENLA-A_WJT_Tree_212



IENLA-A_WJT_Tree_213



IENLA-A_WJT_Tree_214



IENLA-A_WJT_Tree_215



IENLA-A_WJT_Tree_216



IENLA-A_WJT_Tree_217



IENLA-A_WJT_Tree_218



IENLA-A_WJT_Tree_219



IENLA-A_WJT_Tree_220



IENLA-A_WJT_Tree_221



IENLA-A_WJT_Tree_222



IENLA-A_WJT_Tree_223



IENLA-A_WJT_Tree_224



IENLA-A_WJT_Tree_225



IENLA-A_WJT_Tree_226



IENLA-A_WJT_Tree_227



IENLA-A_WJT_Tree_228



IENLA-A_WJT_Tree_229



IENLA-A_WJT_Tree_231



IENLA-A_WJT_Tree_232



IENLA-A_WJT_Tree_233



IENLA-A_WJT_Tree_234



IENLA-A_WJT_Tree_235



IENLA-A_WJT_Tree_236



IENLA-A_WJT_Tree_237



IENLA-A_WJT_Tree_238



IENLA-A_WJT_Tree_239



IENLA-A_WJT_Tree_240



IENLA-A_WJT_Tree_241



IENLA-A_WJT_Tree_242



IENLA-A_WJT_Tree_243



IENLA-A_WJT_Tree_244



IENLA-A_WJT_Tree_245



IENLA-A_WJT_Tree_246



IENLA-A_WJT_Tree_247



IENLA-A_WJT_Tree_248



IENLA-A_WJT_Tree_251



IENLA-A_WJT_Tree_252



IENLA-A_WJT_Tree_253



IENLA-A_WJT_Tree_254



IENLA-A_WJT_Tree_255



IENLA-A_WJT_Tree_256



IENLA-A_WJT_Tree_257



IENLA-A_WJT_Tree_258



IENLA-A_WJT_Tree_259



IENLA-A_WJT_Tree_260



IENLA-A_WJT_Tree_261



IENLA-A_WJT_Tree_262



IENLA-A_WJT_Tree_263



IENLA-A_WJT_Tree_264



IENLA-A_WJT_Tree_265



IENLA-A_WJT_Tree_266



IENLA-A_WJT_Tree_267



IENLA-A_WJT_Tree_268



IENLA-A_WJT_Tree_269



IENLA-A_WJT_Tree_270



IENLA-A_WJT_Tree_271



IENLA-A_WJT_Tree_272



IENLA-A_WJT_Tree_273



IENLA-A_WJT_Tree_274



IENLA-A_WJT_Tree_275



IENLA-A_WJT_Tree_276



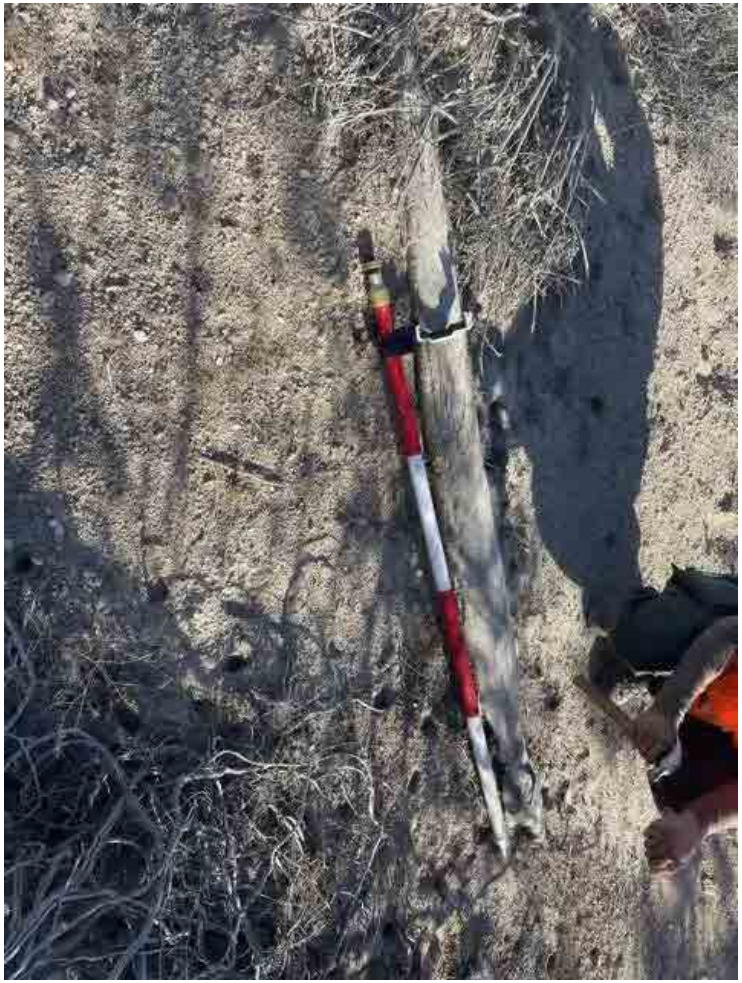
IENLA-A_WJT_Tree_277



IENLA-A_WJT_Tree_278



IENLA-A_WJT_Tree_279



IENLA-A_WJT_Tree_280



IENLA-A_WJT_Tree_281



IENLA-A_WJT_Tree_282



IENLA-A_WJT_Tree_283



AV143_WJT_Tree_104



AV143_WJT_Tree_105



AV143_WJT_Tree_106



AV143_WJT_Tree_107



AV143_WJT_Tree_108



AV143_WJT_Tree_109



AV143_WJT_Tree_110



AV143_WJT_Tree_111



AV143_WJT_Tree_112



AV143_WJT_Tree_113



AV143_WJT_Tree_114



AV143_WJT_Tree_115



AV143_WJT_Tree_116



AV143_WJT_Tree_117



AV143_WJT_Tree_118



AV143_WJT_Tree_119



AV143_WJT_Tree_120



AV143_WJT_Tree_123

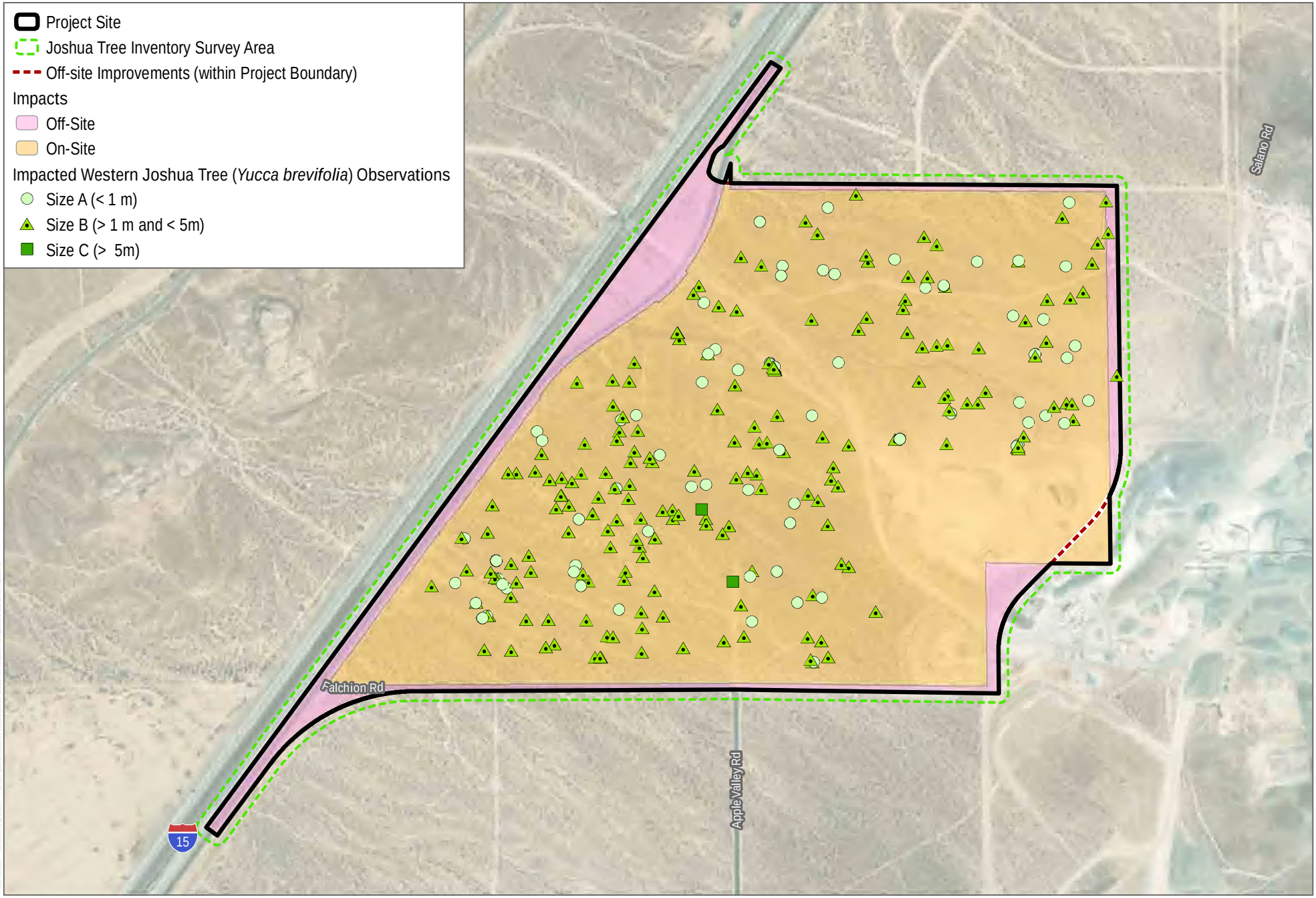


AV143_WJT_Tree_125



IENLA-A_WJT_Tree_1

Appendix D
Joshua Tree Impacts



SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

DUDEK

0 300 600 Feet

APPENDIX D

Joshua Tree Impacts

Inland Empire North Logistics Center Apple Valley Project

Appendix D

Mohave Ground Squirrel Protocol Survey Report

August 11, 2023

Anna Cassady
Dudek
605 Third Street
Encinitas, CA 92024
Via email: acassady@dudek.com

Subject: Results of Mohave Ground Squirrel Protocol Surveys for the Inland Empire North Logistics Center Project, Victorville and Apple Valley, San Bernardino County, California

Dear Ms. Cassady:

The purpose of this report is to document the results of a California Department of Fish and Wildlife (CDFW) protocol survey for Mohave ground squirrel (*Xerospermophilus mohavensis*; MGS) conducted by Dipodomys Ecological Consulting LLC (DEC) for the Inland Empire North Logistics Center Project (project). Presented in this report are a description of the project, project location, the biological setting of the site, MGS natural history, survey methodology, results of trapping efforts for MGS, and conclusions.

Project Description and Location

FGFW IV, LLC proposes to develop a speculative distribution warehouse on a 400-acre parcel. The 400-acre project encompasses portions of the City of Victorville, Town of Apple Valley, and unincorporated areas in San Bernardino County, California. The project is bordered by Falchion Road on the south, Los Padres Road on the north, Solano Road on the east, and undeveloped desert on the west. The project is bisected by Interstate 15 (**Figures 1 and 2**). Surrounding land use includes a cement mine on the southeast corner of the project, a landfill northwest of the project, and a pipe supply commercial development on the northeast portion of the project. Gas and electric transmission infrastructure, and an ore transport railroad are located immediately west of the project. The southern and eastern portions of the site are surrounded by undeveloped desert land. The primary source of disturbance is past and current off-highway vehicle (OHV) activity and traffic associated with the cement mine. The project sites can be found on U.S. Geological Survey (USGS) 7.5-minute Victorville topographic quadrangle map within Section 26, Township 6 North and Range 4 West, as shown in **Figure 1**, Project Location.

Biological Setting

One vegetation community was identified within the project site: creosote bush scrub (CDFW CA Code 33.010.00), with varying levels of disturbance throughout the site. Dominant plants present include creosote bush (*Larrea tridentata*), Nevada jointfir (*Ephedra nevadensis*), white bursage (*Ambrosia dumosa*), Cooper's boxthorn (*Lycium cooperi*), and Mojave indigo bush (*Psorothamnus arborescens*). Additional shrubs present include Joshua tree (*Yucca brevifolia*), Anderson's thornbush (*Lycium andersonii*), bladdersage (*Scutellaria mexicana*), spiny hopsage (*Grayia spinosa*), cheesebush (*Ambrosia salsola*), Cooper's goldenbush (*Ericameria cooperi*), rubber rabbitbrush (*Ericameria nauseosa*), four-

wing saltbush (*Atriplex canescens*), cottonthorn (*Tetradymia stenolepis*), California buckwheat (*Eriogonum fasciculatum*), Great Basin sagebrush (*Artemisia tridentata*), winterfat (*Krascheninnikovia lanata*), desert pepperweed (*Lepidium fremontii*), desert prince's plume (*Stanleya pinnata*), sweetbush (*Bebbia juncea*), Thurber's sandpaper plant (*Petalonyx thurberi*), beavertail (*Opuntia basilaris*), turpentine broom (*Thamnosma montana*), cottontop cactus (*Echinocactus polycephalus*), hedgehog cactus (*Echinocerus* sp.), and silver cholla (*Cylindropuntia echinocarpa*).

Herbaceous plants include fiddleneck (*Amsinckia tessellata*), red-stemmed filaree (*Erodium cicutarium*), desert pincushion (*Chaenactis fremontii*), blue dicks (*Dipterostemon capitatus*), common phacelia (*Phacelia distans*), Fremont phacelia (*Phacelia fremontii*), clavate fruited primrose (*Chylismia claviformis*), desert red-root (*Eremocarya micrantha*), desert trumpet (*Eriogonum inflatum*), Wallace's wooly daisy (*Eriophyllum wallacei*), desert gold poppy (*Eschscholzia glyptosperma*), little gilia (*Gilia minor*), goldfields (*Lasthenia californica*), desert lupine (*Lupinus schockleyi*), wishbone bush (*Mirabilis laevis*), short podded mustard (*Hirschfeldia incana*), London rocket (*Sisymbrium irio*), milkvetch (*Astragulus* sp.), white fiesta flower (*Pholistoma membranaceum*), thistle sage (*Salvia carducea*), desert mallow (*Sphaeralcea ambigua*), Mediterranean grass (*Schismus barbatus*), cheatgrass (*Bromus tectorum*), and foxtail brome (*Bromus madritensis*).

Soil consists of Mirage-Joshua complex, Nebona-Cuddeback complex, and Cajon-Arizo complex (WebSoil 2023). The project site is located at an elevation of approximately feet 2,733 above mean sea level (amsl).

Mohave Ground Squirrel Natural History

Mohave ground squirrels are medium-sized (210-230mm, 85-130g), diurnal squirrels. Their dorsal pelage is light gray to cinnamon-brown, while their ventral side is creamy. Unlike round-tailed ground squirrels (*Xerospermophilus tereticaudus*), which occur sympatrically in the southeast portion of their range, MGS have a short, flat tail that is light-colored on its underside, and have brown cheeks instead of white.

MGS inhabit a small geographic area in the western Mojave Desert. This species ranges from Palmdale in the southwest, the Lucerne Valley in the southeast, Olancha in the northwest, and the Avawatz Mountains in the northeast (Gustafson 1993). Although occurrences in the southern portion of their range are rare, occurrences have been documented on the California Natural Diversity Database (CNDDB) as recently as 2011 (Figure 3). Vegetation communities (as classified by the California Native Plant Society) typically associated with MGS include Mojave Creosote Scrub, Shadscale Scrub, Desert Saltbush Scrub, Desert Sink Scrub, and Joshua Tree Woodland. MGS feed primarily on the leaves and seeds of forbs and shrubs. In the northern portion of their range, MGS have been found to feed on spiny hopsage, winterfat and saltbush (*Atriplex* sp.), especially in early spring when forbs are unavailable, during summer when forbs have dried out, and during drought conditions (Leitner and Leitner 1998). Recent studies have also indicated that MGS feed on the following forbs and shrubs: freckled milkvetch (*Astragalus lentiginosus*), Mojave lupine (*Lupinus odoratus*), buckwheat (*Eriogonum* sp.), white mallow (*Eremalche exilis*), fiddleneck, Russian thistle, desert pincushion (*Chaenactis* sp.), Cryptantha (*Cryptantha pterocarya*), Coreopsis (*Leptosyne bigelovii*), Valley lessingia (*Lessingia glandulifera*), desert dandelion (*Malacothrix glabrata*), Phacelia (*Phacelia* sp.), wire lettuce (*Stephanomeria* sp.) Anderson's desert thorn, spiny horsebrush (*Tetradimya spinosa*), and Joshua tree (Leitner and Leitner 2017).

MGS have adapted to live in hot desert environments by limiting their activity aboveground through estivation and hibernation. The timing of emergence from hibernation varies by location: in the northern

portion of their range male MGS emerge mid-March (Leitner and Leitner 1998); however, in the southern portion of their range, MGS may emerge as early as mid-January (Recht 1977). Throughout their active period, MGS store fat in preparation for estivation, which typically occurs between July and September, but may occur as early as April or May during drought conditions (Leitner et al. 1995). MGS reproduction is dependent on fall and winter rains and individuals may forgo breeding entirely if low rainfall (<80mm) results in reduced herbaceous plants (Leitner and Leitner 2017).

Throughout the range of MGS, they may co-occur with antelope ground squirrels (*Ammospermophilus leucurus*), round-tailed ground squirrels (**Table 1**), and California ground squirrels (*Otospermophilus beecheyi*). MGS may be misidentified with round-tailed ground squirrels, but this is unlikely to occur with antelope ground squirrels, because the latter species has white dorsal stripes that makes them resemble a chipmunk more than an MGS. California ground squirrels are also notably larger and are not typically confused with MGS.

MGS are classified as threatened and are protected under the California Endangered Species Act. Primary threats to MGS include limited distribution, low abundance, and habitat loss from by converting suitable habitat to urban, suburban, agricultural, and military land uses (Gustafson 1993, Leitner and Leitner 2017).

TABLE 1
RTGS AND MGS CHARACTERISTICS

	RTGS	MGS
Head and body length (mm)	130-181	128-165
Tail length (mm)	70-112	50-72
Weight (g)	110-200	70-300
Back pelage appearance	Back dull gray brown or pale cinnamon	Back pale pinkish brown finely flecked with white
Tail appearance	Tail long and narrow, round in profile	Tail narrow at base, tufted and somewhat banded near tip, flattened in profile
Tail color	Edge and underside pale brown	Edge and underside of tail white
Social structure	Semi-colonial	Solitary except when breeding

From: Peterson Field Guide-Mammals of North America F. Reid 4th Edition (2006)

Methods

Mohave ground squirrel (MGS) Protocol surveys for the Inland Empire North Logistics Center Project MGS were conducted in accordance with the 2010 CDFW MGS Survey Guidelines and consisted of an initial visual survey followed by live trapping and camera trapping efforts. Details for each survey type are described below.

Visual Survey

An initial review of the California Natural Diversity Database (CNDDB) was conducted prior to the visual assessment to determine the historical recorded occurrences of MGS near the project site (**Figure 3**). The visual survey was conducted by Principal Investigator Karla Flores (MOU and Scientific Collection Permit SC-10572) and Principal Investigator Karl Fairchild (SCP S-182820007-18333-001) on April 7, 2023. The visual survey consisted of driving and walking throughout the project site to identify

suitable habitat for MGS. This included identifying plants known to provide forage material for MGS such as spiny hopsage, winterfat, Cooper's boxthorn, Anderson's desert thorn, and Joshua tree (Leitner 2022). Areas supporting suitable habitat for MGS where these plants are concentrated were recorded on an aerial map. Suitable soil types for burrowing and burrow densities were also noted.

Live Trapping

Live trapping surveys were conducted by Karla Flores and Karl Fairchild and consisted of setting up five live trapping survey grids. Three grids consisted of the standard 10x10 (315m x 315m) grid configuration. The fourth and fifth grids consisted of 100 traps, configured in a 25-trap 5x5 (140mx140m) grid configuration and a 75-trap polygon with 25 traps moved out of the SE corner (**Figure 2**). Permission to modify the CDFW MGS survey protocol was received on March 29, 2023. Grids encompassed representative habitat types. Coordinate locations for the five grids are listed in **Table 2**. Traps in each grid were spaced 35 meters apart and utilized XLK Sherman live-traps (3x3.75x12") with accompanying A-frame cardboard shade covers staked to the ground with metal tent stakes. All traps were baited with 4-way livestock feed and peanut butter powder and were opened within one hour of sunrise and were checked no more than every four hours. All traps were closed within an hour of sunset. Trapping was conducted when temperatures were between 50- and 90-degrees Fahrenheit, and inclement conditions (rain, thunderstorms) were not present. All animals captured were released at their capture location, and the following information recorded for each capture: species, weight, age, sex, and reproductive condition. Live-trapping surveys were conducted for a period of five days in each of the three survey windows established by the MGS survey guidelines (1st: March 15-April 3; 2nd May 1-31;3rd June 15-July 15). Details for each survey period are presented in **Table 3.** MGS Survey and Trapping Forms, including weather details, are presented in **Attachment A** and **Attachment B**.

TABLE 2
UTM COORDINATES FOR CORNERS OF LIVE TRAPPING GRIDS

Grid	Corner	Zone	Easting	Northing	Grid	Corner	Zone	Easting	Northing
1	SW	11	474630	3826915	2b	SE	11	475050	3826400
1	NW	11	474630	3827230	2b	NE	11	475050	3826260
1	SE	11	474945	3826915	3	SW	11	474995	3825640
1	NE	11	474945	3827230	3	NW	11	474995	3825955
2a	SW	11	475150	3826725	3	SE	11	475310	3825640
2a	NW	11	475150	3826865	3	NE	11	475310	3825955
2a	SE	11	475290	3826725	4	SW	11	475615	3826060
2a	NE	11	475290	3826865	4	NW	11	475615	3826375
2b	SW	11	474735	3826085	4	SE	11	475930	3826060
2b	NW	11	474735	3826400	4	NE	11	475930	3826375

*Datum: WGS 1984

TABLE 3
MOHAVE GROUND SQUIRREL SURVEY DATES

Grid	Survey 1	Survey 2	Survey 3
1	April 10-14, 2023	May 2-6, 2023	June 16-20, 2023
2A	April 10-14, 2023	May 2-6, 2023	June 16-20, 2023
2B	April 10-14, 2023	May 2-6, 2023	June 16-20, 2023
3	April 5-9, 2023	May 7-11,2023	June 22-26, 2023
4	April 5-9, 2023	May 7-11, 2023	June 22-26, 2023

Camera Trapping

Camera trapping surveys were used to supplement live-trapping efforts and consisted of setting up twenty camera trapping stations throughout the project site (**Figure 2**). Each camera trap station consisted of a Bushnell Core Low Glow Trail Camera (Model 1199932CB) secured to a 36-inch U-post facing a bait station. The bait station consisted of a feeding tube filled with 4-way livestock feed staked to the ground with a 12-inch railroad spike. Cameras operated 24 hours a day, concurrent with live-trapping surveys, and followed the set-up specifications described in Delaney et al. 2017. Coordinate locations for each camera trap station are listed below in **Table 4**.

Photos from the camera trap stations were downloaded and reviewed by the Principal Investigator after every five-day trapping session. A list of species detected at the camera trap stations is included in **Table 5**.

TABLE 4
COORDINATE LOCATIONS FOR CAMERA TRAP STATIONS

Camera	Zone	Easting	Northing	Camera	Zone	Easting	Northing
1	11	475173	3827136	11	11	474866	3825690
2	11	474622	3827067	12	11	475113	3825701
3	11	474871	3826942	13	11	475239	3825905
4	11	474591	3825866	14	11	475545	3825675
5	11	474744	3826689	15	11	475371	3825915
6	11	474620	3826051	16	11	475381	3826345
7	11	474819	3826284	17	11	475557	3826186
8	11	474940	3826320	18	11	475663	3826297
9	11	475129	3826599	19	11	475908	3826184
10	11	475234	3826831	20	11	475694	3826035

*Datum: WGS 1984

Results

Visual Survey

Based on the habitat data collected during the visual survey, MGS habitat is present onsite. Primary MGS food plants such as spiny hopsage and winterfat are present onsite. Other plants also associated with MGS in microhistology and metabarcoding studies (Leitner 2022) are present onsite, these include: creosote bush, fourwing saltbush, Joshua tree, Cooper's boxthorn, Anderson's thornbush, red-stemmed filaree and

fiddleneck. Visual observations of burrows and burrow complexes showed that soil onsite is suitable for burrowing.

Live Trapping

No MGS were captured during live trapping. Captures consisted of white-tailed antelope ground squirrel, California ground squirrel, desert woodrat (*Neotoma lepida*), yellow-backed spiny lizard (*Sceloporus uniformis*), and Great Basin whiptail (*Aspidoscelis tigris*) and side-blotched lizard. (**Table 5; Figure 4**).

TABLE 5
RESULTS OF MOHAVE GROUND SQUIRREL PROTOCOL SURVEYS

Grid	Common name	Scientific name	Session			Total
			1	2	3	
1	White-tailed antelope ground squirrel	*Ammospermophilus leucurus*	12	11	23	46
1	California ground squirrel	*Otospermophilus beecheyi*	0	0	4	4
1	Great Basin whiptail	*Aspidoscelis tigris*	0	1	0	1
1	Yellow-backed spiny lizard	*Sceloporus uniformis*	0	0	1	1
1	Side-blotched lizard	*Uta stansburiana*	0	1	0	1
2A	White-tailed antelope ground squirrel	*Ammospermophilus leucurus*	1	0	11	12
2A	California ground squirrel	*Otospermophilus beecheyi*	4	0	1	5
2B	White-tailed antelope ground squirrel	*Ammospermophilus leucurus*	14	10	62	86
2B	California ground squirrel	*Otospermophilus beecheyi*	1	3	4	8
2B	Desert woodrat	*Neotoma lepida*	0	2	0	2
2B	Great Basin whiptail	*Aspidoscelis tigris*	4	0	0	4
3	White-tailed antelope ground squirrel	*Ammospermophilus leucurus*	15	16	108	139
3	Great Basin whiptail	*Aspidoscelis tigris*	0	0	1	1
4	White-tailed antelope ground squirrel	*Ammospermophilus leucurus*	13	11	66	90
4	Yellow-backed spiny lizard	*Sceloporus uniformis*	0	1	1	2
					Total	**402**

Camera Trapping

No Mohave ground squirrels were detected in the images collected during the camera trapping surveys. Thirteen species were observed utilizing the camera trap stations: white-tailed antelope ground squirrel, Great Basin whiptail (*Aspidoscelis tigris*), domestic dog (*Canis familiaris*), coyote (*Canis latrans*), spiny pocket mouse (*Chaetodipus* sp.) Merriam's kangaroo rat (*Dipodomys merriami*), Panamint kangaroo rat (*Dipodomys panamintinus*), domestic cat (*Felis domesticus*), black-tailed jackrabbit (*Lepus californicus*), desert woodrat (*Neotoma lepida*), California ground squirrel, silky pocket mouse (*Perognathus* sp.), and desert cottontail (*Sylvilagus audubonii*) (**Table 6**).

TABLE 6
RESULTS OF MOHAVE GROUND SQUIRREL CAMERA TRAPPING

Common Name	Scientific Name	Grid 1	Grid 2A	Grid 2B	Grid 3	Grid 4
White-tailed antelope ground squirrel	*Ammospermophilus leucurus*			X	X	X
Great Basin whiptail	*Aspidoscelis tigris*		X			
Domestic dog	*Canis familiaris*	X		X		
Coyote	*Canis latrans*		X			
Spiny pocket mouse	*Chaetodipus sp.*					
Merriam's kangaroo rat	*Dipodomys merriami*					X
Panamint kangaroo rat	*Dipodomys panamintinus*	X	X	X	X	X
Domestic cat	*Felis domesticus*			X		
Black-tailed jackrabbit	*Lepus californicus*		X	X		
Desert woodrat	*Neotoma lepida*			X		
California ground squirrel	*Otospermophilus beecheyi*	X	X	X	X	X
Silky pocket mouse sp.	*Perognathus sp.*		X	X	X	
Desert cottontail	*Sylvilagus audubonii*			X		

Conclusions

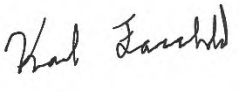
The Inland Empire North Logistics Center Project is located within the southern portion of the MGS range where MGS occurrences are rare, and population densities have historically been low. Additionally, the site is located outside of the MGS core population areas, peripheral population areas and linkage areas described in the 2019 CDFW MGS Conservation Strategy. California Natural Diversity Database (CNDDB) occurrence details for MGS in the vicinity of the project site (**Figure 3**), indicate that MGS are generally extirpated from the general area. The nearest MGS occurrence to the project site was recorded 0.7 miles north from the project site in 1977 in intact habitat. The most recent occurrence recorded in the vicinity of the project was recorded in 2011, 9.3 miles southwest of the project, across the Mojave River.

Although suitable habitat is present within the project, no MGS were captured or detected during the live trapping or camera trapping surveys. Furthermore, the distance from core population areas and significant barriers to dispersal between the project site and documented recent occurrences make it unlikely that colonization from core MGS populations will occur in the near future. Based on the results of this survey, the CDFW survey guidelines indicate that the department will stipulate that no MGS occur on the project site. This stipulation will expire one year from the last day of trapping, June 26, 2023.

I hereby certify that the information in this report is true, and that it conforms to accepted biological standards. Please feel free to contact Karla Flores by phone at (619) 972-4319 or by email at kflores@dipodomysecological.com or Karl Fairchild by phone at (541) 609-1038 or by email at kfairchild@dipodomysecological.com, with any questions regarding this report.

Sincerely,





Karla L. Flores
Principal Investigator

Karl Fairchild
Principal Investigator

Figures and Attachments
Figure 1-Project Location
Figure 2-Survey Area
Figure 3- Historical MGS Occurrences
Figure 4- Results

Attachment A-CDFW Mohave Ground Squirrel Survey and Trapping Form(s)
Attachment B-Weather Details
Attachment C-Species Compendium
Attachment D-Representative Photographs

References

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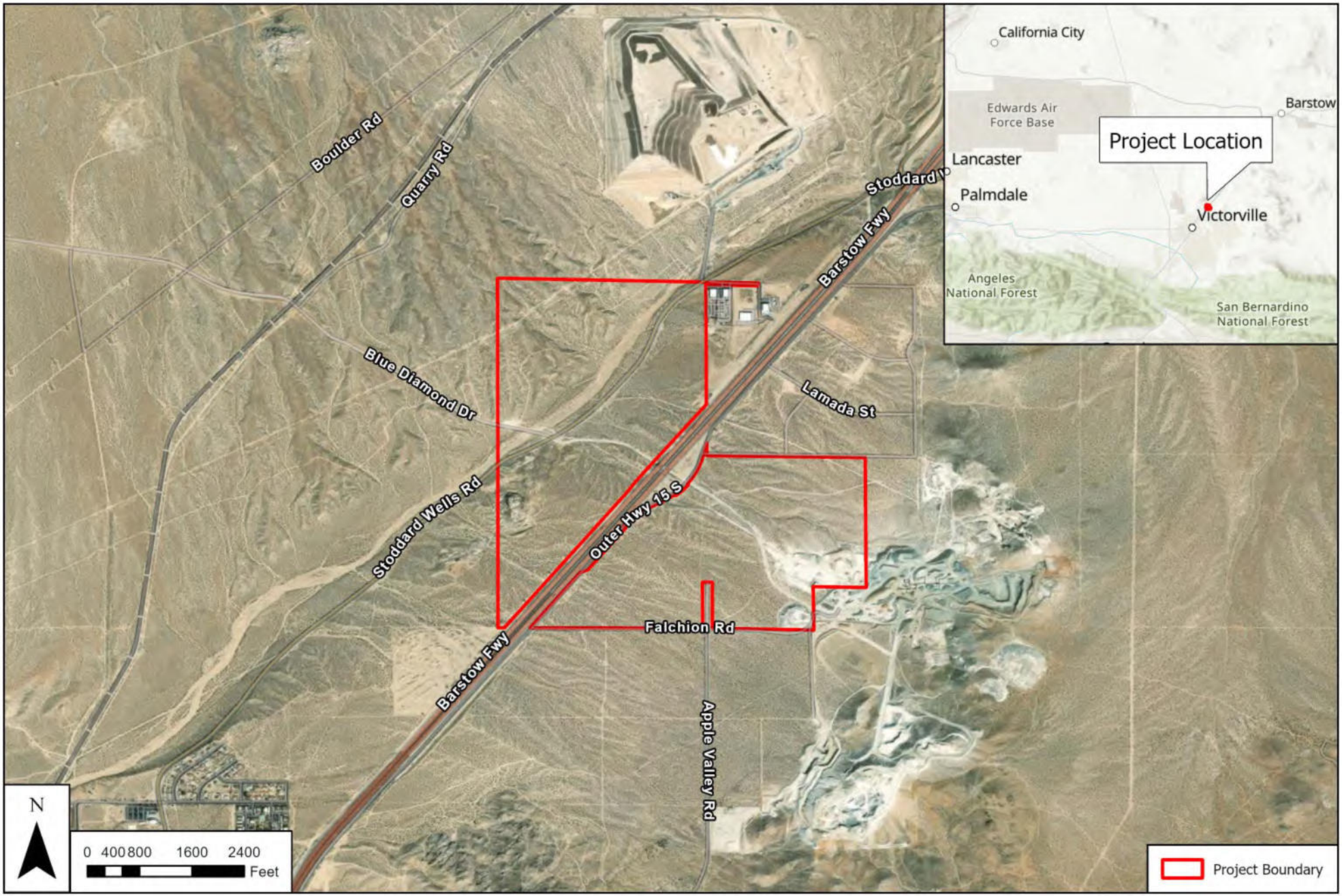


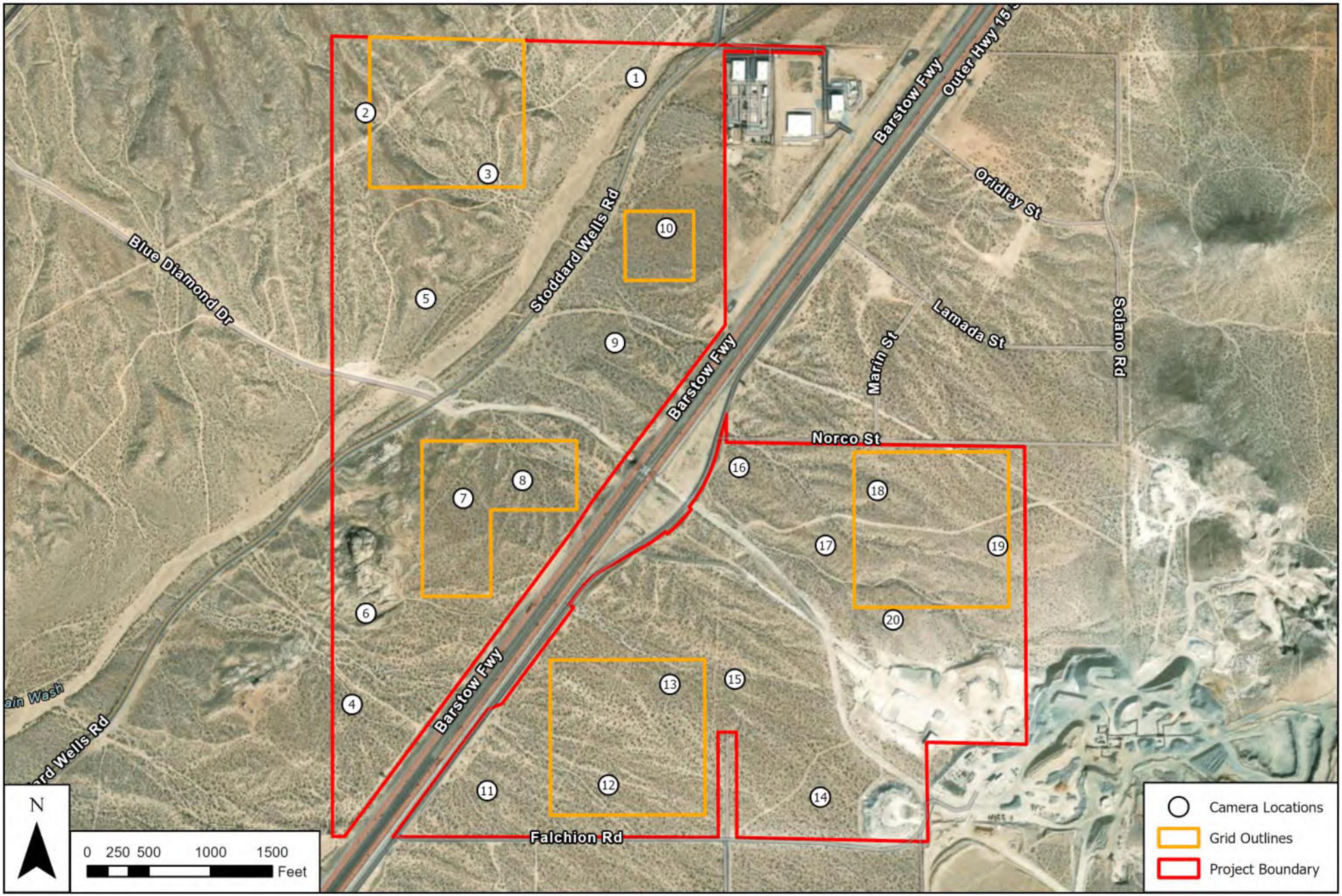
SOURCE: ESRI

Inland Empire North Logistics Center Project

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Figure 1

Project Location



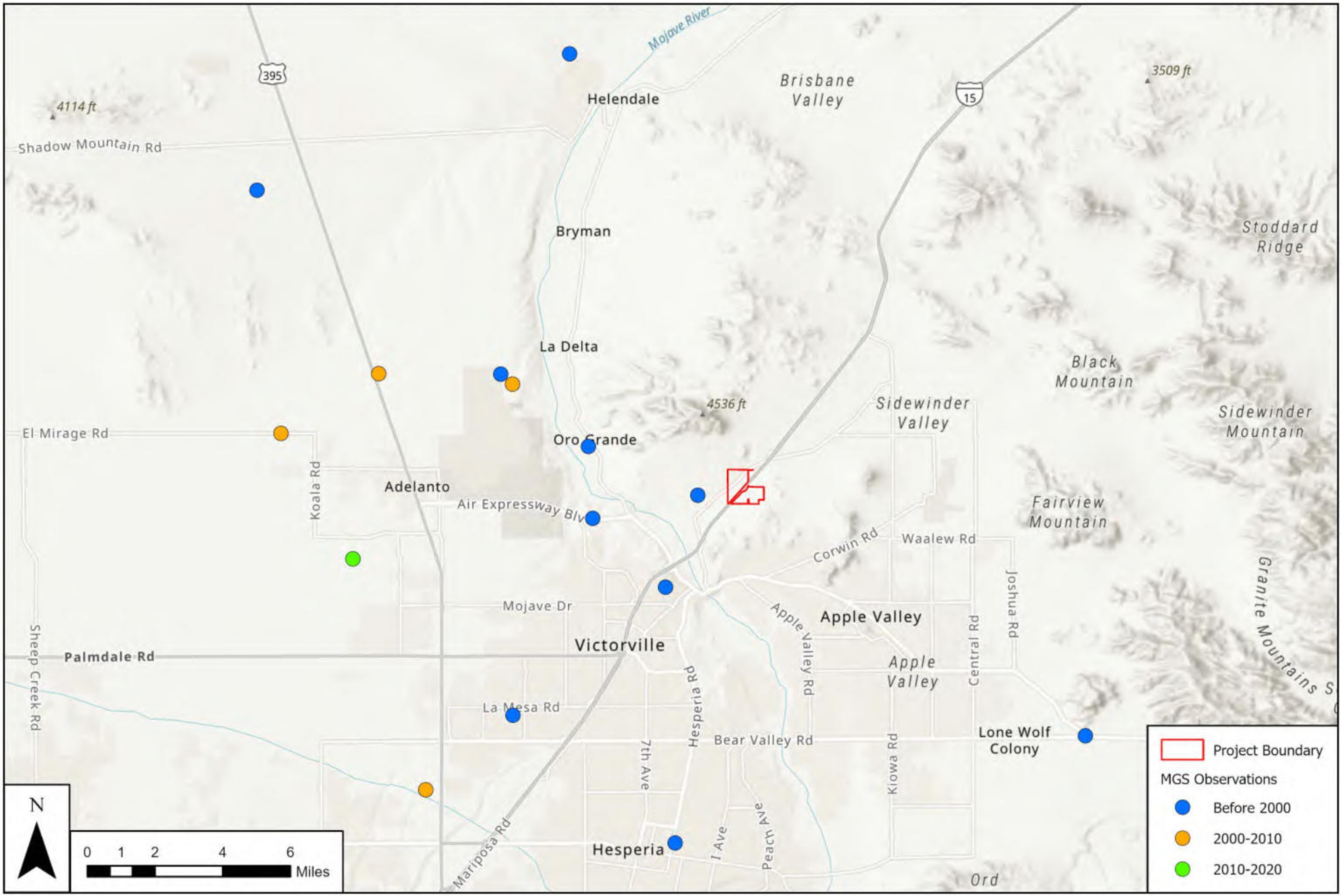
SOURCE: ESRI

Inland Empire North Logistics Center Project

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Figure 2

Survey Area



SOURCE: ESRI

Inland Empire North Logistics Center Project

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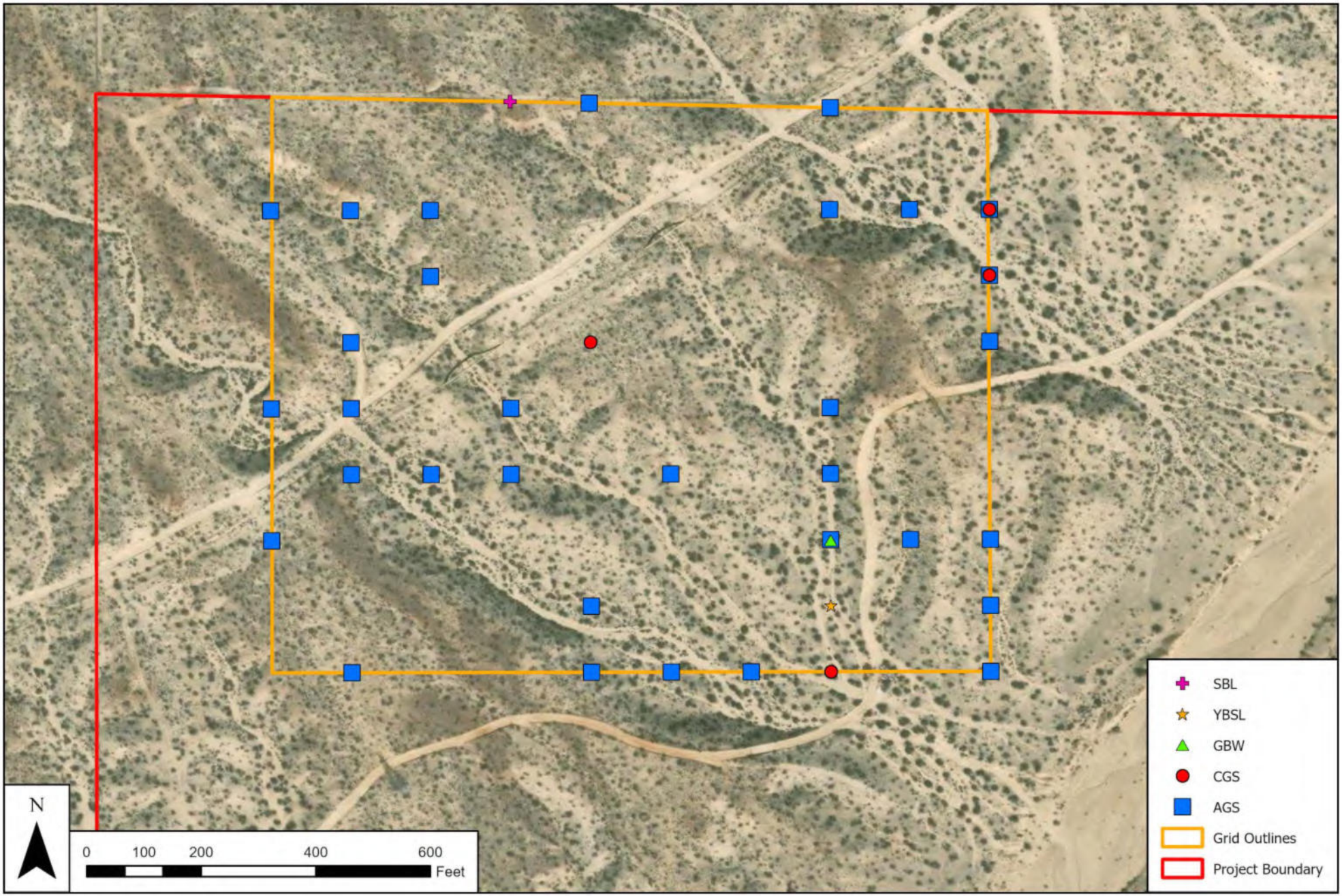
Figure 3

Historical MGS Occurrences



SOURCE: ESRI

Inland Empire North Logistics Center Project

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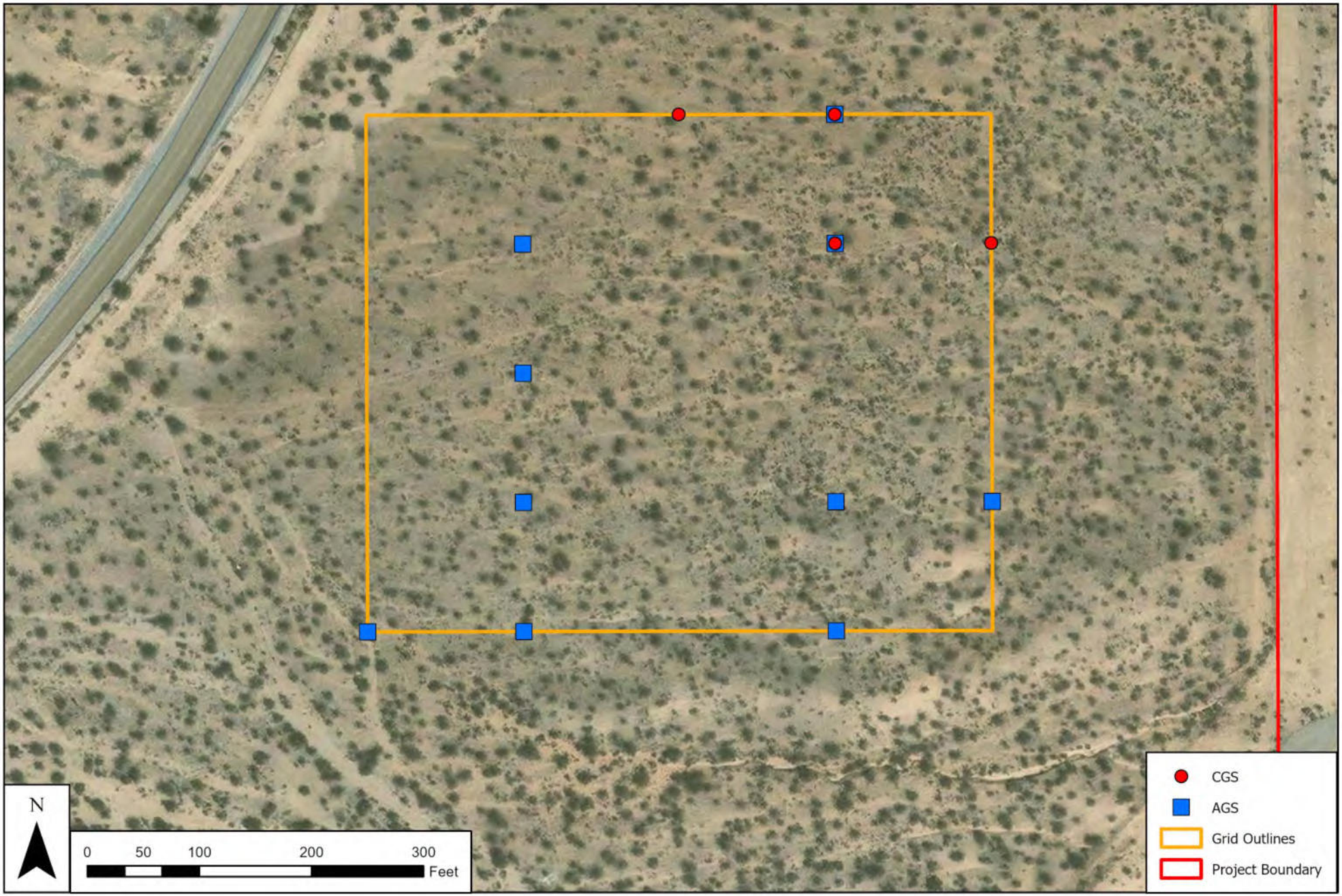
ECOLOGICAL CONSULTING, LLC

Figure 4a

Grid 1 Trapping Results



SOURCE: ESRI

Inland Empire North Logistics Center Project

DIPODOMYS
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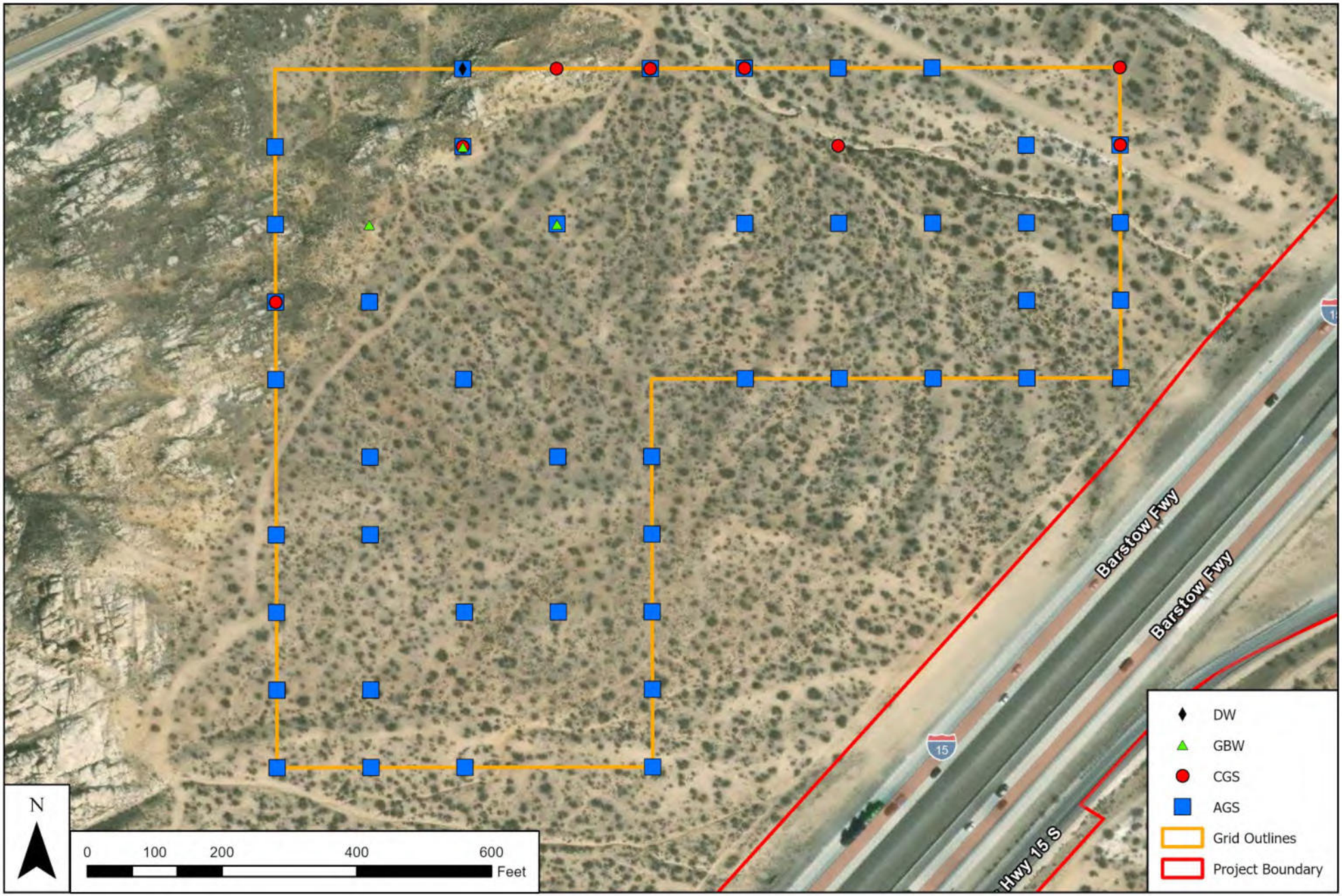
Figure 4b

Grid 2a Trapping Results



SOURCE: ESRI

Inland Empire North Logistics Center Project

DIPODOMYS
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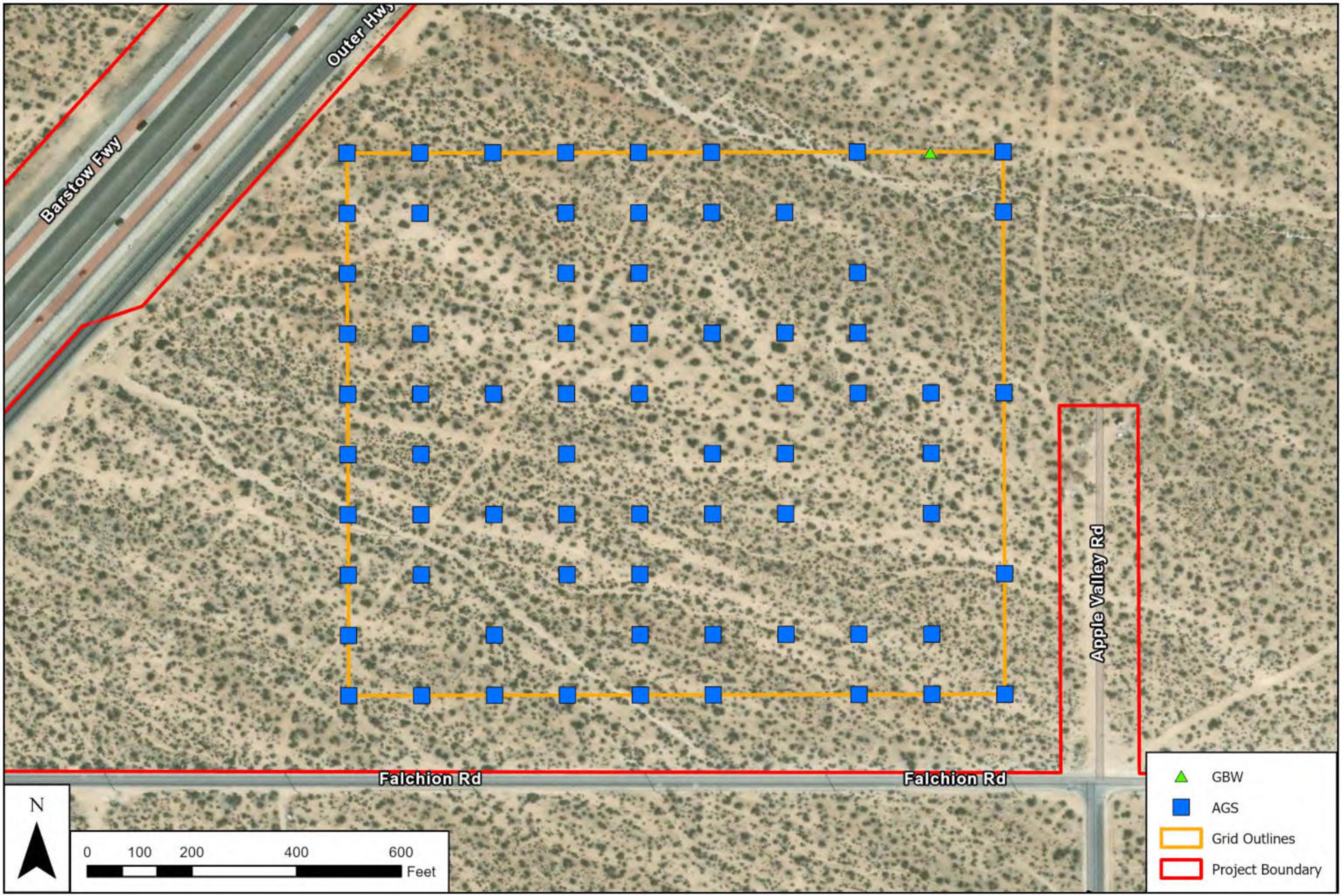
Figure 4c

Grid 2b Trapping Results



SOURCE: ESRI

Inland Empire North Logistics Center Project

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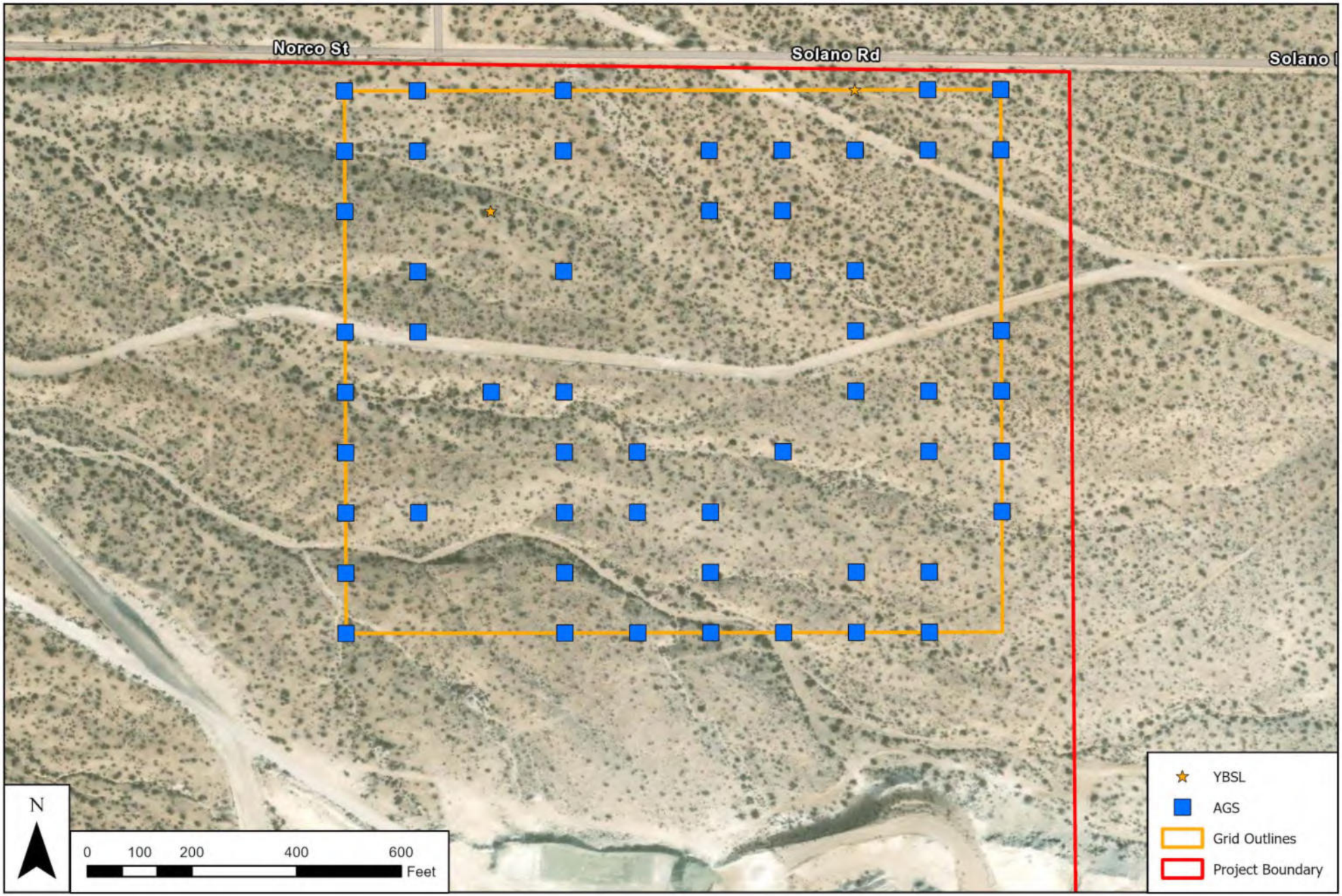
Figure 4d

Grid 3 Trapping Results



SOURCE: ESRI

Inland Empire North Logistics Center Project

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Figure 4e

Grid 4 Trapping Results

Attachment A

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: Inland Empire North Logistics Center-Grid 1 Property owner: FGFW IV, LLC

Location: Township 6 North Range 4 West Section 26 Section

Quad map/series: Victorville UTM coordinates: SW 474630 3826915 NW 474630 3827230 SE 474945 3826915 NE 474945 3827230
GPS coordinates of trapping-grid corners

Acreage of Project Site: 400 acres Acreage of potential MGS habitat on site: 400 acres

Total acreage visually surveyed on project site: 400 Dates: April 7, 2023
visual surveys

Visual surveys conducted by: Karla Flores and Karl Fairchild
names of all persons by date (use back of form, if needed)

Total acres trapped: 400 acres Number of sampling grids: 5

Trapping conducted by: Karla Flores and Karl Fairchild
names of all persons by sampling term and sampling grid (use back of form, if needed)

Dates of sampling terms: FIRST April 10-14, 2023 SECOND May 2-6, 2023 THIRD June 16-20, 2023
if required if required

PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)
Vegetation: dominant perennials: Creosote bush, winterfat, Nevada joint-fir, cheesebush, Mojave indigo bush
other perennials: Anderson's thornbush, cheesebush, spiny hopsage, white bursage, silver cholla, turpentine broom, bladdersage, beavertail, desert pepperweed
dominant annuals: Red-stemmed filaree, fiddleneck, foxtail brome, desert gold poppy
other annuals: Fremont phacelia, little gilia, desert trumpet, devil's spineflower, common phacelia, browneyes, Wallace's woolly daisy, desert lupine

Land forms (mesa, alluvial fan, wash): bajada

Soils description: Mirage-Joshua complex, Nebona-Cuddeback complex, Cajon-Arizo complex

Elevation: 2740ft Slope: 2-15%

PART III - WEATHER (report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made; use a separate blank sheet for each day)

Temperature: AIR minimum and maximum; SOIL minimum and maximum; Cloud Cover: % in AM and % in PM; Wind Speed: in AM and in PM

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: Inland Empire North Logistics Center-Grid 2a Property owner: FGFW IV, LLC

Location: Township 6 North Range 4 West Section 26 Section

Quad map/series: Victorville UTM coordinates: SW 475150 3826725 NW 475150 3826865 SE 475290 3826725 NE 474945 3826865
GPS coordinates of trapping-grid corners

Acreage of Project Site: 400 acres Acreage of potential MGS habitat on site: 400 acres

Total acreage visually surveyed on project site: 400 Dates: April 7, 2023
visual surveys

Visual surveys conducted by: Karla Flores and Karl Fairchild
names of all persons by date (use back of form, if needed)

Total acres trapped: 400 acres Number of sampling grids: 5

Trapping conducted by: Karla Flores and Karl Fairchild
names of all persons by sampling term and sampling grid (use back of form, if needed)

Dates of sampling terms: FIRST April 10-14, 2023 SECOND May 2-6, 2023 THIRD June 16-20, 2023
if required if required

PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)
Vegetation: dominant perennials: Creosote bush, Joshua tree, rubber rabbitbrush, fourwing saltbush
other perennials: Anderson's thornbush, Nevada joint-fir, turpentine broom, cottonthorn, pencil cactus, silver cholla
dominant annuals: Red-stemmed filaree, fiddleneck, thistle sage, foxtail brome
other annuals: Wallace's woolly daisy, goldfields

Land forms (mesa, canada, wash): slope

Soils description: Mirage-Joshua complex, Nebona-Cuddeback complex, Cajon-Arizo complex

Elevation: 2740ft Slope: 2-15%

PART III - WEATHER (report measurements in the following categories for each day of visual survey and each day of trapping) (using 24-hour clock, indicate time of day that each measurement was made) (use a separate blank sheet for each day)

Temperature: AIR minimum and maximum (SOIL minimum and maximum) Cloud Cover: % in AM and % in PM (Wind Speed: in AM and in PM

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION □use a separate □orm □or each sampling grid□

Pro□ect name: Inland Empire North Logistics Center-Grid 2b Property owner: FGFW IV, LLC

Location: Township 6 North □ Range 4 West □ Section 26 □ □ Section _____

□uad map/series: Victorville UTM coordinates: SW 474735 3826085 NW 474735 3826400 SE 475050 3826915 NE 475050 3826060
GPS coordinates o□trapping-grid corners

Acreage o□Pro□ect Site: 400 acres Acreage o□potential MGS ha□itat on site: 400 acres

Total acreage visually surveyed on pro□ect site: 400 Date□s□: April 7, 2023
visual surveys

Visual surveys conducted □y: Karla Flores and Karl Fairchild
names o□all persons □y date □use □ack o□□orm, i□ needed□

Total acres trapped: 400 acres Num□er o□sampling grids: 5

Trapping conducted □y: Karla Flores and Karl Fairchild
names o□all persons □y sampling term and sampling grid □use □ack o□□orm, i□needed□

Dates o□sampling term□s□: FIRST April 10-14, 2023 SECOND May 2-6, 2023 THIRD June 16-20, 2023
i□re□uired i□re□uired

PART II - GENERAL HABITAT DESCRIPTION □use □ack o□□orm, i□needed□
Vegetation: dominant perennials: Creosote bush, Nevada joint-fir, cheesebush, Joshua tree, California buckwheat, Mojave indigo bush, Anderson's thornbush
other perennials: Spiny hopsage, winterfat, Cooper's goldenbush, narrowleaf goldenbush, silver cholla, pencil cactus, turpentine broom, bladdersage, sweetbush
dominant annuals: Red-stemmed filaree, fiddleneck, foxtail brome, desert gold poppy

other annuals: Common phacelia, desert pincushion, red root cryptantha, desert trumpet, milk vetch, hedgehog cactus, Wallace's woolly daisy, desert lupine
blue dicks, fiesta flower, Thurber's sandpaper plant, apricot mallow, four-o-clock, goldfields, little gilia

Land □orms □mesa, □a□ada, wash□: desert slope

Soils description: Mirage-Joshua complex, Nebona-Cuddeback complex, Cajon-Arizo complex

Elevation: 2740ft Slope: 2-15%

PART III - WEATHER □report measurements in the □ollowing categories □or each day o□visual survey and each day o□trapping□using 24-hour clock, indicate time o□day that each measurement was made□use a separate □lank sheet □or each day□

Temperature: AIR minimum and maximum□SOIL minimum and maximum□Cloud Cover: □ in AM and □ in PM□Wind Speed: in AM and in PM

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION □use a separate □orm □or each sampling grid□

Pro□ect name: Inland Empire North Logistics Center-Grid 3 Property owner: FGFW IV, LLC

Location: Township 6 North _□ Range 4 West _□ Section 26 _ □□ Section _____

□uad map/series: Victorville _____ UTM coordinates: SW 474995 3825640 NW 474995 3825955 SE 475310 3825640 NE 475310 3825955
GPS coordinates o□trapping-grid corners

Acreage o□Pro□ect Site: 400 acres Acreage o□potential MGS ha□itat on site: 400 acres

Total acreage visually surveyed on pro□ect site: 400 Date□s□: March 31, 2023
visual surveys

Visual surveys conducted □y: Karla Flores and Karl Fairchild
names o□all persons □y date □use □ack o□□orm, i□ needed□

Total acres trapped: 400 acres Num□er o□sampling grids: 5

Trapping conducted □y: Karla Flores and Karl Fairchild
names o□all persons □y sampling term and sampling grid □use □ack o□□orm, i□needed□

Dates o□sampling term□s□: FIRST April 5-9, 2023 SECOND May 7-11, 2023 THIRD June 22-26, 2023
i□re□uired i□re□uired

PART II - GENERAL HABITAT DESCRIPTION □use □ack o□□orm, i□needed□
Vegetation: dominant perennials: Creosote bush, Nevada joint-fir, Mojave indigo bush
other perennials: Anderson's thornbush, cheesebush, spiny hopsage
dominant annuals: Red-stemmed filaree, fiddleneck, foxtail brome, desert gold poppy
other annuals: browneyes, Wallace's woolly daisy, desert lupine

Land □orms □mesa, □a□ada, wash□: bajada

Soils description: Mirage-Joshua complex, Nebona-Cuddeback complex, Cajon-Arizo complex

Elevation: 2740ft Slope: 2-15%

PART III - WEATHER □report measurements in the □ollowing categories □or each day o□visual survey and each day o□trapping□using 24-hour clock, indicate time o□day that each measurement was made□use a separate □lank sheet □or each day□

Temperature: AIR minimum and maximum□SOIL minimum and maximum□Cloud Cover: □ in AM and □ in PM□Wind Speed: in AM and in PM

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION □use a separate □orm □or each sampling grid□

Pro□ect name: Inland Empire North Logistics Center-Grid 4 Property owner: FGFW IV, LLC

Location: Township 6 North _□ Range 4 West _□ Section 26 _ □□ Section _____

□uad map/series: Victorville _____ UTM coordinates: SW 475615 3826060 NW 475615 3826375 SE 475930 3826060 NE 475930 3826375
GPS coordinates o□trapping-grid corners

Acreage o□Pro□ect Site: 400 acres Acreage o□potential MGS ha□itat on site: 400 acres

Total acreage visually surveyed on pro□ect site: 400 Date□s□: March 31, 2023
visual surveys

Visual surveys conducted □y: Karla Flores and Karl Fairchild
names o□all persons □y date □use □ack o□□orm, i□ needed□

Total acres trapped: 400 acres Num□er o□sampling grids: 5

Trapping conducted □y: Karla Flores and Karl Fairchild
names o□all persons □y sampling term and sampling grid □use □ack o□□orm, i□needed□

Dates o□sampling term□s□: FIRST April 5-9 2023 SECOND May 7-11, 2023 THIRD June 22-26, 2023
i□re□uired i□re□uired

PART II - GENERAL HABITAT DESCRIPTION □use □ack o□□orm, i□needed□
Vegetation: dominant perennials: Creosote bush, winterfat, Nevada joint-fir, cheesebush, Mojave indigo bush
other perennials: Anderson's thornbush, cheesebush, turpentine broom, desert pepperweed, desert prince's plume
dominant annuals: Red-stemmed filaree, fiddleneck, foxtail brome, desert gold poppy
other annuals: desert trumpet, devil's spineflower, browneyes, Wallace's woolly daisy, desert lupine

Land □orms □mesa, □a□ada, wash□: bajada

Soils description: Mirage-Joshua complex, Nebona-Cuddeback complex, Cajon-Arizo complex

Elevation: 2740ft Slope: 2-15%

PART III - WEATHER □report measurements in the □ollowing categories □or each day o□visual survey and each day o□trapping□using 24-hour clock, indicate time o□day that each measurement was made□use a separate □lank sheet □or each day□

Temperature: AIR minimum and maximum□SOIL minimum and maximum□Cloud Cover: □ in AM and □ in PM□Wind Speed: in AM and in PM

Attachment B

Attachment B: Grid 1 and 2 weather details for California Department of Fish and Wildlife (CDFW) Mohave ground squirrel (*Xerospermophilus mohavensis*) protocol surveys. Details include date, survey (1-3), air temperature (min-max ° Fahrenheit), soil temperature (min-max ° Fahrenheit), wind speed (mph) and percent cloud cover (%).

Grid	Date		Air Temperature (°F)		Soil temperature (°F)		Wind (mph)		Cloud Cover (%)	
			Min	Max	Min	Max	Start	End	Start	End
1&2	4/10/2023	1	69	87	55.2	69.2	1	4	0	0
1&2	4/11/2023	1	65.3	84.2	56.3	75	6.2	9.9	0	40
1&2	4/12/2023	1	65	81.9	60	75.7	7.3	11.7	70	80
1&2	4/13/2023	1	55.8	73.2	56.6	71.4	6.3	13.2	10	5
1&2	4/14/2023	1	54	73.4	50.5	82.1	5.5	5	0	0
1&2	5/2/2023	2	57.4	68.2	59.8	77.5	13.3	15	60	15
1&2	5/3/2023	2	51.4	66.1	53.6	80.4	2.7	18.6	5	40
1&2	5/4/2023	2	50.6	62.3	56.7	70	8.2	12.9	75	70
1&2	5/5/2023	2	61.9	64.7	52.7	81	3.4	11.8	15	10
1&2	5/6/2023	2	56.5	73.2	54.2	74.4	8.3	6.8	1	30
1&2	6/16/2023	3	66.4	88.8	72	77	1.4	2.2	30	5
1&2	6/17/2023	3	68.5	90	72	77.9	1.8	3.3	0	2
1&2	6/18/2023	3	70.6	90	74.9	78.9	2.9	11.1	1	0
1&2	6/19/2023	3	66.3	88.1	71.6	77	4.5	9.3	1	0
1&2	6/20/2023	3	61.1	88	67	74.3	7.8	7.4	2	5

Attachment B: Grid 3 and 4 weather details for California Department of Fish and Wildlife (CDFW) Mohave ground squirrel (*Xerospermophilus mohavensis*) protocol surveys. Details include date, survey (1-3), air temperature (min-max ° Fahrenheit), soil temperature (min-max ° Fahrenheit), wind speed (mph) and percent cloud cover (%).

Grid	Date		Air Temperature (°F)		Soil temperature (°F)		Wind (mph)		Cloud Cover (%)	
			Min	Max	Min	Max	Start	End	Start	End
3&4	4/5/2023	1	60.3	63.6	46.3	60.9	5.7	4.9	1	10
3&4	4/6/2023	1	51.1	65.7	45.2	62.8	3.6	2.6	1	1
3&4	4/7/2023	1	52.7	73.4	48.3	80.4	4.2	5.7	20	20
3&4	4/8/2023	1	61.4	77.8	47.9	70.2	3.7	2.9	5	10
3&4	4/9/2023	1	63.9	83	51.1	74.5	2.6	7.3	0	0
3&4	5/7/2023	2	61.1	76.8	55	82.7	7.8	8.1	2	0
3&4	5/8/2023	2	57.4	77.8	55.9	84.3	6.2	15.9	0	5
3&4	5/9/2023	2	53.8	76.5	55.5	83.5	1.4	14.2	0	30
3&4	5/10/2023	2	52.5	79.2	55.4	82.7	6.4	8.8	0	2
3&4	5/11/2023	2	53.6	84.3	56.6	77.2	1.4	5.7	0	0
3&4	6/22/2023	3	59	77	67.6	80.6	2.7	19.5	10	0
3&4	6/23/2023	3	53.7	89.2	62	83.3	1.1	3.7	2	0
3&4	6/24/2023	3	60.6	87	63.6	79.3	1.6	3.2	5	0
3&4	6/25/2023	3	58	85.7	65.1	72.5	2.3	5	0	0
3&4	6/26/2023	3	61.3	89.1	66.6	73.4	2	6.1	0	0

Attachment C

Common name	Scientific name	Special Status
Plants		
white bursage	*Ambrosia dumosa*	
cheesebush	*Ambrosia salsola*	
fiddleneck	*Amsinckia tessellata*	
milkvetch	*Astragalus* sp.	
fourwing saltbush	*Atriplex canescens*	
sweetbush	*Bebbia juncea*	
foxtail brome	*Bromus madritensis*	
desert pincushion	*Chaenactis fremontii*	
Devil's spineflower	*Chorizanthe rigida*	
clavate fruited primrose	*Chylismia claviformis*	
silver cholla	*Cylindropuntia echinocarpa*	
pencil cholla	*Cylindropuntia ramosissima*	
blue dicks	*Dipterostemon capitatus*	
cottontop cactus	*Echinocactus polycephalus*	
hedgehog cactus	*Echinocereus* sp.	
Nevada jointfir	*Ephedra nevadensis*	
desert red-root	*Eremocarya micrantha*	
Cooper's goldenbush	*Ericameria cooperi*	
rubber rabbitbrush	*Ericameria nauseosa*	
California buckwheat	*Eriogonum fasciculatum*	
desert trumpet	*Eriogonum inflatum*	
Wallace's woolly daisy	*Eriophyllum wallacei*	
red-stemmed filaree	*Erodium cicutarium*	
desert gold poppy	*Eschscholzia glyptosperma*	
little gilia	*Gilia minor*	
spiny hopsage	*Grayia spinosa*	
winterfat	*Krascheninnikovia lanata*	
creosote bush	*Larrea tridentata*	
goldfields	*Lasthenia californica*	
desert pepperweed	*Lepidium fremontii*	
desert lupine	*Lupinus schockleyi*	
Anderson's thornbush	*Lycium andersonii*	
wishbone bush	*Mirabilis laevis*	
beavertail	*Opuntia basilaris*	
sandpaper plant	*Petalonyx thurberi*	
common phacelia	*Phacelia distans*	
Fremont phacelia	*Phacelia fremontii*	
white fiesta flower	*Pholistoma membranaceum*	
Mojave indigo bush	*Psorothamnus arborescens*	
thistle sage	*Salvia carduacea*	
bladdersage	*Scutellaria mexicana*	
desert mallow	*Sphaeralcea ambigua*	
desert prince's plume	*Stanleya pinnata*	
cottonthorn	*Tetradymia stenolepis*	
turpentine broom	*Thamnosma montana*	
Joshua tree	*Yucca brevifolia*	

Common name	Scientific name	Special Status
Birds		
Cooper's hawk	*Accipiter cooperii*	
white-throated swift	*Aeronautes saxatalis*	
black-throated sparrow	*Amphispiza bilineata*	
Bell's sparrow	*Artemisiospiza belli*	
verdin	*Auriparus flaviceps*	
red-tailed hawk	*Buteo jamaicensis*	
Costa's hummingbird	*Calypte costae*	
Wilson's warbler	*Cardellina pusilla*	
lesser nighthawk	*Chordeiles acutipennis*	
northern harrier	*Circus hudsonius*	SSC
western wood-pewee	*Contopus sordidulus*	
ruby-crowned kinglet	*Corthylio calendula*	
common raven	*Corvus corax*	
horned lark	*Eremophila alpestris*	
American kestrel	*Falco sparverius*	
house finch	*Haemorhous mexicanus*	
barn swallow	*Hirundo rustica*	
loggerhead shrike	*Lanius ludovicianus*	SSC
California gull	*Larus californicus*	
ash-throated flycatcher	*Myiarchus cinerascens*	
house sparrow	*Passer domesticus*	
phainopepla	*Phainopepla nitens*	
black-tailed gnatcatcher	*Polyoptila melanura*	
rock wren	*Salpinctes obsoletus*	
Say's phoebe	*Sayornis saya*	
yellow-rumped warbler	*Setophaga coronata*	
western tanager	*Setophaga coronata*	
yellow warbler	*Setophaga petechia*	
Townsend's warbler	*Setophaga townsendi*	
Brewer's sparrow	*Spizella breweri*	
European starling	*Sturnus vulgaris*	
American robin	*Turdus migratorius*	
mourning dove	*Zenaida macroura*	
white-crowned sparrow	*Zonotrichia leucophrys*	
Mammals		
white-tailed antelope ground squirrel	*Ammospermophilus leucurus*	
domestic dog	*Canis familiaris*	
coyote	*Canis latrans*	
Merriam's kangaroo rat	*Dipodomys merriami*	
Panamint kangaroo rat	*Dipodomys panamitinus*	
black-tailed jackrabbit	*Lepus californicus*	
California ground squirrel	*Otospermophilus beeckeyi*	
Reptiles		
Mojave green rattlesnake	*Crotalus scutulatus*	
desert horned lizard	*Phrynosoma platyrhinos*	
common chuckwalla	*Sauromalus ater*	

Common name	Scientific name	Special Status
yellow-backed spiny lizard	*Sceloporus uniformis*	
Great basin whiptail	*Aspidoscelis tigris*	
zebra-tailed lizard	*Callisaurus draconoides*	
side-blotched lizard	*Uta stansburiana*	

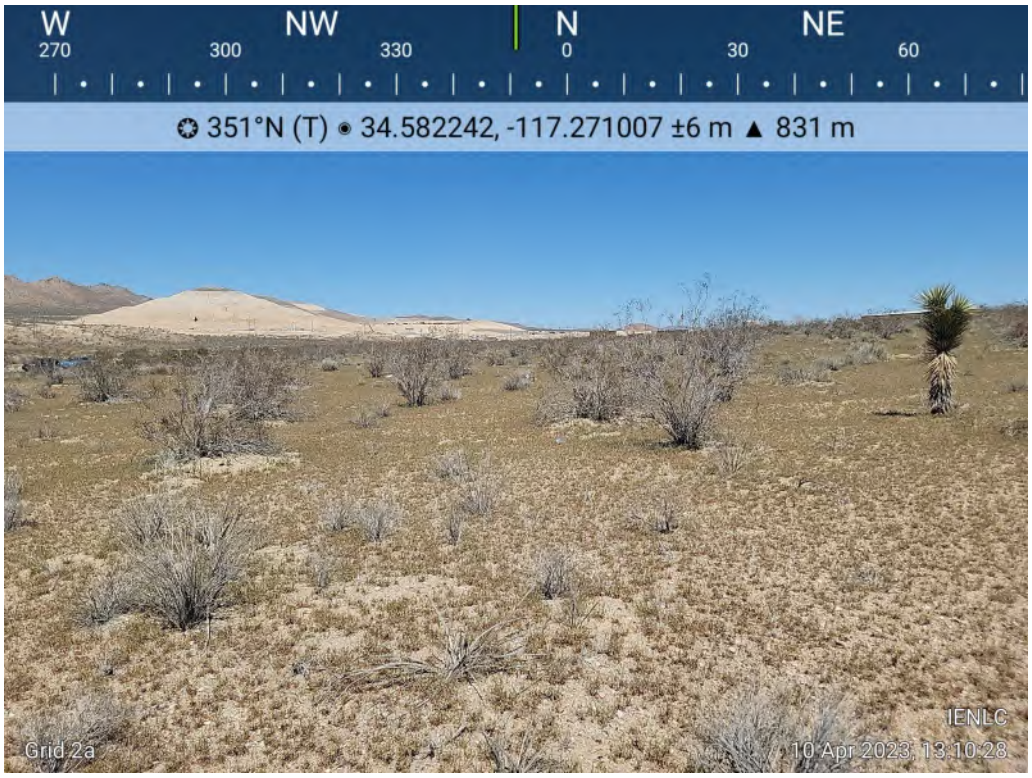
Attachment D



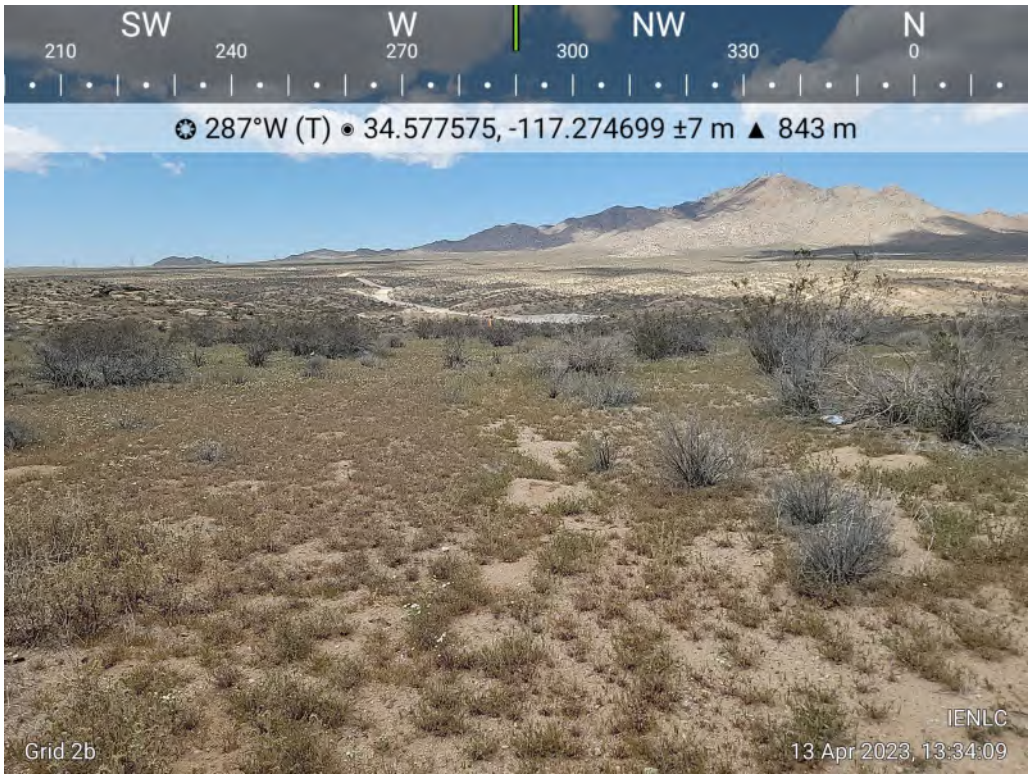
Photograph 1: Representative vegetation on Grid 1, facing northwest.



Photograph 2: Representative vegetation on Grid 1, facing south.



Photograph 3: Representative vegetation on Grid 2A, facing north.



Photograph 4: Representative vegetation on Grid 2B, facing north.



Photograph 5: Representative vegetation on Grid 3, facing west.



Photograph 6: Representative vegetation on Grid 4, facing south.



Photograph 7: Representative camera trap station.



Photograph 8: Representative live trap station.



Photograph 9: White-tailed antelope ground squirrel (*Ammospermophilus leucurus*) captured.



Photograph 10: California ground squirrel (*Otospermophilus beecheyi*) captured.



Photograph 11: Winterfat (*Krascheninnikovi lanata*), MGS food plant located on project site.



Photograph 12: Mojave green rattlesnake (*Crotalus scutulatus*), MGS food plant located on project site.



Photograph 13: Common chuckwalla (*Sauromalus ater*) on Grid 2.



Photograph 14: Coyote (*Canis latrans*) visiting camera trap station.

May 5, 2023

Anna Cassady
Dudek
605 Third Street
Encinitas, CA 92024
Via email: acassady@duek.com

Subject: Results of a Mohave Ground Squirrel Habitat Assessment for the 7-mile utility alignment for Apple Valley 143 Project, San Bernardino County, California

Dear Anna:

The purpose of this report is to document the results of a Mohave ground squirrel (*Xerospermophilus mohavensis*; MGS) Habitat Assessment conducted by Dipodomys Ecological Consulting LLC (DEC) on the 7-mile utility alignment for the Apple Valley 143 Project (project). Presented in this report are a description of the project, project location, MGS natural history, survey methodology, results of the MGS Habitat Assessment, and conclusions/recommendations.

Project Description and Location

Covington Group, Inc., proposes to develop a speculative industrial distribution warehouse on a 143-acre parcel. In addition to the warehouse footprint, the proposed development will require 7 miles (approximately 111.24 acres) of utility tie-in alignments (off-site improvements). This MGS habitat assessment was conducted to determine the potential for MGS to occur within the culvert installation footprint.

The 7-mile alignment is located within the Town of Apple Valley in San Bernardino County, California. The easternmost extent of the alignment is located along Johnson Road 240 meters west of Navajo Road. The alignment then extends approximately 2 miles west towards the intersection with Stoddard Wells Road, then extends 1.65 miles southwest towards Outer Highway 15, then extends 1.75 miles south along Outer Highway 15 towards Falchion Road, then extends 0.4 miles west along Falchion Road towards Apple Valley Road, then extends 1.5 miles along Apple Valley Road and ends at the intersection of Apple Valley Road and Ohna Road (**Figure 1-2**). The study area, composed of the project alignment and an associated 100-foot buffer, consists of creosote bush-ephedra scrub, disturbed creosote bush scrub, disturbed/developed, ornamentals plantings, and saltbush scrub (**Figure 4**). The primary source of disturbance is past and current off highway vehicle (OHV) activity and roadside litter. The project alignment is located on the U.S. Geological Survey (USGS) 7.5-minute Victorville and Apple Valley North topographic quadrangle map within Sections 16, 17, 18, 19, 20, 21, Township 6 North and Range 3 West, and Sections 23, 24, 26 and 35 Township 6 North and Range 4 West and Section 2 Township 5 North and Range 4 West as shown in **Figure 1**, Project Location.

Mohave Ground Squirrel Natural History

Mohave ground squirrels are medium-sized (210-230mm, 85-130g), diurnal squirrels. Their dorsal pelage is light gray to cinnamon-brown, while their ventral side is creamy. Unlike round-tailed ground squirrels, which occur sympatrically in the southeast portion of their range, MGS have a short, flat tail that is light-colored on its underside, and have brown cheeks instead of white.

MGS inhabit a small geographic area in the western Mojave Desert. This species ranges from Palmdale in the southwest, the Lucerne Valley in the southeast, Olancha in the northwest, and the Avawatz Mountains in the northeast (Gustafson 1993). Although occurrences in the southern portion of their range are rare, occurrences have been documented on the California Natural Diversity Database (CNDDB) as recently as 2011 (Figure 3). Vegetation communities (as classified by the California Native Plant Society) typically associated with MGS include Mojave Creosote Scrub, Shadscale Scrub, Desert Saltbush Scrub, Desert Sink Scrub, and Joshua Tree Woodland. MGS feed primarily on the leaves and seeds of forbs and shrubs. In the northern portion of their range, MGS have been found to feed on spiny hopsage (*Grayia spinosa*), winterfat (*Krascheninnikovia lanata*) and saltbush (*Atriplex* sp.), especially in early spring when forbs are unavailable, during summer when forbs have dried out, and during drought conditions (Leitner and Leitner 1998). Recent studies have also indicated that MGS feed on the following forbs and shrubs: freckled milkvetch (*Astragalus lentiginosus*), Mojave lupine (*Lupinus odoratus*), buckwheat (*Eriogonum* sp.), white mallow (*Eremalche exilis*), fiddleneck (*Amsinckia tessellata*), Russian thistle (*Salsola tragus*), desert pincushion (*Chaenactis* sp.), Cryptantha (*Cryptantha pterocarya*), Coreopsis (*Leptosyne bigelovii*), Valley lessingia (*Lessingia glandulifera*), desert dandelion (*Malacothrix glabrata*), Phacelia (*Phacelia* sp.), wire lettuce (*Stephanomeria* sp.) Anderson's desert thorn (*Lycium andersonii*), spiny horsebrush (*Tetradimya spinosa*), and Joshua tree *(Yucca brevifolia*) (Leitner and Leitner 2017).

MGS have adapted to live in hot desert environments by limiting their activity aboveground through estivation and hibernation. The timing of emergence from hibernation varies by location: in the northern portion of their range male MGS emerge mid-March (Leitner and Leitner 1998); however, in the southern portion of their range, MGS may emerge as early as mid-January (Recht 1977). Throughout their active period, MGS store fat in preparation for estivation, which typically occurs between July and September, but may occur as early as April or May during drought conditions (Leitner et al. 1995). MGS reproduction is dependent on fall and winter rains and individuals may forgo breeding entirely if low rainfall (<80mm) results in reduced herbaceous plants (Leitner and Leitner 2017).

Throughout the range of MGS, they may co-occur with antelope ground squirrels, round-tailed ground squirrels, and California ground squirrels. MGS may be confused with round-tailed ground squirrels, but this is unlikely to occur with antelope ground squirrels, because the latter species has white dorsal stripes that makes them resemble a chipmunk more than an MGS. California ground squirrels are notably larger and are not typically confused with MGS.

MGS are classified as threatened and are protected under the California Endangered Species Act. Primary threats to MGS include limited distribution, low abundance, and habitat loss from by converting suitable habitat to urban, suburban, agricultural, and military land uses (Gustafson 1993, Leitner and Leitner 2017).

Methods

Prior to carrying out the habitat assessment in the field, a 12-quad query of the California Natural Diversity Database (CNDDB) was conducted to determine the locations of historical recorded occurrences of MGS near the project site (**Figure 3**).

The MGS habitat assessment was conducted on April 19, 2023, by permitted biologists Karla Flores (MOU Principal Investigator, Scientific Collection Permit SC-10572) and Karl Fairchild (MOU Principal Investigator, SCP S-182820007-18333-001). The habitat assessment consisted of walking meandering transects throughout a 100-foot buffer along the 7-mile project footprint while recording vegetation communities and individual plants that provide suitable habitat for MGS. The presence of any plant species associated with MGS was also recorded. The presence of burrows within the survey area was also noted as an indication that the soil is friable and suitable for burrowing rodents.

Results

The 12-quad CNDDB query yielded 16 MGS occurrences within the search area. The most recent of these occurrences was recorded in 2011, approximately nine miles west of the survey area. The closest MGS occurrence was documented in 1977, approximately one mile west of the survey area (**Figure 3**).

The field survey results of the MGS habitat assessment showed that there are five vegetation communities present along the 7-mile alignment and 100-foot buffer including: creosote bush-ephedra scrub, disturbed creosote bush scrub, disturbed/developed land, ornamental plantings, and saltbush scrub (**Figure 3, Table 1**). Of these vegetation communities, moderate quality habitat for MGS is present along Falchion Road in creosote bush-ephedra scrub and low-quality habitat is located along disturbed creosote bush scrub.

Creosote bush -ephedra scrub is located almost entirely along Falchion Road and extending slightly south along Apple Valley Road. Shrub species in this vegetation community include creosote bush (*Larrea tridentata*), Nevada joint-fir (*Ephedra nevadensis*), cheesebush (*Ambrosia salsola*), Anderson's thornbush, Mojave indigo bush (*Psorothamnus arborescens*), and winterfat. Forb/annual species present include desert pepperweed (*Lepidium fremontii*), mountain red-root (*Eremocarya lepida*), Fremont phacelia (*Phacelia fremontii*), Jones' blazing star (*Mentzelia jonesii*), yellow California mustard (*Caulanthus flavescens*), Devil's spineflower (*Chorizanthe rigida*), fiddleneck, and Mediterranean grass (*Schismus barbatus*).

Disturbed creosote bush scrub was located along Johnson Road and Apple Valley Road. Shrub species in this vegetation community include creosote bush, interior goldenbush (*Ericameria linearifolia*) and scale broom (*Lepidospartum squamatum*). Forb/annual species present include fiddleneck, red-stemmed filaree (*Erodium cicutarium*), London rocket (*Sisymbrium irio*), short-podded mustard (*Hirschfeldia incana*), and Mediterranean grass.

Developed/disturbed land is primarily unvegetated, but includes small, sparsely distributed patches of London rocket, short-podded mustard, red brome (*Bromus madritensis*), and coyote brush (*Baccharis pilularis*), and occasional, scattered four-wing saltbush (*Atriplex canescens*).

Ornamental plantings included blue palo verde (*Parkinsonia florida*), mesquite (*Prosopis* sp.), and desert willow (*Chilopsis linearis*), and yucca cultivars (*Yucca* sp.).

Saltbush scrub consisted of allscale saltbush (*Atriplex polycarpa*), four-wing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Ericameria nauseosa*), cheesebush, white bursage (*Ambrosia dumosa*), and Mojave indigo bush.

Eight soil types were mapped along the survey area including: Cajon sand (2-9% slope), Cajon-Arizo complex (2-15%slope), Helendale-Bryman loamy sands (2-5% slope), Mirage-Joshua complex (2-5% slopes), Nebona-Cuddeback complex (2-9% slope) and rock outcrop-lithic torriorthents, Sparkhule-rock outcrop complex (15-50% slopes) and trigger Sparkhule rock outcrop association. Elevation within the study area ranged between 2,779 and 2,973 feet above mean sea level.

Weather conditions during the habitat assessment were sunny with temperatures between 59.1° and 72.8°F, wind speeds between 2.3 and 12 mph, and 1% cloud cover. Vertebrate species observed during the habitat assessment included horned lark (*Eremophila alpestris*), common raven (*Corvus corax*) and European starling (*Sturnus vulgaris*).

TABLE 1
VEGETATION COMMUNITIES

Vegetation Community	Acres
Creosote Bush-Ephedra Scrub	4.98
Disturbed Creosote Bush Scrub	27.34
Disturbed/Developed	75.71
Ornamental Plantings	2.14
Saltbush Scrub	1.07
Total	111.24

Conclusions and Recommendations

The 7-mile extension to the Apple Valley 143 project footprint consists largely of disturbed/developed areas and disturbed creosote bush scrub. The latter vegetation community is associated with MGS occurrences (CDFW 2019). Winterfat, a preferred MGS food plant, is present throughout the creosote bush-ephedra scrub vegetation community, albeit at low density. The other preferred food plant, spiny hopsage, was not encountered during the habitat assessment, but has been observed during other surveys in the immediate vicinity. Other plants known to provide forage for MGS are also present: allscale saltbush, creosote bush, Cooper's boxthorn, fiddleneck and red-stemmed filaree (Leitner 2022). The presence of these plants along with friable soils for burrowing suggests that some MGS habitat may be present within the study area but is generally low-quality due to high levels of development, proximity to busy roadways (those within the survey area and the I-15 freeway), OHV activity, and illegal dumping.

Results of the CNDDB query showed that the most recent MGS occurrence was documented in 2011, approximately nine miles west of the survey area (recent aerial photos indicate this site has been developed into a solar farm and is no longer capable of supporting MGS). The closest MGS occurrence was recorded in 1977, one mile west of the project site. Additionally, results published in the 2021 status report for MGS showed that one MGS was recorded visiting a camera trap station in the Victor Valley, west of the Mojave River and north of the Southern California Logistics Airport (Leitner 2021), within one mile of a 2007 occurrence. This suggests that despite low densities of MGS present in the southern

portion of the MGS range, a relict population may persist. All these MGS occurrences, however, are separated from the survey area by the Interstate 15 Freeway, and all but the 1977 occurrence by the Mojave River, two landscape features that may significantly limit dispersal to the east. The closest MGS core population area (the Harper Lake core population) to the survey site is located over 20 miles to the north, and it is separated from the survey site by Highway 58, Interstate 15, and the Mojave River, which may inhibit dispersing individuals. The limited connectivity between established core populations and relict populations, as well as the disturbance in and around the survey area, suggest that MGS occupancy is unlikely despite the presence of low to moderate quality habitat within the study area.

Even though it is unlikely that MGS are present within the project (based on the range of MGS, lack of connectivity to core populations, and low population densities in the southern portion of the MGS range), it should be noted that an MGS Habitat Assessment does not prove or disprove presence of MGS. The presence/absence of MGS is evaluated using established survey protocols. As DEC is currently conducting MGS protocol surveys immediately north of Falchion Road for the unrelated Inland Empire North Logistics Center Project and north of Johnson Road for the Apple Valley 84 Project (with negative results to date for both projects), DEC does not recommend additional protocol surveys for the 7-mile Utility Extension to the Apple Valley 143 Project at this time. However, CDFW has final authority on whether to require additional surveys for project approval.

I hereby certify that the information in this report is true, and that it conforms to accepted biological standards. Please feel free to contact Karla Flores by phone at (619) 972-4319 or by email at kflores@dipodomysecological.com with any questions regarding this report.

Sincerely,



Karla L. Flores
Principal Biologist

Figures and Attachments
Figure 1-Project Location
Figure 2-Survey Area
Figure 3- Historical MGS Occurrences
Figure 4- Vegetation Communities

Attachment A- Representative Photographs

References

California Department of Fish and Wildlife. California Natural Diversity Database Rarefind. November 6, 2022.

California Department of Fish and Wildlife. A Conservation Strategy for the Mohave Ground Squirrel. July 2019.

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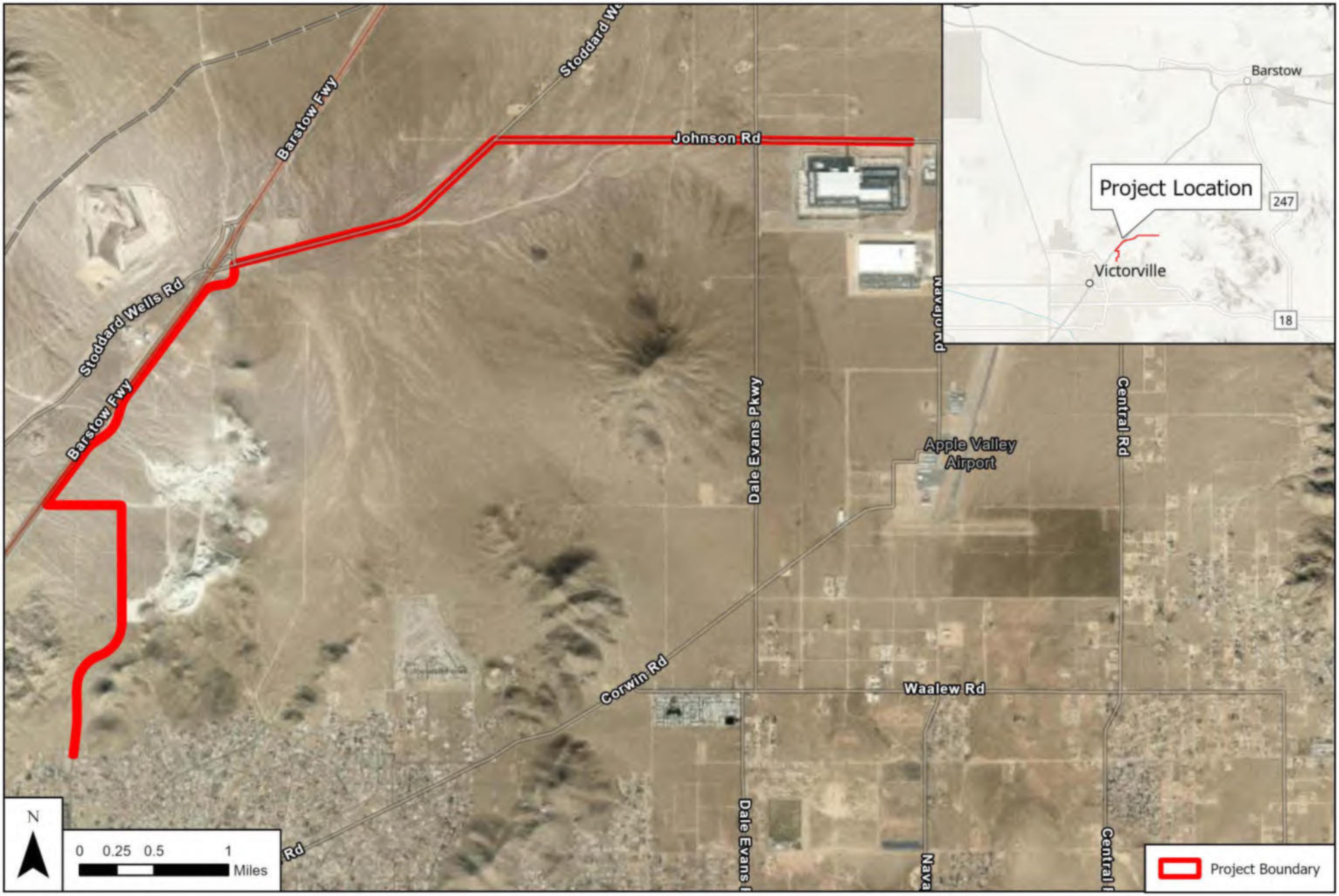

SOURCE: ESRI

Apple Valley 143 Utility Alignment Project

DIPODOMYS
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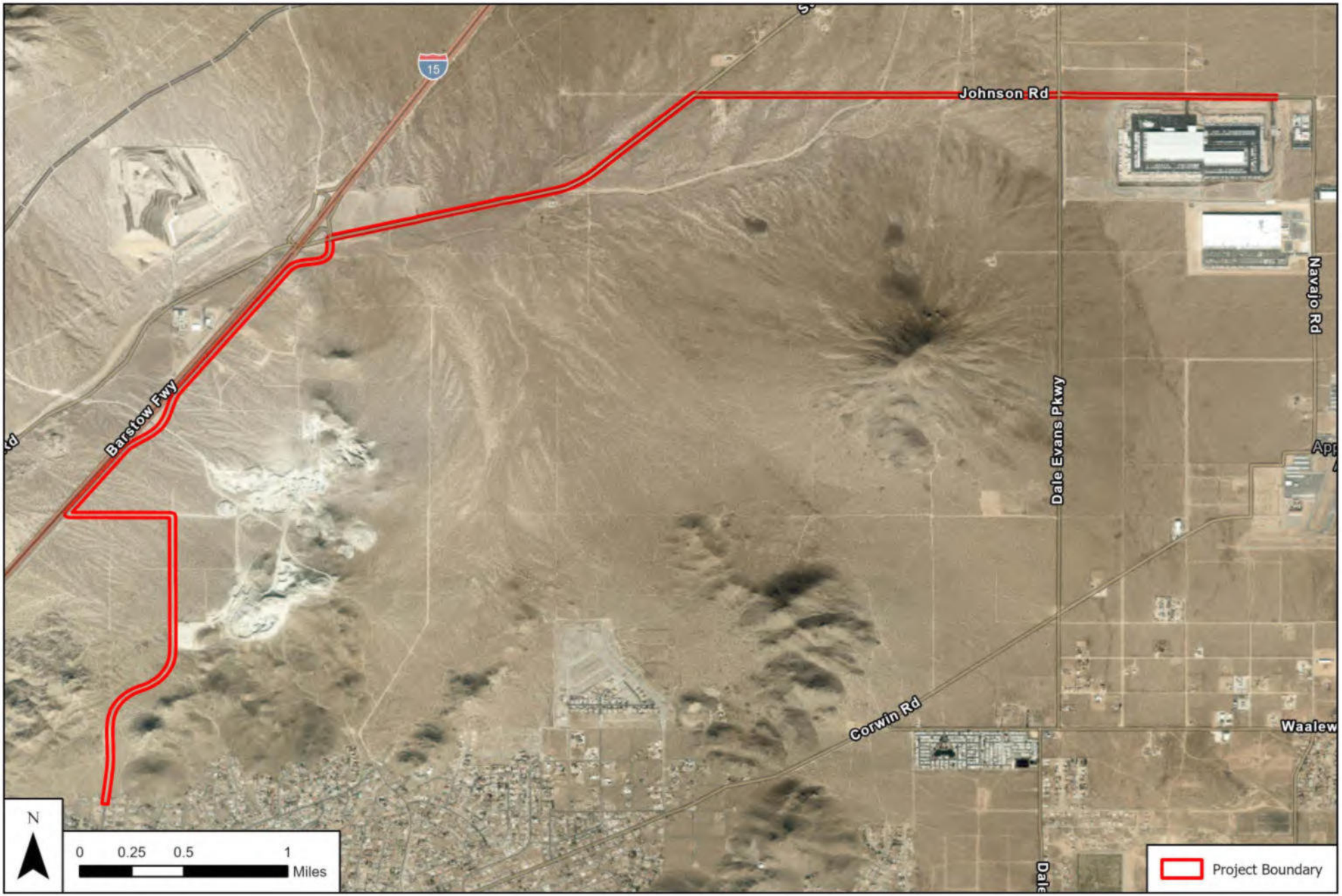
Figure 1

Project Location



SOURCE: ESRI

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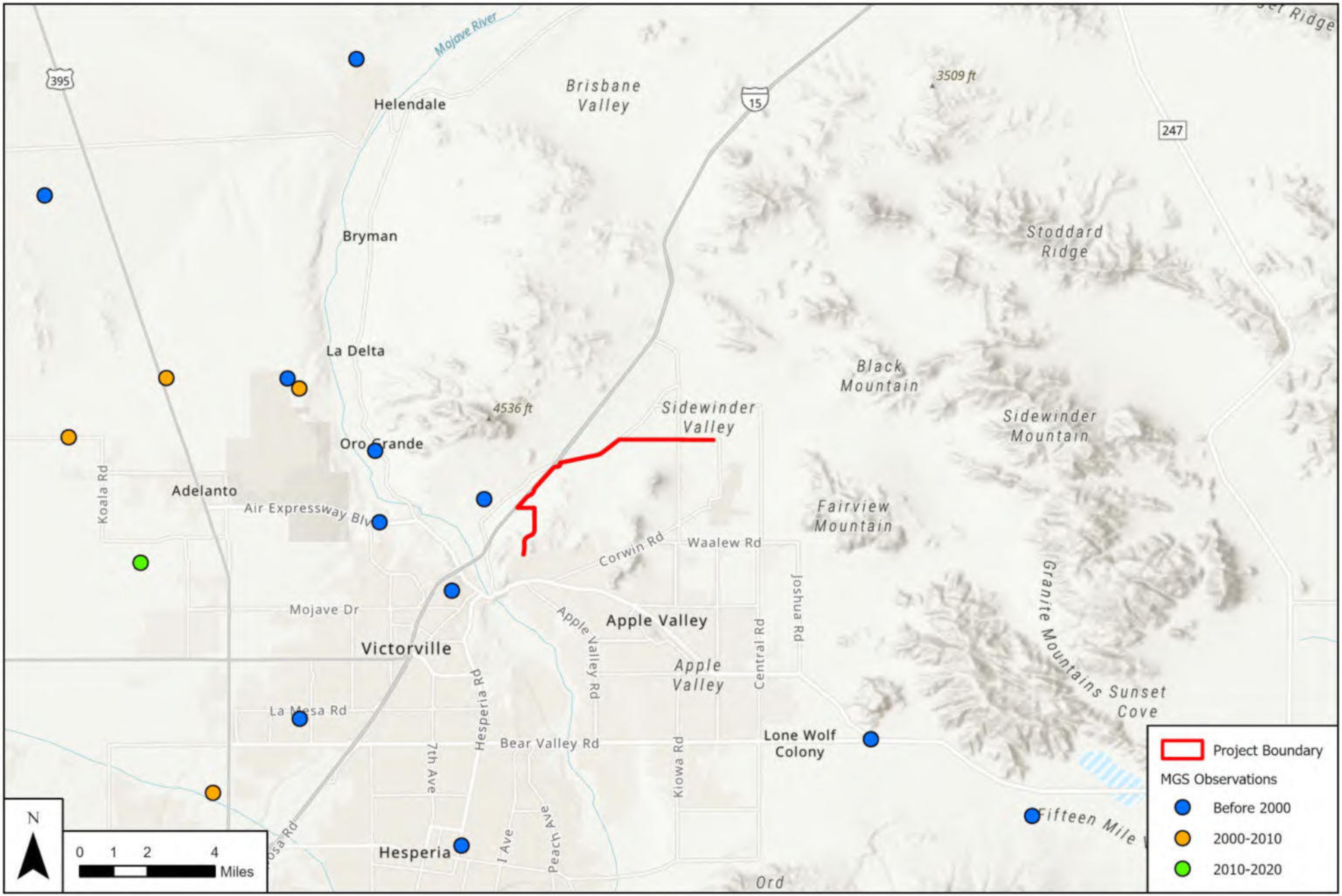
Apple Valley 143 Utility Alignment Project

Figure 2

Survey Area



SOURCE: ESRI

Apple Valley 143 Utility Alignment Project

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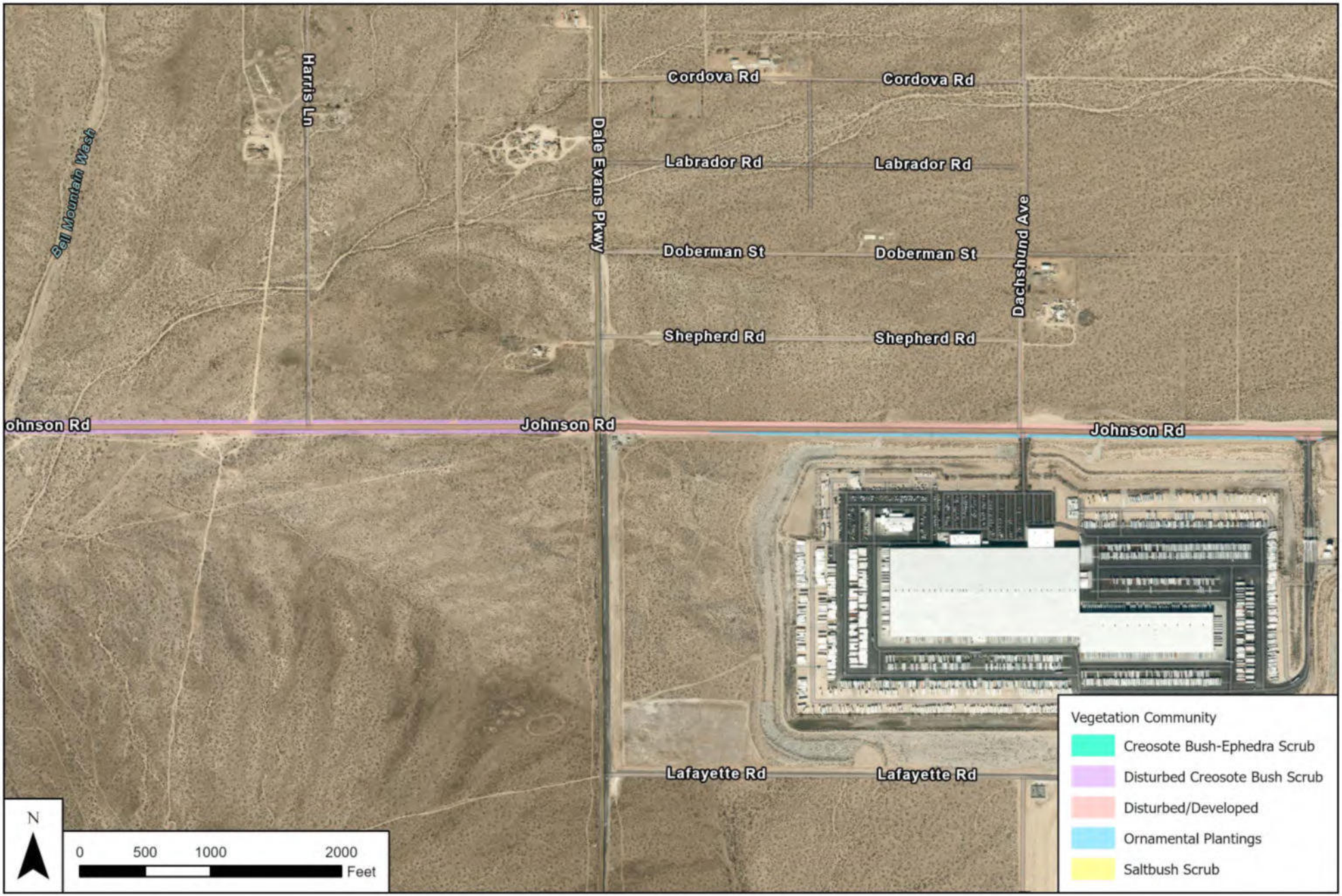
Figure 3

Historical MGS Occurrences



SOURCE: ESRI

Apple Valley 143 Utility Alignment Project

Figure 4a

Vegetation Communities

DIPODOMYS
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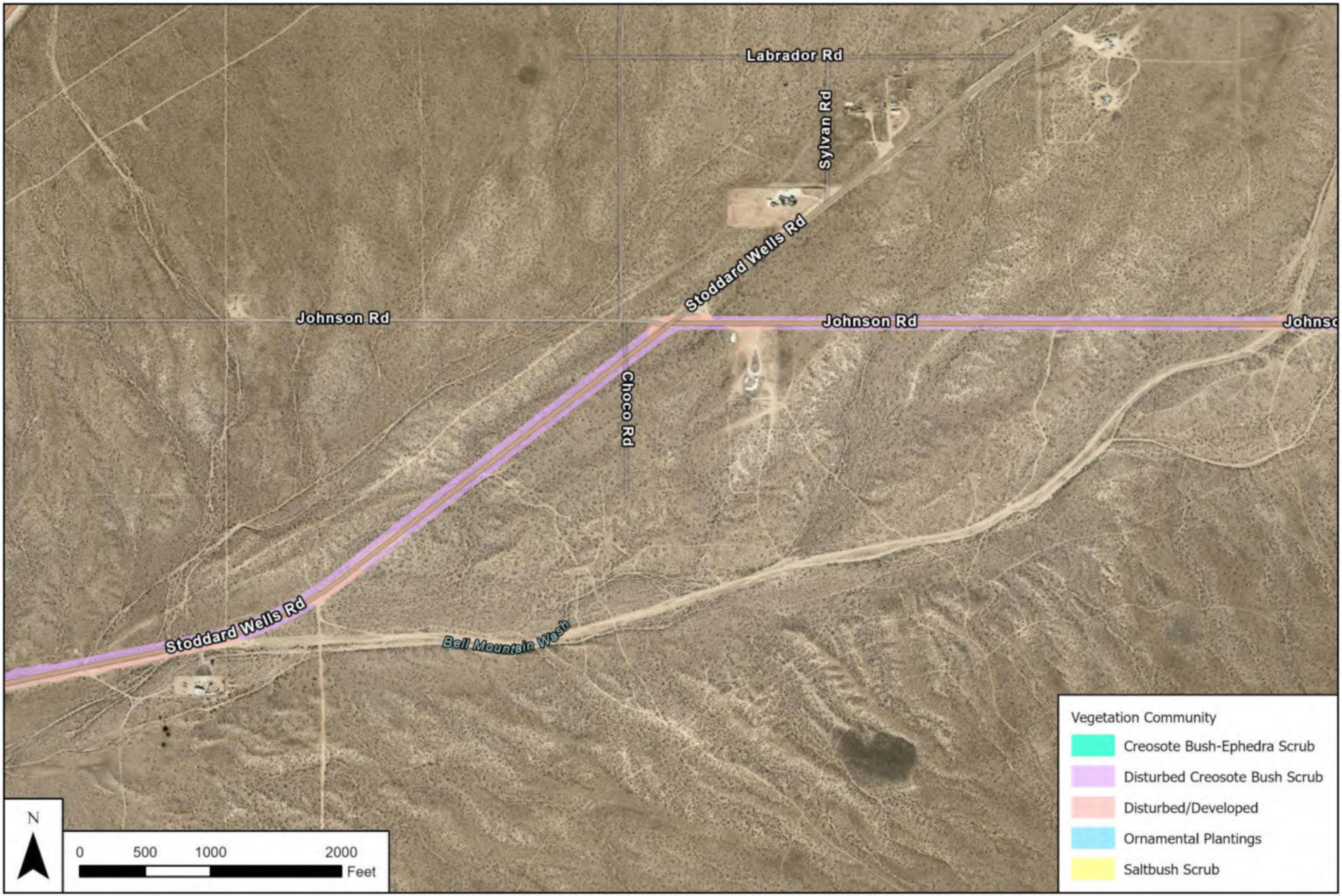

SOURCE: ESRI

DIPODOMYS
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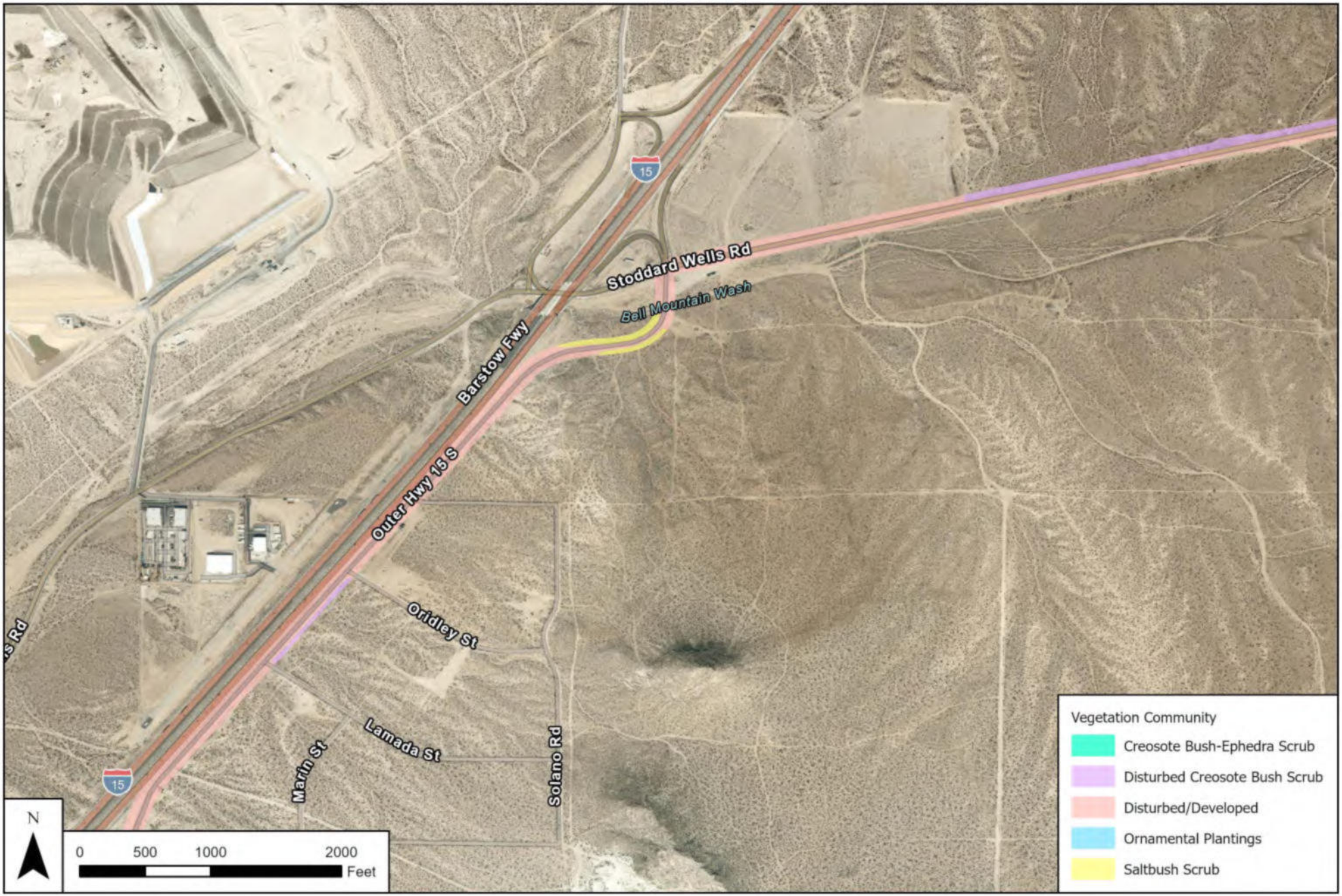
Apple Valley 143 Utility Alignment Project

Figure 4b

Vegetation Communities



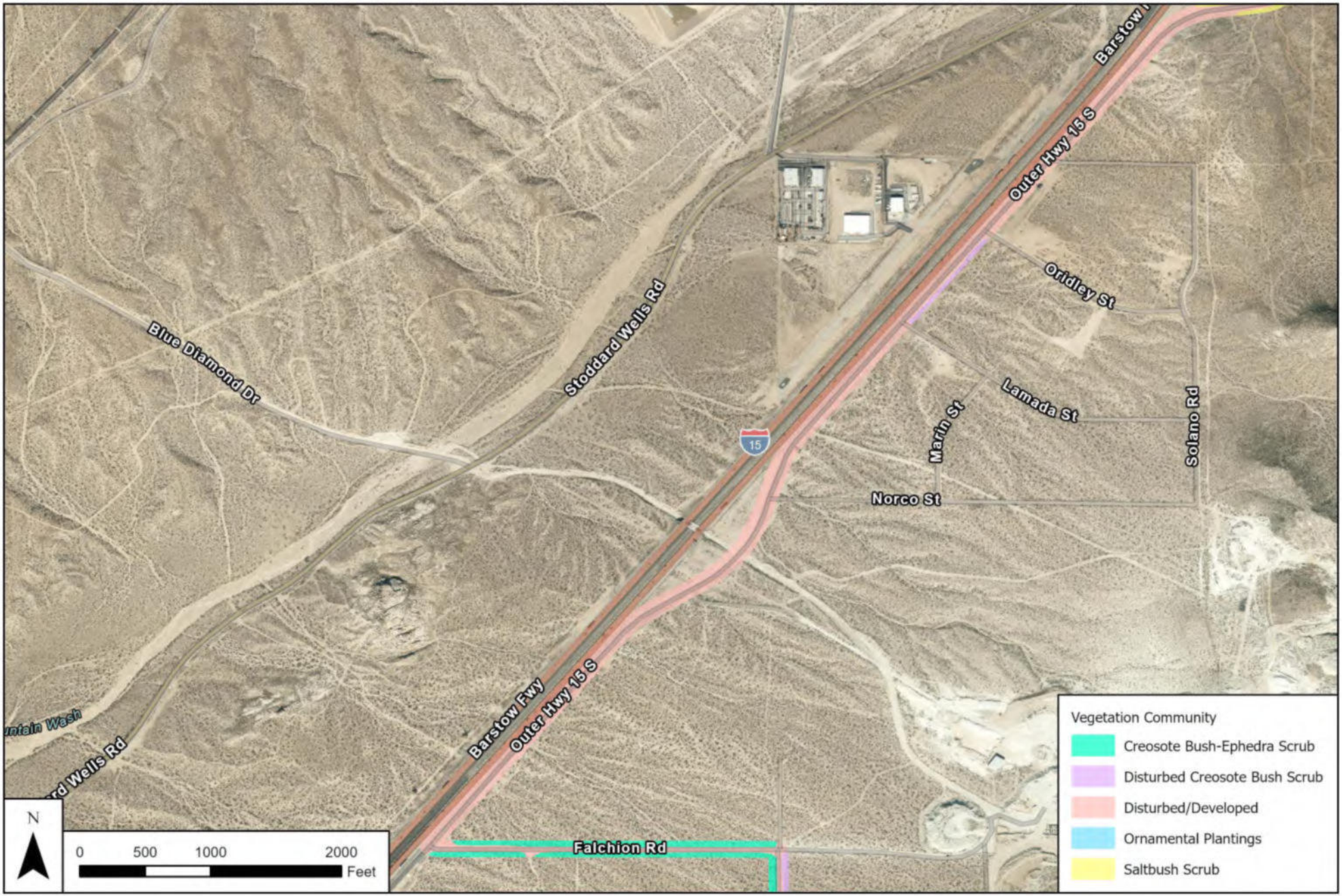
SOURCE: ESRI

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Apple Valley 143 Utility Alignment Project

Figure 4c

Vegetation Communities



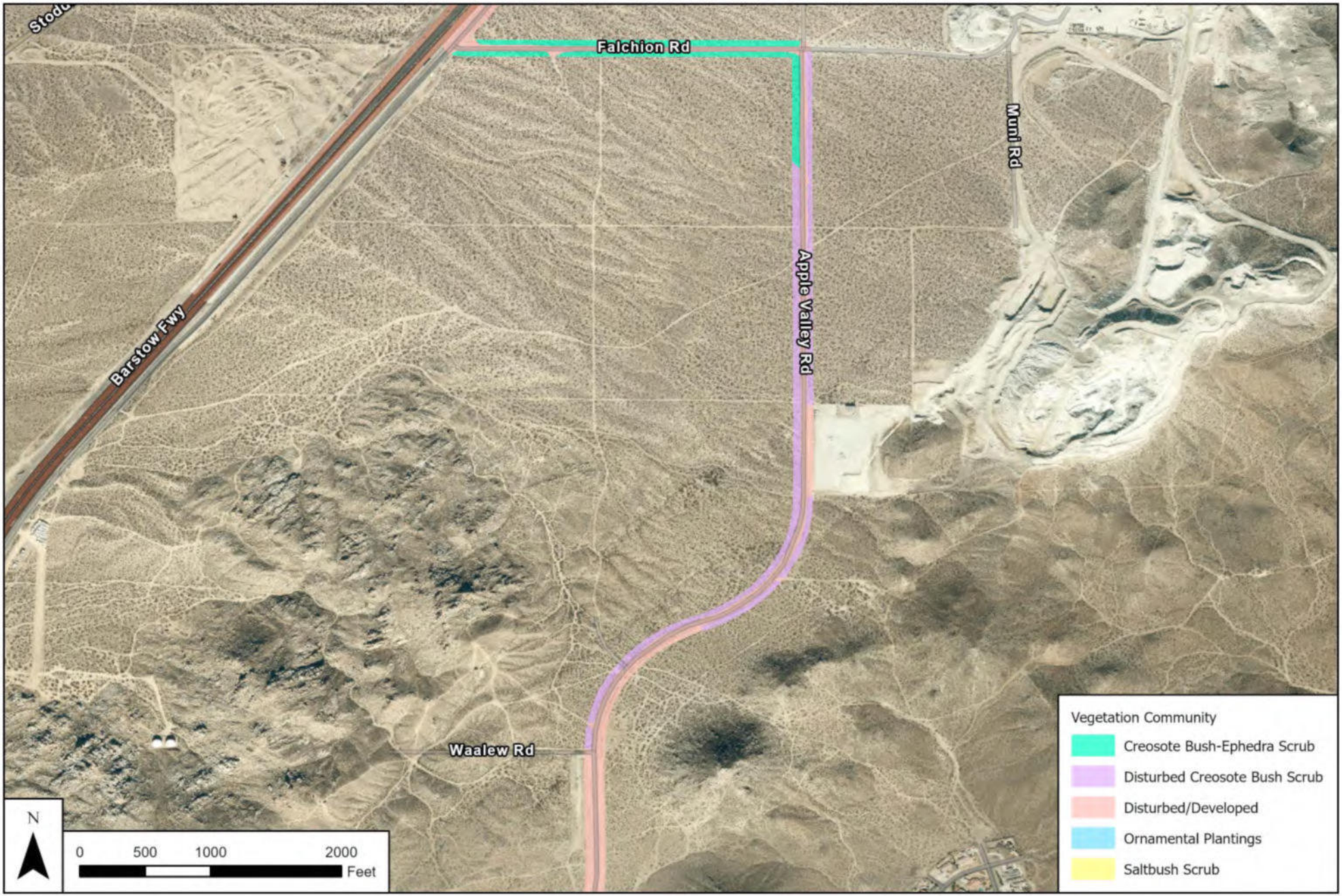
SOURCE: ESRI

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Apple Valley 143 Utility Alignment Project

Figure 4d

Vegetation Communities



SOURCE: ESRI

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Apple Valley 143 Utility Alignment Project

Figure 4e

Vegetation Communities



SOURCE: ESRI

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

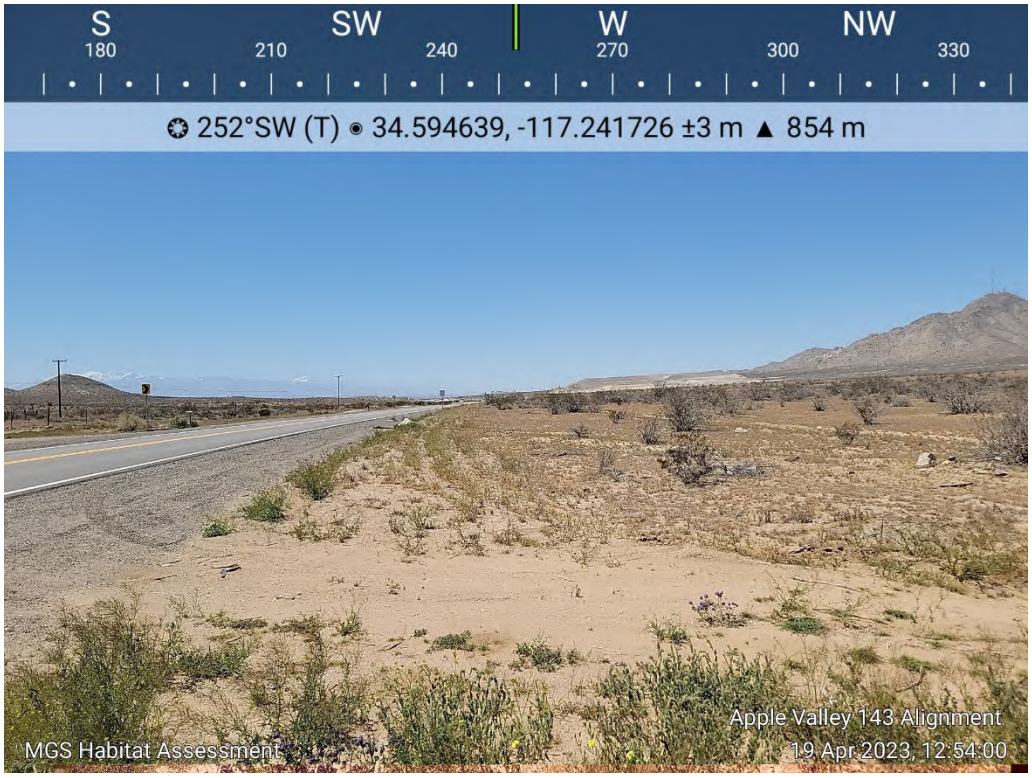
Apple Valley 143 Utility Alignment Project

Figure 4f

Vegetation Communities



Photograph 1:Disturbed creosote bush scrub and ornamental plantings (background) along Johnson Road (easternmost extent of alignment).



Photograph 2: Disturbed creosote bush scrub along Stoddard Wells Road.



Photograph 3: Saltbush scrub along Outer Highway 15.



Photograph 4: Disturbed creosote bush scrub along Outer Highway 15.



Photograph 5: Creosote bush-ephedra scrub along Falchion Road.



Photograph 6: Disturbed creosote bush scrub along Apple Valley Road.



Photograph 7: Disturbed creosote bush scrub along Apple Valley Road.



Photograph 8: Disturbed/developed land along Apple Valley Road.

Appendix E
Photo Documentation



Photo 1. View of ephemeral wash in southwest portion of the on-site BSA, facing southeast.



Photo 2. View of creosote scrub vegetation community and ephemeral wash in southwest portion of the on-site BSA, facing north east.



Photo 3. View of urban/developed land consisting of Quarry Road in central portion of the on-site BSA, facing south.



Photo 4. View of creosote scrub community and culvert pipe under Quarry Road in central portion of the on-site BSA, facing north.

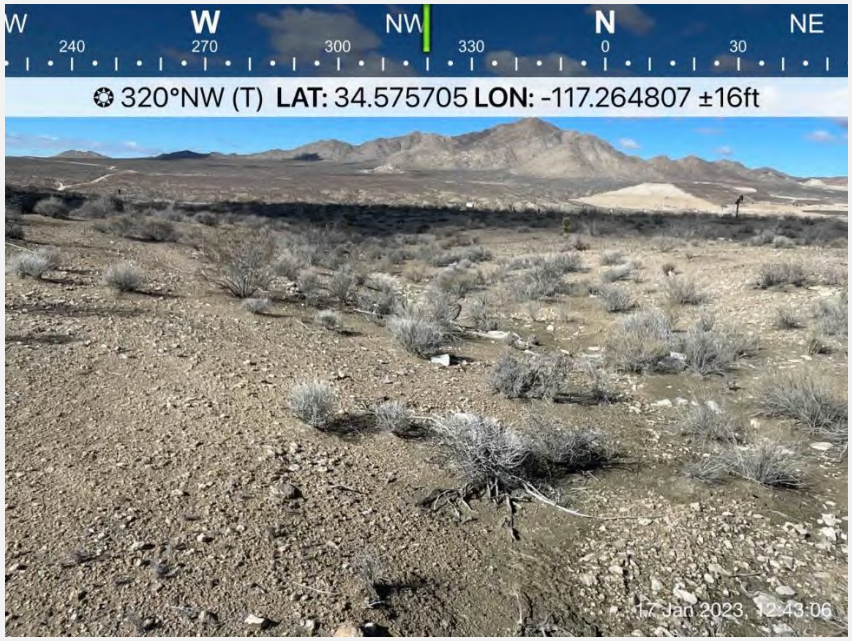


Photo 5. View of rubber rabbitbrush vegetation community in central portion of the on-site BSA, facing northwest.

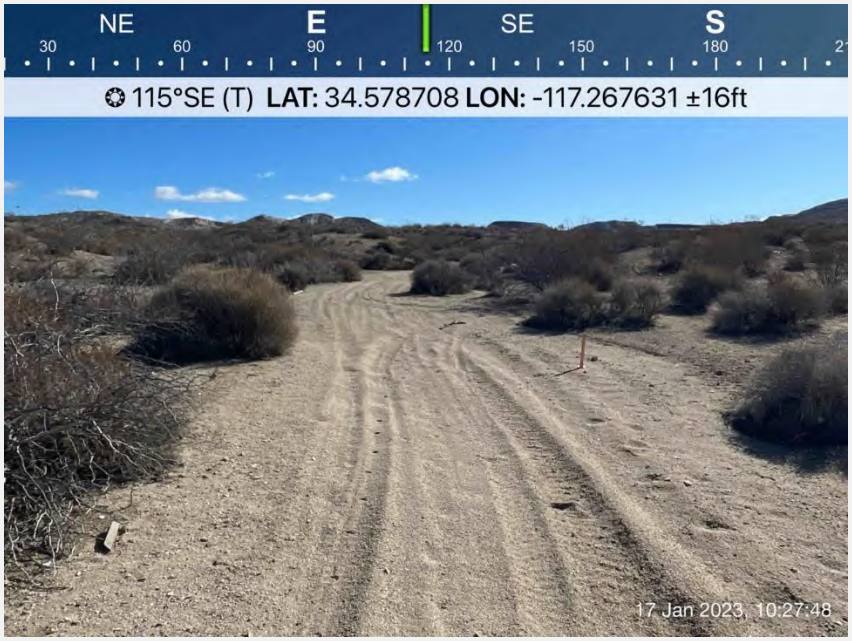


Photo 6. View of disturbed habitat consisting of a dirt road in northwest portion of the on-site BSA, facing southeast.



Photo 7. View of rubber rabbitbrush vegetation community in northeast portion of the on-site BSA, facing southeast.



Photo 8. View of urban/developed land consisting of the quarry site in southeast portion of the on-site BSA, facing northeast.

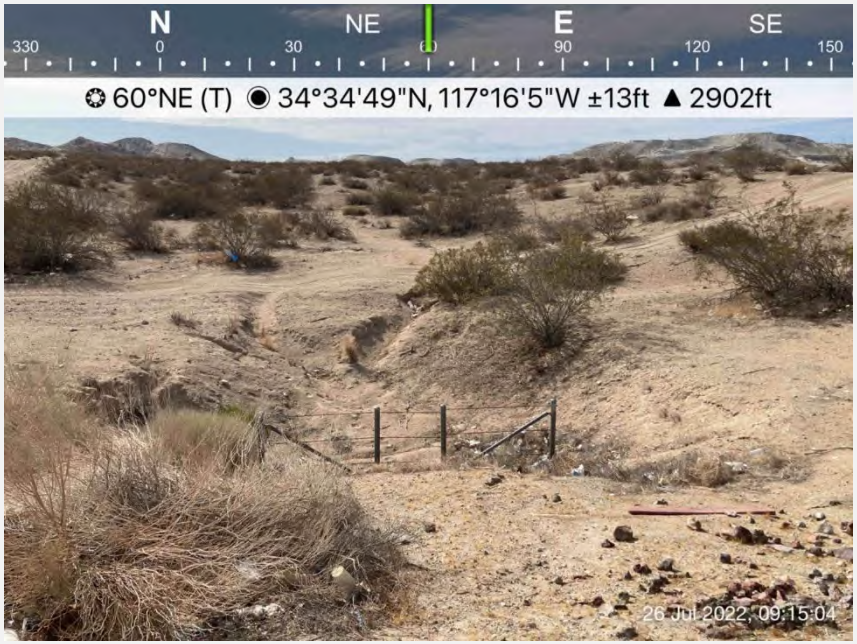


Photo 9. View of disturbed habitat and creosote scrub in the northwestern portion of the off-site improvement BSA, facing northeast.



Photo 10. View of rubber rabbitbrush in the western portion of the off-site improvement BSA, facing southeast.

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Appendix F
Plant Compendium

Vascular Species

Eudicots

ASTERACEAE – SUNFLOWER FAMILY

Acamptopappus sphaerocephalus – rayless goldenhead
Adenophyllum cooperi – Cooper's dogweed
Ambrosia acanthicarpa – flatspine bur ragweed
Ambrosia dumosa – white bursage
Ambrosia salsola – cheesebush
Chaenactis carphoclinia var. *carphoclinia* – *pebble pincushion*
Chaenactis macrantha – *bighe*ad dustymaiden
Chaenactis xantiana – fleshcolor pincushion
Cirsium occidentale – cobwebby thistle
Ericameria nauseosa – rubber rabbitbrush
Eriophyllum wallacei – woolly easterbonnets
Malacothrix coulteri – snake's head
Malacothrix glabrata – smooth desertdandelion
Stephanomeria exigua ssp. *exigua* – small wirelettuce
Stephanomeria pauciflora – brownplume wirelettuce
Tetradymia spinosa – shortspine horsebrush
Xylorhiza tortifolia var. *tortifolia* – Mojave woodyaster

BORAGINACEAE – BORAGE FAMILY

Amsinckia tessellata – bristly fiddleneck
Cryptantha pterocarya – wingnut cryptantha
Greeneocharis circumscissa var. *circumscissa* – cushion cryptantha
Greeneocharis circumscissa – cushion cryptantha
Pectocarya penicillata – sleeping combseed
Pectocarya platycarpa – broadfruit combseed
Pectocarya recurvata – curvenut combseed
Pectocarya setosa – moth combseed
Phacelia distans – distant phacelia
Phacelia fr*emontii* – Fremont's phacelia
Phacelia tanacetifolia – lacy phacelia

BRASSICACEAE – MUSTARD FAMILY

* *Brassica tournefortii* – Tournefort's mustard
Caulanthus heterophyllus – California mustard
Caulanthus lasiophyllus – California mustard

Descurainia pinnata – western tansymustard
* *Descurainia sophia* – herb sophia
* *Hirschfeldia incana* – shortpod mustard
Lepidium fremontii – desert pepperweed
Lepidium lasiocarpum ssp. *lasiocarpum* – shaggyfruit pepperweed
* *Lepidium perfoliatum* – clasping pepperweed
* *Sisymbrium altissimum* – tall tumblemustard
* *Sisymbrium irio* – London rocket
Stanleya pinnata var. *pinnata* – desert princesplume

CACTACEAE – CACTUS FAMILY

Cylindropuntia echinocarpa – silver cholla
Cylindropuntia ramosissima – branched pencil cholla
Opuntia basilaris var. *basilaris* – beavertail pricklypear

CAMPANULACEAE – BELLFLOWER FAMILY

Nemacladus rubescens – desert threadplant

CHENOPODIACEAE – GOOSEFOOT FAMILY

Grayia spinosa – spiny hop sage
Krascheninnikovia lanata – winterfatland
* *Salsola tragus* – prickly Russian thistle

EUPHORBIACEAE – SPURGE FAMILY

Euphorbia albomarginata – whitemargin sandmat

FABACEAE – LEGUME FAMILY

Astragalus layneae – widow's milkvetch
Astragalus lentiginosus var. *variabilis* – freckled milkvetch
Parkinsonia florida – blue palo verde
Prosopis glandulosa – honey mesquite
Psorothamnus fremontii var. *fremontii* – Fremont's dalea

GERANIACEAE – GERANIUM FAMILY

* *Erodium cicutarium* – redstem stork's bill

LAMIACEAE – MINT FAMILY

Salvia columbariae – chia
Scutellaria mexicana – Mexican bladdersage

LOASACEAE – LOASA FAMILY

Mentzelia albicaulis – whitestem blazingstar

Mentzelia involucrata – whitebract blazingstar

NYCTAGINACEAE – FOUR O'CLOCK FAMILY

Mirabilis laevis – desert wishbone-bush

ONAGRACEAE – EVENING PRIMROSE FAMILY

Chylismia claviformis – browneyes

Eremothera boothii – Booth's evening primrose

PAPAVERACEAE – POPPY FAMILY

Eschscholzia minutiflora – pygmy poppy

PLANTAGINACEAE – PLANTAIN FAMILY

Plantago ovata – desert Indianwheat

POLEMONIACEAE – PHLOX FAMILY

Eriastrum eremicum ssp. *eremicum* – desert woollystar

Gilia minor – little gilia

Ipomopsis polycladon – manybranched ipomopsis

Loeseliastrum matthewsii – desert calico

Loeseliastrum schottii – Schott's calico

POLYGONACEAE – BUCKWHEAT FAMILY

Chorizanthe brevicornu – brittle spineflower

Chorizanthe rigida – rigid spineflower

Eriogonum angulosum – anglestem buckwheat

Eriogonum deflexum – flatcrown buckwheat

Eriogonum fasciculatum var. *polifolium* – California buckwheat

Eriogonum inflatum – desert trumpet

Eriogonum reniforme – kidneyleaf buckwheat

Oxytheca perfoliata – roundleaf oxytheca

RUTACEAE – RUE FAMILY

Thamnosma montana – turpentinebroom

SOLANACEAE – NIGHTSHADE FAMILY

Lycium andersonii – Anderson's boxthorn

Lycium cooperi – peach thorn

ZYGOPHYLLACEAE – CALTROP FAMILY

Larrea tridentata – creosote bush

Gymnosperms and Gnetophytes

EPHEDRACEAE – EPHEDRA FAMILY

Ephedra nevadensis – Nevada joint fir

Monocots

AGAVACEAE – AGAVE FAMILY

Hesperoyucca whipplei – chaparral yucca
Yucca brevifolia – Joshua tree
Yucca schidigera – Mojave yucca

POACEAE – GRASS FAMILY

* *Bromus rubens* – red brome
* *Bromus tectorum* – cheatgrass
Elymus elymoides – squirreltail
* *Festuca bromoides* – brome fescue
Festuca octoflora – sixweeks fescue
* *Hordeum murinum* – mouse barley
Poa secunda – onesided bluegrass
* *Schismus arabicus* – Arabian schismus
Stipa hymenoides – Indian rice grass

* signifies introduced (non-native) species

Appendix G
Wildlife Compendium

Birds

Bushtits

AEGITHALIDAE – LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus – bushtit

Finches

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus – house finch

Flycatchers

TYRANNIDAE – TYRANT FLYCATCHERS

Sayornis nigricans – black phoebe

Sayornis saya – Say's phoebe

Tyrannus verticalis – western kingbird

Goatsuckers

CAPRIMULGIDAE – GOATSUCKERS

Chordeiles acutipennis – lesser nighthawk

Hummingbirds

TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird

Jays, Magpies and Crows

CORVIDAE – CROWS AND JAYS

Corvus brachyrhynchos – American crow

Corvus corax – common raven

Larks

ALAUDIDAE – LARKS

Eremophila alpestris – horned lark

Mockingbirds and Thrashers

MIMIDAE – MOCKINGBIRDS AND THRASHERS

Mimus polyglottos – northern mockingbird

New World Vultures

CATHARTIDAE – NEW WORLD VULTURES

Cathartes aura – turkey vulture

Old World Sparrows

PASSERIDAE – OLD WORLD SPARROWS

* *Passer domesticus* – house sparrow

Pigeons and Doves

COLUMBIDAE – PIGEONS AND DOVES

Zenaida macroura – mourning dove

Starlings and Allies

STURNIDAE – STARLINGS

* *Sturnus vulgaris* – European starling

Swallows

HIRUNDINIDAE – SWALLOWS

Hirundo rustica – barn swallow

Verdin

REMIZIDAE – PENDULINE TITS AND VERDINS

Auriparus flaviceps – verdin

Wrens

TROGLODYTIDAE – WRENS

Salpinctes obsoletus – rock wren

Thryomanes bewickii – Bewick's wren

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Amphispiza bilineata – black-throated sparrow
Artemisiospiza belli – Bell's sparrow
Spizella passerina – chipping sparrow
Zonotrichia leucophrys – white-crowned sparrow

Mammals

Domestic

FELIDAE – CATS

* *Felis catus* – domestic cat

Hares and Rabbits

LEPORIDAE – HARES AND RABBITS

Lepus californicus – black-tailed jackrabbit
Sylvilagus audubonii – desert cottontail

Squirrels

SCIURIDAE – SQUIRRELS

Ammospermophilus leucurus – white-tailed antelope squirrel
Otospermophilus beecheyi – California ground squirrel

Reptiles

Lizards

PHRYNOSOMATIDAE – IGUANID LIZARDS

Callisaurus draconoides – zebra-tailed lizard
Phrynosoma platyrhinos – desert horned lizard
Sceloporus magister – desert spiny lizard
Sceloporus occidentalis – western fence lizard
Uta stansburiana – common side-blotched lizard

TEIIDAE – WHIPTAIL LIZARDS

Aspidoscelis tigris – tiger whiptail

Snakes

COLUBRIDAE – COLUBRID SNAKES

Pituophis catenifer – gophersnake

VIPERIDAE – VIPERS

Crotalus oreganus – western rattlesnake

Crotalus scutulatus – Mohave rattlesnake

* signifies introduced (non-native) species

Appendix H
Desert Tortoise Survey Forms

Date of survey: 11/04/23 (day, month, year) Survey biologist(s): Ryan Stanley, Chelsea Bowers-Doerning (name, email, and phone number)

Site description: IENLC, 177 acres, Apple Valley, CA (project name and size; general location)

County: San Bernardino Quad: Victorville Location: 34.573987, -117.270751 (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 16 Transect #: 23 Transect length: Various

GPS Start-point: 34.576254, -117.266637, 897 m (easting, northing, elevation in meters) Start time: 10:40 (am)/pm

GPS End-point: 34.572187, -117.269137, 902 m (easting, northing, elevation in meters) End time: 2:00 am/(pm)

Start Temp: 22.2 °C End Temp: 27.8 °C

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

Date of survey: 13/04/23 (day, month, year) Survey biologist(s): Valerie Goodwin, Zarina Pringle (name, email, and phone number)

Site description: IENLC, 177 acres, Apple Valley, CA (project name and size, general location)

County: San Bernardino Quad: Victorville Location: 34.573987, -117.270751 (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 75 Transect #: 26 Transect length: Various

GPS Start-point: 34.571885, -117.275935, 881 m (easting, northing, elevation in meters) Start time: 8:43 (am)/pm

GPS End-point: 34.571781, -117.268656, 904 m (easting, northing, elevation in meters) End time: 4:47 am/(pm)

Start Temp: 10.6 °C End Temp: 14.4 °C

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	34.5760994	-117.2636245	Burrow	Shaded refugia, no sign
2	34.5763189	-117.2649385	Burrow	Potential DETO pallet in berm, no sign
3	34.5782062	-117.2649658	Burrow	Rank 4, no sign
4	34.5760233	-117.2634766	Burrow	Potential DETO pallet in berm, no sign
5	34.5774052	-117.2633591	Burrow	Class 5, no sign
6	34.5761017	-117.2640994	Burrow	Shaded refugia, no sign
7	34.5761062	-117.2656981	Burrow	Potential DETO pallet in bank. No sign
8	34.573334	-117.2741476	Burrow	Class 5, no sign
9	34.5775069	-117.2627791	Burrow	Large burrow under shrubs, could be suitable for DETO, but no sign.

Date of survey: 27/04/23 (day, month, year) Survey biologist(s): Kathleen Dayton, Zarina Pringle (name, email, and phone number)

Site description: IENLC, 177 acres, Apple Valley, CA (project name and size; general location)

County: San Bernardino Quad: Victorville Location: 34.573987, -117.270751 (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 19 acres Transect #: 3 Transect length: 3,518 ft

GPS Start-point: 34.571691, -117.275862, 882 m (easting, northing, elevation in meters) Start time: 7:15 (am)/pm

GPS End-point: 34.571364, -117.264336, 924 m (easting, northing, elevation in meters) End time: 7:59 (am)/pm

Start Temp: 13.3 °C End Temp: 15.6 °C

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

Kim Narel

Date of survey: 02/05/2023 (day, month, year) Survey biologist(s): Katie Dayton; kdayton@dudek.com (name, email, and phone number)

Site description: Apple Valley 143 Roadway offsites; 114 ac (project name and size; general location)

County: San Bernardino Quad: Victorville NW North Location: 34°36'3.40"N; 117°11'54.00"W (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: ~~100% coverage~~ or Sampling Area size to be surveyed: 114 ac Transect #: 2 Transect length: 8.0 miles

GPS Start-point: 34°36'3.40"N; 117°11'54.00"W (easting, northing, elevation in meters) Start time: 8:21 (am)/pm

GPS End-point: 34°33'8.43"N; 117°16'23.88"W (easting, northing, elevation in meters) End time: 12:25 am/(pm)

Start Temp: 9.4 °C End Temp: 15 °C

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

NO desert tortoise observed.
NO sign observed.
NO active burrows observed.

Date of survey: 06/06/23 (day, month, year) Survey biologist(s): Sarah Greely, Zarina Pringle, Luz Badillo (name, email, and phone number)

Site description: IENLC, 177 Acres, Apple Valley, CA (project name and size, general location)

County: San Bernardino Quad: Victorville Location: 34.573987, -117.270751 (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 93 acres Transect #: 77 Transect length: various

GPS Start-point: 34.571804, -117.274165, 887 m (easting, northing, elevation in meters) Start time: 6:21 (am)/pm

GPS End-point: 34.571735, -117.264268, 993 m (easting, northing, elevation in meters) End time: 1:43 am/(pm)

Start Temp: 9.4 °C End Temp: 22.2 °C

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	34.57487958	-117.2707938	Burrow	Alcove under creosote bush. No sign.
2	34.57296641	-117.2721936	Burrow	Class 5
3	34.57372259	-117.2676123	Burrow	Class 4
4	34.5723416	-117.2713187	Burrow	Class 4, webbing at entrance
5	34.5760417	-117.2701895	Burrow	Class 4, 2-3" deep, no active
6	34.5732445	-117.2713849	Burrow	class 4, maybe DETO pallet sign
7	34.57254 62	-117.2727397	Burrow	Class 5, trash inside, possibly
8	34.5734456	-117.2709051	Burrow	Class 5, possibly DETO pallet. DETO pallet
9	34.5745807	-117.266747	Burrow	Large burrow under ephedra
10	34.5735207	-117.2731496	Burrow	Possible DETO pallet
11	34.574253	-117.2716031	Burrow	Class 4, no active sign, no fecal sign present.

Appendix C2

Burrowing Owl Relocation Plan

Burrowing Owl Relocation Plan

Inland Empire North Logistics Center Apple Valley Project

FEBRUARY 2024

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
BSA	biological survey area
CDFW	California Department of Fish and Wildlife
MM	Mitigation Measure
Plan	Burrowing Owl Relocation Plan
project	Inland Empire North Logistics Apple Valley Project

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1 Purpose and Objectives

The following Burrowing Owl Relocation Plan (Plan) describes the burrowing owl (*Athene cunicularia*) monitoring and reporting requirements during construction of the Inland Empire North Logistics Apple Valley Project (project) as recommended in Section 4.3, Biological Resources, of the environmental impact report prepared for the project (Dudek, forthcoming). This Plan was prepared in accordance with **Mitigation Measure (MM) BIO-11** per environmental impact report Section 4.3. The full text of **MM-BIO-11** is provided in Section 1.1 herein for ease of reference.

This Plan is intended to identify when passive displacement of burrowing owls will be used, the methods that will be implemented to perform passive displacement, and the monitoring and reporting that will be required if passive displacement is performed. More specifically, this Plan includes descriptions of the following requirements for passive displacement procedures:

- Methods to confirm a burrow is active
- Measures that could be used to avoid and minimize impacts
- Methods to be used to determine vacancy and excavation timing
- Methods for burrow excavation
- Methods for removal of other potential owl burrow surrogates or refugia
- Requirements for reporting on the excavation and closure of burrows
- Requirements for monitoring to evaluate success
- Requirements for reporting on long-term burrowing owl deterrence of the impacted site

1.1 Mitigation Measure BIO-11

This Plan was prepared in accordance with **MM-BIO-11**, per Section 4.3 of the environmental impact report (Dudek, forthcoming). The full text of **MM-BIO-11** is provided below:

MM-BIO-11 Pre-Construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the California Department of Fish and Wildlife's 2012 (or most recent version) Staff Report on Burrowing Owl Mitigation.

If burrowing owls are detected, the Burrowing Owl Relocation Plan shall be implemented in consultation with the California Department of Fish and Wildlife (CDFW). As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in accordance with guidance provided in CDFW's Staff Report on Burrowing Owl Mitigation. No project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, passive owl relocation techniques shall be implemented. Owls shall be excluded from burrows in the immediate project area and within a buffer zone by installing one-way doors in burrow entrances. These doors shall be in place at least 72 hours prior to ground-disturbing activities. The project site shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat, if the site is occupied by burrowing owl, shall be provided following the guidance in CDFW's Staff Report on Burrowing Owl Mitigation.

Where possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow. An endoscope (fiber optic camera) should also be used to scope the burrow in front of the excavation. Occupied burrows that are excavated need to be replaced at a 2:1 ratio if there are already suitable burrows present nearby.

Should burrowing owl be located during the clearance survey, the project would result in the loss of 165.4 acres of suitable habitat for burrowing owl. Mitigation for direct impacts to 165.4 acres shall be fulfilled through conservation of suitable burrowing owl habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the project, for a total of 165.4 acres.

2 Background

2.1 Project Overview

The approximately 226.9-acre site, including the 178.72-acre on-site area, 22.35-acre off-site improvement area, and 25.82-acre biological buffer, is in the northwestern part of the Town of Apple Valley, which is within the Victor Valley Region of San Bernardino County (Figure 1, Project Location). The project boundary is located directly east of Interstate 15, north of Falchion Road and south of Norco Street. The project would involve construction of two industrial/warehouse buildings and associated improvements including loading docks, truck and vehicle parking, and landscaped areas within the entire 178.72-acre on-site area. Additionally, improvements to roadways would occur within the entire 22.4-acre off-site improvement area at Falchion Road between Outer Highway 15 and Apple Valley Road, Norco Street between Outer Highway 15 and Apple Valley Road, Outer Highway 15 between Falchion Road and Norco Street, and Apple Valley Road between Falchion Road and Norco Street.

2.2 2022/2023 Biological Survey Results

Biological resource surveys of the 226.9-acre biological survey area (BSA), which includes the project site and off-site improvement areas, plus a 100-foot buffer, were conducted May 2022 through December 2023.

Although the BSA contains open scrub areas that may support burrowing owls, this species was not observed during focused surveys. However, numerous burrows that are potentially suitable for nesting were mapped, including burrows mapped during protocol surveys for Mojave desert tortoise (*Gopherus agassizii*) (Figure 2, Suitable Burrowing Owl Burrow Locations). Mapped burrows were at least 4 inches in diameter, and all were natural earthen burrows. No active burrowing owl sign (i.e., feathers, whitewash, or pellets) were observed within the BSA. The nearest mapped CNDDB record is approximately 4.5 miles southwest of the BSA, from 2008 (CDFW 2023). Based on the discussion above, suitable habitat for burrowing owl exists, and the species could occupy the BSA prior to construction. Pursuant to the California Fish and Game Code and the Migratory Bird Treaty Act, a pre-construction survey in compliance with the California Department of Fish and Wildlife's (CDFW) 2012 Staff Report on Burrowing Owl Mitigation (2012 Staff Report) (CDFG 2012) would be necessary to re-evaluate the locations of potential burrowing owl burrows within the project limits so that impacts to owls and active owl nests can be avoided or minimized. Consistent with **MM-BIO-11**, a pre-construction survey for burrowing owl will be conducted in areas supporting potentially suitable habitat no more than 14 days prior to the start of construction activities, and a second survey will be completed within 24 hours of the start of site preparation or grading activities.

2.3 Mitigation Measures

The project would result in the permanent loss of 165.4 acres of suitable habitat for burrowing owl, specifically 93.6 acres of creosote bush scrub, 62.39 acres of rubber rabbitbrush, and 9.43-acres of disturbed habitat. If the site is found to support burrowing owl during the pre-construction survey, then the project will be required to mitigate for this habitat loss at a 1:1 ratio. Mitigation measures include **MM-BIO-11,** Pre-Construction Surveys for Burrowing Owl and Avoidance, and **MM-BIO-1**, Conservation of Western Joshua Tree Lands. As required by MM-BIO-1, mitigation for direct impacts to 283 western Joshua trees will be fulfilled through a payment of the elected fees as described in Section 1927.3 of The Western Joshua Tree Conservation Act In conformance with the reduced fee schedule, mitigation will consist of payment of $1,000 for each western Joshua tree 5 meters or greater in height,

$200 for each western Joshua tree 1 meter or greater but less than 5 meters in height, and $150 for each western Joshua tree less than 1 meter in height. Conservation efforts for western Joshua tree associated with the Western Joshua Tree Mitigation Fund will focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the project site. Mitigation for impacts to western Joshua tree will also mitigate for impacts to loss of suitable habitat for burrowing owl.

If passive displacement of burrowing owl is implemented, the abovementioned purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by CDFW will mitigate for direct impacts to displaced burrowing owls.

2.4 Qualified Biologist

In accordance with the 2012 Staff Report, a qualified biologist meets the following minimum qualifications (CDFG 2012):

- Familiarity with the species and its local ecology
- Experience conducting habitat assessments and non-breeding- and breeding-season surveys, or experience with these surveys conducted under the direction of an experienced surveyor
- Familiarity with the appropriate state and federal statuses related to burrowing owls, scientific research, and conservation
- Experience with analyzing impacts of development on burrowing owls and their habitat

In accordance with the 2012 Staff Report, a qualified biologist will perform the burrowing owl surveys as outlined in **MM-BIO-11**. Occupied burrows will not be disturbed during the nesting season. Occupied burrows will also not be disturbed during the non-nesting season until a qualified biologist verifies that either (1) nesting has not begun or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival.

3 Avoidance and Minimization Measures

3.1 Pre-Construction Burrowing Owl Surveys

In accordance with **MM-BIO-11**, a qualified biologist (see Section 2.4) will conduct surveys of the project site and off-site improvement areas and within a 150-meter buffer, where legally accessible, no more than 14 days prior to the start of construction activities and again within 24 hours of the start of site preparation or grading. The surveys will identify active wintering or breeding burrowing owls within these areas.

The survey methods are detailed in the 2012 Staff Report (CDFG 2012) and will consist of walking parallel transects 7 to 20 meters apart over the entire survey area and noting all burrowing owls present and any suitably sized burrows (i.e., 4 inches or greater in diameter) with burrowing owl sign (e.g., whitewash, feathers, pellets). The results of the surveys will be submitted to CDFW.

If burrowing owls or active burrowing owl sign are detected during pre-construction surveys, the qualified biologist or monitoring biologist will coordinate with the contractor to avoid and minimize impacts to burrowing owl by implementing the measures described below.

3.2 Buffer Distances

If occupied burrowing owl burrows are detected outside of the project site and off-site improvement areas but within the 150-meter buffer during the pre-construction surveys, the active burrow will be flagged to include a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season, or as otherwise determined by the qualified biologist. The buffer will be staked and flagged. Ground-disturbing activities during the breeding season will be restricted within the buffer. Depending on the level of disturbance, a smaller buffer may be established in consultation with the lead agency.

The active burrows will be monitored to ensure that the buffer distance is effective. Effective buffers minimize direct impacts by providing space between the owl and the construction activity. In addition, effective buffers minimize indirect impacts by decreasing sound and visual disturbance for the animal. A monitoring biologist will be present during all initial activities adjacent to burrowing owl buffers to monitor bird behavior. In any case where a burrowing owl shows signs of stress or disturbance due to construction activities, all activities in the immediate vicinity will be halted and the buffer distance and construction activities will be re-evaluated. In accordance with **MM-BIO-11**, no project activities will be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer will remain in place until it is determined that any nesting activity has ended and/or occupied burrows have been vacated.

3.3 Burrow Screening

In cases where it is infeasible to maintain a 160-foot buffer during the non-breeding season or a 250-foot buffer during the breeding season due to environmental, topographic, or construction constraints, the buffer may be reduced and burrows screened to minimize potential impacts to burrowing owls, where appropriate and feasible. This strategy involves screening burrows by installing hay bales, plywood, and/or other fencing material to create a visual and auditory barrier between construction activities and the active burrows. If this method is used, then care must be taken to reduce potential raptor perch locations near the burrow opening. Biological monitors will

determine if the topography of a specific site is appropriate for the use of this technique and whether this technique will be effective at reducing disturbance.

During the breeding season, hay bales will be stacked three bales high and 50 feet wide. During the non-breeding season, hay bales will be stacked two bales high and 50 feet wide. All hay bales used within the 150-meter buffer of the project site and off-site improvement areas will be certified as weed free. Perches near the burrow will remain within the sheltered area of the bales, and the bales will not be closer than 2 or 3 feet from the occupied burrow and will be placed as far from the active burrow as possible, outside the nearest work area. During and following installation of the shelter, biological monitors will be present for all ground-disturbing activities within the area between the recommended buffer and the edge of the reduced buffer. Biological monitors will evaluate and make adjustments to the buffer and/or shelter to ensure that impacts to burrowing owl are minimized and the owls are not showing signs of stress or disturbance.

When determining an appropriate buffer setback distance, the qualified biologist will take into consideration any data collected on the individual sensitivities of the burrowing owls present at the project site. This data will be used as a baseline to compare the behavior of burrowing owls within no-disturbance buffers that are smaller than the recommended distances. Biological monitors will have the authority to stop construction or sheltering activities that are disturbing sensitive species, and to make changes to the shelters and buffers in accordance with these guidelines to increase protection of the burrowing owls, if necessary.

Documentation of the installation of a shelter will include the following: where and when the shelter was installed, how long it will be required, anticipated level of construction activity, pictures of the shelter, schematic/pictures of installation, a description of the installation, and a description of site conditions. The description should include surrounding vegetation, topography of the area, animals present at the burrow, and line-of-sight conditions between the burrow and construction activities. This information and a status of the shelters will be described in the monthly reports (see Section 5.2, Reporting Requirements).

3.4 Excavation of Inactive Burrows

Excavation of inactive burrows, confirmed inactive based on wildlife camera monitoring, will help deter burrowing owls from occupying construction areas. Pre-construction surveys (described above) will be conducted within the project site to determine if burrows are actively being used. If burrows are suitably sized (i.e., 4 inches or greater in diameter), game cameras will be installed at the entrance for 3 days to confirm owl presence. Inactive burrows will be excavated and refilled by a qualified biologist. To prevent injury to wildlife that might be inside the burrow, all excavation of inactive burrows will be performed using hand tools, escape routes will be installed (flexible plastic pipe), and a mirror or camera will be used to scope during the excavation of all burrows. The excavation of inactive burrows will occur prior to clearing or grading activities.

4 Passive Displacement

If an active burrow is identified in an area where there is potential for it or the tunnel structure to be destroyed or irreversibly affected by construction; the owl would be in danger; and shelter-in-place, setback distances, and avoidance will not be effective or possible, then passive displacement will be implemented. To the extent feasible, passive displacement will take place such that it is in sync with owl natural dispersal cycles (i.e., early in the non-breeding season, when owls exhibit less site-fidelity) (Hennessy et al. 2020; Le Gouar et al. 2012).

4.1 Determining Vacancy

Passive displacement will only occur outside of the breeding season (September 1 through January 31) after a qualified biologist verifies that juveniles from the burrow are foraging independently and capable of independent survival or the owls have not begun nesting. If exclusion will occur immediately (within 1 week) after the end of the breeding season (August 31), daily monitoring will be conducted for 1 week to confirm that young have fledged prior to exclusion. Similar to the excavation of inactive burrows, a mirror or camera will be used to scope all previously active burrows to ensure burrows are not occupied by eggs or young.

4.2 Excavation of Active Burrows

Burrowing owls will be excluded from currently occupied burrows by installation of a one-way door in the original burrow and all connected legally accessible surrounding potentially active burrows within 160 feet—provided that they are at risk by development. One-way doors will remain in place at least 72 hours before excavation. The one-way doors will be monitored for exiting or trapped animals via a game camera. Once a qualified biologist can determine by site surveillance that the old burrow is vacant (i.e., 3 days of negative game camera results), with no sign of fresh use by wildlife, including tracks, scat, or recent excavation, the burrows will be checked with an endoscope (fiber optic camera) immediately prior to excavation to verify status. Sections of flexible plastic pipe will be inserted into the tunnels during excavation to maintain an escape route for any animals that could be inside the burrow. Each burrow will be collapsed and refilled with dirt and/or rocks to prevent reoccupation of the burrows. Photographs will be taken of the excavation and closure of the burrow to demonstrate success and sufficiency. Construction will occur as soon as possible following passive relocation and burrow collapse to discourage burrowing owls from re-occupying the disturbance area.

Prior to burrow collapse, the qualified biologist will obtain confirmation that the burrows are empty of wildlife, document the installation of one-way doors 72 hours in advance of burrow excavation, and remove other potential burrow surrogates or refugia on the project site. Burrows that are not threatened by collapse due to the project (i.e., burrows outside the construction area) will not be passively excluded or dismantled.

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5 Monitoring and Reporting

5.1 Monitoring Requirements

In accordance with the 2012 Staff Report, monitoring will occur before, during, and after exclusion of burrowing owls. In accordance with **MM-BIO-11**, if exclusion occurs, a qualified biologist will conduct daily monitoring for 3 days to confirm owls have vacated the burrows. Monitoring will be performed for a minimum of 2 hours between the periods of 2 hours before sunset to 2 hours following sunset, or 1 hour before sunrise to 2 hours following sunrise, corresponding with the time when burrowing owls are most active; this monitoring time will be extended if owls are active longer. Biologists will examine the collapsed burrows and survey for owl-related impacts and new burrows in the surrounding area. The results of these monitoring efforts and an evaluation of the success of the passive displacement efforts will be included in the monthly compliance reports, along with any needed remedial measures to avoid and/or minimize impacts.

5.2 Reporting Requirements

Pre-Construction Clearance Survey Reports

A report will be submitted to the lead agency documenting the results of the pre-construction surveys. The report will describe the methods and results of the clearance surveys and will serve as notification as to whether owl passive relocation is necessary.

Monthly Reports

If avoidance or passive relocation is implemented, monthly reports will be prepared for submittal to the lead agency. The reports will summarize the construction activities that occurred with the potential to impact burrowing owls, any injuries or fatalities of burrowing owls, the effectiveness and practicality of the avoidance and minimization measures implemented, and recommendations for modifying the protection measures. If passive relocation of burrowing owls is performed, the monthly reports will also include the following: the total number and locations of burrows collapsed, a map of those locations, photographs of the excavation and closure of the burrows, the number and activity of the owls observed leaving the burrows to be excavated, and the methods used to continually make the site inhospitable to burrowing owls and fossorial mammals.

Final Compliance Report

A final compliance report will be submitted to the lead agency summarizing the effectiveness of the mitigation measures and the level of burrowing owl take associated with the project.

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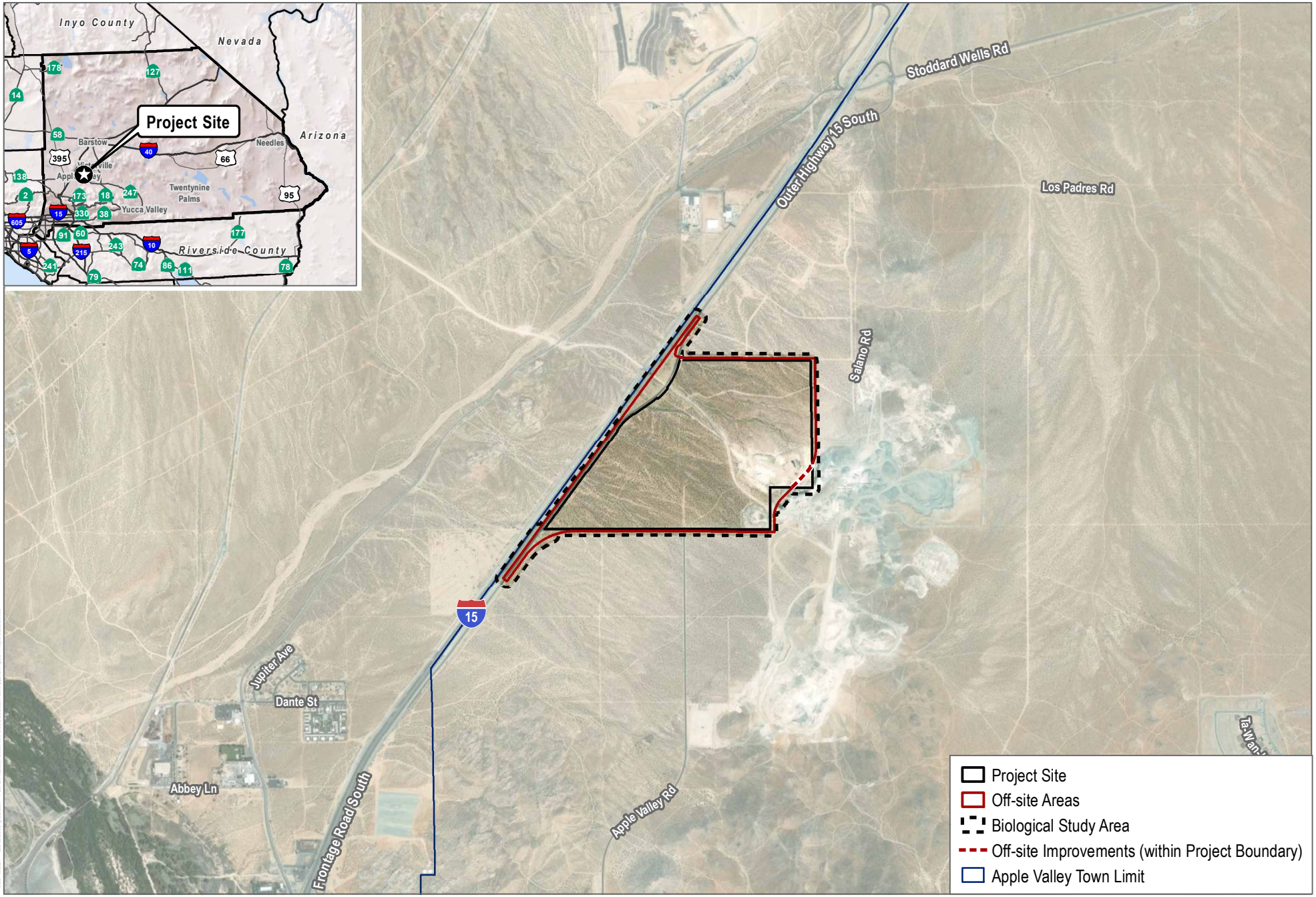

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Inland Empire North Logistics Center Apple Valley Project

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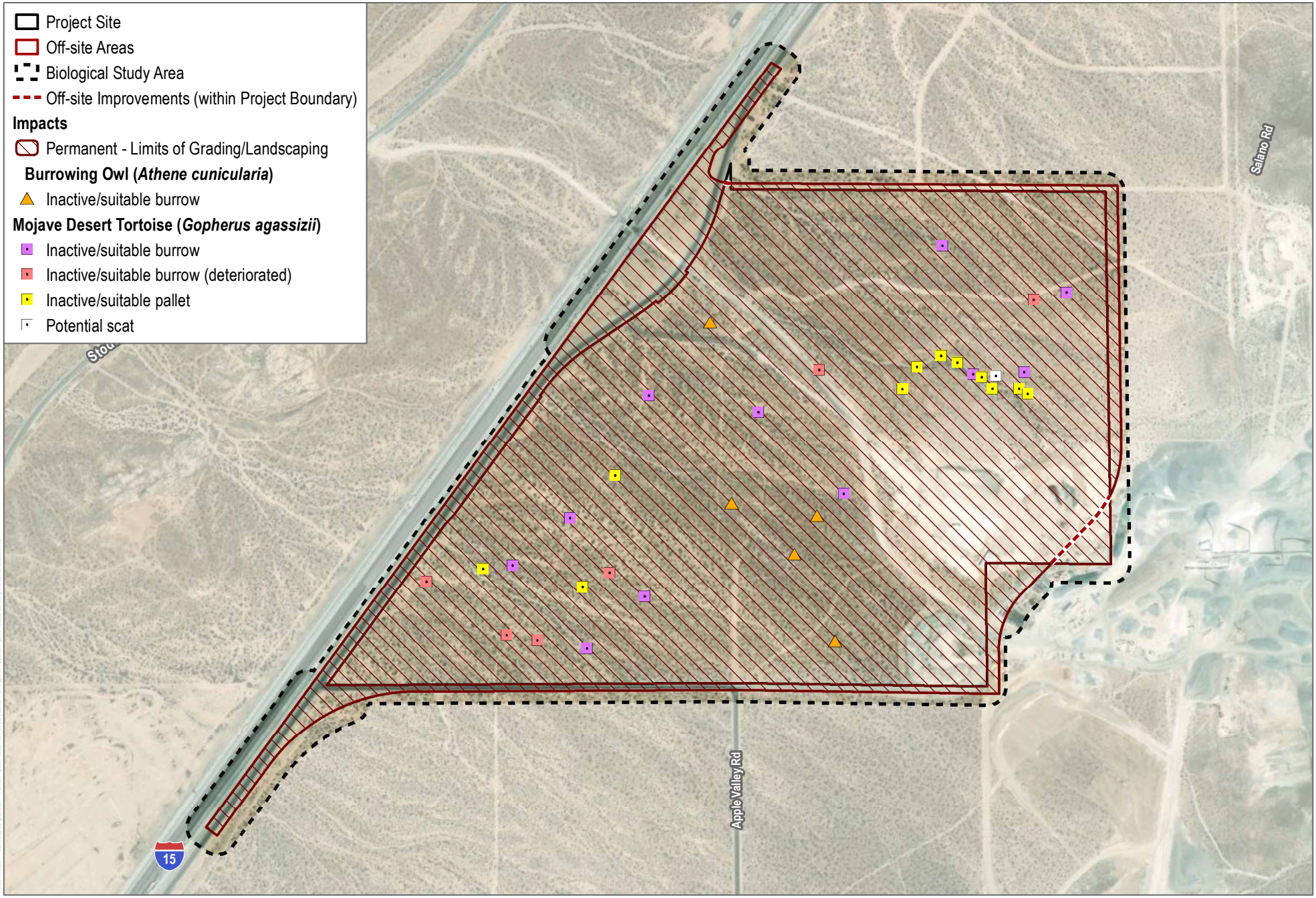

SOURCE: County of San Bernardino; Open Street Map; ESRI World Imagery 2022

DUDEK

0 300 600 Feet

FIGURE 2

Suitable Burrowing Owl Burrow Locations

Inland Empire North Logistics Center Apple Valley Project

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Appendix D

Confidential Cultural Resources Assessment Report

PALEOWEST

CULTURAL RESOURCE INVESTIGATION FOR THE PORTION OF THE INLAND EMPIRE NORTH LOGISTICS CENTER PROJECT IN THE TOWN OF APPLE VALLEY, SAN BERNARDINO COUNTY, CALIFORNIA

September 26, 2022



CULTURAL RESOURCE INVESTIGATION FOR THE PORTION OF THE INLAND EMPIRE NORTH LOGISTICS CENTER PROJECT IN THE TOWN OF APPLE VALLEY, SAN BERNARDINO COUNTY, CALIFORNIA

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Technical Report No.: 22-488

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September 26, 2022

Keywords: CEQA; Town of Apple Valley; Victorville, CA 7.5-minute USGS Topographic Quadrangle; San Bernardino County; 178 acres; historic period refuse scatters; historic period limestone quarry and plant remains; historic period transmission line; historic period access road

MANAGEMENT SUMMARY

PaleoWest, LLC (PaleoWest) was contracted by Synergy Consulting to conduct a Phase I cultural resource assessment for the proposed Inland Empire North Logistics Center Project (Project). The proposed Project involves the development of a warehouse complex on approximately 397 acres of vacant land in the cities of Victorville and Apple Valley, San Bernardino, California. Approximately 218 acres of land are in the city of Victorville (and are not discussed in this report) with 179 acres (APN 0472-031-08) in the town of Apple Valley. The Project requires compliance with the California Environmental Quality Act (CEQA); the City of Victorville and Town of Apple Valley are acting as the CEQA lead agencies for the portion of the Project under each of their jurisdiction.

This report summarizes the methods and results of the cultural resource investigation that was conducted on the portion of the proposed Project area within the town of Apple Valley. The investigation included background research, communication with the Native American Heritage Commission (NAHC) and local Native American groups, a cultural resource survey of the Project area, and resource documentation and evaluation. The purpose of the investigation was to determine the potential for the proposed Project to impact archaeological and historical resources under CEQA.

A cultural resource records search and literature review was completed at the South Central Coastal Information Center of the California Historical Resource Information System housed at California State University, Fullerton. The records search indicated that 37 previous cultural resource studies have been conducted within 0.5 mile of the Project area resulting in the documentation 13 cultural resources. Five of the identified cultural resources are within or intersect the portion of the Project area in the town of Apple Valley. All the resources date to the historic period and include three archaeological sites and two built-environment resources.

As part of the cultural resource assessment of the Project area, PaleoWest also requested a search of the Sacred Lands File (SLF) from the NAHC. Results of the SLF search were positive. The NAHC suggested contacting 14 individuals representing 5 Native American tribal groups to request information on sensitive Native American resources that may be present in the Project area. Outreach efforts consisted of sending an initial letter request followed by a telephone call to each of the 14 tribal contacts. To date, two responses were received.

PaleoWest completed a pedestrian survey of the Project area between August 24–31, 2022. Five historic period cultural resources were identified within the portion of the Project area in the town of Apple Valley. These resources include two refuse scatters, the remnants of a mining and quarry plant, a road segment, and an abandoned transmission line. No prehistoric resources were documented within the Project area. An evaluation of significance indicates that none of the resources meets the criteria for listing on the California Register of Historical Resources (CRHR).

Based on the paucity of prehistoric archaeological resources documented in the vicinity, the level of existing disturbance of the Project site, and the result of the survey, the Project area appears to have a low sensitivity for encountering intact buried archaeological resources. PaleoWest does not recommend any additional cultural resource management for the portion of the proposed Project in the town of Apple Valley. In the unlikely event that cultural resources are encountered during construction activities associated with the Project, a qualified archaeologist shall be obtained to assess the significance of the find in accordance with the

criteria set forth in the CRHR. In addition, Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

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1 INTRODUCTION

PaleoWest, LLC (PaleoWest) was contracted by Synergy Consulting CA to conduct a Phase I cultural resource assessment for the proposed Inland Empire North Logistics Center Project (Project). The proposed Project involves the development of a warehouse complex in the cities of Victorville and Apple Valley, San Bernardino, California. The Project requires compliance with the California Environmental Quality Act (CEQA); the Town of Apple Valley (Town) is acting as the CEQA lead agency for the portion of the Project located within its jurisdiction. This report summarizes the methods and results of the cultural resource investigation that was conducted on the portion of the proposed Project area within the town of Apple Valley.[1]

1.1 PROJECT LOCATION

The Project area encompasses approximately 397 acres of vacant land in the northern boundaries of the cities of Victorville and Apple Valley in San Bernardino County, California (Figure 1-1). Interstate 15 (I-15) intersects the Project area running in a northeast-southwest direction with the Mojave River located 2.15 kilometers (km) (1.3 miles [mi]) to the southwest (Figure 1-2). The portion of the Project west of I-15, which totals 218 acres (and is not discussed further in this report), is in the city of Victorville. The portion of the Project area east of I-15 (178 acres; APN 0472-031-08) is in the town of Apple Valley. More specifically, this area lies within the southern portion of Section 26 of Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle map. The elevation of the Project area ranges from approximately 2820–2920 feet (ft) above mean sea level (amsl).

1.2 REPORT ORGANIZATION

This report documents the results of a cultural resource investigation completed for the portion of the proposed Project in the town of Apple Valley. Section 1 introduced the Project location with Section 2 stating the regulatory context that should be considered for the Project. Section 3 synthesizes the natural and cultural setting of the Project area and surrounding region. Section 4 presents the results of the existing cultural resource data literature and resource record review, the Sacred Lands File (SLF) search, and a summary of the Native American communications. Section 5 presents the research design for the Project. Section 6 describes the field methods employed during this investigation and survey findings. Section 7 presents the management recommendations based on the result of the background research and survey findings. This is followed by bibliographic references and appendices.

[1] The findings of the cultural resource assessment for the portion of the Project area within the city of Victorville are summarized in Knabb et al. (2022).



Figure 1-1. Project vicinity map.

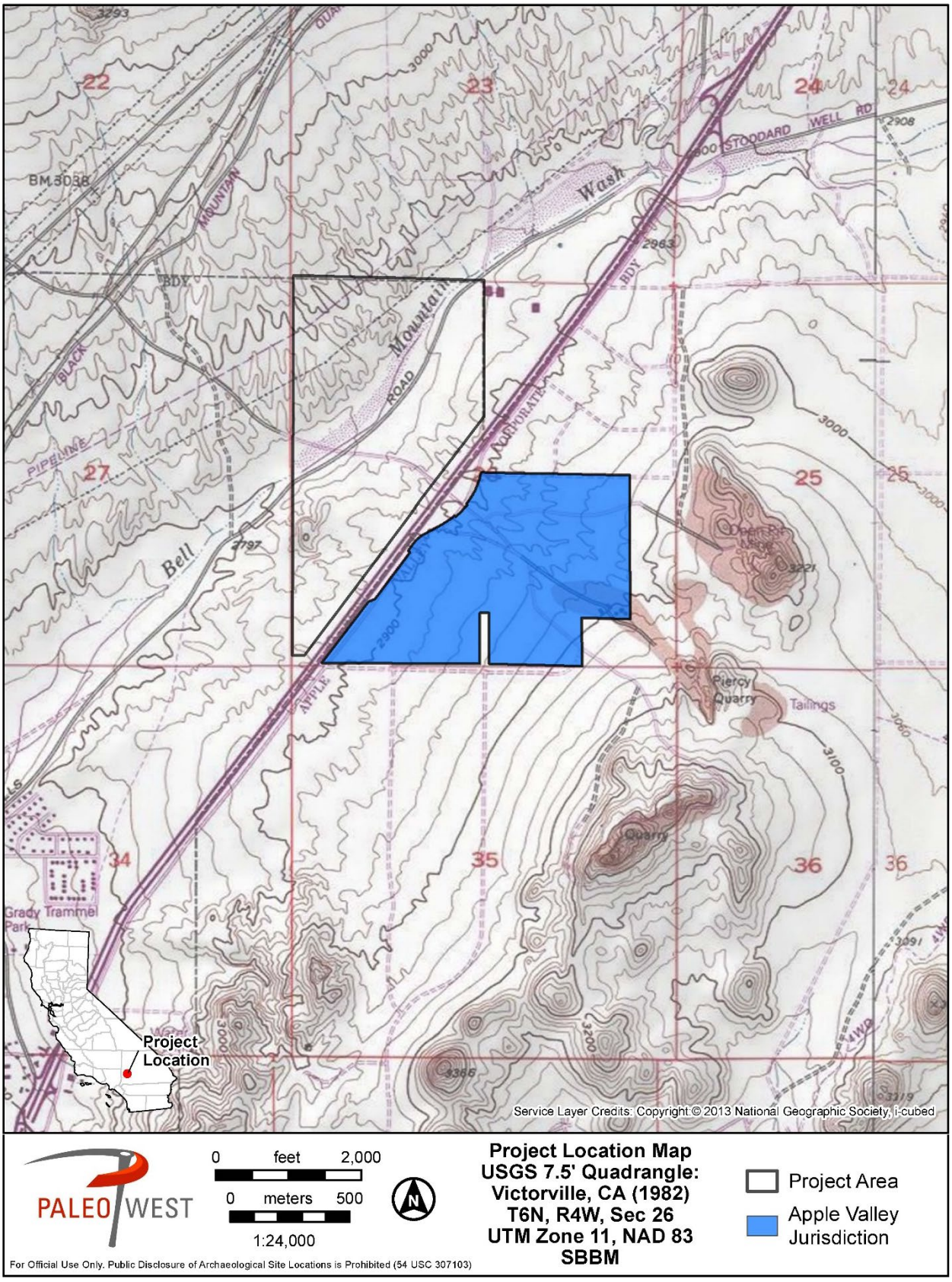

Figure 1-2. Project location map.

2 REGULATORY CONTEXT

2.1 STATE

2.1.1 California Environmental Quality Act

The proposed Project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the project and then determine whether the resources are "historically significant" resources.

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association.[2] In addition, it must meet at least one of the following criteria for listing in the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation measures must be considered.

2.1.2 California Assembly Bill 52

Signed into law in September 2014, California Assembly Bill 52 (AB 52) created a new class of resources (tribal cultural resources [TCRs]) for consideration under CEQA. TCRs may include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to California Native American tribes that are listed or determined to be eligible for listing in the CRHR, included in a local register of historical resources, or a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant and

[2] The Office of Historic Preservation (OHP) guidelines recognize a 45-year-old criteria threshold for documenting and evaluating cultural resources (assumes a 5-year lag between resource identification and the date that planning decisions are made) (OHP 1995:2). The age threshold is an operational guideline and not specific to CEQA statutory or regulatory codes.

eligible for listing in the CRHR. AB 52 requires that the lead CEQA agency consult with California Native American tribes that have requested consultation for projects that may affect tribal cultural resources. The lead CEQA agency shall begin consultation with participating Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Under AB 52, a project that has potential to cause a substantial adverse change to a tribal cultural resource constitutes a significant effect on the environment unless mitigation reduces such effects to a less than significant level.

2.2 LOCAL

2.2.1 Town of Apple Valley 2009 General Plan

The Town has one goal related to archaeological and historic resource preservation in the Open Space and Conservation Element of the General Plan (Town of Apple Valley 2009). The following presents the goal and the associated policies and program for archaeological and historic resources.

GOAL: That all elements of the Town's cultural heritage, including archaeological and historic sites, artifacts, traditions, and other elements, shall be professionally documented, maintained, preserved, conserved, and enhanced.

- Policy 1.A Early in the planning process, the Town shall implement its obligation to identify, document and assess archaeological, historical, and cultural resources that proposed development projects and other activities may affect.
    - Program 1.A.1 Where proposed development or land uses have the potential to adversely impact sensitive cultural resources, it shall be subject to evaluation by a qualified specialist, comprehensive Phase I studies and appropriate mitigation measures shall, as necessary, be incorporated into project approvals.
    - Program 1.A.2 The Town shall implement the requirements of state law relating to cultural resources, including Government Code 65352.3, and any subsequent amendments or additions.
- Policy 1.B The Town shall establish and maintain a confidential inventory of archaeological and historical resources within the Town, including those identified in focused cultural resources studies.
- Policy 1.C The Town shall, to the greatest extent possible, protect sensitive archaeological and historic resources from vandalism and illegal collection.
    - Program 1.C.1 Any information, including mapping, that identifies specific locations of sensitive cultural resources, shall be maintained in a confidential manner, and access to such information shall be provided only to those with appropriate professional or organizational ties.
- Policy 1.D Public participation in and appreciation of the Town's cultural heritage shall be encouraged.
    - Program 1.D.1 The Town shall implement a systematic program to enhance public awareness of Apple Valley's heritage, engender wide-ranging support for its preservation, and enhance community pride.

- Program 1.D.2 The Town shall support the efforts of local cultural associations to obtain historical materials and artifacts, and to educate the public about the Town's and region's cultural heritage.

3 SETTING

This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historic contexts of the general area. Several factors—including topography, available water sources, and biological resources—affect the nature and distribution of human use and occupation of an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region.

3.1 ENVIRONMENTAL SETTING

The Project area is within Victor Valley in the western Mojave Desert. The Mojave Desert is bounded on the west by the Sierra Nevada Mountains, on the south by the Transverse and Peninsular ranges, on the southeast and east by the Yuma and Colorado deserts, and on the north by the Great Basin. The western Mojave Desert encompasses several valleys, including the Victor Valley, Antelope Valley, Fremont Valley, Lucerne Valley, along with the Mojave River and the Barstow area.

Geologically, the Mojave Desert region is a wedge-shaped fault block, which has been termed the "Mojave Block" (Dibblee 1967:4). It is bounded by the San Andreas and Garlock fault zones on the southwest and north, respectively. Rocks within the western Mojave Desert region can be grouped into three main divisions that include crystalline rocks of pre-Tertiary age; sedimentary and volcanic rock of Tertiary age; and sediments and local basalt flows of Quaternary age. Units of the pre-Tertiary crystalline rocks and Quaternary sediments and basalt are widespread with Tertiary volcanic and sedimentary rocks more limited in their areal distribution (Dibblee 1967).

The Mojave is a warm-temperature desert situated between the subtropical Sonoran Desert to the south and the cooler-temperature Great Basin to the north. The Mojave Desert is characterized by sparse rainfall, generally ranging from 5–25 centimeters (cm) (2–10 inches [in]) per year. Some areas receive as little as 2.5 cm (1 in) of annual precipitation, while others may receive more than 25 cm (10 in) (Warren 1984:342). The present-day climate and vegetation within the Mojave Desert are substantially different during the so-called Wisconsin Glacial Stage (60,000–10,500 years Before Present [B.P.]), where the climate was influenced by the massive continental ice sheets that resulted in cooler summer and warmer winter temperatures than at present (Bupp et al. 1998, as cited in Basgall and Overly 2004).

The Victor Valley is dominated by the creosote bush community, which consists of widely spaced shrubs and cacti (Grayson 1993; Warren 1984:342). Creosote bush (*Larrea tridentata*) is the dominant perennial with co-dominant species including burrobush (*Ambrosia dumosa*) and ephedra (*Ephedra nevadensis*). Other perennials observed included Joshua tree (*Yucca brevifolia*), cholla (*Opuntia ramosissima*), cottonthorn (*Tetradymia spinosa)*, paperbag plant (*Salazaria mexicana*), spiny hop-sage (*Grayia spinosa*), and winterfat (*Krachenokovia lanata*) (Mayer and Laudenslayer 1988:88).

Large game animals are rare in the Mojave Desert, as evidenced by deer (*Odocoileus hemionus*) and black bear (*Ursus americanus*), which make infrequent treks from the nearby Sierra Nevada and San Bernardino mountains. More common to the desert floor are various reptiles and rodents, such as Couch's spadefoot toad (*Scaphiopus couchii*), desert tortoise

(*Xerobates [Goperus] agassizii*), chuckwalla (*Sauromalus obesus*), leopard lizard (*Crotaphytus wislizenii*), horned lizard (*Prynosoma platyrhinos*), Mojave rattlesnake (*Crotalus scutulatus*), whitetail antelope squirrel (*Ammospermophilus leucurus*), and kangaroo rats (*Dipodomys spp.*). Other species found in the Mojave include blacktail jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), kit fox (*Vulpes macrotis*) coyote (*Canis latrans*), and bobcat (*Lynx rufus*) (Laudenslayer and Boggs 1988:114; Martyn and Moore 1996). More than 300 species of birds are known to inhabit the northern Mojave Desert.

3.2 PREHISTORIC SETTING

Over the past century, archaeologists have generally divided the prehistory of the Western Mojave Desert into five distinct periods or sequences distinguished by specific material (i.e., technological) or cultural traits. Early cultural chronologies were proposed by Amsden (1937), Campbell and Campbell (1937), and Rogers (1939), that were later adapted by Warren and Crabtree (1986) and further detailed by Warren in 1984. Alternative sequences have since emerged (e.g., Bettinger and Taylor 1974) proposing new nomenclature (e.g., Newberry Period vs. Rose Spring Period vs. Saratoga Springs), slightly adjusted cultural chronologies, or attempting to link the Great Basin chronological framework to the Mojave Desert.

Recently, Sutton et al. proposed a cultural-ecological chronological framework based on climatic periods (e.g., Early Holocene) "to specify spans of calendric time and cultural complexes (e.g., Lake Mojave Complex) to denote specific archaeological manifestations that existed during (and across) those periods," (2007:233). In this scheme, the cultural history for the area is divided into the Late Pleistocene (10,000–8000 calibrated [cal] B.P.), the Early Holocene (8000–6000 cal B.P.), the Middle Holocene (7000–3000 cal B.P.), and the Late Holocene (2000 cal B.P. to Contact). The new sequence draws heavily from Warren and Crabtree (1986) and Warren (1984), as well as from the vast body of recent archaeological research conducted in the region.

3.2.1 Late Pleistocene (ca. 10,000–8000 cal B.P.)

The earliest cultural complex recognized in the Mojave Desert is Clovis, aptly named for the fluted projectile points often associated with Pleistocene megafaunal remains. Paleoindian culture is poorly understood in the region due to a relative dearth of evidence stemming from a handful of isolated fluted projectile point discoveries and one presumed occupation site on the shore of China Lake. Archaeologists tend to interpret the available data as evidence of a highly mobile, sparsely populated hunting society that occupied temporary camps near permanent Pleistocene water sources (Sutton et al. 2007).

3.2.2 Early Holocene (ca. 8000–6000 cal B.P.)

Two archaeological patterns are recognized during the Early Holocene: the Lake Mojave Complex (sometimes referred to as the Western Pluvial Lakes Tradition) and the Pinto Complex. The Lake Mojave Complex is characterized by stemmed projectile points of the Great Basin Series, abundant bifaces, steep-edged unifaces, and crescents. Archaeologists have also identified, in less frequency, cobble-core tools and ground stone implements. The Pinto Complex, on the other hand, is distinguished primarily by the presence of Pinto-style projectile points. Although evidence suggests some temporal overlap, the inception of the Pinto Complex is generally considered a Middle Holocene cultural complex that begins during the latter part of the Early Holocene.

During the Lake Mojave cultural complex, inhabitants of the region used more extensive foraging ranges, as indicated by an increased frequency of extra-local materials. Spheres of influence also expanded as potential long-distance trade networks were established between desert and coastal peoples. Groups were still highly mobile, but they practiced a more forager-like settlement subsistence strategy. Residential sites indicate more extensive periods of occupation and recurrent use. In addition, residential and temporary sites also indicated a diverse social economy, characterized by discrete workshops and special-use camps (e.g., hunting camps). Diet also appears to have diversified, with a shift away from dependence upon lacustral environments such as lakeside marshes, to the exploitation of multiple environments containing rich resource patches (Sutton et al. 2007).

3.2.3 Middle Holocene (ca. 7000–3000 cal B.P.)

The Pinto Complex is the primary cultural complex in the Mojave Desert during the Middle Holocene. Once thought to have neatly succeeded the Lake Mojave Complex, a growing corpus of radiocarbon dates associated with Pinto Complex artifacts suggest that its inception could date to the latter part of the Early Holocene. Extensive use of tool stone other than obsidian and high levels of tool blade reworking were characteristic of this complex and the earlier Lake Mojave Complex. A reduction in tool stone source material variability suggests a contraction of foraging ranges that had expanded during the Early Holocene. Conversely, long distance trade with coastal peoples continued uninterrupted, as indicated by the presence of *Olivella* shell beads.

The most distinguishing characteristic of the Pinto Complex is the prevalence of ground stone tools, which are abundant in nearly all identified Pinto Complex sites. The emphasis on milling tools indicates greater diversification of the subsistence economy during the Middle Holocene. Groups increased reliance on plant processing while continuing to supplement their diet with protein from small and large game animals.

Recent archaeological research in the Mojave Desert suggests there was a greater degree of regional cultural diversity during the Middle Holocene than previously thought. Sutton et al. (2007) have proposed a new Middle Holocene cultural complex associated with sites exclusively at Twentynine Palms in the southeastern Mojave Desert. Artifacts recovered from Deadman Lake Complex sites, such as *Olivella dama* shell from the Sea of Cortez and contracting-stem and lozenge-shaped projectile points similar to those recovered from Ventana Cave in Arizona, may suggest closer cultural contact with Southwest Archaic cultures than Pinto cultures to the north and west. However, it is also possible that the proposed complex simply reflects a technologically distinct segment of the Pinto, rather than a distinct culture.

3.2.4 Late Holocene (ca. 2000 cal B.P.–Contact)

The Late Holocene in the greater Southern California region is characterized by increases in population, higher degrees of sedentism, expanding spheres of influence, and greater degrees of cultural complexity. In the Mojave Desert, the Late Holocene is divided into several cultural complexes: the Gypsum Complex (2000 cal B.C.–cal A.D. 200), the Rose Spring Complex (cal A.D. 200–1100), and the Late Prehistoric Complexes (cal A.D. 1100–Contact).

The Gypsum Complex is defined by the presence of side-notched (Elko series), concave-based (Humboldt series), and well-shouldered contracting stem (Gypsum series) projectile points. Other indicative artifacts include quartz crystals, painted ceramics, rock art, and twig figures,

which are generally associated with ritual activities. Warren (1984) considers the appearance of these artifact types at Gypsum Complex sites as evidence of the Southwest's expanding influence in the region. Conversely, Sutton et al. (2007) opt to associate Gypsum sites, which tend to cluster in the northern Mojave Desert, with temporal sequences modeled for the adjacent Great Basin. It is most likely, however, that the Gypsum Complex was exposed to various cultural influences stemming from long-distance exchange and social interaction networks that linked groups occupying the Mojave Desert to those on the Pacific Coast, and in the American Southwest and the Great Basin.

The Rose Spring Complex can also be defined by the presence of distinct projectile points (i.e., Rose Spring and Eastgate series) and artifacts, including stone knives, drills, pipes, bone awls, milling implements, marine shell ornaments, and large quantities of obsidian. Of greater significance, however, are the characteristic advancements in technology, settlement strategies, and evidence for expanding and diverging trade networks.

The Rose Spring Complex marks the introduction of bow and arrow technology to the Mojave Desert, likely from neighboring groups to the north and east. As populations increased, groups began to consolidate into larger, more sedentary residential settlements indicated by the presence of well-developed middens and architectural styles. West and north of the Mojave River, increased trade activity along existing exchange networks ushered in a period of relative material wealth, exhibited by increased frequencies of marine shell ornaments and tool stone, procured almost exclusively from the Coso obsidian source. East and south of the Mojave River, archaeological evidence suggests there was a greater influence from Southwest and Colorado River cultures (i.e., Hakataya and Patayan).

Between approximately A.D. 1100 and contact, several cultural complexes emerged that archaeologists believe may represent prehistoric correlates of known ethnographic groups. Collectively known as the Late Prehistoric Cultural Complexes, during this time material distinctions between groups were more apparent, as displayed by the distribution of projectile point styles (e.g., Cottonwood vs. Desert Side-notched), ceramics, and lithic materials. Long-distance trade continued, benefiting those occupying "middleman" village sites along the Mojave River where abundant shell beads and ornaments, and lithic tools were recovered from archaeological contexts (Rector et al. 1983). Later, however, trade in Coso obsidian was significantly reduced as groups shifted focus to the procurement of local silicate stone.

The Late Prehistoric Cultural Complex was also a time of increasing regional influence and territorial expansion. Warren (1984) noted "strong regional developments" in the Mojave Desert that included Ancestral Puebloan interest in turquoise in the Mojave Trough, Hakatayan (Patayan) influence from the Colorado River, and the expansion of Numic Paiute and Shoshonean culture eastward. These developments led Sutton (1989) to propose that several interaction spheres were operating in the Mojave Desert during the Late Prehistoric. Sutton (1989) delineated interaction spheres based on the distribution of projectile point styles, ceramics, and obsidian and argued that the spheres broke along geographical lines that reflected the territorial boundaries of known ethnohistoric groups.

3.3 ETHNOHISTORIC SETTING

The Project area encompasses the traditional use area of the Vanyume and the Serrano. Ethnographic information on each of these groups is provided below.

3.3.1 Vanyume

The Vanyume, which are sometimes referred to as the Desert Serrano, are a subdivision of the Serrano who resided along the Mojave River corridor in the Victorville region and to the north and east along the river as far as Soda Lake. At the time of Spanish contact, the Project study area was likely occupied by the Vanyume, a Takic-speaking branch of the larger Uto-Aztecan (or Shoshonean) language family. The Vanyume territory is generally accepted as consisting of the area south of the lower Mojave Riverbed and to the southeast into the foothills of the San Bernardino Mountains, and to the north and east along the river as far as Soda Lake.

Diary accounts of travel through the Mojave River region left by Franciscan missionaries Father Garces (1776), Zalvidea (1806), and Nuez (1819) have provided important information on native settlement, village locations, and place names along the Mojave River (Earle 2005:7-10). Both Garces and Jedediah Smith heard versions of the term Vanyume used to refer to the native inhabitants of the Mojave River corridor (Earle 2005:4). Kroeber (1925:614-615) also referred to the native peoples of the Mojave River regions as Vanyume, whom he described as a linguistically differentiated desert division of the Serrano language and culture group, the latter being historically associated with the San Bernardino Mountains and surrounding areas. Mojave groups along the Colorado River also appeared to distinguish between what they called the Vanyume of the Mojave River and the Serrano-speakers of the San Bernardino Mountains region (Earle 2005:4).

Ethnohistorical information on the Mojave River area from the 1770s through the 1840s makes it clear that the Mojave River communities of the Vanyume had developed long-standing political and social ties with the Mojave and functioned as intermediaries in the long-distance trade networks maintained by the Mojave. Mojave traders negotiating the Mojave River route on the way to the coast to obtain shell beads and ornaments which served as an important medium of exchange relied on the Vanyume for food and shelter along the trek, as they did not carry their own supplies (Earle 2005:10; Harrington 1986:III:167:20). Gifts of shell beads and other goods were bestowed upon the Vanyume as reciprocal exchanges for this hospitality, and cemented relationships between the two groups (Earle 2005:30).

Vanyume settlements were located along the Mojave River drainage and to the southeast in the foothills of the San Bernardino Mountains. The location of *Ahamoha*, or birthplace of Moha, and Vanyume informant to Kroeber who survived an attack by the Mojaves in the 1830s, is situated somewhere in the Barstow-Daggett area. Moha herself placed the village near Daggett, while a Mojave informant to Kroeber stated that it was a few miles north of Victorville. The village was apparently occupied by the Vanyume during the 1820s (Earle 2005:9-10).

A second village site, *Timina*, was reportedly located at Newberry Springs (Harrington 1986:147, 695). This village was apparently occupied by the Vanyume prior to the 1830s. Further to the east along the lower reaches of the Mojave River were the Vanyume settlements of *Angayaba*, near the later site of Camp Cady, *Asambeat*, located in Afton Canyon, and *Guanachique*, located on the vicinity of Soda Lake (Earle 2005:7-8).

3.3.2 Serrano

The Serrano also belonged to the Takic-speaking branch of the larger Uto-Aztecan language family. Serrano territory included the San Bernardino Mountains, east of Cajon Pass, as well as the desert area that is immediately south of Victorville, extending east as far as Twentynine

Palms and south as far as Yucaipa Valley. The Serrano were primarily hunters and gatherers. Vegetal staples varied with village locality: acorns and piñon nuts in the foothills; mesquite, yucca roots, cacti fruits, and piñon nuts in or near the desert regions. Diets were supplemented with other roots, bulbs, shoots, and seeds. An increased yield of herbaceous plants was created by periodic burning (Bean and Smith 1978:571). Communal gathering expeditions, involving several lineages under one leader's authority, were not uncommon (Bean and Smith 1978:571; Benedict 1924:391–392; Drucker 1937). Deer, mountain sheep, antelope, rabbits, and other small rodents were among the principal animals hunted. Various game birds were also hunted with quail being the most important. The bow and arrow were used for large game, while smaller game and birds were killed with curved throwing sticks, traps, and snares. Occasionally, game was hunted communally, especially during annual mourning ceremonies (Bean and Smith 1978:571; Benedict 1924:391–392; Drucker 1937).

Individual family dwellings were occupied by a husband, wife, their unmarried female children, sometimes the husband's parents, and occasionally a widowed aunt or uncle. The Serrano lived in circular, domed structures that were constructed of willow frames and covered with tule thatch. These structures were utilized primarily as sleeping and storage areas, with most Serrano activities taking place outside or under a shade structure consisting simply of four posts and a roof. On occasion, an individual would erect a separate house for private use (Benedict 1924; Drucker 1937; Kroeber 1925).

Technologically, the Serrano were quite accomplished and produced a vast array of articles. Their manufactured goods included baskets, pottery, rabbit-skin blankets, awls, arrow straighteners, sinew-backed bows, arrows, drills, stone pipes, musical instruments (rattles, rasps, whistles, bull-roarers, and flutes), feathered costumes, mats, bags, storage pouches, and nets (Bean and Smith 1978:571). Food acquisition and processing required the manufacture of additional items such as knives, stone or bone scrapers, pottery trays and bowls, bone or horn spoons, and stirrers. Mortars, made of either stone or wood, and metates were also manufactured (Benedict 1924; Drucker 1937; Strong 1929).

The Serrano were organized into exogamous clans. Each of these, in turn, was affiliated with one of two exogamous moieties (Strong 1929). Although the exact nature of these clans, including their structure, function, and number is unknown, Strong (1929) determined that the clan was the largest autonomous political and landholding unit of the Serrano. The clan was patrilineal: all the male members recognized descent from a common male ancestor. The descendants and wives of these men were also regarded as clan members. When women married, they retained their own lineage names and participated in ceremonies of their natal lineage (Strong 1929:17).

Every clan had a headman or chief, which was a hereditary position passed from father to son. Under unusual circumstances this could pass to the wife of the previous headman (Strong 1929; Gifford 1918). Duties of the head of the clan included determining when and where to collect or hunt, as well as conducting religious and other ceremonies. An assistant (also a hereditary post passing from father to son) assisted the head or chief in these ceremonies. The assistant's duties included taking charge of the sacred bundle (a kit of ceremonial paraphernalia), notification of the time and location of the ceremonies, carrying shell money between groups for ceremonial purposes, and attending to the division of shell money and food at ceremonies (Bean and Smith 1978:572).

Like other California Native American groups, the Serrano had a shaman who acquired his various powers through datura-enhanced dreaming (Strong 1929). Shamans were mainly curers, who healed their patients through administering herbal remedies and sucking out disease-causing agents (Benedict 1924).

3.4 HISTORICAL SETTING

European exploration of the Mojave Desert began in the sixteenth century, but sustained Euro-American settlement of the region did not occur until the mid-nineteenth century. This extended period of exploration without expansion creates a long Proto-Historic period in the region, when Europeans and local Native American groups knew of one another but interacted very little. This period is discussed above from the point of view of Native American history. Below, the Euro-American expansion into the region and subsequent historical developments are described.

The European settlement in the Mojave Desert began when Spanish missionaries and explorers entered the area in the eighteenth century. Among the first Europeans in the area was Pedro Fages, who led an expedition into the western Mojave in 1772 in pursuit of Spanish soldiers who had deserted (Pourade 1960). Later forays into the Mojave were undertaken in 1776 by Franciscan missionary, Francisco Garces. Garces was tasked with exploring overland routes between Santa Fe, New Mexico, and Southern California. During his expedition, he stayed in what is today the town of Mojave (Coues 1900; Sutton 1991). The establishment of trade routes between Santa Fe and Los Angeles and the establishment of missions in the Mojave Desert were difficult in the eighteenth century because the native Mohave people hindered Spanish expansion beyond the coastal areas of California (Bean and Bourgeault 1989). The Old Spanish Trail, which passes through the Mojave Desert, was not firmly established as a travel route until the 1830s (Norris and Carrico 1978).

The Mexican War of Independence from Spain began in 1810. The Mexicans were victorious in 1821 and declared the Republic of Mexico in 1823. California was made a territory of the Republic in 1825. During Mexican rule, from 1825 to 1847, the rancheros became wealthy from trade in hides, tallow, wine, and brandy. The missions' properties were redistributed between 1834 and 1836, making the rancheros even wealthier. American traders, drawn by low prices for cowhides and other raw materials, made contacts with the Californios. Some married the daughters of the rancheros, started business enterprises, and became increasingly influential in the finance and commerce of the region (Los Angeles Cultural Heritage Masterplan 2000:15).

During the Mexican American War, on August 13, 1846, Captain John Fremont entered the pueblo of Los Angeles and declared it an American territory. The Treaty of Cahuenga ended the conflict in California in 1847 and The Treaty of Guadalupe Hidalgo officially ended the war in 1848 (Los Angeles Cultural Heritage Masterplan 2000:15).

American exploration into the Mojave Desert began in the nineteenth century. Jedediah Smith was the first American to enter the Mojave in 1826 and 1827. Little is known about Smith's time in the Mojave since his notes were lost in a fire (Pourade 1961). Smith followed the Old Spanish Trail, which runs south and east of the current Project area, and ultimately reached the Pacific Ocean where Spanish authorities prevented him from continuing further and temporarily imprisoned him (Beck and Haase 1974; Norris and Carrico 1978). In 1844, John C. Fremont traveled through the Mojave from the north and eventually met up with the Old Spanish Trail (Beck and Haase 1974; Fremont 1845). Fremont was named "The Great Pathfinder" because

his explorations helped open the West for Americans to move into California in the middle and late nineteenth century (Barnard 1977).

By the 1850s, the Old Spanish Trail was established as a reliable overland route to California, and it became easier for people to move into the area. Once California was ceded to the United States, the land was open for settlement and development. With the discovery of gold in the Sierra Nevada Mountains, California's population boomed. Most early mining in California took place in the north, near Sacramento and San Francisco. Mining led to the creation of roads throughout the state. Later, these mining roads would be used to establish railroads that operated in the region.

In the Mojave, scientific exploration was being undertaken in conjunction with investigations into proposed railroads from the east (Sherer 1994). An expedition led by Lt. Amiel Weeks Whipple in 1854 sought to survey a railroad route leading from Arkansas to Los Angeles along the 35th parallel, passing near Fremont Valley. The proposed railroad was meant to tie into lines that originated in both the north and the south (Barnard 1977). Whipple's expedition included scientists who recorded information about the geology, climatology, and biology of the region (Sherer 1994). A later expedition undertaken by Edward Beale in 1857 tested the feasibility of using camels for transport across the desert and established an early wagon road through the area (Norris and Carrico 1978; Sherer 1994).

Construction of the Southern Pacific Railroad (SPRR), linking San Francisco to Los Angeles via the Mojave Desert, was completed in 1876. Large numbers of Chinese workers were employed in the construction of the railroad, and following its completion, many became involved in placer mining in the upper Santa Clarita River area (Earle 2003). The SPRR Mojave line also included a 20-day (round trip) rail route that extended over 165 miles (mi) of mountains and desert, running from the Harmony Borax Works in Death Valley (Inyo County) to the railroad loading dock in Mojave (Kyle 1990:129).

By the 1860s, there were numerous mining claims along the periphery of the San Bernardino Mountains, including the gold claim staked by William Holcomb at Big Bear Lake. The boom that followed saw the building of roads from the Victor Valley side of the Cajon Pass to points southward. The 1870s and 1880s witnessed expanded mining in the desert region as well. The Oro Grande mining district, which included Hesperia, Victor, and Oro Grande north of Victorville, was a region rich in minerals, including gold, silver, gemstones, marble, and limestone (Sturm 1993:17).

Although historical settlement of the western Mojave was initially based on mining, which continues to the present day, by the late nineteenth century Victor Valley was slowly being settled by ranchers and farmers. In addition to agrarian pursuits, mining continued to be an important economic focus. As well, growing commercial activities spurred the growth of Victorville and the neighboring communities of Apple Valley, Lucerne Valley, Hesperia, Helendale, Adelanto, and Oro Grande. Further development of the region occurred in 1915, when the state legislature and the federal government authorized the Victor Valley Water Project, largest of its era in the nation. Railroads were expanded to serve the anticipated needs of the growing Victor Valley. In 1916, the Arrowhead Reservoir and Power Company was formed. However, by 1917 and the onslaught of World War I, many residents of the Valley left to serve in the war. It was not until World War II that the Victor Valley witnessed another expansion of settlement with the establishment of George Air Force Base in 1941, which brought military personnel, families, and associated military services and industry.

4 CULTURAL RESOURCES INVENTORY

PaleoWest completed a literature review and records search at the South Central Coastal Information Center at California State University, Fullerton, on July 5, 2022. This inventory effort included the Project area and a 0.5-mi radius around the Project area, collectively termed the study area. The objective of this records search was to identify prehistoric or historic period cultural resources that have been previously recorded within the study area during prior cultural resource investigations.

As part of the cultural resources inventory, PaleoWest staff also examined historical maps and aerial images to characterize the developmental history of the Project area and surrounding area. A summary of the results of the record search and background research are provided below.

4.1 PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

The records search results indicate that 37 previous investigations have been conducted and documented within the study area between 1976 and 2014 (Table 4-1). Three of these studies include portions of the Project area in the town of Apple Valley. Together, 100 percent of the portion of the Project area in the City's jurisdiction has been inventoried for cultural resources.

Table 4-1. Previous Cultural Investigations within 0.5 mile of the Project Area

Report No.	Year	Author(s)	Title
SB-00333	1976	Crowell, Jim	Archaeological Impact Assessment of Land Located in Section 35, T6N R4W
SB-00874	1979	Barker, James P., Carol H. Rector, and Philip J. Wilke	An Archaeological Sampling of the Proposed Allen-Warner Valley Energy System, Western Transmission Line Corridors, Mojave Desert, Los Angeles and San Bernardino Counties, California and Clark County, Nevada
SB-01219	1981	Hall, Matthew C., Philip J. Wilke, Doran L. Cart, and James D. Swenson	An Archaeological Survey of the Proposed Southern California Edison Ivanpah Generating Station, Plant Site, and Related Rail, Coal Slurry, Water and Transmission Line Corridors, San Bernardino County, California, and Clark County, Nevada
SB-01288	1982	Bureau Of Land Management - Ridgecrest Resource Area	Steam Well, Area of Critical Environmental Concern (ACEC), Management Plan and Environmental Assessment
SB-01479	1985	Dames & Moore	Mead/Mccullough-Victorville/Adelanto Transmission Project Technical Report: Volume IV, Cultural Resources
SB-01820	*1988*	*Peak & Associates, Inc*	*Cultural Resource Survey and Clearance for Re-Routed Portions of the Proposed American Telephone and Telegraph Las Vegas to San Bernardino Fiberoptics Communication Route*
SB-01954	1989	Schneider, Joan S.	Environmental Impact Evaluation: Cultural Resources Assessment of 1028 Acres of Land Located Along the Mojave River in the City of Victorville, San Bernardino County, California
SB-02181	*1990*	*Drover, Christopher E.*	*Environmental Impact Evaluation: An Archaeological Assessment of the Apple-Victor 1010 Project, San Bernardino County, California*

Report No.	Year	Author(s)	Title
SB-02399	1991	McGuire, Kelly R., and Leslie Glover	A Cultural Resources Inventory of a Proposed Natural Gas Pipeline Corridor from Adelanto to Ward Valley, San Bernardino County, California
SB-02922	1994	Taylor, Thomas T.	Archaeological Survey Report Victorville Landfill Distribution Line Extension Project, San Bernardino County, California
SB-02943	1994	Tearnen, Janet	Historical Assessment: 514 & 524 N. Arrowhead Ave., San Bernardino, Ca.
SB-03168	1996	Alexandrowicz, J. Stephen, S.R. Alexandrowicz, A.A. Kuhner, R.A. Krautkramer, D. Ingram, and E. Knell	Cultural & Paleontological Resources Investigations for the Stoddard Road Improvement Project of Victorville, San Bernardino County, Ca. 104PP
SB-03728	2000	Love, Bruce	Identification And Evaluation of Historic Properties: Lenwood Sewer Line Installation in the Community of Lenwood, San Bernardino County, Ca. 25PP
SB-03789	1997	White, Robert S.	An Archaeological Assessment of the 430 Acres Victorville Sanitary Landfill Project, Victorville, San Bernardino County, Ca. 18PP
SB-03795	2002	Love, Bruce, Bai "Tom" Tang, Daniel Ballester, and Mariam Dahdul	Historic/Archaeological Resources Survey Report: North Apple Valley Interceptor, in & near the Cities of Apple Valley & Victorville, San Bernardino County, Ca. 23PP
SB-04445	2004	Mckenna, Jeanette A.	Results of the Archaeological/Paleontological Monitoring Program for the North Apple Valley Interceptor Pipeline Project, Victor Valley Wastewater Reclamation Authority, Victorville, San Bernardino County, Ca. 200PP
SB-04861	1999	Balcom, Jim	Historic Property Survey Report for the Widening Drive in Victorville, California Lenwood Drive in Barstow, California
SB-04861	1998	-	Historic Architectural Survey Report for the Widening of Interstate 15 Between Mojave Drive in Victorville, California and Lenwood Road in Barstow, California.
SB-04861	1998	Balcom, Jim	Archaeological Survey Report for the Widening of Interstate 15 Between Mojave Drive in Victorville and Lenwood Road in Barstow
SB-05049	2006	Hatheway, Roger and Hatheway, Lora	Historical and Archaeological Survey of Krumsick Subject Property #1, Town of Apple Valley County of San Bernardino California
SB-05050	*2006*	*Hatheway, Roger and Hatheway, Lora*	*Historical and Archaeological Survey of Krumsick Subject Property #2(A) Town of Apple Valley County of San Bernardino California*
SB-05051	2006	Hatheway, Roger and Hatheway, Lora	Historical and Archaeological Survey of Krumsick Subject Property #2(B), City of Victorville County of San Bernardino California
SB-05052	2006	Hatheway, Roger and Hatheway, Lora	Historical and Archaeological Survey of Krumsick Acquisition Property of Gridley Street, Town of Apple Valley County of San Bernardino California
SB-08161	2014	Gust, Sherri M.	Combined Paleontological Identification and Evaluation Report Without Survey for the High Desert Corridor Freeway, Los Angeles and San Bernardino Counties, California

Report No.	Year	Author(s)	Title
SB-08162	2014	Sikes, Nancy, Dustin Keeler, Molly Valasik, and Sherri M Gust	Extended Phase I Testing Report P-19-004366, P-36-000066 (CA-SBR-66), P-36-000182 (CA-SBR-182), and P-36-012609 (CA-SBR-12336), High Desert Corridor Project from SR 14 to SR 18 Los Angeles and San Bernardino Counties, California, 07-LA/ 08-SBR EA No. 116720
SB-08162	2014	Sikes, Nancy, and Sherri M Gust	Extended Phase I Testing Proposal, P-19-004366, P-36-000066 (Ca-SBR-66), P-36-000182 (CA-SBR-182) and P-36-012609 (CA-SBR-12336), High Desert Corridor/ SR 138 Widening Project from SR 14 to SR 18, Los Angeles and San Bernardino Counties, California, 07-LA/PM 48.0 to SR 138 EA No. 116720

Cultural Resources Studies in ***bold italics*** are within the Project area.
"–" Indicates authors are not known.

4.2 CULTURAL RESOURCES REPORTED WITHIN 0.5-MI OF THE PROJECT AREA

The records search indicated that 13 cultural resources have been previously documented within the study area, all of which date to the historic period (Table 4-2). Five of these resources are in the portion of the Project area in the town of Apple Valley. These include three archaeological sites and two built-environment resources. A description of each of these resources is provided below.

Table 4-2. Previously Recorded Cultural Resources within 0.5 mile of the Project Area

Primary No.	Trinomial	Type	Description
P-36-009360	CA-SBR-009360H	Structure	Segment of Stoddard Wells Road
P-36-010315	CA-SBR-010315H	Structure	Boulder Dam-San Bernardino transmission line
P-36-012649	***CA-SBR-012348H***	***Structure***	***Access road***
P-36-012650	CA-SBR-012349H	Site	Dirt roadway and prospecting quarry
P-36-012651	***CA-SBR-012350H***	***Site***	***Building foundations, storage tanks/bins, a shop, garage and oil shack, and partial storage building.***
P-36-012652	***CA-SBR-012351H***	***Structure***	***Access road***
P-36-012654	CA-SBR-012353H	Site	Homestead can scatter
P-36-012655	***CA-SBR-012354H***	***Site***	***Abandoned transmission line segment***
P-36-012657	***CA-SBR-012356H***	***Site***	***Refuse scatter***
P-36-012658	CA-SBR-012357H	Structure	Segment of I-15 Freeway
P-36-020969	-	Site	Dump site
P-36-061272	-	Isolate	Survey marker
P-36-061294	-	Isolate	Single gin bottle

4.2.1 P-36-012649/CA-SBR-012348H

P-36-012652 is a 0.6-mi-long segment of a dirt road that was originally used to access the Victorville Lime Rock Company and Riverside Cement Company located east and southeast of the Project area. The road was first recorded by Hatheway (2006a) with a later update by Cogstone (Peterson 2014a). The road was constructed around 1940 and runs in a northwest-southeast direction from Stoddard Wells Road to an abandoned limestone mining complex. Portions of the road alignment were substantially altered by the California Division of Highways in 1957/1958, during construction of the I-15 Freeway (originally designated as Route 66/91) between Victorville and Barstow. As a result, the historic roadway alignment was cut-off by the freeway and a new haul road was built to connect through a freeway underpass to Stoddard Wells Road. The resource was previously recommended not eligible for listing in the CRHR.

4.2.2 P-36-012651/CA-SBR-012350H

P-36-012651 consists of various historic building foundations and features including a jaw crusher, storage tanks/bins, an electrical shop, a garage, an oil shack, and a parts storage building associated with the Victorville Lime Rock Company Mining Quarry and Plant. The site measures 1,420 by 1,300 feet in area and was initially recorded by Hatheway (2006b) with a later update by McKenna et al. (McKenna 2018). Although the Victorville Lime Rock Company Mining Quarry and Plant was established in 1924, the archaeological remnants that comprise P-36-012651 date between circa 1940 and 1985. The site appears to retain very little integrity and the resource was recommended not eligible for listing in the CRHR.

4.2.3 P-36-012652/ CA-SBR-012351H

P-36-012652 is a single-track dirt road measuring approximately 0.9 mi in length that originally led from Stoddard Wells Road to a historic limestone mining complex to the southeast (Hatheway 2006c). The road is shown on a historical 1917 map and was likely built in the late nineteenth century to provide access to a stone lime kiln located in the vicinity. This historic road alignment was substantially altered by the California Division of Highways in 1957/1958, during completion of the I-15 Freeway (originally designated as Route 66/91) between Victorville and Barstow. As a result, the historic roadway alignment was cut-off by the freeway and a new haul road was built to connect through a freeway underpass to Stoddard Wells Road. The resource was recommended not eligible for listing in the CRHR.

4.2.4 P-36-012655/ CA-SBR-012354H

P-36-012655 is a historic period site that measures 1,000 ft in length and consists of several structural components of an abandoned transmission line segment. The archaeological remains that comprise the site include a set of individual power poles, cross trees, and insulators. The power line was first recorded by Hatheway (2006d) with later updates in 2011 and 2014 by ICF International (Chmiel et al. 2013) and Cogstone (Peterson 2014b), respectively. The powerlines were built circa 1940 by Victorville Lime Rock Company to power their mining complex (quarry and crusher). It was later replaced in 1975 by the existing powerline. The resource was recommended not eligible for listing in the CRHR.

4.2.5 P-36-012657/CA-SBR-012356H

P-36-012657 is a deposit of household refuse that measuring 50 by 33 ft and is primarily concentrated within a 10 by 10 ft area (Romani and Keith 2006). The site consists of approximately 70 broken glass objects (e.g., bottles, tumblers, dishes) and metal food cans. Temporally diagnostic artifacts indicate that the remains date to the mid-1950s. The site appears to represent a single event dispositional event. The resource was recommended not eligible for listing in the CRHR.

4.3 ADDITIONAL SOURCES

Additional sources consulted during the cultural resource literature and data review include the National Register of Historic Places (NRHP), the Office of Historic Preservation Archaeological Determinations of Eligibility, and the Office of Historic Preservation Built Environment Resources Directory (BERD). The Hoover Dam Transmission Line (P-36-010315/CA-SBR-10315H) is the only cultural resource listed in the NRHP in the study area.

Historical maps and aerial images were also consulted as part of the background research. Maps that were examined as part of this effort include Barstow, CA 30' (1932, 1934), Victorville, CA 7.5' and 15' (1956), Lancaster East, CA 7.5' (1958), and San Bernardino, CA (1953, 1956, 1957, 1958, 1959, and 1966) USGS series maps (TopoView 2022). Historical aerial images were available on NETROnline dating to 1952, 1968, 1969, 1984, 1985, and 1994. Results of the archival review indicate that the Project area remained relatively undeveloped except for the mining/quarrying facility located in the southeast corner of the site and three associated access roads. Other developments noted in the vicinity of the Project area include the construction of I-15 in 1957/1958 and the various mines and quarries east of the Project area (NETROnline 2022, TopoView 2022).

A review of Bureau of Land Management (BLM) General Land Office (GLO) records indicate that portions of the Project area are part of a serial patent for 1059.32 acres issued to the State of California in 1951 by authority of the January 21, 1927: Indemnity Selections (44 Stat. 1022) (BLM 2022). It does not appear that any buildings or other structures related to the patent have been constructed with the Project area.

4.4 NATIVE AMERICAN COORDINATION

PaleoWest contacted the Native American Heritage Commission (NAHC) on June 14, 2022, for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. The NAHC responded on July 21, 2022, stating that the SLF was completed with positive results. The NAHC suggested that 14 individuals representing 5 Native American tribal groups be contacted to elicit information on sensitive Native American cultural resources that may be present in the Project area (Appendix A). PaleoWest sent outreach letters to the 14 recommended tribal groups on July 18, 2022. Follow-up phone calls were conducted on August 25, 2022.

To date, PaleoWest has received two responses:

- Mark Cochrane, Co-Chairperson of the Serrano Nation of Mission Indians, responded via telephone on August 25, 2022, and requested that he and Co-Chair Wayne Walker be notified in the event of any discovery of cultural materials.
- Robert Robinson, Chairperson of the Kern Valley Indian Community, responded via telephone on August 25, 2022, and stated that the tribe has concerns regarding the proposed Project, which is in areas with a high probability of habitation sites occurring there. He recommended archaeological and tribal monitoring during ground disturbing activities.

5 RESEARCH DESIGN

A research design is an explicit statement of the theoretical and methodological approaches to be followed in a cultural resources study (OHP 1990). Inventory studies, such as this one, rely on data from cultural resources visible on or above the ground surface with supplemental information provided by archival research and literature review (OHP 1991). In such studies, the focus of the research design is to ensure the adequacy of the identification effort. Should any identified resources within the Project area have sufficient age and integrity to warrant consideration for CRHR eligibility, then relevant research questions and data requirements may be posed to evaluate the significance of the resource and make recommendations regarding determinations of eligibility.

For the purposes of this study, one relevant research domain was identified: historic development and settlement of the Victor Valley. Use of the valley was, at first, associated primarily with mining activities. Following the construction of the railroad in the 1870s, Victor Valley was slowly settled by ranchers and farmers. The following questions may be considered when examining the nature and extent of cultural resources within the Project area.

- What evidence of historic period mining, agriculture, ranching, and/or homesteading is present in the Project area?
- What specific activities were performed at these sites? If mining-related sites are identified, what was being mined? Did these activities change over time?
- What is the age of these sites? How long were these sites used or occupied and when or why were they abandoned?
- How do mining, agriculture, ranching, and homesteading sites in the Project area reflect or diverge from regional or national trends?

Data Requirements (among the data needed to address the research questions posed above):

- Chronological data from features and/or temporally diagnostic artifacts that can be used to assess the age of the sites;
- Artifact assemblages and features to identify the types of activities that were associated with each site;
- Artifacts (e.g., culinary artifacts, food preparation items, food containers and remains, clothing/grooming, personal hygiene, and medicinal items), that may be used to examine the social, ethnic, or economic background of the residents of the sites;
- Infrastructure elements such as roads, transmission lines, pipelines, and water lines, and;
- Documentary information in the form of U.S. Geological Survey historical maps, BLM GLO township plat maps, BLM land patent records, master title plat maps, and County assessor records to address questions of land ownership.

6 FIELD INVESTIGATION

6.1 FIELD METHODS

A cultural resources survey of the Project area was completed by PaleoWest archaeologists Gena Severen, M.A., RPA, Earl Morales, and Nick Illig between August 24 and 31, 2022. The survey methods followed standard archaeological methods consisting of parallel pedestrian transects spaced at 10–15-meter (m) (33–50-ft) intervals when allowed by terrain and vegetation. Crew members also opportunistically examined any subsurface exposures, including rodent burrows and cut banks. Survey crews navigated the transects using georeferenced maps on iPad tablets and handheld global position system (GPS) units. Field iPads included all Project maps and relevant site forms. Field iPads with the ArcGIS web application were used to record and document resources.

The Project area was documented with digital photographs that included general views of the topography and vegetation density, and other images. A photograph log was maintained to include photograph number, date, orientation, photograph description, and comments. The surveyors carefully inspected all areas likely to contain or exhibit sensitive cultural resources to ensure discovery and documentation of and visible, potentially significant cultural resources located within the Project area. In particular, the survey crews carefully inspected rocky outcroppings, creek banks, clearings, and other habitable flat spots.

All cultural materials and features of an eligible age were recorded during the surveys in accordance with OHP (1995) guidelines. Materials and features that could not be accurately dated in the field were also recorded. Historic period indicators include standing buildings, objects, structures such as sheds, or concentrations of materials at least 45 years in age, such as domestic refuse (e.g., glass bottles, ceramics, toys, buttons, and leather shoes), refuse from other pursuits such as agriculture (e.g., metal tanks, farm machinery parts, and horseshoes) or structural materials (e.g., nails, glass windowpanes, corrugated metal, wood posts or planks, metal pipes and fittings, and railroad spurs). Prehistoric site indicators include areas of darker soil with concentrations of ash, charcoal, animal bone (burned or unburned), shell, flaked stone, ground-stone, pottery, or even human bone.

When artifacts were found during the surveys, site boundaries were defined by surveying out in widening concentric circles until artifacts were no longer encountered. Artifacts or features that were within 30 m of each other, or that were clearly related, were combined into the same isolate or site. All resources were digitally recorded in the field directly into a FileMaker database on iPad.

All newly identified cultural resources were recorded on appropriate Department of Parks and Recreation (DPR) 5232 forms. In addition, previously recorded cultural resources were revisited during the survey. The current condition of each resource was assessed to determine if there had been any changes since the last recordation. All newly recorded sites were fully recorded and are described in this report.

6.2 RESULTS

The Project area is composed of an alluvial plan intermixed with coppice dunes and seasonal washes that have a mildly sloping landscape (Figure 6-1 and Figure 6-2). The soils are fine- to

medium-grained alluvial sandy loam and gravel that are light tan in color and made of quartz and granitic material. Vegetation within the Project area consists of moderately distributed Creosote Bush Scrub with creosote bush (*Larrea tridentata*), cheesebush (*Ambrosia salsola*), white bursage (*Ambrosia dumosa*), fourwing saltbush (*Atriplex canescens*), and very sparse Joshua trees (*Yucca brevifolia*).

Ground visibility across the Project area was good to excellent (70–100%). All of the Project area east of the I-15 was surveyed except for 23.5 acres in the southeastern portion of the Project site adjacent to the CalPortland mining facility (Figure B.1 in Appendix B). This area contained the previously documented remains of the Victorville Lime Rock Company Mining Quarry and Plant (P-36-012651). Due to safety concerns, which included active mining activities and live explosions on the adjacent CalPortland mine, the site could not be revisited at the time of the survey. Furthermore, the area could not be visually inspected from a distance due to the presence of large earthen berms surrounding the facility. To assess the current condition of P-36-012651, PaleoWest inspected the area using recent google earth imagery. Results of this examination indicate that the unsurveyed portion of the Project area that contains P-36-012651 has been heavily disturbed by mining activities and the potential to preserve previously unidentified cultural resources is low.

Four historic period archaeological sites and one historic period built-environment resource were identified in the portion of the Project area within the town of Apple Valley (Table 6-1). These include the previously recorded dirt access road (P-36-012649), the remains of the Victorville Lime Rock Company Mining Quarry and Plant (P-36-012651), transmission line segment (P-36-012655), and a refuse deposit (P-36-012657). The second dirt road (P-36-012652) that was recorded in the Project area, which ran from Stoddard Wells Road to an abandoned limestone mining complex, could not be relocated. The road appears to have been destroyed and is no longer extant. One newly identified archaeological site, a historic period refuse scatter, was also documented in the portion of the Project area in the town of Apple Valley. No prehistoric archaeological resources were identified in the Project area. Descriptions and significance evaluations of the documented cultural resources are provided below. Locations of these resources are shown in Figure B.1 in Appendix B. DPR 523 forms are provided in Appendix C.

6.2.1 Site 22-0218-GG-005H

Site 21-0218-GG-005H is a historic period refuse scatter that measures 11 by 30 ft in area. The site is on the north bank of a small, unnamed wash and about 80 ft north of an east-west oriented off-highway vehicle trail. The site consists of a scatter of historic glass with five green, amber, and colorless liquor/beer bottle bases. The amber bottle base is embossed with an Owens Illinois maker's mark indicating a manufacturing date of 1933. A colorless bottle base is embossed with a Puerto Rico Glass Corporation maker's mark, which was in operation between 1945 and circa 1980 (Lockhart et al. 2022).

The assemblage, while not particularly diagnostic, dates from the early to mid-twentieth century and consists primarily of domestic refuse. An examination of historical maps indicates that there is no settlement within the vicinity of Site 21-0218-GG-005H during this time. Given the proximity of the site to an unnamed east-west running dirt road, it is likely that the refuse represents one or more episodes of opportunistic roadside dumping by local residents or travelers. The site appears to be largely surficial, with no evidence found to suggest there are



Figure 6-1. Overview of the Project area, facing west-northwest



Figure 6-2. Overview of the Project area, facing southwest.

Table 6-1. Archaeological Sites Recorded in the Project Area

Temporary No	Type	Description	CRHR Eligibility Recommendation
22-0218-GG-005H	Site	Refuse scatter	Not eligible
P-36-012649	Structure	Access road	Not eligible
P-36-012651	Site	Ruins of the Victorville Lime Rock Company Mining Quarry and Plant	Not eligible
P-36-012655	Site	Transmission line remnants	Not eligible
P-36-012657	Site	Refuse scatter	Not eligible

substantial buried deposits. Site 21-0218-GG-005H is in poor condition with modern refuse found across the site's boundary.

CRHR Eligibility

Site 21-0218-GG-005H consists of a scatter of domestic refuse that was likely deposited by local residents or travelers during the early part of the twentieth century. The site contains no evidence to indicate that the historic refuse is linked to early settlement-related activities in the Victor Valley that made a significant contribution to the broad patterns of our history. Furthermore, it cannot be associated or linked to any important persons in California's history. As such, the site is not recommended eligible for listing in the CRHR under Criterion 1 or 2. The artifacts do not embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; therefore, the site is not significant under Criterion 3. Finally, because the refuse scatter exhibits no clear temporal or historically significant association, it cannot produce information that would answer directed research questions presented in Section 5 and has very limited data potential. As a result, the site is not significant under Criterion 4.

PaleoWest recommends Site 21-0218-GG-005H be considered ineligible for inclusion in the CRHR.

6.2.2 P-36-012649

P-36-012649 was previously described as a 0.6-mil-long realignment of the Victorville Lime Rock Company and Riverside Cement Company access road, which was substantially altered by the construction of I-15 (Hatheway 2006a). PaleoWest revisited the resource during the current survey. The portion of the road located east of the I-15 runs from a frontage road in a northwest-southeast direction across the Project area towards the existing Victorville Lime Rock Company Mining Quarry Plant Ruin. The road is approximately 0.5 mi in length and consists of a paved single lane roadway The condition of the road has not changed since its documentation in 2014.

CRHR Eligibility

P-36-012649 was previously recommended to be ineligible for listing on the CRHR. Hatheway (2006a) argued that although the road is associated with the development of the limestone industry in the vicinity of Victorville, no individually significant historical events are known to be

directly associated with the access road. As such, he concluded that the site as ineligible for listing on the CRHR under Criterion 1. Furthermore, the road segment could not be associated with any individuals that made significant contributions to history and therefore, it was ineligible under CRHR Criterion 2. Hatheway (2006a) noted that the road alignment has been substantially altered and does not retain sufficient architectural and/or original design integrity to warrant consideration as having the distinctive characteristics of a type, period, or regional expression of architectural design. In addition, it is characterized by no outstanding or distinguishing construction features to make it eligible under Criterion 3. Finally, he found that the additional study of the road was unlikely to yield information important to the prehistory or history of the area and was therefore ineligible for listing on the CRHR under Criterion 4.

The current study indicates that the condition of P-36-012649 had not changed since the site was last revisited in 2014. Based on these findings, PaleoWest agrees with the previous eligibility recommendation. P-36-012649 is not eligible for listing in the CRHR.

6.2.3 P-36-012651

Site P-36-012651 consists of the remnants of the Victorville Lime Rock Company Mining Quarry and Plant that was in operation between 1940 and 1985. At the time of its initial recordation, the site included 11 building foundations and one metal storage building (Hatheway 2006b). The metal storage building appeared to have been constructed in the mid-1980s.

PaleoWest attempted to revisit P-36-012651during the current survey and found that access to the resource is limited, as the adjacent CalPortland mine is active. Haul trucks were observed running loads in and out of the facility and live explosions were heard, prompting surveyors to maintain a safe distance. Large earthen berms prevented visual inspection from a distance. Although the resource could not be revisited during the pedestrian survey, aerial photographs of the area were examined to assess the current condition of the resource. Aerial images dated to June 2022 indicate that while several building foundations and the metal storage structure are still present, additional clearance and/or grading appears to have occurred within the site's boundaries.

CRHR Eligibility

P-36-012651 was previously recommended as ineligible for listing on the CRHR. Research by Hatheway (2006b) found that the mining facility remnants were associated with the development of the limestone industry in the vicinity of Victorville. However, no individually significant historical events are known to be specifically associated with the mine and as such, the site is ineligible for listing under Criterion 1. In addition, Hatheway (2006b) stated that limestone mining plant could not be associated with any individuals that made significant contributions to history and therefore, was ineligible under Criterion 2. Because the limestone mining plant has been substantially altered with most of the buildings demolished, it did not retain sufficient architectural and/or original design integrity to warrant consideration as having the distinctive characteristics of a type, period, or regional expression of architectural design. Therefore, Hatheway (2006b) recommended it ineligible under Criterion 3. Finally, he concluded that the additional study of the limestone mine facility was unlikely to yield information important to the prehistory or history of the area and therefore it was ineligible for listing on the CRHR under Criterion 4.

The current study indicates that the condition of P-36-012651 has deteriorated since 2006. Based on these findings, PaleoWest agrees with the previous eligibility recommendation. P-36-012651 is not eligible for listing in the CRHR.

6.2.4 P-36-012655

Site P-36-012655 was originally described as a set of individual power poles that have been cut down and abandoned (Hatheway 2006d). Cross trees and insulators were no longer attached to the poles, but three were located nearby. The powerline was built circa 1940 as part of the construction of the Victorville Lime Rock Company Mining Quarry and Plant. It provided power the mining complex (quarry and crusher) and replaced in 1975 by a new powerline. PaleoWest revisited the site during the current survey and found that the power poles, cross tress, and insulators are in similar condition as the original documentation in 2006.

CRHR Eligibility

P-36-012655 was previously recommended to be ineligible for listing on the CRHR. Hatheway (2006d) argued that although the powerline is associated with the development of the limestone industry in the vicinity of Victorville, no individually significant historical events are known to be directly associated with the site. As such, he concluded that P-36-012655 as ineligible for listing on the CRHR under Criterion 1. Furthermore, the powerline could not be associated with any individuals that made significant contributions to history and therefore, it was ineligible under CRHR Criterion 2. Hatheway (2006d) noted that the powerline has been partially dismantled and does not retain sufficient architectural and/or original design integrity to warrant consideration as having the distinctive characteristics of a type, period, or regional expression of architectural design. In addition, it is characterized by no outstanding or distinguishing construction features to make it eligible under Criterion 3. Finally, he found that the additional study of the powerline was unlikely to yield information important to the prehistory or history of the area and was therefore ineligible for listing on the CRHR under Criterion 4.

The current study indicates that the condition of P-36-012655 had not changed since the site was initially documented in 2006. Based on these findings, PaleoWest agrees with the previous eligibility recommendation. P-36-012655 is not eligible for listing in the CRHR.

6.2.5 P-36-012657

Site P-36-012657 was originally described as a small, single-event refuse scatter consisting of household debris dating to the mid-1950s (Romani and Keith 2006). The site consisted of approximately 70 glass bottles and metal food tins, most of which were concentrated in a 10 by 10 ft area. PaleoWest revisited the site and found the refuse deposit to be in the same condition as previously recorded.

CRHR Eligibility

P-36-012657 was previously recommended as not eligible for listing on the CRHR. Romani and Keith (2006) argued that the site was not eligible under Criterion 1 or 2 as no individually significant historical events or persons could be specifically associated with the refuse scatter. In addition, the sparse scatter of domestic refuse appears to lack depth or stratigraphy and any defining characteristics that would qualify it for listing under Criterion 3. Finally, Romani and

Keith (2006) note that the refuse scatter is unlikely to yield information important to the prehistory or history of the area and therefore it is ineligible for listing on the CRHR under Criterion 4. Based on the findings of the current study, PaleoWest agrees with the previous recommendation. P-36-012657 is not eligible for listing in the CRHR.

7 MANAGEMENT RECOMMENDATIONS

The cultural resource assessment of the portion of the Project area in the town of Apple Valley included record searches, background research, and a pedestrian survey of the Project area. As a result of these efforts, five historic period cultural resources were identified in the Project area, including two refuse scatters, the remnants of a mining and quarry plant, a road segment, and an abandoned transmission line. None of the resources are recommended eligible for listing in the CRHR.

Based on the paucity of prehistoric archaeological remains documented in the vicinity, the level of existing disturbance of the Project site, and the result of the survey, the Project area appears to have a low sensitivity for encountering intact buried prehistoric archaeological resources. The presence of historic period cultural resources in the Project area and vicinity suggests use of area focused on limestone mining and processing activities that took place in the mid- and late-twentieth century. Most of these remains are limited to surface manifestations suggesting that there is a relatively low likelihood of encountering buried historic period archaeological remains in the Project area. Furthermore, given the level of disturbance observed in the Project vicinity, any buried archaeological deposits that may be encountered during Project implementation would likely not be intact.

PaleoWest does not recommend any additional cultural resource management for the proposed Project. In the unlikely event that potentially, significant cultural materials are encountered during Project-related ground-disturbing activities, all work should be halted in the vicinity of the discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. In addition, Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Finally, should additional actions be proposed outside the currently defined Project area that have the potential for additional subsurface disturbance, further cultural resource management may be required.

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2006c Department of Parks and Recreation Site Record for P-36-012652. On file at the South Central Coastal Information Center, California State University, Fullerton.
2006d Department of Parks and Recreation Site Record for P-36-012655. On file at the South Central Coastal Information Center, California State University, Fullerton.

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Appendix A. Native American Coordination

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

PARLIAMENTARIAN
Russell Attebery
Karuk

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

July 21, 2022

Kyle Knabb
PaleoWest Archaeology

Via Email to: kknabb@paleowest.com

Re: Carney Commerce Center Project, San Bernardino County

Dear Mr. Knabb:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
7/21/2022

Chemehuevi Indian Tribe
Sierra Pencille, Chairperson
P.O. Box 1976 1990 Palo Verde Drive — Chemehuevi
Havasu Lake, CA, 92363
Phone: (760) 858 - 4219
Fax: (760) 858-5400
chairman@cit-nsn.gov

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010 — Kawaiisu
Lake Isabella, CA, 93240 — Tubatulabal
Phone: (760) 378 - 2915 — Koso
bbutterbredt@gmail.com

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010 — Kawaiisu
Lake Isabella, CA, 93240 — Tubatulabal
Phone: (661) 340 - 0032 — Koso

Kern Valley Indian Community
Brandy Kendricks,
30741 Foxridge Court — Kawaiisu
Tehachapi, CA, 93561 — Tubatulabal
Phone: (661) 821 - 1733 — Koso
krazykendricks@hotmail.com

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Vanyume
Phone: (503) 539 - 0933 — Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Jessica.Mauck@sanmanuel-nsn.gov

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Carney Commerce Center Project, San Bernardino County.

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Carney Commerce Center Project, San Bernardino County.

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Ann Brierty, THPO,
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA, 92220
Transmitted via email to abrierty@morongo-nsn.gov

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Ms.Brierty,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

A cultural resource records search and literature review was completed at the South-Central Coastal Information Center (SCCIC) of the California Historical Resource Information System housed at California State University, Fullerton. The records search indicated that thirteen cultural resources were identified within one-half-mile of the Project area. Of the thirteen resources, all of them are comprised of historic-period structures, sites, and isolated artifacts. Nine of these historic-period cultural resources were previously documented within the Project area. No prehistoric resources have been previously documented within the Project area.

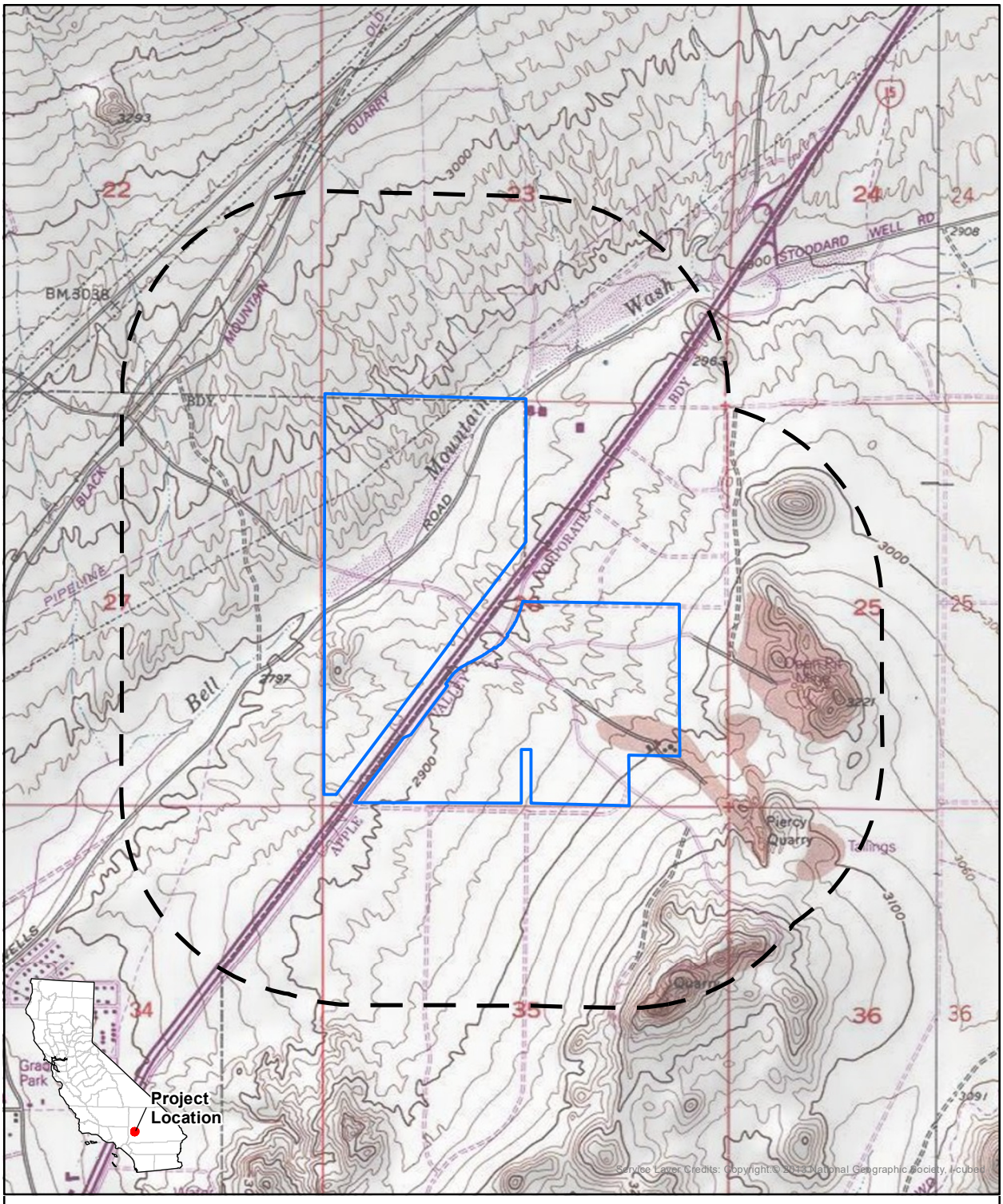
As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File*. The NAHC has not yet responded but it is anticipated that they recommend we contact you for comment. If your records show that cultural resources exist within or near the Project area (see enclosed map), please contact me at (626) 376-6729 or kknabb@paleowest.com.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

Kyle A. Knabb

Kyle Knabb, Ph.D., RPA
Senior Archaeologist
PaleoWest



PALEO WEST

0 feet 2,000

0 meters 500

1:24,000

RS Request
USGS 7.5' Quadrangle:
Victorville, Ca (1982)
T6N, R4W, Secs 22-27 & 34-26
UTM Zone 11, NAD 83
SBBM

Project Area

Half Mile Buffer

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Mark Cochrane, Co-Chairperson
Serrano Nation of Mission Indians
P. O. Box 343
Patton, CA, 92369
Transmitted via email to serranonation1@gmail.com

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Mr. Cochrane,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

A cultural resource records search and literature review was completed at the South-Central Coastal Information Center (SCCIC) of the California Historical Resource Information System housed at California State University, Fullerton. The records search indicated that thirteen cultural resources were identified within one-half-mile of the Project area. Of the thirteen resources, all of them are comprised of historic-period structures, sites, and isolated artifacts. Nine of these historic-period cultural resources were previously documented within the Project area. No prehistoric resources have been previously documented within the Project area.

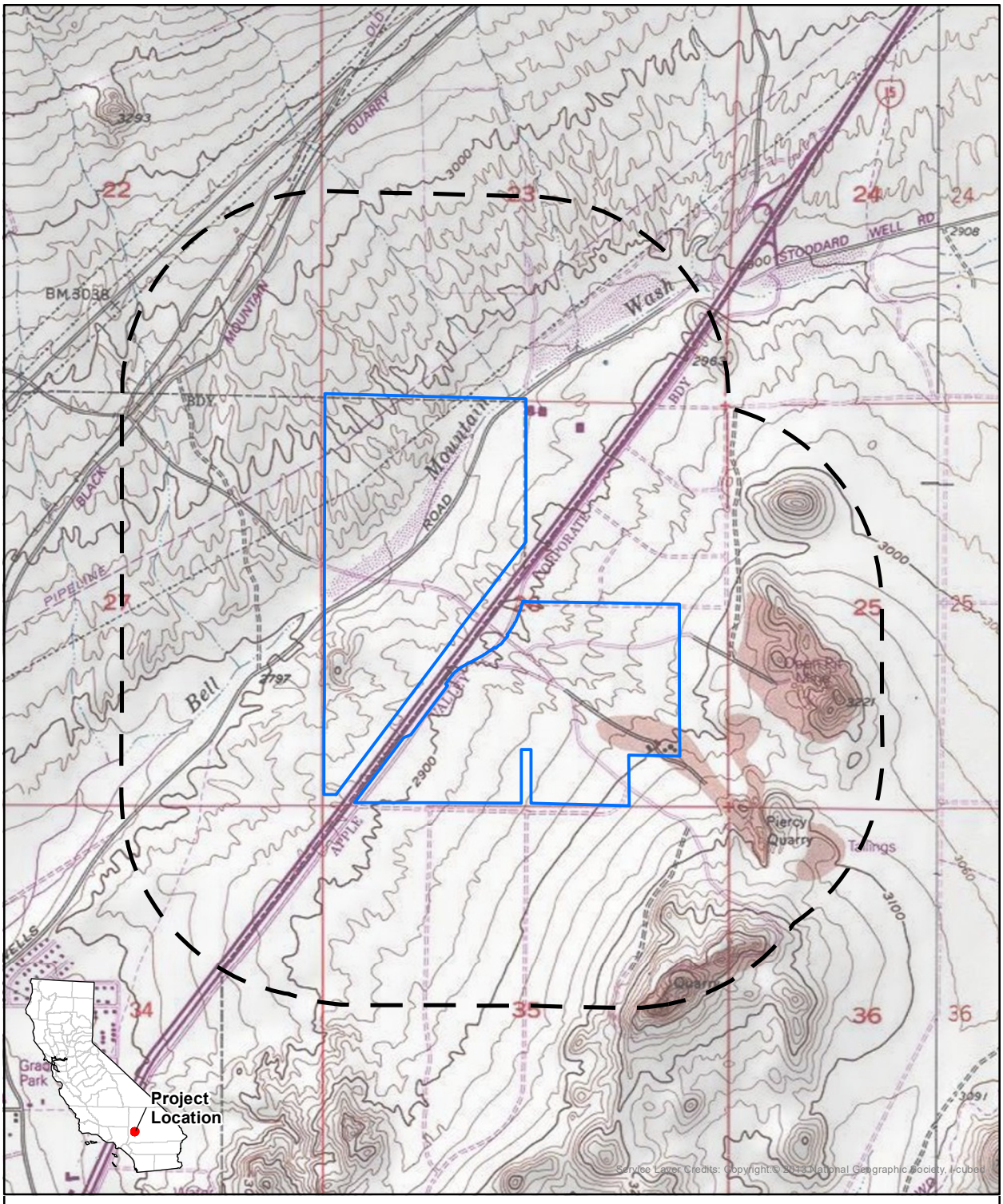
As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File*. The NAHC has not yet responded but it is anticipated that they recommend we contact you for comment. If your records show that cultural resources exist within or near the Project area (see enclosed map), please contact me at (626) 376-6729 or kknabb@paleowest.com.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

Kyle A. Knabb

Kyle Knabb, Ph.D., RPA
Senior Archaeologist
PaleoWest



PALEO WEST

0 feet 2,000

0 meters 500

1:24,000

RS Request
USGS 7.5' Quadrangle:
Victorville, Ca (1982)
T6N, R4W, Secs 22-27 & 34-26
UTM Zone 11, NAD 83
SBBM

Project Area

Half Mile Buffer

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 21, 2022

Brandy Kendricks
Kern Valley Indian Community
30741 Foxridge Court
Tehachapi, CA, 93561
Transmitted via email to krazykendricks@hotmail.com

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Ms. Kendricks,

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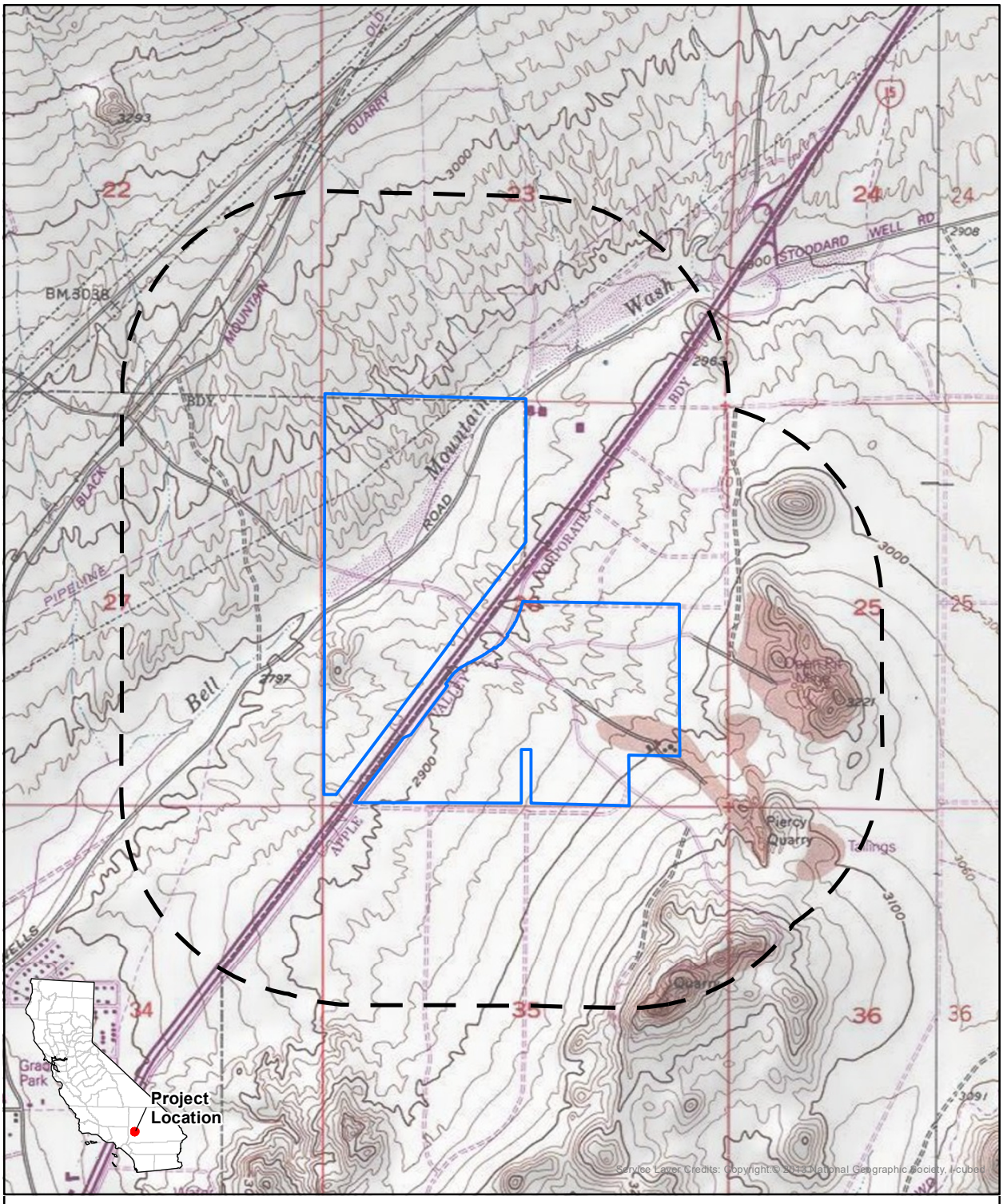
Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

Kyle A. Knabb

Kyle Knabb, Ph.D., RPA
Senior Archaeologist
PaleoWest



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RS Request
USGS 7.5' Quadrangle:
Victorville, Ca (1982)
T6N, R4W, Secs 22-27 & 34-26
UTM Zone 11, NAD 83
SBBM

Project Area

Half Mile Buffer

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Anthony Madrigal, Tribal Historic Preservation Officer
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place
Coachella, CA, 92236
Transmitted via email to amadrigal@29palmsbomi-nsn.gov

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Mr. Madrigal,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

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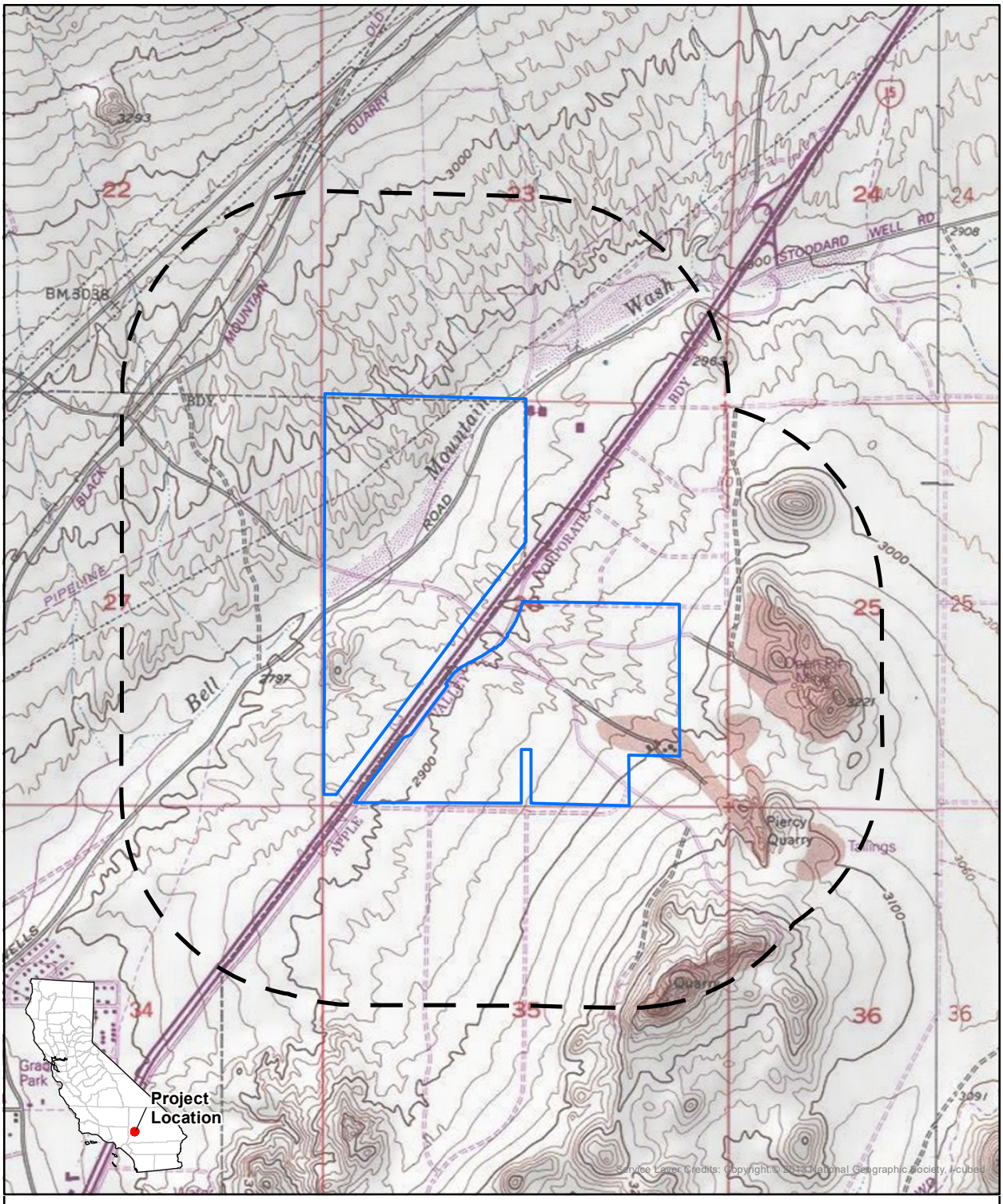

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T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Robert Martin, Chairperson
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA, 92220
Transmitted via email to abrierty@morongo-nsn.gov

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Mr. Martin,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

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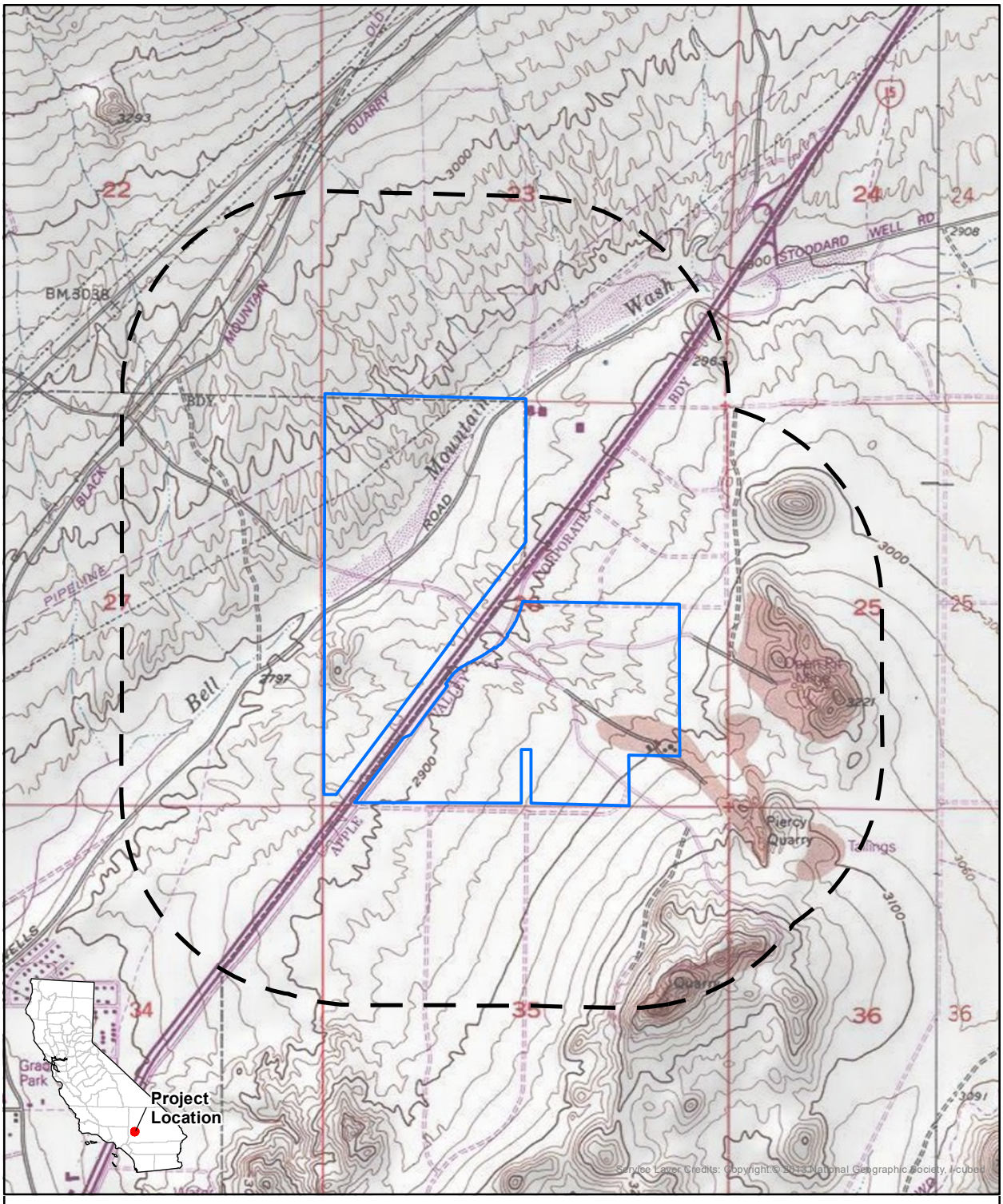

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T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Jessica Mauck, Director of Cultural Resources
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA, 92346
Transmitted via email to Jessica.Mauck@sanmanuelnsn.gov

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Ms. Mauck,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

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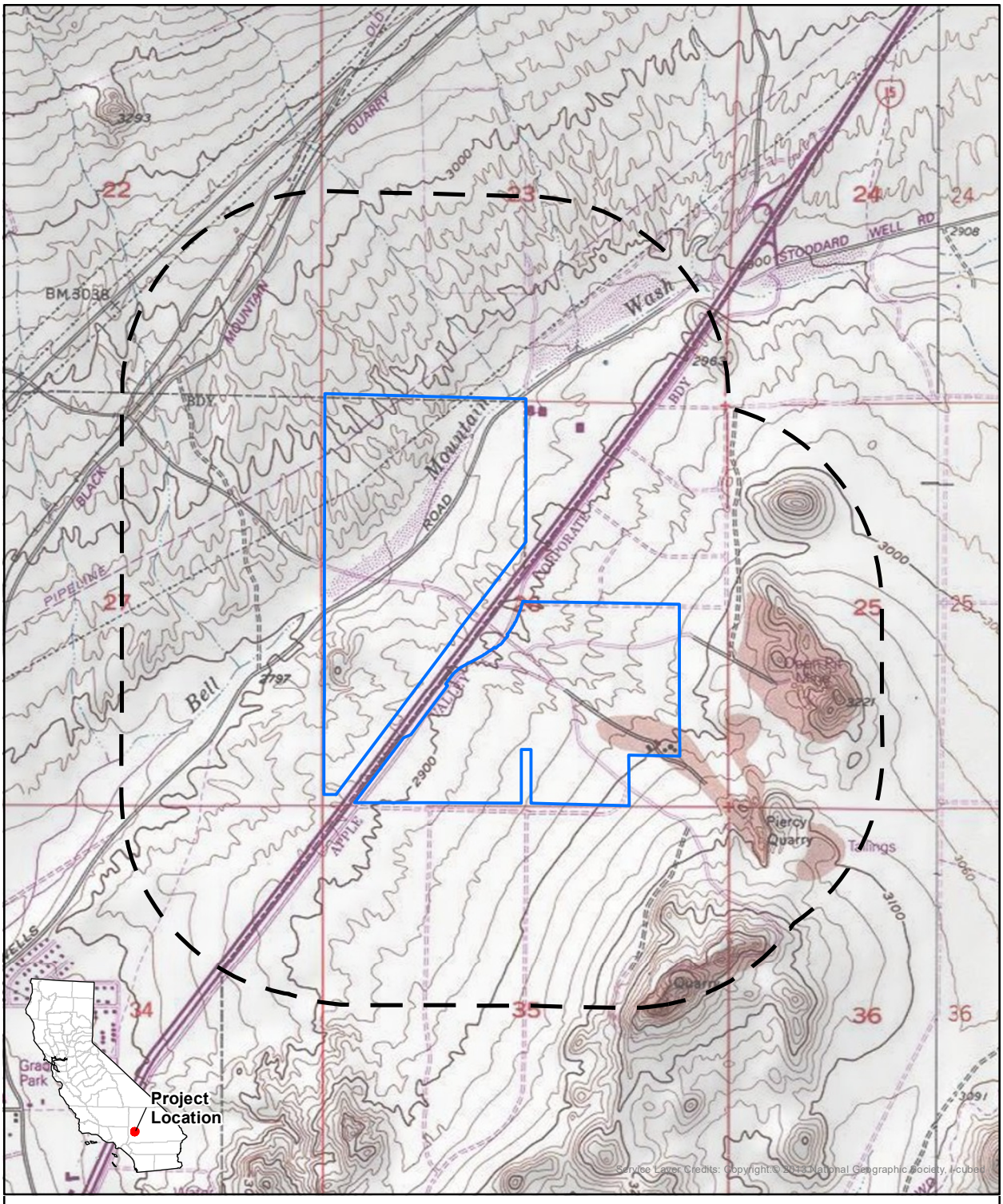

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PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Jill McCormick, Historic Preservation Officer
Quechan Tribe of the Fort Yuma Reservation
P.O. Box 1899
Yuma, AZ, 85366
Transmitted via email to historicpreservation@quechantribe.com

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Ms. McCormick,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

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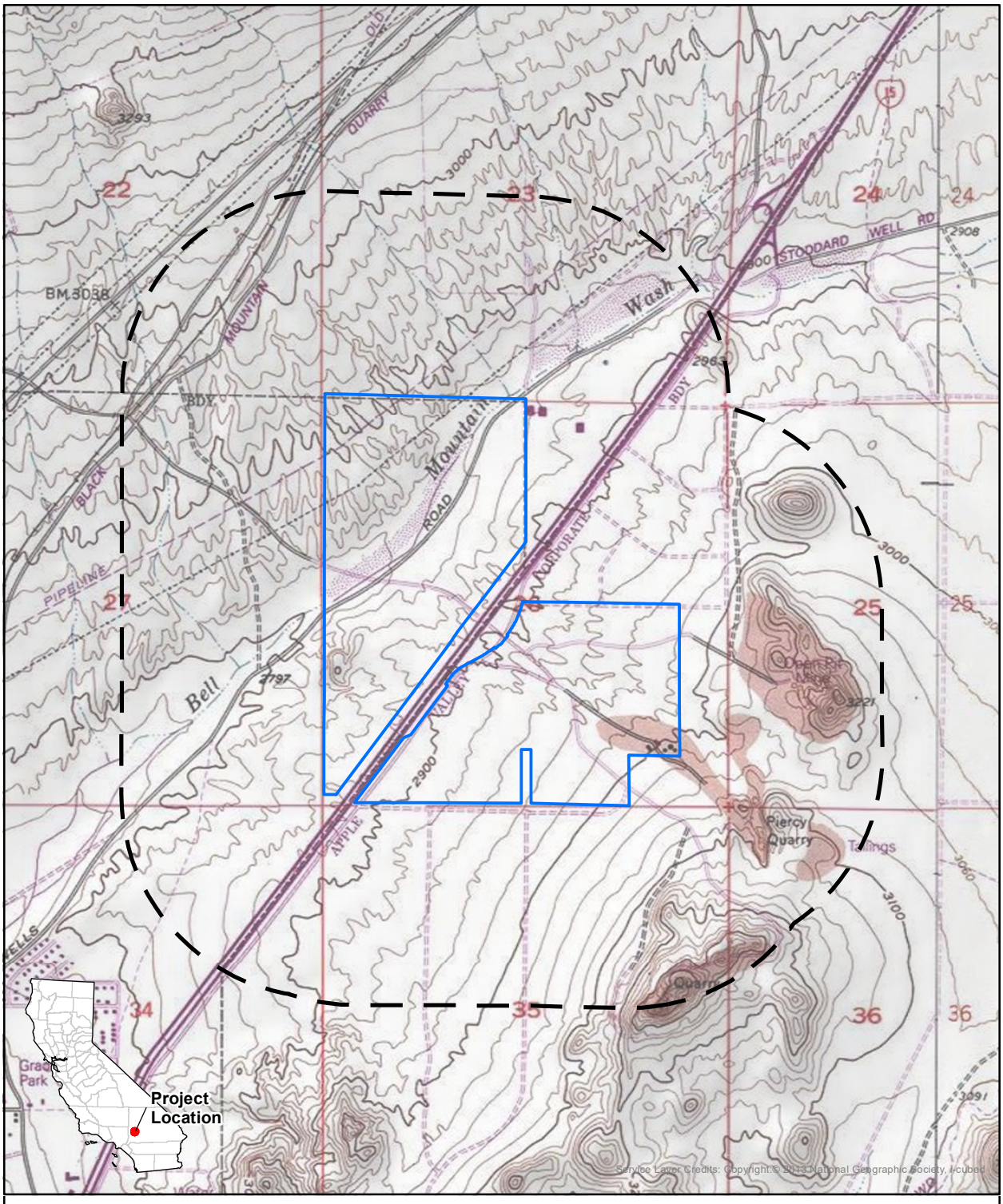

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PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Darrell Mike, Chairperson
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place
Coachella, CA, 92236
Transmitted via email to 29chairman@29palmsbominsn.Gov

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Mr. Mike,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

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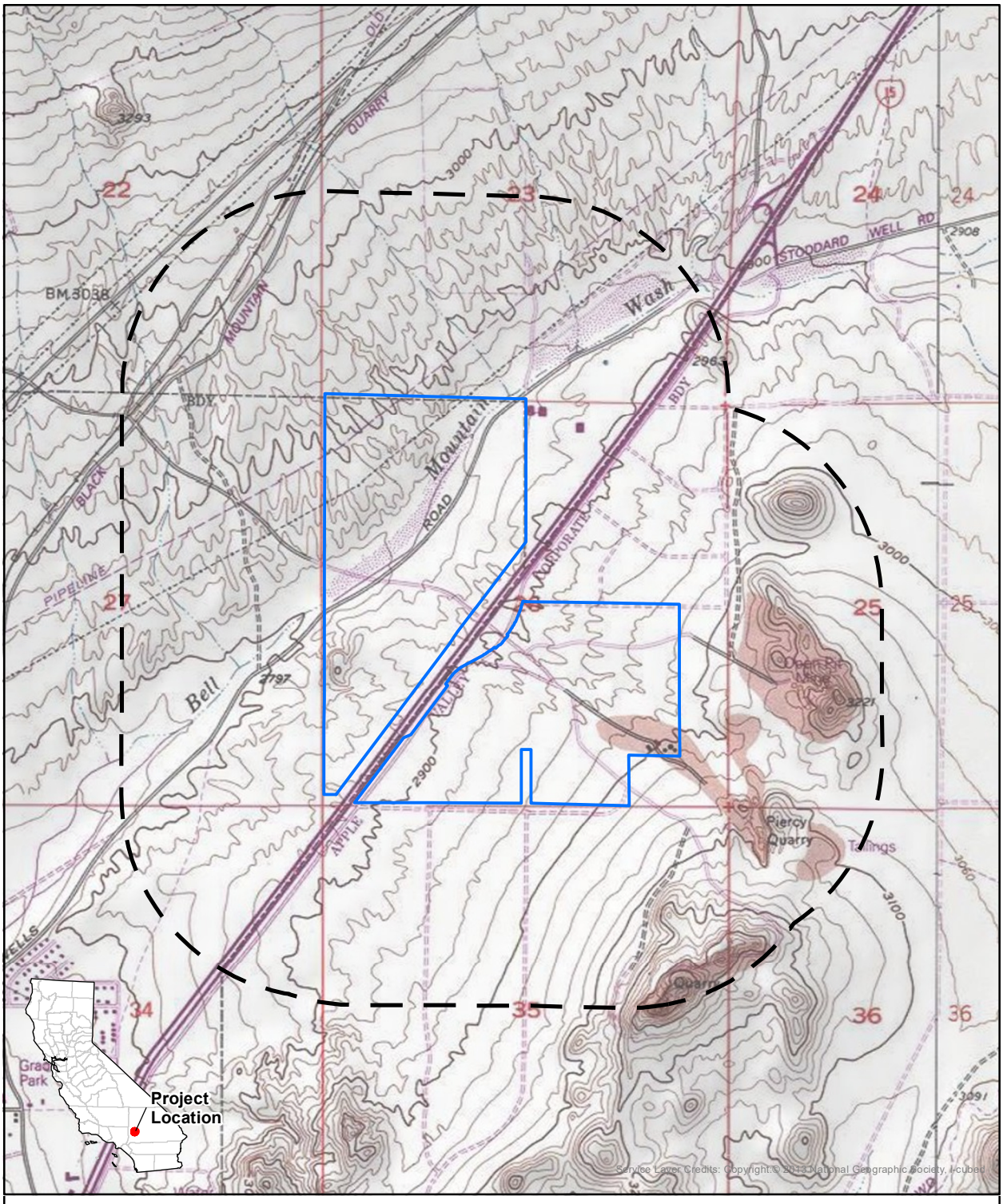

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Project Area

Half Mile Buffer

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Sierra Pencille, Chairperson
Chemehuevi Indian Tribe
P.O. Box 1976 1990 Palo Verde Drive
Havasu Lake, CA, 92363
Transmitted via email to chairman@cit-nsn.gov

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Ms. Pencille,

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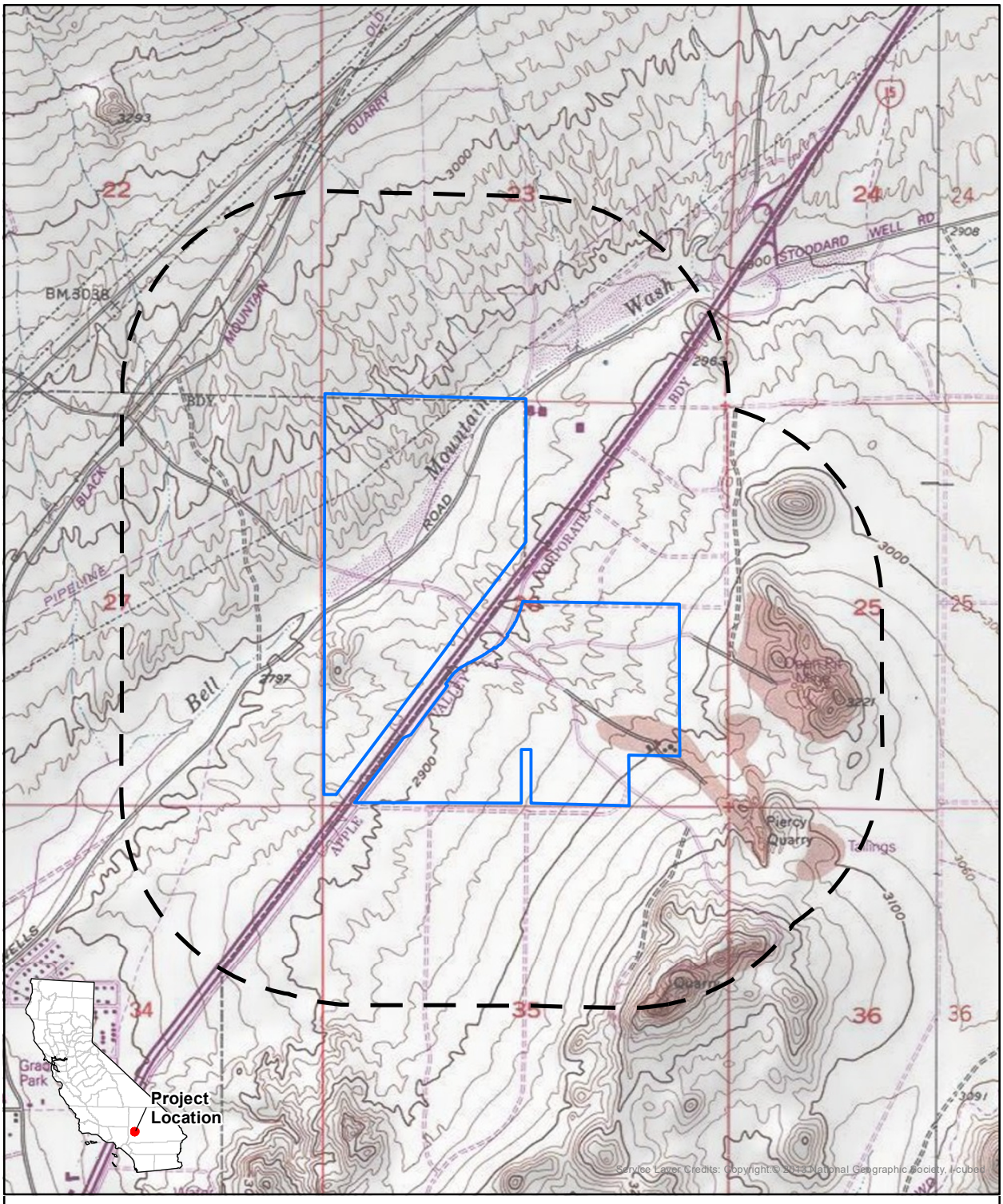

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T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 21, 2022

Robert Robinson, Chairperson
Kern Valley Indian Community
P.O. Box 1010
Lake Isabella, CA, 93240
Transmitted via email to bbutterbredt@gmail.com

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Mr. Robinson,

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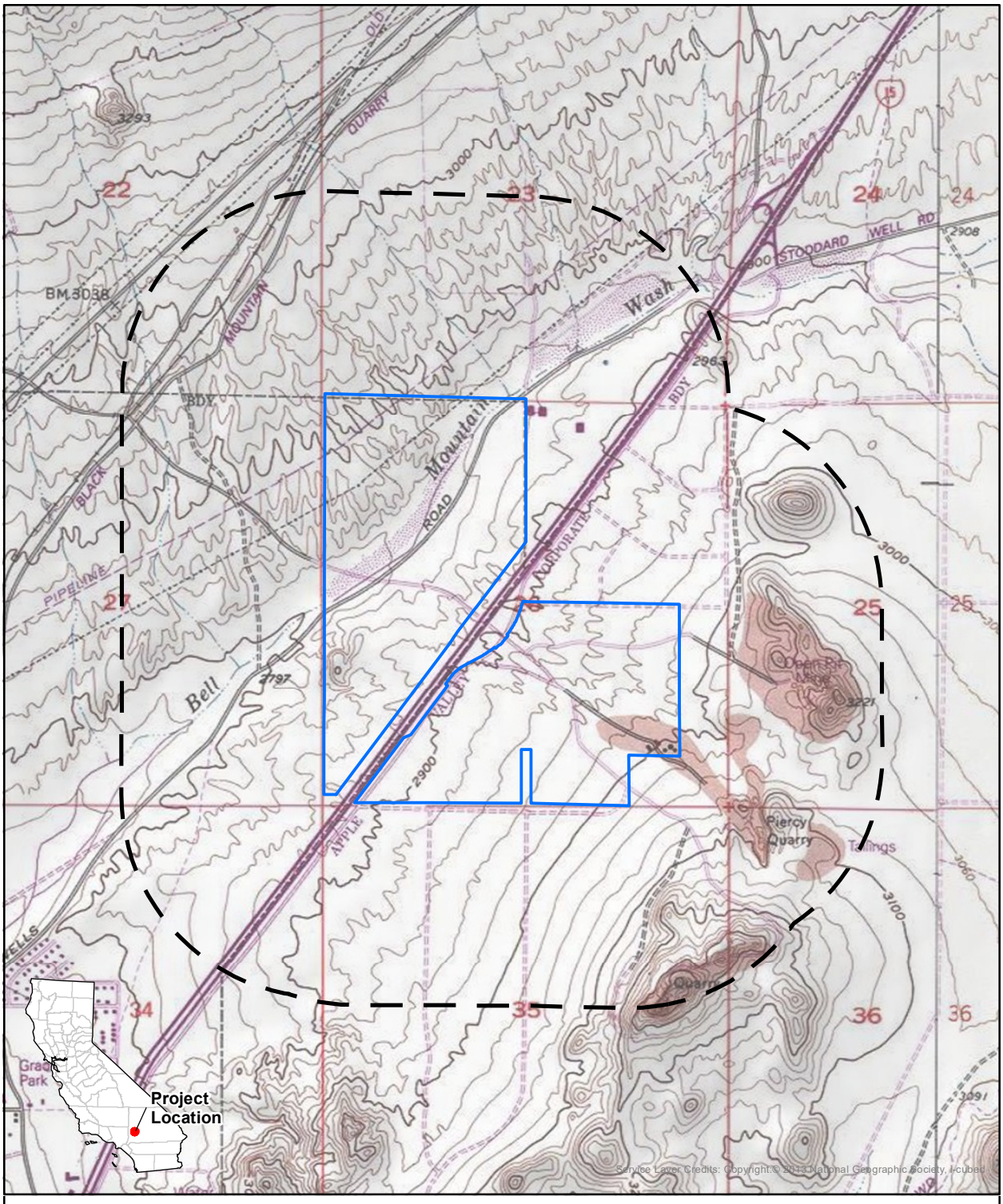

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T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee Quechan Tribe of the Fort Yuma Reservation
P.O. Box 1899
Yuma, AZ, 85366
Transmitted via email to scottmanfred@yahoo.com

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Mr. Scott,

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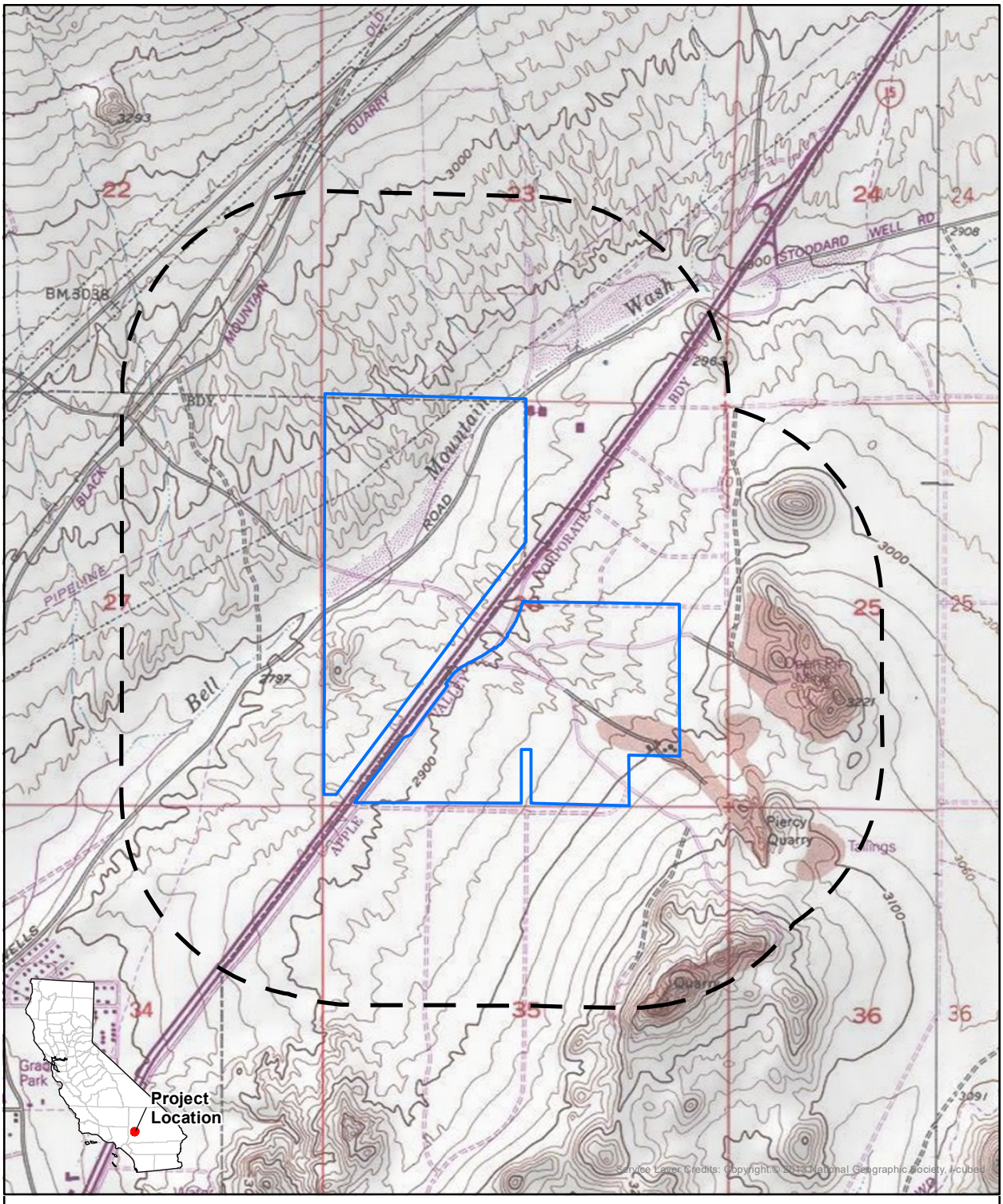

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T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 21, 2022

Julie Turner, Secretary
Kern Valley Indian Community
P.O. Box 1010
Lake Isabella, CA, 93240

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Ms. Turner,

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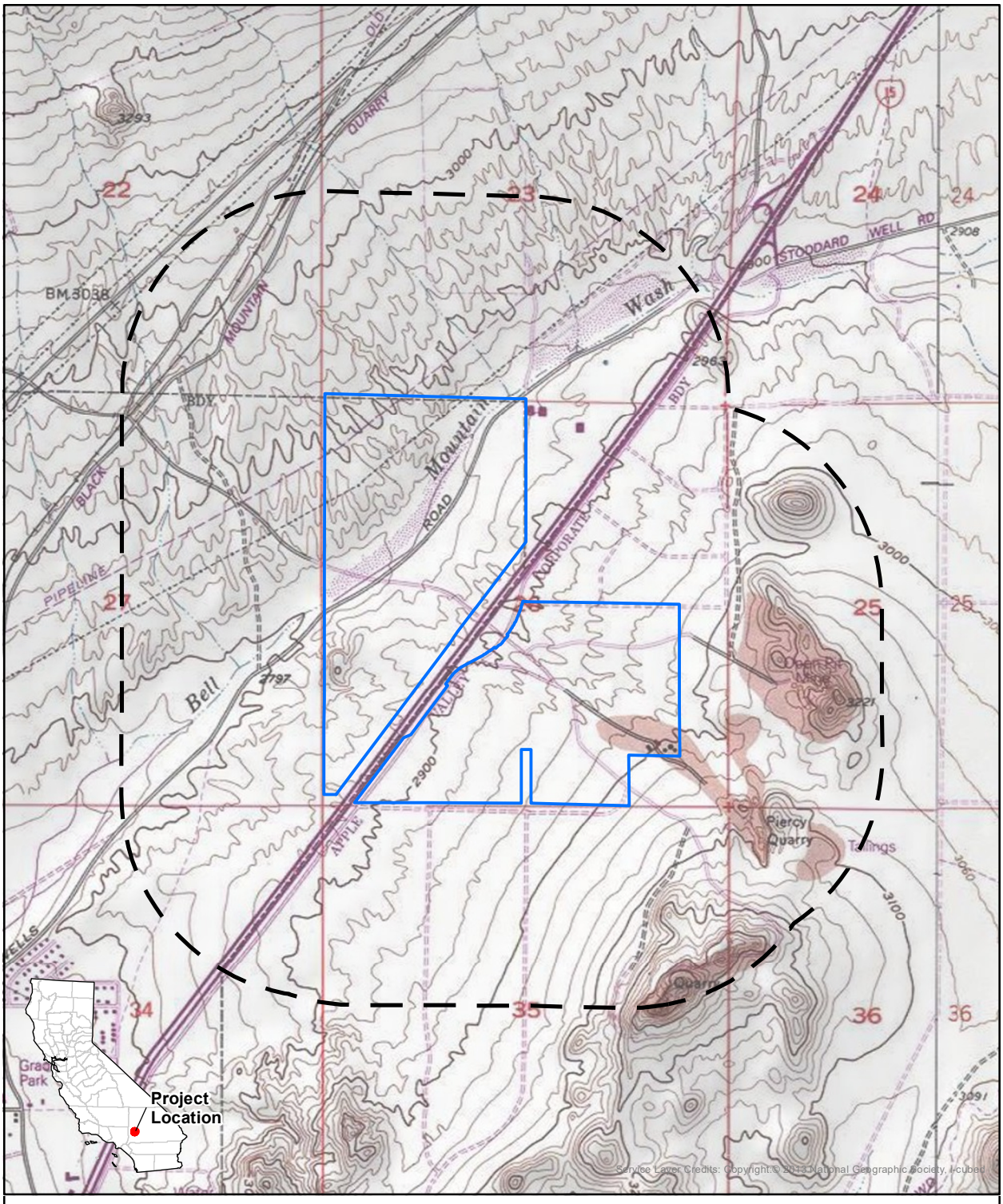
Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

Kyle A. Knabb

Kyle Knabb, Ph.D., RPA
Senior Archaeologist
PaleoWest



PALEO WEST

0 feet 2,000

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RS Request
USGS 7.5' Quadrangle:
Victorville, Ca (1982)
T6N, R4W, Secs 22-27 & 34-26
UTM Zone 11, NAD 83
SBBM

Project Area

Half Mile Buffer

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Wayne Walker, Co-Chairperson
Serrano Nation of Mission Indians
P. O. Box 343
Patton, CA, 92369
Transmitted via email to serranonation1@gmail.com

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Mr. Walker,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

A cultural resource records search and literature review was completed at the South-Central Coastal Information Center (SCCIC) of the California Historical Resource Information System housed at California State University, Fullerton. The records search indicated that thirteen cultural resources were identified within one-half-mile of the Project area. Of the thirteen resources, all of them are comprised of historic-period structures, sites, and isolated artifacts. Nine of these historic-period cultural resources were previously documented within the Project area. No prehistoric resources have been previously documented within the Project area.

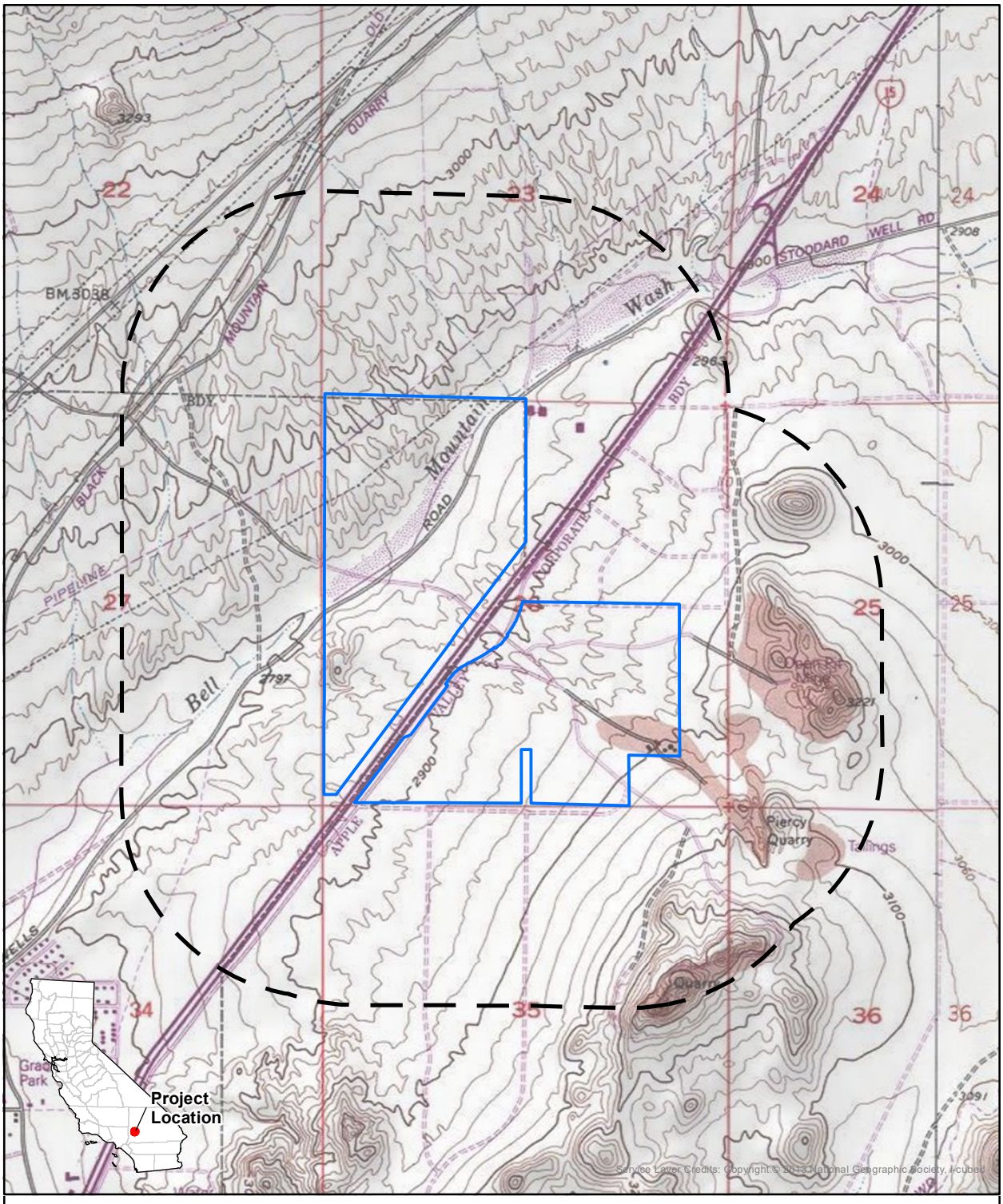
As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File*. The NAHC has not yet responded but it is anticipated that they recommend we contact you for comment. If your records show that cultural resources exist within or near the Project area (see enclosed map), please contact me at (626) 376-6729 or kknabb@paleowest.com.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

Kyle A. Knabb

Kyle Knabb, Ph.D., RPA
Senior Archaeologist
PaleoWest



PALEO WEST

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RS Request
USGS 7.5' Quadrangle:
Victorville, Ca (1982)
T6N, R4W, Secs 22-27 & 34-26
UTM Zone 11, NAD 83
SBBM

Project Area

Half Mile Buffer

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

July 18, 2022

Donna Yocum, Chairperson
San Fernando Band of Mission Indians
P.O. Box 221838
Newhall, CA, 91322
Transmitted via email to ddyocum@comcast.net

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Ms. Yocum,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

A cultural resource records search and literature review was completed at the South-Central Coastal Information Center (SCCIC) of the California Historical Resource Information System housed at California State University, Fullerton. The records search indicated that thirteen cultural resources were identified within one-half-mile of the Project area. Of the thirteen resources, all of them are comprised of historic-period structures, sites, and isolated artifacts. Nine of these historic-period cultural resources were previously documented within the Project area. No prehistoric resources have been previously documented within the Project area.

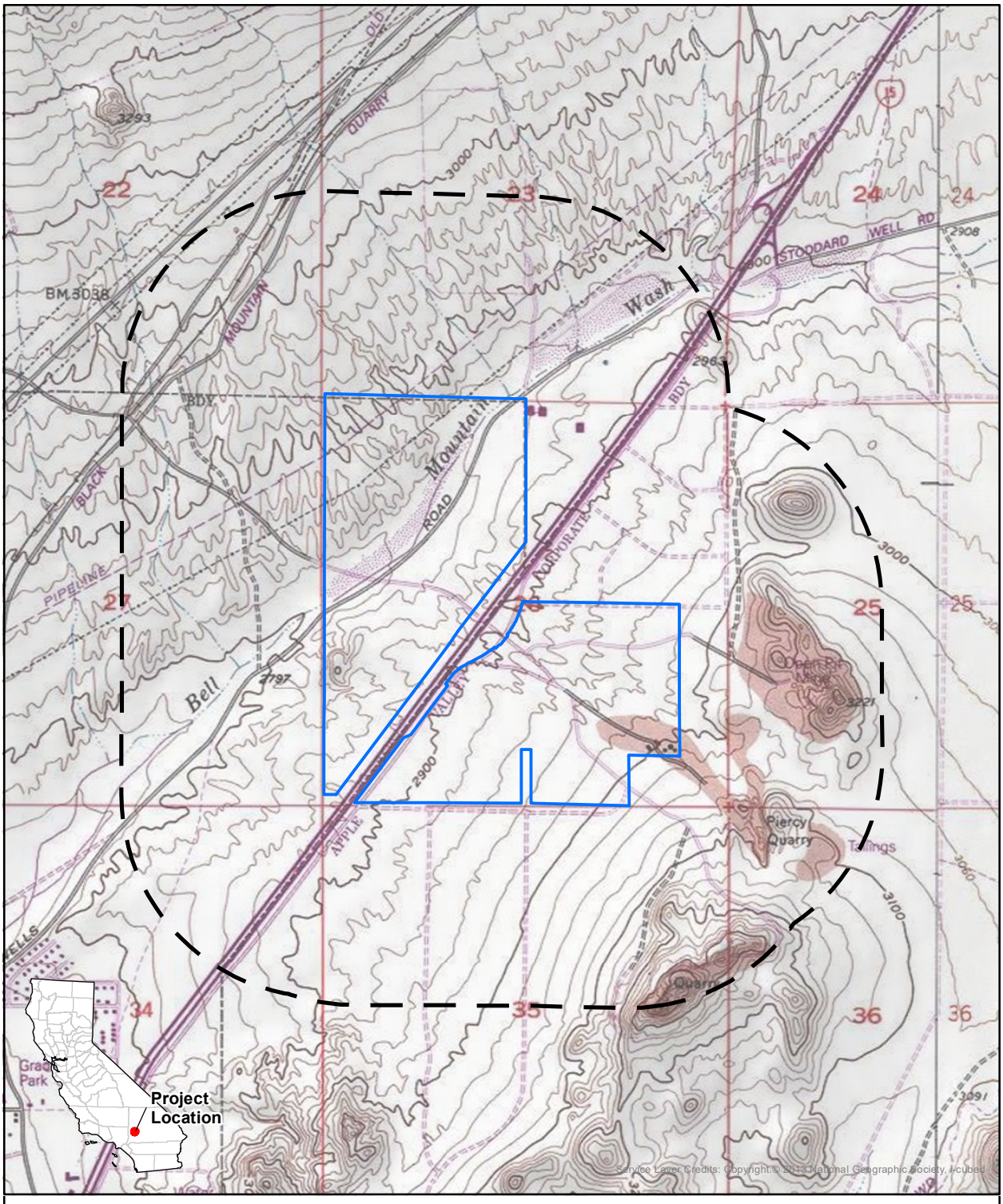
As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File*. The NAHC has not yet responded but it is anticipated that they recommend we contact you for comment. If your records show that cultural resources exist within or near the Project area (see enclosed map), please contact me at (626) 376-6729 or kknabb@paleowest.com.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

Kyle A. Knabb

Kyle Knabb, Ph.D., RPA
Senior Archaeologist
PaleoWest



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0 meters 500

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RS Request
USGS 7.5' Quadrangle:
Victorville, Ca (1982)
T6N, R4W, Secs 22-27 & 34-26
UTM Zone 11, NAD 83
SBBM

Project Area

Half Mile Buffer

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

August 25, 2022

Glen Lodge, Chairperson
Chemehuevi Indian Tribe
P.O. Box 1976 1990 Palo Verde Drive
Havasu Lake, CA, 92363
Transmitted via email to chairman@cit-nsn.gov

RE: Cultural Resource Investigation for the Carney Commerce Center Project, City of Victorville and City of Apple Valley, San Bernardino County, California

Dear Chairperson Lodge,

PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation for the Carney Commerce Center Project (Project) in the City of Victorville and City of Apple Valley, San Bernardino County, California. The Project is located within Section 26, Township 6 North, Range 4 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Victorville, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (see attached map). The Project area lies within APNs 0472-031-60, -61, -62, -63, -64, and -65 (Victorville), and 0472-031-08 (Apple Valley) totaling approximately 397 acres. The Project is subject to the California Environmental Quality Act and the Cities of Victorville and Apple Valley is the Lead agency.

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As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File*. The NAHC has not yet responded but it is anticipated that they recommend we contact you for comment. If your records show that cultural resources exist within or near the Project area (see enclosed map), please contact me at (626) 376-6729 or kknabb@paleowest.com.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

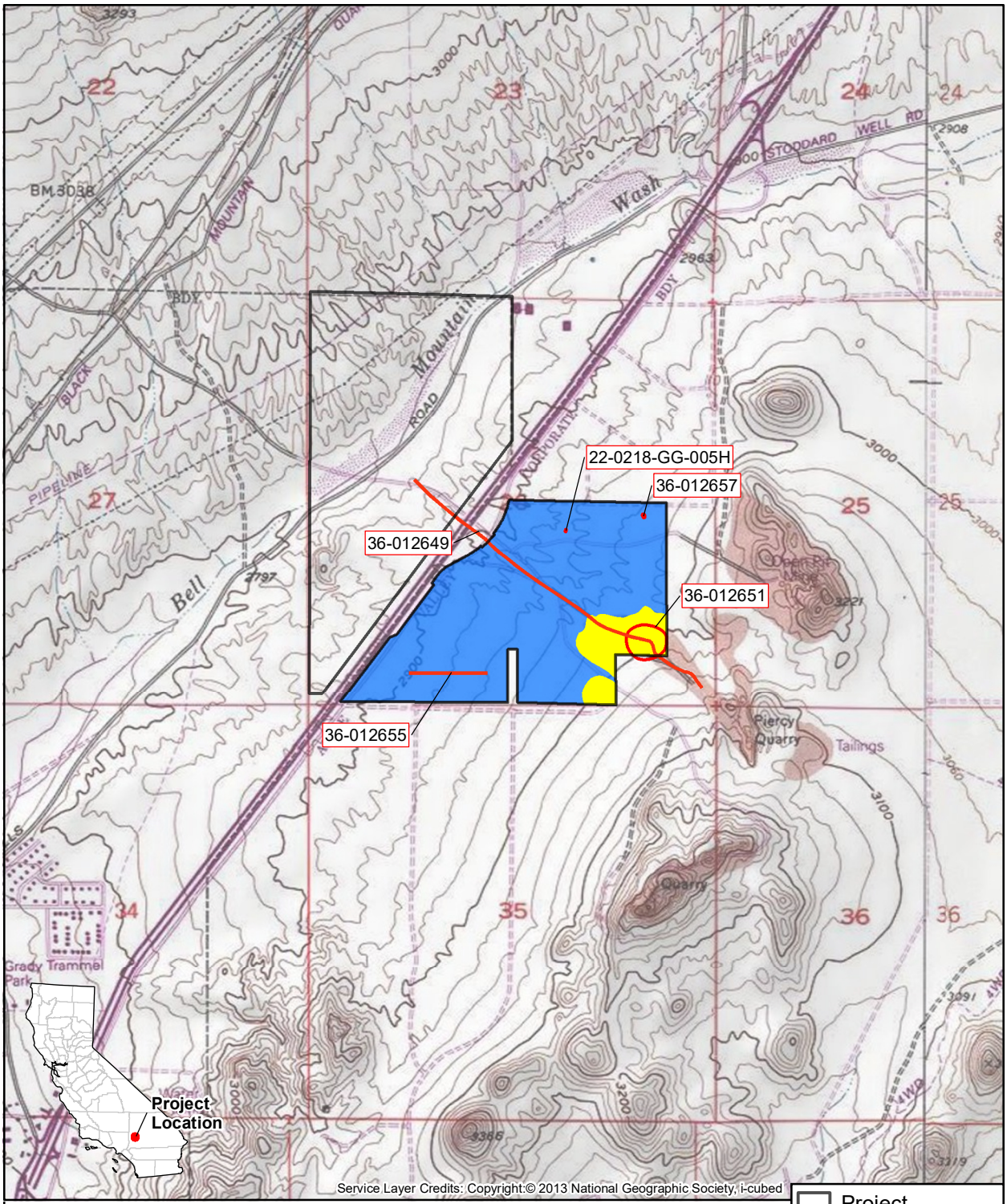
Kyle A. Knabb

Kyle Knabb, Ph.D., RPA
Senior Archaeologist
PaleoWest

Native American Contact/Response Matrix			
Recommended Contacts (Name and Tribal Affiliation)	Initial Contact	Follow up Attempts	Comments/Notes
Sierra Pencille, Chairperson Chemehuevi Indian Tribe P.O. Box 1976 1990 Palo Verde Drive Havasu Lake, CA, 92363	Email sent 7/18	Email sent 8/25	Sierra Pencille no longer Chairperson of Chemehuevi Indian Tribe. Newest Chairperson is Glen Lodge. Requested by assistant to follow up via email. No additional response received.
Ann Brierty, THPO, Morongo Band of Mission Indians 12700 Pumarra Road Banning, CA, 92220	Email sent 7/18	Called, Left Message 8/25	N/A
Robert Martin, Chairperson Morongo Band of Mission Indians 12700 Pumarra Road Banning, CA, 92220	Email sent 7/18	Called, Left Message 8/25	N/A
Jill McCormick, Historic Preservation Officer, Quechan Tribe of the Fort Yuma Reservation P.O. Box 1899 Yuma, AZ, 85366	Email sent 7/18	NA	Email received on 7/19/22 from Tribe's Historic Preservation Officer stating that the Tribe does not have any comments on the Project and defers to more local Tribes for decisions regarding the Project.
Manfred Scott, Acting Chairman Kw'ts'an Cultural Committee Quechan Tribe of the Fort Yuma Reservation P.O. Box 1899 Yuma, AZ, 85366	Email sent 7/18	NA	See above.
Donna Yocum, Chairperson San Fernando Band of Mission Indians P.O. Box 221838 Newhall, CA, 91322	Email sent 7/18	Called, Left Message 8/25	N/A
Jessica Mauck, Director of Cultural Resources San Manuel Band of Mission Indians 26569 Community Center Drive Highland, CA, 92346	Email sent 7/18	Called, Left Message 8/25	N/A

Native American Contact/Response Matrix			
Recommended Contacts (Name and Tribal Affiliation)	Initial Contact	Follow up Attempts	Comments/Notes
Wayne Walker, Co-Chairperson Serrano Nation of Mission Indians P. O. Box 343 Patton, CA. 92369	Email sent 7/18	Called, Left Message 8/25	N/A
Mark Cochrane, Co-Chairperson Serrano Nation of Mission Indians P. O. Box 343 Patton, CA. 92369	Email sent 7/18	Called, spoke with MC 8/25	Mark Cochrane requested that we notify him and his brother, Wayne Walker, in the event of any cultural materials being found.
Darrell Mike, Chairperson Twenty-Nine Palms Band of Mission Indians 46-200 Harrison Place Coachella, CA, 92236	Email sent 7/18	Called, Left Message 8/25	N/A
Anthony Madrigal, Tribal Historic Preservation Officer Twenty-Nine Palms Band of Mission Indians 46-200 Harrison Place Coachella, CA, 92236	Email sent 7/18	Called, spoke with AM 8/25	Informed us that Assistant Sarah Bles will be reaching out to us via email regarding this Project. No additional response received.
Robert Robinson, Chairperson Kern Valley Indian Community P.O. Box 1010 Lake Isabella, CA, 93240	Email sent 7/21/22	Called, spoke with RR 8/25	RR responded via telephone on 8/25 and stated that the tribe has concerns regarding the proposed projects. Both portions of the Project area are in areas with a high probablilty habitation sites occuring there, and the area has a high sensitivity. He recommends archaeological and tribal monitoring during gound disturbing construction activities.
Julie Turner, Secretary Kern Valley Indian Community P.O. Box 1010 Lake Isabella, CA, 93240	Sent via USPS 7/22/22	Called, Left Message 8/25	N/A
Brandy Kendricks Kern Valley Indian Community 30741 Foxridge Court Tehachapi, CA, 93561	Email sent 7/21/22	Called, Left Message 8/25	N/A

Appendix B.
Confidential Resource Location Map



PALEO WEST

0 feet 2,000

0 meters 500

1:24,000

Survey Results
USGS 7.5' Quadrangle:
Victorville, CA (1982)
T6N, R4W, Sec 26
UTM Zone 11, NAD 83
SBBM

- Project
- Apple Valley Jurisdiction
- Not Accessible
- Site Boundary

For Official Use Only. Public Disclosure of Archaeological Site Locations is Prohibited (54 USC 307103)

Appendix C. Confidential Department of Parks and Recreation Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI#
Trinomial
NRHP Status Code **Not Eligible**
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 5 ***Resource Name or #:** 22-0218-GG-005H
P1. Other Identifier:
***P2. Location:** ☒ **Not for Publication** ☐ **Unrestricted**
***a. County** San Bernardino **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
*b. **USGS 7.5' Quad** Victorville, CA **Date** 1982 **T** 6N **R** 4W **;** NW **1/4 of** SE **1/4 of Sec** 26 **;** SBB **B.M.**
c. Address City Victorville, CA Zip
d. UTM: Zone 11 475566 mE; 3826276 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
From I-15 exit Stoddard Wells Road and use dirt roads to natigate to site location.

***P3a. Description:** Site 21-0218-GG-005H is a historic period refuse scatter that measures 11 by 30 ft. The site consists of a scatter of historic glass with five green, amber, and colorless liquor/beer bottle bases. The amber bottle base is embossed with an Owens Illinois maker's mark indicating a manufacturing date of 1933. A colorless bottle base is embossed with a Puerto Rico Glass Corporation maker's mark, which was in operation between 1945 and ca. 1980. The site is on the north bank of a small, unnamed wash and about 80 ft north of an east-west oriented off-highway vehicle trail that was created between 1952 and 1968.

***P3b. Resource Attributes:** AH4. Privies/dumps/trash scatters
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo: Site overview; north, 8/30/2022, IMG_001

***P6.Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
Bottle bases with makers marks

***P7. Owner and Address:** Private land

***P8.Recorded by:** GES and NI

PaleoWest 517 S. Ivy Avenue Monrovia, CA 91016

***P9. Date Recorded:** 8/30/2022

***P10. Survey Type:** Pedestrian

***P11. Report Citation:** McDougall, Dennis, Gena Severen, and Kyle Knabb. Cultural Resource Investigation in Support of the Inland Empire North Logistics Center Project, City of Victorville, San Bernardino County, California

***Attachments**: ☐ NONE ☒ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☒ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☒ Photograph Record ☐ Other (List):

ARCHAEOLOGICAL SITE RECORD

***A1. Dimensions: a. Length:** 11 ft (E/W) **x b. Width:** 30 ft (N/S)
Method of Measurement: ☐ Paced ☐ Taped ☐ Visual Estimate ☐ GPS ☒ GIS Other: GIS
Method of Determination: ☒ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut Bank
☐ Animal Burrow ☐ Excavation ☐ Property Boundary Other: Artifacts

Reliability of Determination: ☒ High ☐ Medium ☐ Low Explain:

Limitations: ☐ Restricted Access ☐ Paved/built over ☐ Site limits incompletely defined ☒ Disturbances ☐ Vegetation
Other: Disturbances

A2. Depth: ☒ None ☐ Unknown Method of Determination: Archaeological survey
***A3. Human Remains:** ☐ Present ☐ Absent ☐ Possible ☒ Unknown Method of Determination: Archaeological survey

***A4. Features:** None

***A5. Cultural Constituents:** Resource is a historic glass scatter comprised of five glass bottle bases. A1: "James Buchanan & Co." "Glascow Scotland" (3 1/8 in D, green); A2 and A3: "Gallo Flavor Guard Bottle" bottle bases (4 1/16 in D, green); A4: Owens Illinois makers mark with "20" on left side and "3" on right side, "4A" below and "20153-GB" below that (3 in D, amber), and A5: rectangular glass bottle base with "RONRICO CORP." "ARECIBO. P.R.", "702" "63" with a interlocking "PRG" as makers mark (1 1/2 in thick, length is fractured, colorless).

***A6. Were Specimens Collected?:** ☐ Yes ☒ No
***A7. Site Condition:** ☐ Good ☒ Fair ☐ Poor (Describe disturbances.): Resource lies on north bank of wash and appears to be in context.
***A8. Nearest Water:** Bell Mountain Wash 2400 ft to NW
***A9. Elevation:** 2930 ft
A10. Environmental Setting: Soils in the area are more silty with finer sands and higher concentrations of calcium (changes in soils are likely due to presence of lime mine SE of the resource). Vegetation is comprised of creosote, sage brush and cheese bush, sparse Joshua trees, and sparse cholla.
A11. Historical Information:

***A12 Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1914-1945 ☒ Post 1945 ☐ Undetermined

A13. Interpretations:

A14. Remarks:

A15. References:

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):

Original Media/Negatives Kept at: PaleoWest, LLC
***A17. Form Prepared by:** Gena Severin **Date:** 8/30/2022
Affiliation and Address: PaleoWest 517 S. Ivy Avenue Monrovia, CA 91016



Site overview; north, 8/30/2022, IMG_001



Example of James Buchanan green bottle base; plan, 8/30/2022, IMG_002



Example of green glass Gallo bottle base; plan, 8/30/2022, IMG_003



Amber bottle base; plan, 8/30/2022, IMG_004



Colorless glass liquor bottle base; plan, 8/30/2022, IMG_005

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

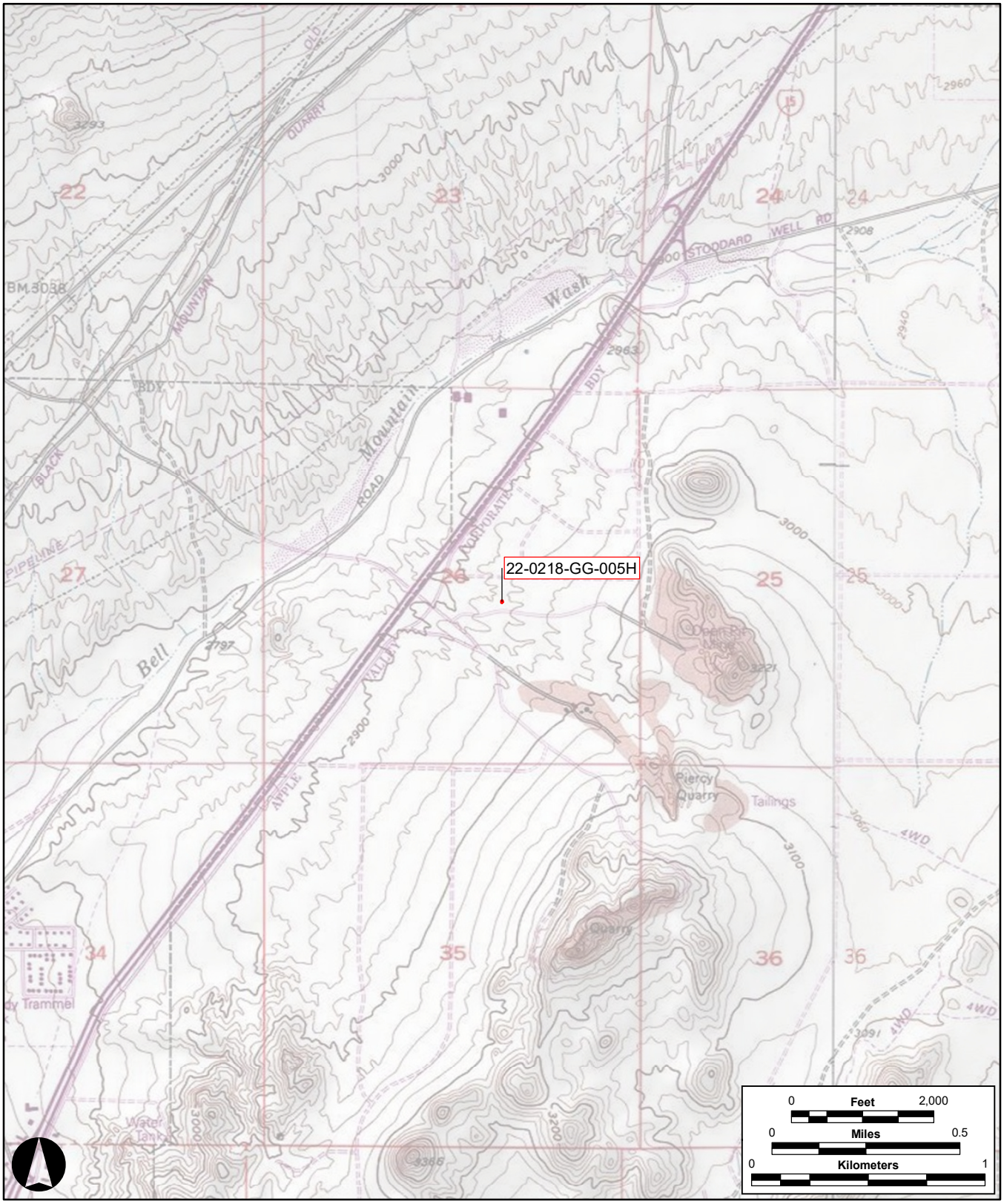
LOCATION MAP

Primary
HRI

Trinomial

Page 4 **of** 5 **Resource Name or #:** 22-0218-GG-005H **Scale:** 1:24,000

Map Name: Victorville, CA (1982), 7.5' USGS Quad. **Date:** 2022



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

***Resource Name or #:** 22-0218-GG-005H

***Drawn by:** B. Spelts

***Scale:** 1:250

***Date of map:** August 2022



*Required information

P-36-012649 was previously described as a 0.6-mil-long realignment of the Victorville Lime Rock Company and Riverside Cement Company access road, which was substantially altered by the construction of I-15 (Hatheway 2006; Peterson 2014). PaleoWest revisited the resource during the current survey. The portion of P-36-012649 located west of the I-15 consists of a 20-ft-wide dirt road that runs in a northwest-southeast direction from the edge of the California Department of Transportation right-of-way for a distance of approximately 900 ft to terminate at Quarry Road. The condition of the road has not changed since its documentation in 2014. The condition of the road does not appear to have changed since its original documentation.

***Recorded by:** GES and NI ***Date:** 8/31/2022 ☐ Continuation ☒ Update

Site P-36-012651 consists of the remnants of the Victorville Lime Rock Company Mining Quarry and Plant that was in operation between 1940 and 1985. At the time of its initial recordation, the site included 11 building foundations and one metal storage building (Hatheway 2006). The metal storage building appeared to have been constructed in the mid-1980s.

PaleoWest attempted to revisit P-36-012651 during the current survey and found that access to the resource is limited, as the adjacent CalPortland mine is active. Haul trucks were observed running loads in and out of the facility and live explosions were heard, prompting surveyors to maintain a safe distance. Large earthen berms prevented visual inspection from a distance. Although the resource could not be revisited during the pedestrian survey, aerial photographs of the area were examined to assess the current condition of the resource. Aerial images dated to June 2022 indicate that while several building foundations and the metal storage structure are still present, additional clearance and/or grading appears to have occurred within the site's boundaries.

***Recorded by:** GES and NI ***Date:** 8/31/2022 ☐ Continuation ☒ Update

This resource was originally recorded in 2006 by R. Hatheway as the access road to Old Stone Lime Kiln/Quarry. The resource was recorded originally as the remains of a dirt roadway alignment that led from Stoddard Wells Road in a generally southeasterly direction to an historic limestone mining complex. The resource was updated in 2011 by Chmiel et al., who noted that the small segment of the resource was surveyed from where it intersects with Frontage Road and the I-15 and that no changes had been noted since the original recordation. The resource was updated again in 2014 by Peterson, who noted that the original alignment was substantially altered by the California Division of Highways in 1957/1958, during the construction of the Interstate-15 Freeway between Victorville and Barstow. In effect, the historic roadway was cut-off by the freeway, and a new haul road was built to connect through a freeway underpass to Stoddard Wells Road. Additionally, Peterson noted that the small segment of the access road was revisited where it intersects with Frontage Road and I-15 and that it has not changed since it was originally recorded.

PaleoWest archaeologists attempted to relocate a segment of the resource that lies south of Norco Street and north of an unnamed two track road south of Norco Street. The segment of the resource as originally mapped was revisited and the resource was not relocated. There was no evidence of the original alignment in the area. A segment of the resource west of I-15 was also surveyed and not relocated

Site P-36-012655 was originally described as a set of individual power poles that have been cut down and abandoned (Hatheway 2006). Cross trees and insulators were no longer attached to the poles, but three were located nearby. The powerline was built circa 1940 as part of the construction of the Victorville Lime Rock Company Mining Quarry and Plant. It provided power the mining complex (quarry and crusher) and replaced in 1975 by a new powerline. PaleoWest revisited the site during the current survey and found that the power poles, cross tress, and insulators are in similar condition as the original documentation in 2006.

Site P-36-012657 was originally described as a small, single-event refuse scatter consisting of household debris dating to the mid-1950s (Romani and Keith 2006). The site consisted of approximately 70 glass bottles and metal food tins, most of which were concentrated in a 10 by 10 ft area. PaleoWest revisited the site and found the refuse deposit to be in the same condition as previously recorded.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary
HRI

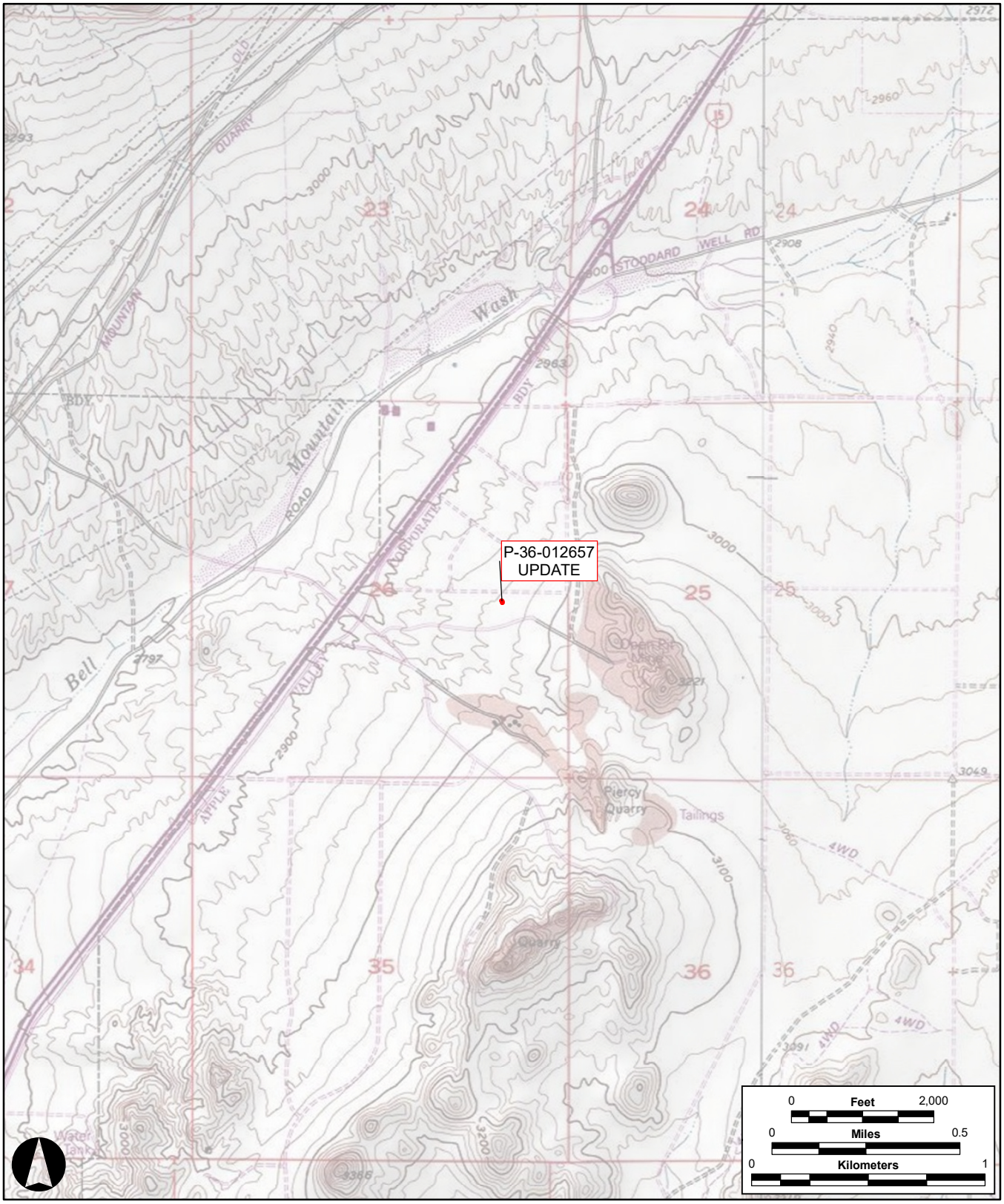
Trinomial

Resource Name or #: P-36-012657 UPDATE

Scale: 1:24,000

Map Name: Victorville, CA (1982), 7.5' USGS Quad.

Date: 2022



Appendix E

Paleontological Resources Assessment

PALEOWEST

T: 909.283.7533
F: 602.254.6280
info@paleowest.com

REDLANDS, CALIFORNIA
301 9th Street, Suite 114
Redlands, CA 92374

January 5, 2023

Jessica Haughton
Synergy Consulting, CA
410 Patti Ann Woods Drive
Henderson, Nevada 89002
Transmitted via email to jhaughton@synergyconsultingca.com

RE: Paleontological Resource Assessment for the Inland Empire North Logistics Center Project, Town of Apple Valley, San Bernardino County, California

Dear Jessica Haughton,

At the request of Synergy Consulting CA, PaleoWest, LLC (PaleoWest) conducted a paleontological resource assessment for the Inland Empire North Logistics Center Project (Project) in the Town of Apple Valley, San Bernardino County, California. The goal of the assessment was to identify the geologic units that may be impacted by the development of the Project, determine the paleontological sensitivity of geologic units within the Project area, assess the potential for impacts to paleontological resources from the development of the Project, and recommend mitigation measures to avoid or mitigate impacts to scientifically significant paleontological resources, as necessary.

This paleontological resource assessment included a fossil locality records search conducted by the Natural History Museum of Los Angeles County (NHMLA). The records search was supplemented by a review of existing geologic maps and primary literature regarding fossiliferous geologic units within the proposed Project vicinity and region. This technical memorandum, which was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP) (2010), has been prepared to support environmental review under the California Environmental Quality Act (CEQA). It is the understanding of PaleoWest that the Town of Apple Valley is acting as the CEQA lead agency for the portion of the Project located within its jurisdiction; the city of Victorville is the CEQA lead agency for the portion of the Project within its jurisdiction

PROJECT LOCATION AND DESCRIPTION

The proposed Project involves the development of a warehouse complex. The Project area encompasses approximately 82 acres of vacant land within Assessor's Parcel Numbers (APNs) 0463-213-05, -07, -08, -09, -16, -33, -34, -35, and -36 in the town of Apple Valley in San Bernardino County, California (Figure 1). The Project area is bounded to the north by Cardova Road, to the west by Dachshund Avenue, to the south by Shepard Road, and to the east by Navajo Road. The Project area is within the southeastern quarter of Section 16 of Township (T) 6 North (N), Range (R) 3 West (W), San Bernardino Baseline and Meridian (SBBM), as depicted on the 1975 Apple Valley North, California 7.5-minute U.S. Geological Survey (USGS)



Figure 1. Project vicinity map.

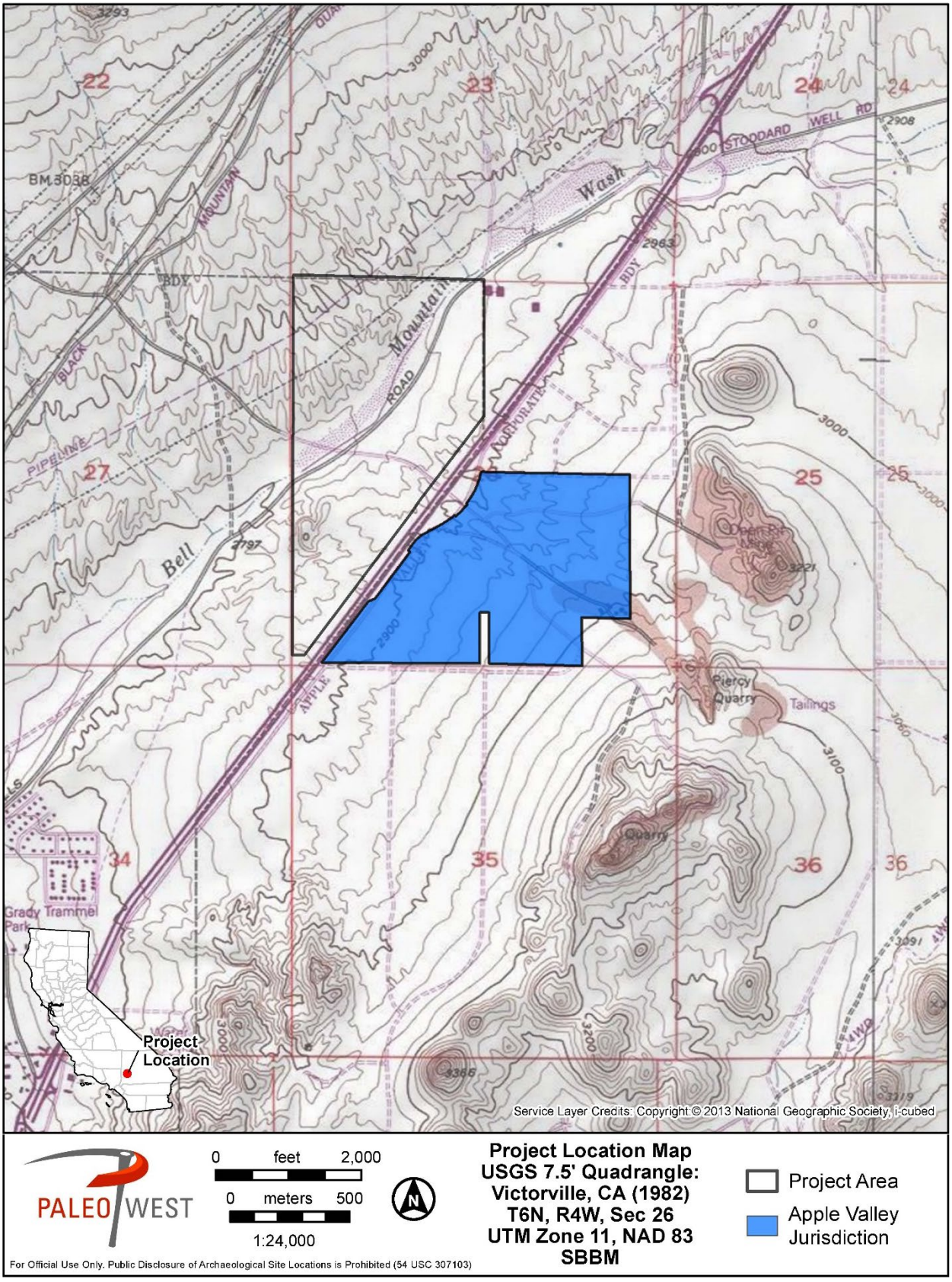


Figure 2. Project location map, , highlighting the portion of the Project in Apple Valley jurisdiction.

topographic quadrangle map (Figure 2). The elevation of the Project area ranges from approximately 3,060–3,080 feet (ft) above mean sea level (amsl).

REGULATORY CONTEXT

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because, once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws and regulations. Laws pertinent to this Project are discussed below.

STATE LAWS AND REGULATIONS

California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their Projects on any object or site of significance to the scientific annals of California (Division I, California Public Resources Code [PRC] Section 5020.1 [j]). Appendix G in Section 15023 provides an Environmental Checklist of questions (Section 15023, Appendix G, Section XIV, Part A) that includes the following: "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?"

CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has provided guidance specifically designed to support state and Federal environmental review. The SVP broadly defines significant paleontological resources as follows (SVP, 2010:11):

> "Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)."

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important and therefore considered significant.

California Public Resources Code

Section 5097.5 of the Public Resources Code (PRC) states:

> "No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this PRC section, 'public lands' means lands owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof."

Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

LOCAL

The Town of Apple Valley General Plan (Town of Apple Valley 2009), Chapter III: Environmental Resources, states the following:

> "The potential for geological formations to produce fossils is evaluated based on what fossil resources have been produced in the past at other nearby locations of similar geologic composition. There are substantial exposures of Mesozoic-age (65,000,000 to 245,000,000 years ago) rocks in more elevated portions of the Town that may contain no fossils. Shallow grading of younger Quaternary alluvium that occurs throughout most of the area is not likely to reveal significant fossil remains. Potential for the presence of significant non-renewable paleontological resources exists where surface or subsurface Pleistocene-age (1,808,000 to 11,550 years ago) soils occur in the planning area. High priority is also given to older sediments along the Mojave River and at unknown depth below the surface.
>
> Based on research of surface deposits, the soils in the planning area, which are relatively young, have a low potential for containing significant fossil remains. Surface deposits may in some areas constitute only a "veneer cover" that directly overlays older sediments; however, research indicates that no fossils have been reported in Town. Reports have, however, identified localities with fossil resources of an age that is similar soil deposits to those that occur in the Town and Sphere of Influence. In the overall, research indicates that there is a range of likelihood from low to high of encountering paleontological resources during future development projects; as discussed above, the potential depends on the location and sediments encountered."

The City of Victorville General Plan (City of Victorville 2018) establishes that Victorville shall have the characteristic of "[p]reservation of important archaeological, historical, and paleontological resources." In addition, it also states the following about the Planning Area, which includes the Project area:

> "All of the Planning Area, excepting those areas above the 2,985 foot contour or below the 2,727 foot contour, is located upon fossil bearing strata. The entire Planning Area is considered to be sensitive regarding paleontological resources due to the existence of recovery sites throughout."

In addition, Goal #5: Preservation of important cultural resources, of the General Plan establishes the following with the goal to "Protect identified archeological, paleontological resources, and historic resources in the Planning Area":

Objective 5.1: Preserve known and expected cultural resources.

Policy 5.1.1: Determine presence/ absence of and consider impacts to cultural resources in the review of public and private development and infrastructure projects.

Implementation Measure 5.1.1.4: Complete a Planning Area-wide assessment of the paleontological sensitivity based on a review of geologic formations and a review of paleontological records that identify those formations that have yielded or are expected to yield fossil materials of importance to the scientific community.

Policy 5.1.2: Prohibit destruction of cultural and paleontological materials that contain information of importance to our knowledge of the evolution of life forms and the history of human settlement in the Planning Area unless sufficient documentation of that information is accomplished and distributed to the appropriate scientific community. Require mitigation of any significant impacts that may be identified in the project or program-level cultural and paleontological assessments as a condition of project or program approval.

Implementation Measure 5.1.2.3: Require paleontological monitoring of land alteration projects involving excavation into native geologic materials known to have a high sensitivity for the presence of paleontological resources.

PALEONTOLOGICAL RESOURCE POTENTIAL

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by SVP (2010) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a Project area can be assigned to one of four categories defined by SVP (2010). Although these standards were written specifically to protect vertebrate paleontological resources, all fields of paleontology have adopted the following guidelines:

HIGH POTENTIAL (SENSITIVITY)

Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered have a high potential for containing significant nonrenewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable.

LOW POTENTIAL (SENSITIVITY)

Sedimentary rock units that are potentially fossiliferous but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow a determination that some areas or units have low potential for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway, it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from Low to High Potential and, thus, require monitoring and mitigation if the resources are found to be significant.

UNDETERMINED POTENTIAL (SENSITIVITY)

Specific areas underlain by sedimentary rock units for which little information is available have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

NO POTENTIAL

Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

METHODS

To assess whether a particular area has the potential to contain significant fossil resources at the subsurface, it is necessary to review published geologic mapping to determine the geology and stratigraphy of the area. Geologic units are considered "sensitive" for paleontological resources if they are known to contain significant fossils anywhere in their extent. Therefore, a search of pertinent local and regional museum repositories for paleontological localities within and nearby the Project area is necessary to determine whether fossil localities have been previously discovered within a particular rock unit. For this Project, a formal museum records search was conducted at the NHMLA. Informal records searches were also conducted of the online University of California Museum of Paleontology Collections and San Diego Natural History Museum Collections, the online Paleobiology Database and FAUNMAP, and other published and unpublished geological and paleontological literature of the area.

RESOURCE CONTEXT

GEOLOGIC SETTING

The Project area is in the southwestern portion of the Mojave Desert geomorphic province. The Mojave Desert is a broad interior region of isolated mountain ranges separated by expanses of desert plains, bordered and controlled by two prominent faults, the Garlock fault to the northwest and the San Andreas fault to the southwest (California Geological Survey, 2002).

Locally, the Project area is in a valley basin surrounded by mountains of igneous intrusions, mostly emplaced in the Cretaceous Period (145 million years ago [Ma] to 66 Ma) (Dibblee, 1967). Sediments in the basin area are dominated by alluvial detritus from the surrounding mountains deposited in the Pleistocene (2.5 Ma to 11,700 years ago) and Holocene (11,700 years ago to today) Epochs (Dibblee, 1967), with local sediments reaching into the Miocene (23 to 5.3 Ma) and Pliocene (5.3 to 2.5 Ma) Epochs (Hernandez et al., 2007).

SITE SPECIFIC GEOLOGY AND PALEONTOLOGY

According to Hernandez et al., (2007), the Project is underlain by four geological units (Figure 3), described below with their paleontological potential:

Artificial fill and disturbed areas (af) (late Holocene)

In developed areas in the southeast portion of the Project area, surficial sediment has been intensely modified by human construction and grading activities (Hernandez et al., 2007) to an unspecified depth. Due to its modern age and human disturbance, artificial fill has no potential for paleontological resources.

Modern alluvial fan deposits (Qf) (Holocene)

Underlying southeast-trending drainages in the northern portion of the Project area are deposits of unconsolidated, poorly sorted, silty lithic-arkosic sand and angular to subangular gravel (Hernandez et al., 2007). Due to their recent age, Modern alluvial fan deposits have low to no potential for paleontological resources.

Old alluvial deposits (Qoa) (late Pleistocene)

Most of the Project area is underlain by moderately consolidated, fine- to medium-grained sand and fine-to-medium gravel from inactive alluvial fans (Hernandez et al., 2007). Elsewhere in San Bernardino County, Pleistocene deposits have produced remains of a diverse terrestrial fauna, including ground sloth, deer, mammoth, camel, horse, bison, badger, mole, rabbit, gray fox, coyote, snake, and rodent (Jefferson, 1991a, 1991b; Miller, 1971; Reynolds and Reynolds, 1991), and has a high potential for paleontological resources.

Granodiorite (Kgd) (Cretaceous)

The foothills in the southeastern edge of the Project area are composed of granodiorite and hornblende-granodiorite resulting from igneous intrusions in the Cretaceous Period (145 to 66 Ma) (Hernandez et al., 2008). Due to its igneous nature, granodiorite has no potential for paleontological resources.

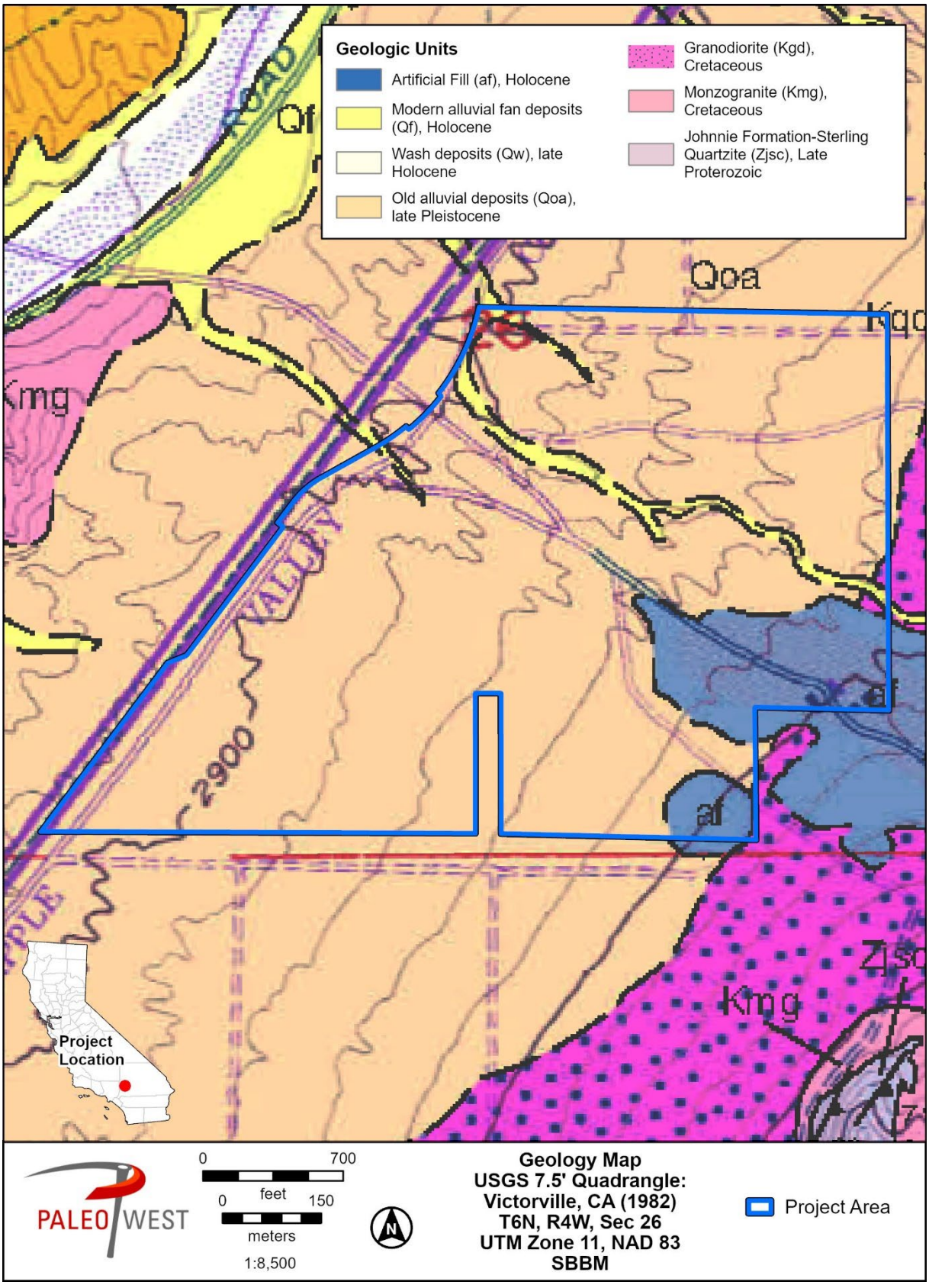


Figure 3. Geologic map of the Project area.

RECORDS SEARCH RESULTS

The NHMLA records search did not produce any fossil localities from within the Project area but did produce six localities in Pleistocene-age sediment within ten miles (Attachment A). Searches of online databases and other literature produced two additional fossil localities within three miles of the Project area (Graham and Lundelius, 2010; Jefferson, 1991,1991b; Miller, 1971; PBDB, 2022; SDNHM, 2022; UCMP, 2022) (Table 1).

Table 1. Pleistocene fossil Localities in Project Vicinity

Fossil Locality	Formation	Fossils Present	Depth (bgs)
LACM VP 3498[1]	Shoemaker Gravel Formation	Horse (*Equus*), deer (Cervidae), antelope (Antilocapridae)	Not specified
LACM VP 3352[1]	Shoemaker Gravel Formation	Horse (*Equus*)	Not specified
LACM VP 3353[1]	Shoemaker Gravel Formation	Horse (*Equus*)	Not specified
LACM VP 1224[1]	Shoemaker Gravel Formation	Camelid (Camelidae)	Not specified
LACM VP 7786[1]	Alluvium	Vole (*Microtus mexicanus*)	10 – 11
LACM VP CIT209[1]	Shoemaker Gravel Formation	Mammoth (*Mammuthus*), Horse (*Equus*)	Not specified
SCBCM 1.114.3: Leon, Victorville[2]	Noble's Old Alluvium or Shoemaker Gravels	Horse (*Equus*)	Not specified
Victorville[3]	Lacustrine and fluvial beds	Harlan's ground sloth (*Paramylodon harlani*), Short-faced bear (*Arctodus simus*), Southern mammoth (*Mammuthus meridionalis*), Horse (*Equus*), Giant camel (*Titanotylopus*), Western camel (*Camelops*), Stilt-legged camel (*Hemiauchenia*), Meadow vole (*Microtus*), rodentia	Not specified

Note: bgs=below ground surface.
[1] NHMLA Records Search Results
[2]Jefferson, 1991b
[3]Scott et al., 1997

FINDINGS

Based on the literature review and museum records search results, and in accordance with the SVP (2010) sensitivity scale, the Granodiorite (Kgd) has no paleontological sensitivity due to its igneous origin. The Artificial fill and disturbed areas (af) and Modern alluvial fan deposits (Qf) have low to no paleontological sensitivity at the surface due to their young age but may overlie Old alluvial deposits (Qoa) at depth (Table 2). Old alluvial deposits have a high paleontological sensitivity due to the presence of Pleistocene fossil localities in the vicinity. Therefore, further paleontological resource management is recommended during Project development.

Table 2. Geologic Units in the Project Area and their Paleontological Sensitivity

Geologic Unit[1]	Age	Fossils Present[2]	Paleontological Sensitivity	Recommended Monitoring
Artificial fill and disturbed areas (af)	Late Holocene	None	None	None
Modern alluvial fan deposits (Qf)	Holocene	None	Low to High	Full-time below 10 ft bgs
Old alluvial deposits (Qoa)	Late Pleistocene	Horse, mammoth, camelid, deer, antelope, vole, Harlan's ground sloth, Short-faced bear, Southern mammoth, Horse, Giant camel, Western camel, Stilt-legged camel, Meadow vole, rodentia	High	Full-time at surface and at depth
Granodiorite (Kgd)	Cretaceous	None	None	None

[1] Hernandez et al., 2007.
[2] NHMLA Records Search Results; Jefferson, 1991b; Scott et al., 1997.

RECOMMENDATIONS

In general, the potential for a given project to result in negative impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the project; thus, the higher the amount of ground disturbances within geological deposits with a known paleontological sensitivity, the greater the potential for negative impacts to paleontological resources. Since this Project entails excavation for a warehouse complex, new ground disturbances are anticipated. The presence of Pleistocene deposits at the surface, and potentially at depth in the Project area, suggests that ground disturbance may result in significant impacts under CEQA to paleontological resources, such as destruction, damage, or loss of scientifically important paleontological resources. A qualified paleontologist should be retained to develop and implement the measures recommended below. These measures have been developed in accordance with SVP guidelines; if implemented, these measures will satisfy the requirements of CEQA.

WORKER'S ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

Prior to the start of the proposed Project activities, all field personnel will receive a worker's environmental awareness training on paleontological resources. The training will provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the paleontological monitor, outline steps to follow if a fossil discovery is made, and provide contact information for the Project Paleontologist. The training will be developed by the Project Paleontologist and can be delivered concurrently with other training, including cultural, biological, safety, et cetera.

PALEONTOLOGICAL MITIGATION MONITORING

Prior to the commencement of ground disturbing activities, a professional paleontologist will be retained to prepare and implement a paleontological mitigation plan for the Project. The plan will describe the monitoring required during ground disturbing activities. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted based on the geologic conditions at depth, they may recommend that monitoring be reduced or cease entirely.

FOSSIL DISCOVERIES

If a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

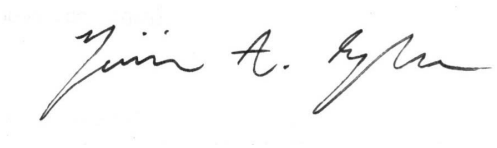
1. Salvage of Fossils. If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological resources as outlined in the mitigation plan prepared for the Project. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
2. Fossil Preparation and Curation. The paleontological mitigation plan will identify the museum that has agreed to accept fossils that may be discovered during Project related excavations. Upon completion of fieldwork, all significant fossils collected will be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility of the client.

FINAL PALEONTOLOGICAL MITIGATION REPORT

Upon completion of ground disturbing activity (and curation of fossils, if necessary), the Project Paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include a discussion of the location, duration, and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

Thank you for contacting PaleoWest for this Project. If you have any questions, please do not hesitate to contact us.

Sincerely,



Benjamin Scherzer, M.S. | Senior Paleontologist
PALEOWEST

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Attachment A.
NHMLA Record Search Results

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of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007
tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Research & Collections

e-mail: paleorecords@nhm.org

December 11, 2022

PaleoWest
Attn: Benjamin Scherzer

re: Paleontological resources for the Carney Commerce Center Project, #22-0218

Dear Benjamin:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Carney Commerce Center project area as outlined on the portion of the Victorville USGS topographic quadrangle map that you sent to me via e-mail on December 1, 2022. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County (NHMLA).

Locality Number	Location	Formation	Taxa	Depth
LACM VP 3498	West of Portland Cement Co. plant in bluffs on west side of Mojave River, midway between I-15 and Air Expressway Rd.	Shoemaker Gravel Formation	Horse (*Equus*); deer (Cervidae); antelope (Antilocapridae)	Unknown
LACM VP 3352	West bank of the Mojave River, north end of Victorville (more precise locality not available)	Shoemaker Gravel Formation	Horse (*Equus*)	Unknown
LACM VP 3353	Second Street at sand & gravel pit; near top of bluff, west bank of Mojave River	Shoemaker Gravel Formation	Horse (*Equus*)	Unknown
LACM VP 1224	North of Hesperia, near Dean Ave. & Dean Place	Shoemaker Gravel Fm	Camel family (Camelidae)	Unknown
LACM VP 7786	Southern California	Alluvium	Vole (*Microtus mexicanus*)	10-11 feet

	Logistics Airport	(Pleistocene, moderately indurated fine to medium grained silty sandstone)		bgs
LACM VP CIT209	10 mi N, 1 mi W of Victorville, Calif., bluffs on W side Mojave River	Shoemaker Gravel Formation	Mammoth (*Mammuthus*); Horse (*Equus*)	Unknown

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the NHMLA. It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,



Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice

Appendix F
Geotechnical Reports

GEOTECHNICAL INVESTIGATION PROPOSED INDUSTRIAL WAREHOUSE DEVELOPMENT, PARCEL A, ASSESSOR'S PARCEL NUMBER (APN) 0472-031-08, NORTH OF FALCHION ROAD AND EAST OF INTERSTATE I-15, APPLE VALLEY, SAN BERNARDINO COUNTY, CALIFORNIA

Prepared For

FGFW IV, LLC
400 NORTH WOODLAWN, SUITE 210
WICHITA, KANSAS 67208
C/O SYNERGY CONSULTING CA

Prepared By

LEIGHTON CONSULTING, INC.
10532 ACACIA STREET, SUITE B-6
RANCHO CUCAMONGA, CA 91730

Project No. 13673.001

February 1, 2023

Leighton Consulting, Inc.
A Leighton Group Company

February 1, 2023

Project No. 13673.001

FGFW IV, LLC
400 North Woodlawn, Suite 210
Wichita, Kansas 67208
c/o Synergy Consulting CA

Attention: Ms. Jessica Haughton

Subject: Geotechnical Exploration
Proposed Industrial Warehouse Development, Parcel A, Assessor's Parcel Number (APN) 0472-031-08, North of Falchion Road and East of Interstate I-15, Apple Valley, San Bernardino County, California

In accordance with your authorization, Leighton Consulting, Inc. (Leighton) has conducted geotechnical exploration for the proposed industrial warehouse development within Assessor's Parcel Number (APN) 0472-031-08, located north of Falchion Road and east of Highway I-15, in the town of Apple Valley in San Bernardino County, California. The project site is currently undeveloped, with the exception of a building related to the mining operation to the east, and has an approximate area of approximately 178 acres. The purpose of this study has been to collect surface and subsurface geotechnical data at the site with regard to the proposed development, evaluate the proposed development with respect to site geotechnical conditions, and provide geotechnical recommendations for design and construction of the proposed development.

Based on this geotechnical investigation, construction of the proposed warehouse development is feasible from a geotechnical standpoint. The most significant geotechnical issues at the site are those related to the potential for strong seismic shaking and potentially near-surface compressible soils. Good planning and design of the project can limit the impact of these constraints. This report presents our findings, conclusions, and geotechnical recommendations for the project.

We appreciate the opportunity to work with you on the development of this project. If you have any questions regarding this report, please call us at your convenience.

Respectfully submitted,

LEIGHTON CONSULTING, INC.

Luis Perez-Milicua, PE 89389
Senior Project Engineer

Steven G. Okubo, CEG 2706
Associate Geologist

Jason D. Hertzberg, GE 2711
Principal Engineer

AA/SGO/LP/JDH/rsm

Distribution: (1) Addressee

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1.0 INTRODUCTION

1.1 Site Location and Description

The property has been informally named “Parcel A” and is approximately 178 acres in area. The property is located north of Falchion Road and east of Interstate Highway I-15 in the town of Apple Valley, San Bernardino County, California. The project is within Assessor’s Parcel Number (APN) 0472-231-08.

This parcel contains undeveloped, hilly terrain, with vegetation. A mining quarry is located at the eastern edge and to the east of the project site. Based on our review of available historical aerial imagery, the area has been undeveloped before 1952, when the quarry operations were outside of the project site to the east. Quarry operation expanded into the project site some time prior to 1968. The existing building related to the mine in the eastern portion of the project site was constructed sometime between 1969 and 1984. Currently, that building still exists, and mining operations have left spoil piles up to approximately 25 feet thick onsite.

Based on the elevation model of Google Earth and a review of available topographic maps, site elevations (El.) range from approximate El. 2,890 to 3,030 feet above mean sea level (msl). The site is relatively flat overall, with local variations in topography from channels and bars typical of alluvial fans.

1.2 Proposed Development

Our understanding of this project is based on email correspondence with you on June 17, 2022, discussions of grading concept changes with the project team, and information you have provided us including the *Site Map,* dated June 15, 2022, and the AutoCAD files showing the preliminary grading contours, dated June 6, 2022. Based on these, we understand that the proposed development within Parcel A consists of two new proposed warehouses, Buildings 1 and 2, with proposed footprints of 1,512,060 and 1,098,420 square feet, respectively. Also planned are drive isles, truck docking areas, associated parking areas, and four underground infiltration facilities located in the northern and southern parking areas of each building. We understand that design cuts as deep as approximately 30 feet below the ground surface (bgs) and design fills as much as 30 feet thick will be required to construct the proposed building pads, with finish pad grade

elevations of El. 2,920 feet msl and El. 2,964 feet msl for Buildings 1 and 2, respectively.

Based on review of provided AutoCAD files, a proposed fill-over-cut slope approximately 40 feet in height with a gradient of 2:1 (horizontal:vertical) is planned to between the pads of the two proposed warehouses. A detailed site plan and structural loading were not available for our review during this time. We anticipate that the warehouse will be composed of concrete tilt-up walls.

1.3 Previous Work

Previous geotechnical exploration reports and environmental studies were not available to Leighton for review during the preparation of this report. Besides mining activities in the eastern portion of the project site, Leighton is not aware of any other previous earthwork activities.

1.4 Purpose of Investigation

The purpose of this study has been to evaluate the geotechnical conditions with respect to the proposed development and to provide geotechnical recommendations for design and construction of the development.

1.5 Scope of Investigation

Our geotechnical exploration included hollow-stem auger soil borings, infiltration tests, laboratory testing, surface geologic mapping, seismic refraction surveys, and geotechnical analysis to evaluate existing geotechnical conditions and to develop the conclusions and recommendations contained in this report. The scope of our study has included the following tasks:

- Background Review: We reviewed available, relevant geotechnical and geologic maps and reports and aerial photographs available from our in-house library, available online, or those provided by you.
- Utility Coordination: We contacted Dig Alert (811) prior to excavating borings so that utility companies could mark utilities onsite. We coordinated our work with you and a site representative.

- Field Exploration: A total of eighteen (18) hollow-stem auger borings (LB-1 through LB-19, excluding LB-11) were logged and sampled onsite on September 12 through 14, 2022, and September 21 and 22, 2022, to evaluate subsurface conditions. These borings were drilled by a subcontracted rig to depths ranging from approximately 14 to 51½ feet bgs. Relatively undisturbed soil samples were obtained at selected intervals within the borings using a Modified California split-barrel sampler lined with rings. Standard Penetration Tests (SPT) were conducted at selected depths and samples were obtained at those intervals. Representative bulk soil samples were also collected at shallow depths from the borings.

  Excavations were backfilled with soil cuttings. Logs of the geotechnical borings are presented in Appendix B. Approximate boring locations are shown on the accompanying Figure 2, *Geotechnical Map*.

  We conducted well permeameter tests at four locations (IT-1 through IT-4) to evaluate general infiltration rates of the subsurface soils at the depth and location tested. Well permeameter test locations were adjusted based on equipment access. The well permeameter tests were conducted based on the USBR 7300-89 method and in general accordance with San Bernardino County guidelines. Tests consisted of constant head infiltration using a water truck to transport water to each test location. A 2-inch slotted PVC pipe was used within each boring, with sand backfilled around the pipe within the test zone. The tests were conducted at depths ranging from 10 to 15 feet bgs. Infiltration test logs are included in Appendix B.

  Multichannel Analysis of Surface Waves (MASW) will be performed along two arrays located within the site to determine the Shear Wave Velocity (V_s) distribution within the subsurface strata.

- Geotechnical Laboratory Testing: Geotechnical laboratory tests were conducted on selected relatively undisturbed and bulk soil samples obtained during our field investigation. This laboratory testing program was designed to evaluate engineering characteristics of site soils. Laboratory tests conducted during this investigation include:

  - Maximum dry density and optimum moisture content
  - In-situ moisture content and density

- Sieve analysis for grain-size distribution
- Expansion Index
- Collapse/ swell-settlement
- R-Value
- Remolded direct shear
- Water-soluble sulfate concentration in the soil
- Resistivity, chloride content and pH

Laboratory tests are provided in Appendix C, Laboratory Test Results.

- Engineering Analysis: Data obtained from our background review, along with data from our field exploration and geotechnical laboratory testing was evaluated and analyzed to develop geotechnical conclusions and provide preliminary recommendations presented in this report.
- Report Preparation: Results of our geotechnical exploration have been summarized in this report, presenting our findings, conclusions and preliminary geotechnical recommendations for design and construction of the proposed development.

2.0 FINDINGS

2.1 Regional Geologic Conditions

The site is located in the western Mojave Desert, in San Bernardino County California, and is part of the Mojave Desert geomorphic province, a broad interior region of isolated mountain ranges separated by broad desert plains and deep alluvial valleys. The Mojave province is wedged between the Garlock Fault (southern boundary of the Sierra Nevada) and the San Andreas Fault, where it bends northerly from its northwest trend. The northern boundary of the Mojave province is separated from the prominent Basin and Range by the eastern extension of the Garlock Fault.

The geology of the region consists of the following rock groups: i) Surficial sediments (Qa); ii) Older alluvial sediments (Qoa); iii) Granitic and dioritic rocks (qm); iv) Metamorphic rocks (ml, mq, and ms); and v) Metamorphosed quarts latite (mql). The Pre-Tertiary and Tertiary rocks are hard, consolidated materials forming the surrounding mountains and rocky buttes that rise from the valley floors and underlie the alluvium at depths. The valley soil profile consists of up to several hundreds to thousands of feet of fine- to coarse-grained alluvial deposits underlain by consolidated rocks. The alluvial deposits consist of late Pleistocene to Holocene age (5 million years old to recent) fine- to coarse-grained soil layers formed as a result of uplift and erosion of the surrounding mountains. Figure 3, *Regional Geology Map,* presents the site location in relation to the predominate geologic materials (alluvium) of the area. Figure 4, *Regional Fault and Historical Seismicity Map,* presents the site location in relation to active faults and epicenters of relatively large (> M_w 4.0) historical earthquakes.

2.2 Subsurface Soil Conditions

Based upon our review of pertinent geotechnical literature and our subsurface exploration, the site is underlain by older alluvial sediments (Qoa) except where artificial fill was encountered (boring LB-9 to 6.5 bgs) or was observed on the surface (see Figure 2, *Geotechnical Map*). Encountered near-surface soils generally consisted of poorly graded sands (SP), poorly graded sands with silt (SP-SM), and silty sands (SM).

Older alluvial soils generally consisted of Silty Sand (SM) and Sand with Silt (SP-SM), with a few samples containing an estimated 5 to 25 percent gravel. The material was observed to be relatively consistent across the project site and to the maximum drilled depths. Undocumented artificial fill observed in boring LB-9 consisted of loose, poorly graded sand with silt. Alluvial soils encountered were generally considered dense to very dense based on field Standard Penetration Test (SPT) blow counts.

2.2.1 Compressible and Collapsible Soil

Soil compressibility refers to a soil's potential for settlement when subjected to increased loads as from a fill surcharge. Based on this study, undocumented artificial fill and the upper portion of alluvial soils are considered moderately compressible. Complete removal of undocumented fill and partial removal of near surface alluvium will be needed to reduce the potential for adverse total and differential settlement of the proposed improvements.

Collapse potential refers to the potential settlement of a soil under existing stresses upon being wetted. Laboratory tests performed on representative soil samples did not indicate significant collapse. Soil collapse and consolidation are not a significant issue considering the dense, granular nature of the on-site soils.

2.2.2 Expansive Soils

Expansive soils contain significant amounts of clay particles that swell considerably when wetted and shrink when dried. Foundations constructed on these soils are subjected to large uplifting forces caused by the swelling. Without proper measures taken, heaving and cracking of building foundations and slabs-on-grade could result.

Expansion index (EI) tests performed on a shallow bulk sample yielded a measured EI of 2, which is classified as "very low" expansion. Based on the encountered near-surface soils and laboratory test results, the onsite soils are anticipated to have "very low" expansion potential.

2.2.3 Sulfate Content

Water-soluble sulfates in soil can react adversely with concrete. However, concrete in contact with soil containing sulfate concentrations of less than 0.1 percent by weight is considered to have negligible sulfate exposure based on American Concrete Institute (ACI) provisions, adopted by the 2019 CBC (CBC, 2019, Chapter 19, and ACI 318, 2014).

Two near-surface soil samples were tested during this investigation for soluble sulfate content, yielding sulfate contents of less than 0.1 percent by weight. Based on the laboratory test results, the sulfate content of onsite soils is anticipated to be negligible (Exposure Class S0). Recommendations for concrete in contact with the soil are provided in Section 3.11.

2.2.4 Resistivity, Chloride and pH

Soil corrosivity to ferrous metals can be estimated by the soil's electrical resistivity, chloride content and pH. In general, soil having a minimum resistivity less than 1,000 ohm-cm is considered severely corrosive. Soil with a chloride content of 500 parts-per-million (ppm) or more is considered corrosive to ferrous metals.

As a screening for potentially corrosive soil, two representative soil samples were tested during this investigation to determine minimum resistivity, chloride content, and pH. The tests indicated a minimum resistivity of 1,850 ohm-cm, chloride content of 40 ppm, and pH of 8.1 to 8.8. Based on these results, the onsite soil is considered to be corrosive.

2.3 Groundwater

Groundwater was not encountered within our exploratory borings performed on September 12 through 14, 2022, and September 21 and 22, 2022.

Review *of California Department of Water Resources Groundwater Wells* indicated at State Well No. 06N04W26B001S located approximately 2,000 feet from the site, groundwater depths were approximately 190 feet bgs during the period of groundwater measurements from 1955 through 1957. According to the *Data and*

Water Table Map of the Mojave River Ground-Water Basin (Stamos and Predmore, 1995), groundwater levels in 1992 near the project site were deeper than 200 feet.

Based on our review of available groundwater data, groundwater is not a significant constraint for this project.

2.3.1 Regional Subsidence

Regional ground subsidence generally occurs due to rapid and intensive removal of subterranean fluids, typically water or oil. It is generally attributed to the consolidation of sediments as the fluid in the sediment is removed. The total load of the soils in partially saturated or saturated deposits is born by their granular structure and the fluid. When the fluid is removed, the load is born by the sediment alone and it settles.

The project site has been mapped by the U.S. Geological Society (2022) to be outside of an area of land subsidence from intense removals of significant quantities of water, peat, or oil extraction in the area. Based on this and no known reports indicating land subsidence of the site's area, the potential for ground subsidence is considered very low and less than a significant impact.

2.4 Faulting and Seismicity

In general, primary seismic hazards for sites in the region include surface rupture along active faults and strong ground shaking. The potential for fault rupture and seismic shaking are discussed below.

2.4.1 Surface Faulting

Based on our research, no active faults appear to have been mapped on or trending towards the site. The closest mapped active or potentially active faults are presented in the following table.

Fault Name	Approximate Distance from Site
Helendale-South Lockhart fault zone	7.9 miles to the northeast
North Frontal thrust system	11.0 miles to the southeast
Cleghorn fault	19.9 miles to the south

Based on our understanding of the current geologic framework, the potential for future surface rupture of active faults onsite is considered very low.

2.4.2 Seismic Design Parameters

The site has and will experience strong ground shaking during the life of the project resulting from an earthquake occurring along one or more of the major active or potentially active faults in southern California. Accordingly, the project should be designed in accordance with all applicable current codes and standards utilizing the appropriate seismic design parameters to reduce seismic risk as defined by California Geological Survey (CGS) Chapter 2 of Special Publication 117a (CGS, 2008). Through compliance with these regulatory requirements and the utilization of appropriate seismic design parameters selected by the design professionals, potential effects relating to seismic shaking can be reduced.

The following seismic parameters should be considered for design under the 2022 edition of the California Building Code (CBC). The following table lists seismic design parameters based on the 2022 CBC and ASCE 7-16 methodology:

Site Seismic Coefficients / Coordinates			Value (g)
Latitude: 34.5754		Longitude: -117.2675	
Site-Specific Analysis (ASCE 7-16)	Spectral Response – Class D (short), S_S		1.04
	Spectral Response – Class D (1 sec), S_1		0.40
	Site Modified Peak Ground Acceleration, PGA_M		0.54
	Max. Considered Earthquake Spectral Response Acceleration (short), S_{MS}		1.16
	Max. Considered Earthquake Spectral Response Acceleration – (1 sec), S_{M1}		0.58
	5% Damped Design Spectral Response Acceleration (short), S_{DS}		0.77
	5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}		0.39
	Maximum Considered Earthquake Geometric Mean MCE_G PGA		0.56

The project structural engineer should review the seismic parameters. Site-specific analyses are presented in Appendix D.

Hazard deaggregation was estimated using the USGS Interactive Deaggregations utility. The results of this analysis indicate that the predominant modal earthquake has a magnitude of approximately 8 .1 (M_W) at a distance on the order of 37.7 kilometers for the Maximum Considered Earthquake (2% probability of exceedance in 50 years), with a corresponding peak ground acceleration of 0.51g.

2.4.5 Site Class

Geophysical survey lines (Arrays 2 and 3) utilizing Multi-channel Analysis of Surface Wave (MASW) methodology were performed towards the central and eastern portions of the site (line locations shown in Figure 2) and yielded a weighted average shear wave to a depth of 100 feet (V_{S100ft}) of 2,028 ft/s at the Array 2 location and 2,223 ft/s at the Array 3 location. In addition, we performed an analysis with field Standard Penetration Blowcounts (SPT) from the geotechnical borings that extended to a maximum depth of 50 feet, which yielded a weighted average N-Value of approximately 76 (with blowcount assumptions for soils below 50 feet). Therefore, based on the criteria in the 2022 CBC and ASCE 7-16, the site is classified as Site Class C, very dense soil and soft rock. A summary of Site Class evaluation is included in Appendix D. Geophysical survey data is included in Appendix E.

2.5 Secondary Seismic Hazards

In general, secondary seismic hazards for sites in the region could include soil liquefaction, earthquake-induced settlement, lateral displacement, landslides, and earthquake-induced flooding. The potential for secondary seismic hazards at the site is discussed below.

2.5.1 Liquefaction Potential

Liquefaction is the loss of soil strength due to a buildup of excess pore-water pressure during strong and long-duration ground shaking. Liquefaction is associated primarily with loose (low density), saturated, relatively uniform fine- to medium-grained, clean cohesionless soils. As shaking action of an earthquake progresses, soil granules are rearranged, and the soil densifies within a short period. This rapid densification of soil results in a buildup of

pore-water pressure. When the pore-water pressure approaches the total overburden pressure, soil shear strength reduces abruptly and temporarily behaves similar to a fluid. For liquefaction to occur there must be:

(1) loose, clean granular soils,
(2) shallow groundwater, and
(3) strong, long-duration ground shaking

The site is not mapped in a liquefaction zone of required investigation on the San Bernardino County General Plan (San Bernardino, 2009).

We have performed an analysis based on the modified Seed Simplified Procedure as detailed by Youd et al. (2001) and Martin and Lew (1999), which compares the seismic demand on a soil layer (Cyclic Stress Ratio, or CSR) to the capacity of the soil to resist liquefaction (Cyclic Resistance Ratio, or CRR), (Youd el al., 2001). A minimum required factor of safety of 1.3 was used in our analysis, with factor of safety defined as CRR/CSR. As required, our analysis assumes that the design earthquake would occur while the groundwater is at its estimated design level (historically highest level).

Due to the dense nature of the granular soils encountered and lack of shallow groundwater, liquefaction is not a significant hazard at this site.

2.5.2 Seismically Induced Settlement

Seismically induced settlement consists of dry dynamic settlement (above groundwater) and liquefaction-induced settlement (below groundwater). During a strong seismic event, seismically induced settlement can occur within loose to moderately dense sandy soil due to reduction in volume during and shortly after an earthquake event. Settlement caused by ground shaking is often nonuniformly distributed, which can result in differential settlement.

Based on the dense nature of the native soils in this area, we believe the onsite soils are susceptible to low seismic settlement (less than 1 inch, with differential settlement of 0.5 inch or less over a horizontal distance of 30 feet based on the MCE).

2.5.3 Lateral Spread

Lateral spread is liquefaction-induced lateral ground movement limited to on the order of several feet, and, thus, smaller than flow failures. A consideration in lateral spread analysis is to evaluate whether laterally continuous liquefiable layers exist. Due to the lack of shallow groundwater (≤50 feet bgs), lateral spread is considered to be less than significant.

2.5.4 Flow Failures

Based on $(N_1)_{60}$ values from the borings, lack of liquefiable soils, and the relatively flat nature of the site, the site is not considered susceptible to flow slides (large transitional or rotational failures).

2.6 Infiltration Testing

Four well permeameter tests (IT-1 through IT-4) were conducted to estimate the infiltration rate at specific locations of the site. Test IT-1 was located towards the southwest corner of Building 1, test IT-2 was located directly north of Building 1, test IT-3 was located on the south side between the two buildings, and test IT-4 was located directly north of Building 2. The locations and depths of the infiltration tests are based on the approximate locations and depths of the proposed underground storage tanks, which you have provided. The well permeameter tests were conducted inside the drilled borings at depths of 10 and 15 feet bgs.

A well permeameter test is useful for field measurements of soil infiltration rates, and is suited for testing when the design depth of the basin or chamber is deeper than current existing grades. The test consists of excavating a boring to the depth of the test. A layer of clean sand is placed in the boring bottom to support temporary perforated well casing pipe. In addition, sand is poured around the outside of the well casing within the test zone to prevent the boring from caving/collapsing or eroding when water is added. The volume of water percolated during timed intervals is converted into an incremental infiltration rate, which is defined as flow divided by infiltration surface area, in inches per hour. The test was conducted based on the USBR 7300-89 test method.

Small-scale infiltration rates as summarized in the table below. Results of the infiltration testing are provided in Appendix B.

Boring	Test Depth (ft)	Soil Classification (percent fines)	Raw Infiltration Rates (in./hr) [1]
IT-1	10 to 15	Silty Sand (23% fines)	2.0
IT-2	10 to 15	Silty Sand (24% fines)	1.5
IT-3	9 to 14	Silty Sand (21% fines)	2.8
IT-4	10 to 15	Silty Sand (13-20% fines)	10.0

[1] Factor of Safety should be applied to raw rates

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on this study, construction of the proposed warehouse development is feasible from a geotechnical standpoint. No severe geologic or soils related issues were identified that would preclude development of the site for the proposed warehouses. The most significant geotechnical issues at the site are those related to the potential for strong seismic shaking and potentially compressible soils in the near-surface. Good planning and design of the project can limit the impact of these constraints. Remedial recommendations for these and other geotechnical issues are provided in the following sections.

We are unaware of environmentally sensitive areas in the project site that would warrant remedial removals from an environmental standpoint. Compressible undocumented fill should be completely removed and properly compacted during earthwork construction. Localized exposures of encountered fill material can be evaluated during grading on a case-by-case basis, and may be left in place if documentation is available and the material appears to be competent based on our field evaluation

3.1 General Earthwork and Grading

All grading should be performed in accordance with the General Earthwork and Grading Specifications presented in Appendix E, unless specifically revised or amended below or by future recommendations based on final development plans.

3.1.1 Site Preparation

Prior to construction, the site should be cleared of debris, which should be disposed of offsite. Any underground obstructions should be removed. Resulting cavities should be properly backfilled and compacted. Efforts should be made to locate existing utility lines. Those lines should be removed or rerouted if they interfere with the proposed construction, and the resulting cavities should be properly backfilled and compacted.

3.1.2 Removal of Uncontrolled Artificial Fill

Prior to overexcavation and recompaction of the onsite alluvial soil, any uncontrolled artificial fill should be removed and may be used as compacted fill for the project, provided any oversized rock is suitably handled and any

deleterious materials are removed from the site. Undocumented fill is present within areas throughout the site (see Figure 2, *Geotechnical Map*), with some areas containing stockpiles of mining spoils estimated to be 20 to 30 feet in thickness, located towards the southeastern portion of the site. Undocumented fill may be thicker than what has been estimated.

3.1.3 Overexcavation and Recompaction

To reduce the potential for adverse total and differential settlement of the proposed structures, the underlying subgrade soil should be prepared in such a manner that a uniform response to the applied loads is achieved.

All undocumented artificial fill within proposed building pads should be removed. Based on preliminary plans, the proposed warehouse buildings are expected to both include cut/fill transitions roughly in the center of each building. To reduce the potential for adverse differential settlement of the proposed improvements, the underlying subgrade soil should be prepared in such a manner that a uniform response to the applied loads is achieved. Due to the potential for near-surface compressive soils observed in our borings, we recommend that onsite soils in the proposed building pad area and site walls taller than 8 feet be overexcavated to a depth of 5 feet bgs, or a depth of 3 feet below the bottoms of proposed footings, whichever is deeper.

Where possible, the removal bottom should extend horizontally a minimum of 5 feet from the outside edges of the building footprint and footings (including columns connected to the buildings), or a distance equal to the depth of overexcavation below the footings, whichever is farther. Where this is not achievable, this should be reviewed on a case-by-case basis.

During overexcavation, the soil conditions should be observed by Leighton to further evaluate these recommendations based on actual field conditions encountered. A firm removal bottom should be established across the building footprint to provide uniform foundation support for the proposed structure. Leighton should observe and test the removal bottom prior to placing fill. Deeper overexcavation and recompaction may be recommended locally until a firm removal bottom is achieved.

Areas outside of proposed structures and planned for new asphalt or concrete pavement (such as parking areas or fire lanes), flatwork (such as sidewalks), site walls up to 8 feet tall and retaining walls retaining up to 3 feet of soil (taller walls should be overexcavated per the recommendations for buildings), areas to receive fill, and other improvements, should be overexcavated to a minimum depth of 2 feet below existing grade or 18 inches below proposed subgrade (including the footing subgrade for walls), whichever is deeper.

After completion of the overexcavation, and prior to fill placement, the exposed surfaces should be scarified to a minimum depth of 6 inches, moisture conditioned to or slightly above optimum moisture content, and recompacted to a minimum 90 percent relative compaction, relative to the ASTM D1557 laboratory maximum density.

3.1.4 Fill Placement and Compaction

Onsite soil to be used for compacted structural fill should also be free of organic material debris and oversized material (greater than 8 inches in largest dimension). Any soil to be placed as fill, whether onsite or imported material, should be reviewed and possibly tested by Leighton.

All fill soil should be placed in thin, loose lifts, moisture conditioned, as necessary to at least 2 percentage points above optimum moisture content and compacted to a minimum 90 percent relative compaction. However, the upper 24 inches of fill under the building pads should be compacted to a minimum of 95 percent relative compaction. Relative compaction should be determined in accordance with ASTM Test Method D1557. Aggregate base for pavement should be compacted to a minimum of 95 percent relative compaction.

3.1.5 Import Fill Soil

Import soil to be placed as fill should be geotechnically accepted by Leighton. Preferably at least 3 working days prior to proposed import to the site, the contractor should provide Leighton pertinent information of the proposed import soil, such as location of the soil, whether stockpiled or native in place, and pertinent geotechnical reports if available. We

recommend that a Leighton representative visit the proposed import site to observe the soil conditions and obtain representative soil samples. Potential issues may include soil that is more expansive than onsite soil, soil that is too wet, soil that is too rocky or too dissimilar to onsite soils, oversize material, organics, debris, etc.

3.1.6 Shrinkage and Subsidence

The change in volume of excavated and recompacted soil varies according to soil type and location. This volume change is represented as a percentage increase (bulking) or decrease (shrinkage) in volume of fill after removal and recompaction. This value does not factor in removal of debris or other materials. Subsidence occurs as in-place soil (e.g., natural ground) is moisture-conditioned and densified to receive fill, such as in processing an overexcavation bottom. Subsidence is in addition to shrinkage due to recompaction of fill soil. Field and laboratory data used in our calculations included laboratory-measured maximum dry densities for soil types encountered at the subject site, the measured in-place densities of soils encountered and our experience. We preliminarily estimate the following earth volume changes will occur during grading:

Shrinkage	Approximately 15 +/- 3 percent
Subsidence (overexcavation bottom processing)	Approximately 0.18 foot

The level of fill compaction, variations in the dry density of the existing soils and other factors influence the amount of volume change. Some adjustments to earthwork volume should be anticipated during grading of the site.

3.1.7 Rippability and Oversized Material

Oversized material (rock or rock fragments greater than 8 inches in dimension) were observed at the surface in mining stockpiles. A significant percentage of oversized material is anticipated in these spoils and should be anticipated by the grading contractor. Oversize rock should be placed in deeper fills (deeper than 5 feet below finish grade) or removed from

structural fill areas. All rocks larger than 24 inches in dimension should be placed in windrows, surrounded by sandy soils, and placed with copious amounts of water. The rock windrows should be placed such that individual rocks are not nested and sandy soil can be worked completely around the rocks. It is imperative that the contractor use copious amounts of water.

Excavations for proposed utilities can be very difficult in the presence of large (greater than 24 inches) rocks. To facilitate utility construction (but not a geotechnical requirement), removing rocks larger than 24 inches in the upper 5 feet below the rough graded surface or 1 foot below the deepest utility may be considered.

3.2 Shallow Foundation Recommendations

Overexcavation and recompaction of the footing subgrade should be performed as detailed in Section 3.1. The following recommendations are based on the onsite soil conditions and soils with a very low expansion potential.

3.2.1 Minimum Embedment and Width

Based on our preliminary investigation, footings should have a minimum embedment per code requirements, with a minimum width of 24 and 12 inches for isolated and continuous footings, respectively.

3.2.2 Allowable Bearing

An allowable bearing pressure of 2,000 pounds-per-square-foot (psf) may be used, based on an assumed embedment depth of 18 inches and minimum width described above. This allowable bearing value may be increased by 250 psf per foot increase in depth or width to a maximum allowable bearing pressure of 4,500 psf. If higher bearing pressures are required, this should be reviewed on a case-by-case basis and may include additional overexcavation and/or soil reinforcement. These allowable bearing pressures are for total dead load and sustained live loads. Footing reinforcement should be designed by the structural engineer.

3.2.3 Lateral Load Resistance

Soil resistance available to withstand lateral loads on a shallow foundation is a function of the frictional resistance along the base of the footing and the passive resistance that may develop as the face of the structure tends to move into the soil. The frictional resistance between the base of the foundation and the subgrade soil may be computed using a coefficient of friction of 0.35. The passive resistance may be computed using an allowable equivalent fluid pressure of 260 pounds per cubic foot (pcf), assuming there is constant contact between the footing and undisturbed soil. The coefficient of friction and passive resistance may be combined without further reduction.

3.2.4 Increase in Bearing and Friction - Short Duration Loads

The allowable bearing pressure and coefficient of friction values may be increased by one-third when considering loads of short duration, such as those imposed by wind and seismic forces.

3.2.5 Settlement Estimates

The recommended allowable bearing pressure is generally based on a total allowable, post-construction static settlement of 1 inch. Differential settlement due to static loading is estimated at 0.2 inch over a horizontal distance of 30 feet. Since settlement is a function of footing sustained load, size and contact bearing pressure, differential settlement can be expected between adjacent columns or walls where a large differential loading condition exists.

Seismic differential settlement is assumed to be less than 0.5 inches over a horizontal distance of 30 feet for the design-level earthquake, or angular distortion of less than 0.0014L.

3.3 Recommendations for Slabs-On-Grade

Concrete slabs-on-grade should be designed by the structural engineer in accordance with the current CBC for soil with a “very low” expansion potential and considering the potential for liquefaction and seismic settlement. Where conventional light floor loading conditions exist, the following minimum

recommendations should be used. More stringent requirements may be required by local agencies, the structural engineer, the architect, or the CBC. Laboratory testing should be conducted at finish grade to evaluate the expansion index of near-surface subgrade soils. In addition, slabs-on-grade should have the following minimum recommended components:

- Subgrade Moisture Conditioning: The subgrade soil should be moisture conditioned to at least 2 percentage points above optimum moisture content to a minimum depth of 12 inches prior to placing the moisture vapor retarder, steel or concrete.

- Moisture Retarder: A minimum of 10-mil moisture retarder should be placed below slabs where moisture-sensitive floor coverings or equipment is planned. The structural engineer should specify pertinent concrete design parameters and moisture migration prevention measures, such as whether a capillary break should be placed under the vapor retarder and whether or not a sand blotter layer should be placed over the vapor retarder. The moisture barrier may be placed directly on subgrade provided gravel or other protruding objects that could puncture the moisture retarder are removed from the subgrade prior to placement. A heavier vapor retarder (such as 15 mil Stego Wrap) placed directly on prepared subgrade may also be used. Moisture retarders can reduce, but not eliminate moisture vapor rise from the underlying soils up through the slab. Moisture retarders should be designed and constructed in accordance with applicable American Concrete Institute, Portland Cement Association, Post-Tensioning Institute, ASTM International, and California Building Code requirements and guidelines.

  Leighton does not practice in the field of moisture vapor transmission evaluation, since this is not specifically a geotechnical issue. Therefore, we recommend that a qualified person, such as the flooring subcontractor and/or structural engineer, be consulted with to evaluate the general and specific moisture vapor transmission paths and any impact on the proposed construction. That person should provide recommendations for mitigation of potential adverse impact of moisture vapor transmission on various components of the structures as deemed appropriate.

- Concrete Thickness and Reinforcement in Warehouse/Industrial Areas: Warehouse/industrial slabs-on-grade should be designed by the structural engineer based on anticipated wheel, equipment, and storage loads. Considering the site conditions, we recommend a minimum slab thickness of 6 inches. Crack control joints should be provided at a maximum spacing of 14 feet on center.

  The structural engineer should consider the following parameters.

  Provided that the slab subgrade soils are compacted to a minimum of 95 percent relative compaction at 1 to 2 percentage points above optimum (as measured by ASTM D 1557), an average subgrade spring constant (modulus of subgrade reaction, k) of 200 pci (with linear deflections up to ¾ inch and a non-linear response for larger deflections) may be assumed for analysis of loading on slabs-on-grade. This value should not be used for estimation of actual settlements, but is intended to estimate shears, moments, and local distortions. An alternate check may be used by assuming an allowable bearing pressure of 1,100 psf (though the modulus of subgrade reaction method is the preferred method). If soils are allowed to dry out prior to placing concrete, the upper 9 inches should be scarified, moisture conditioned to 1 to 2 percentage points above optimum moisture content, and recompacted to a minimum of 95 percent relative compaction (based on ASTM D1557) prior to placing steel or concrete.

- Concrete Thickness--Office Areas: Slabs-on-grade for office space should be at least 4 inches thick (this is referring to the actual minimum thickness, not the nominal thickness). Reinforcing steel should be designed by the structural engineer, but as a minimum (for conventionally reinforced, 4-inch-thick slabs) should be No. 4 rebar placed at 18 inches on center, each direction, mid-depth in the slab. Crack control joints should be provided at a maximum spacing of 15 feet on center for office areas.

Minor cracking of the concrete as it cures, due to drying and shrinkage, is normal and should be expected. However, cracking is often aggravated by a high water/cement ratio, high concrete temperature at the time of placement, small nominal aggregate size, and rapid moisture loss due to hot, dry, and/or windy weather conditions during placement and curing. Cracking due to temperature and

moisture fluctuations can also be expected. Low slump concrete can reduce the potential for shrinkage cracking. Additionally, our experience indicates that reinforcement in slabs and foundations can generally reduce the potential for concrete cracking. The structural engineer should consider these components in slab design and specifications.

3.4 Seismic Design Parameters

Seismic parameters presented in this report should be considered during project design. In order to reduce the effects of ground shaking produced by regional seismic events, seismic design should be performed in accordance with the current CBC. The CBC seismic design parameters listed in Section 2.4.2 of this report should be considered for the seismic analysis of the subject site.

3.5 Retaining Walls

We recommend that retaining walls be backfilled with “very low” expansive soil and constructed with a backdrain in accordance with the recommendations provided on Figure 4 (rear of text). Using expansive soil as retaining wall backfill will result in higher lateral earth pressures exerted on the wall. Based on these recommendations, the following parameters may be used for the design of conventional retaining walls:

Static Equivalent Fluid Weight (pcf)	
Condition	Level Backfill
Active	35 pcf
At-Rest	55 pcf
Passive	260 pcf (allowable) (Maximum of 3,000 psf)

The above values do not contain an appreciable factor of safety unless noted, so the structural engineer should apply the applicable factors of safety and/or load factors during design, as specified by the California Building Code.

Cantilever walls that are designed to yield at least 0.001H, where H is equal to the wall height, may be designed using the active condition. Rigid walls and walls braced at the top should be designed using the at-rest condition.

Passive pressure is used to compute soil resistance to lateral structural movement. In addition, for sliding resistance, a frictional resistance coefficient of 0.35 may be used at the concrete and soil interface. The lateral passive resistance should be taken into account only if it is ensured that the soil providing passive resistance, embedded against the foundation elements, will remain intact with time.

In addition to the above lateral forces due to retained earth, surcharge due to improvements, such as an adjacent structure or traffic loading, should be considered in the design of the retaining wall. Loads applied within a 1:1 projection from the surcharging structure on the stem of the wall should be considered in the design.

For retaining walls with a retained height of more than 6 feet, an incremental seismic load applied as a uniform additive pressure of 17 pcf should be considered for a cantilever (unrestrained) wall with level backfill, and 27 pcf for a basement wall (restrained) with level backfill. This pressure is in addition to the static active earth pressures presented above. Earthquake and at-rest earth pressures need not be combined for analyses.

A soil unit weight of 120 pcf may be assumed for calculating the actual weight of the soil over the wall footing.

3.6 Pavement Design

Flexible Pavement: Based on the design procedures outlined in the 2017 Caltrans Highway Design Manual, and using a design R-value of 50, flexible pavement sections may consist of the following for the Traffic Index indicated. Final pavement design should be based on the Traffic Index determined by the project civil engineer and R-value testing provided near the end of grading.

ASPHALT PAVEMENT SECTION THICKNESS		
Traffic Index	**Asphaltic Concrete (AC) Thickness (inches)**	**Class 2 Aggregate Base Thickness (inches)**
5 or less (auto access)	3.0	4.0
7 (light truck access)	4.0	4.5
8	5.0	5.0
9	5.5	6.5
10	6.5	7.0

If the pavement is to be constructed prior to construction of the structures, we recommend that the full depth of the pavement section be placed in order to support heavy construction traffic.

***Rigid Pavements*:** For onsite Portland Cement Concrete (PCC) pavement in truck drive aisles and parking areas, we recommend a minimum of 7-inch-thick concrete with dowels at construction joints, placed on compacted fill subgrade, with the upper 8 inches compacted to a minimum of 95 percent relative compaction. In areas with car traffic only, we recommend a minimum of 5-inch-thick concrete, placed on compacted fill subgrade with the upper 8 inches compacted to a minimum of 95 percent relative compaction.

The PCC pavement sections should be provided with crack-control joints spaced no more than 14 feet on center each way for 7-inch-thick concrete, and 12 feet for 5-inch-thick concrete. If sawcuts are used, they should have a minimum depth of ¼ of the slab thickness and made within 24 hours of concrete placement.

***Other Pavement Recommendations*:** Irrigation adjacent to pavements without a deep curb or other cutoff to separate landscaping from the paving may result in premature pavement failure.

All pavement construction should be performed in accordance with the Standard Specifications for Public Works Construction or Caltrans Specifications. Field observations and periodic testing, as needed during placement of the base course materials, should be undertaken to ensure that the requirements of the standard specifications are fulfilled.

Prior to placement of aggregate base, the subgrade soil should be processed to a minimum depth of 6 inches, moisture-conditioned, as necessary, and recompacted to a minimum of 95 percent relative compaction. Aggregate base should be moisture conditioned, as necessary, and compacted to a minimum of 95 percent relative compaction.

3.7 Infiltration Recommendations

In general, our geotechnical exploration encountered alluvial soil deposits generally uniform consisting of granular materials Poorly Graded Sand with Silt (SP-SM) and Silty Sand (SM). Alluvial soils were relatively uniform throughout the project site. Gravels were observed within the exploratory borings, with variable percentages throughout the site. At our test locations, sieve analysis tests performed on soil samples from the infiltration test zone generally showed a percent fines (% silt and clay) ranging from 13 to 24 percent.

Based on our infiltration testing, field observations and laboratory testing, the project site is considered to be feasible for groundwater infiltration. A raw infiltration rate of 2.0 inches per hour can be utilized for infiltration system design. As site layout and infiltration system design progresses, supplemental infiltration testing could be performed to further refine our infiltration system recommendations.

We recommend that a correction factor/safety factor be applied to the infiltration rate in conformance with San Bernardino County guidelines, since monitoring of actual facility performance has shown that actual infiltration rates are lower than measured in small-scale tests. Infiltration basins are subject to siltation, which can result in reduced infiltration rates. *This small-scale infiltration rate should be divided by a design factor of at least **3** for buried chambers and at least **4** for open basins; although the design/safety factor may be higher based on project-specific aspects.* It should be noted that during periods of prolonged precipitation, underlying soils tend to become saturated to greater depths/extent. Therefore, infiltration rates tend to decrease with prolonged rainfall.

Some design considerations are presented in the following paragraphs:

- **Adjacent Structure Impact**: As infiltrating water can seep within soil strata partially horizontally, it is important to consider impact that infiltration facilities can play on nearby subterranean structures, such as basement walls or open excavations, whether onsite or offsite, and whether existing or planned. Any such nearby features should be identified and evaluated as to whether infiltrating water can impact these facilities. Infiltration facilities should not be constructed adjacent to or under buildings. Setbacks should be discussed with Leighton during the planning process, but a building setback of at least 15 feet horizontally is initially suggested.

- **Infiltration Basins Type and Geometry**: Further testing may be required depending on final design of infiltration facilities. Infiltration rates are anticipated to vary based on location and depth. Infiltration concepts should be discussed with Leighton as infiltration plans are being developed. We should review all infiltration plans, including locations and depths of proposed facilities. Further testing may be required depending on infiltration facilities design details, particularly considering type, depth and location.

- **Siltation and Soil Changes**: These infiltration rates are for a clean, un-silted infiltration surface in native, sandy alluvial soil. These values may be reduced over time as silting of the basin or chamber occurs. Furthermore, if the basin or chamber bottom is allowed to be compacted by heavy equipment, this value is expected to be reduced. Infiltration of water through soil is highly dependent on such factors as grain size distribution of soil particles, gradation (uniform versus well graded), particle shape, fines content and density. Small changes in soil conditions, including density, can cause large differences in observed infiltration rates. Infiltration is not suitable in compacted fill. For open basins and swales, vegetation within the basin bottoms and sides is expected to help reduce erosion and help maintain infiltration rates.

- **De-silting Weir/Facilities**: Periodic flow of water carrying sediments into the basin or chamber, plus deposition of fine wind-blown sediments and sediments from erosion of basin side walls, will eventually cause the basin bottom or chamber to accumulate a layer of silt, which has the potential to significantly reducing the overall infiltration rate of the basin or chamber. Therefore, we

recommend that significant amounts of silt/sediment not be allowed to flow into the facility within stormwater, especially during construction of the project and prior to achieving a mature landscape onsite. We recommend that an easily maintained, robust silt/sediment removal system be installed to pretreat storm water before it enters the infiltration facility. Infiltration facilities should be constructed with spillways or other appropriate means that would prevent overfilling that could damage the facility or adjacent improvements.

- **Drainage/Infiltration Time Cycle**: In general, the rate of infiltration reduces as the head of water in the infiltration facility reduces, and it also reduces with prolonged periods of infiltration. As such, water typically infiltrates much faster near the beginning of and/or immediately after storm events than at times well after a storm when the water level in the facility has receded, since the infiltration rate is then slower due to both lower head and longer overall duration of infiltration. In open basins with compacted or silty bottoms, this could be problematic, in that even if the basin had already infiltrated significant amounts of storm water, the lower several inches or feet of water could remain in the basin for an extended period of time, creating prolonged open-water safety concern (such as potential for mosquitos and waterborne diseases, algae odor, etc.). In a buried/cover infiltration chamber, these conditions would be of less concern.

- **Maintenance**: Infiltration facilities should be routinely monitored, especially before and during the rainy season, and corrective measures should be implemented if and as needed. Things to check for include removal of trash or dumping, proper infiltration, absence of accumulated silt, and that de-silting filters/features are clean and functioning. Pretreatment desilting features should be cleaned and maintained as recommended by the manufacturer or designer. Even with measures to prevent silt from flowing into the infiltration facility, accumulated silt may need to be removed.

3.8 Temporary Excavations

All temporary excavations, including utility trenches, retaining wall excavations and other excavations should be performed in accordance with project plans, specifications and all OSHA requirements.

No surcharge loads should be permitted within a horizontal distance equal to the height of cut or 5 feet, whichever is greater from the top of the slope, unless the cut is shored appropriately. Excavations that extend below an imaginary plane inclined at 45 degrees below the edge of any adjacent existing site foundation should be properly shored to maintain support of the adjacent structures.

Cantilever shoring should be designed based on an active equivalent fluid pressure of 35 pcf. If excavations are braced at the top and at specific design intervals, the active pressure may then be approximated by a rectangular soil pressure distribution with the pressure per foot of width equal to 25H, where H is equal to the depth of the excavation being shored.

During construction, the soil conditions should be regularly evaluated to verify that conditions are as anticipated. The contractor should be responsible for providing the "competent person" required by OSHA, standards to evaluate soil conditions. Close coordination between the competent person and the geotechnical engineer should be maintained to facilitate construction while providing safe excavations.

3.9 Trench Backfill

Utility-type trenches onsite can be backfilled with the onsite material, provided it is free of debris, organic and oversized material. Prior to backfilling the trench, pipes should be bedded and shaded in a granular material that has a sand equivalent of 30 or greater and will allow water to sufficiently permeate. Gravel or rock cannot be used for trench backfill without written approval by Leighton. If gravel or open-graded rock is approved and used as bedding or shading, it should be wrapped in Mirafi 140N filter fabric, or equivalent, to prevent surrounding soil from washing into the pore spaces in the gap graded rock. Shading should extend at least 12 inches above the top of the pipe. The bedding/shading materials should be densified in-place by mechanical means, or in accordance with Greenbook specifications.

Subsequent to pipe bedding and shading, backfill soils should be placed in loose layers, moisture conditioned, as necessary, and mechanically compacted using a minimum standard of 90 percent relative compaction (ASTMS D1557). The thickness of layers should be based on the compaction equipment used in accordance with the Standard Specifications for Public Works Construction

(Greenbook). The upper 6 inches in pavement areas should be compacted to 95 percent compaction.

3.10 Surface Drainage

Inadequate control of runoff water and/or poorly controlled irrigation can cause the onsite soils to expand and/or shrink, producing heaving and/or settlement of foundations, flatwork, walls, and other improvements. Maintaining adequate surface drainage, proper disposal of runoff water, and control of irrigation should help reduce the potential for future soil moisture problems.

Positive surface drainage should be designed to be directed away from foundations and toward approved drainage devices, such as gutters, paved drainage swales, or watertight area drains and collector pipes.

Surface drainage should be provided to prevent ponding of water adjacent to the structures. In general, the area around the buildings should slope away from the building. We recommend that unpaved landscaped areas adjacent to the buildings be avoided. Roof runoff should be carried to suitable drainage outlets by watertight drain pipes or over paved areas.

3.11 Sulfate Attack and Corrosion Protection

Based on the results of laboratory testing, concrete structures in contact with the onsite soil will have negligible exposure to water-soluble sulfates in the soil. Therefore, common Type II cement may be used for concrete construction. The concrete should be designed in accordance with Table 19.3.2.1 of the American Concrete Institute ACI 318-14 provisions (ACI, 2014).

The onsite soil is considered to be corrosive to ferrous metals. It is recommended that any buried pipe be made of non-ferrous material, or that any ferrous pipe be protected by dielectric tape, polyethylene sleeves and/or other methods, with recommendations from a corrosion engineer. Corrosion information presented in this report should be provided to your underground utility subcontractors. Additional testing and evaluation by a corrosion engineer may be warranted if metallic utilities are planned.

3.12 Additional Geotechnical Services

The preliminary geotechnical recommendations presented in this report are based on subsurface conditions as interpreted from limited subsurface explorations and limited laboratory testing. Our supplemental geotechnical recommendations provided in this report are based on information available at the time the report was prepared and may change as plans are developed. Additional geotechnical investigation and analysis may be required based on final improvement plans. Leighton should review the site and grading plans when available and comment further on the geotechnical aspects of the project. Geotechnical observation and testing should be conducted during excavation and all phases of grading operations. Our conclusions and preliminary recommendations should be reviewed and verified by Leighton during construction and revised accordingly if geotechnical conditions encountered vary from our preliminary findings and interpretations.

Geotechnical observation and testing should be provided:

- After completion of site clearing.
- During overexcavation of compressible soil.
- During compaction of all fill materials.
- After excavation of all footings and prior to placement of concrete.
- During utility trench backfilling and compaction.
- During pavement subgrade and base preparation.
- When any unusual conditions are encountered.

4.0 LIMITATIONS

This report was based in part on data obtained from a limited number of observations, site visits, soil excavations, samples, and tests. Such information is, by necessity, incomplete. The nature of many sites is such that differing soil or geologic conditions can be present within small distances and under varying climatic conditions. Changes in subsurface conditions can and do occur over time. Therefore, our findings, conclusions, and recommendations presented in this report are based on the assumption that Leighton Consulting, Inc. will provide geotechnical observation and testing during construction.

This report was prepared for the sole use of FGFW IV, LLC, for application to the design of the proposed warehouse buildings development in accordance with generally accepted geotechnical engineering practices at this time in California.

See the GBA insert on the following page for important information about this geotechnical engineering report.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled*. No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed*. The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

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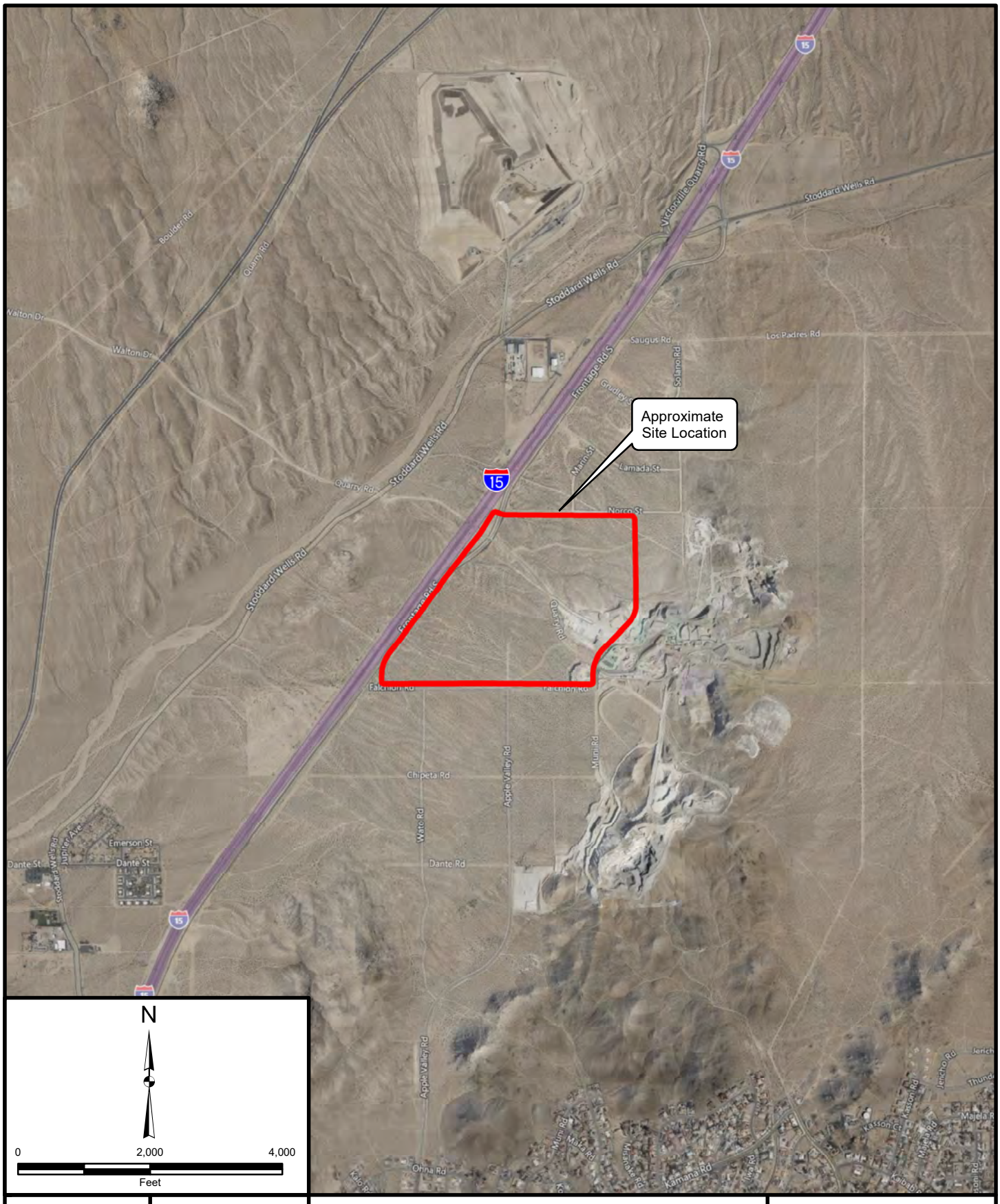

Project: 13673.001	Eng/Geol: JDH/SGO
Scale: 1 " = 2,000 '	Date: February 2023

Reference: © 2022 Microsoft Corporation © 2022 Maxar ©CNES (2022) Distribution Airbus

SITE LOCATION MAP

Proposed Warehouse Building Development
Parcel A APN 0472-031-08,
Apple Valley, California

FIGURE 1

Leighton

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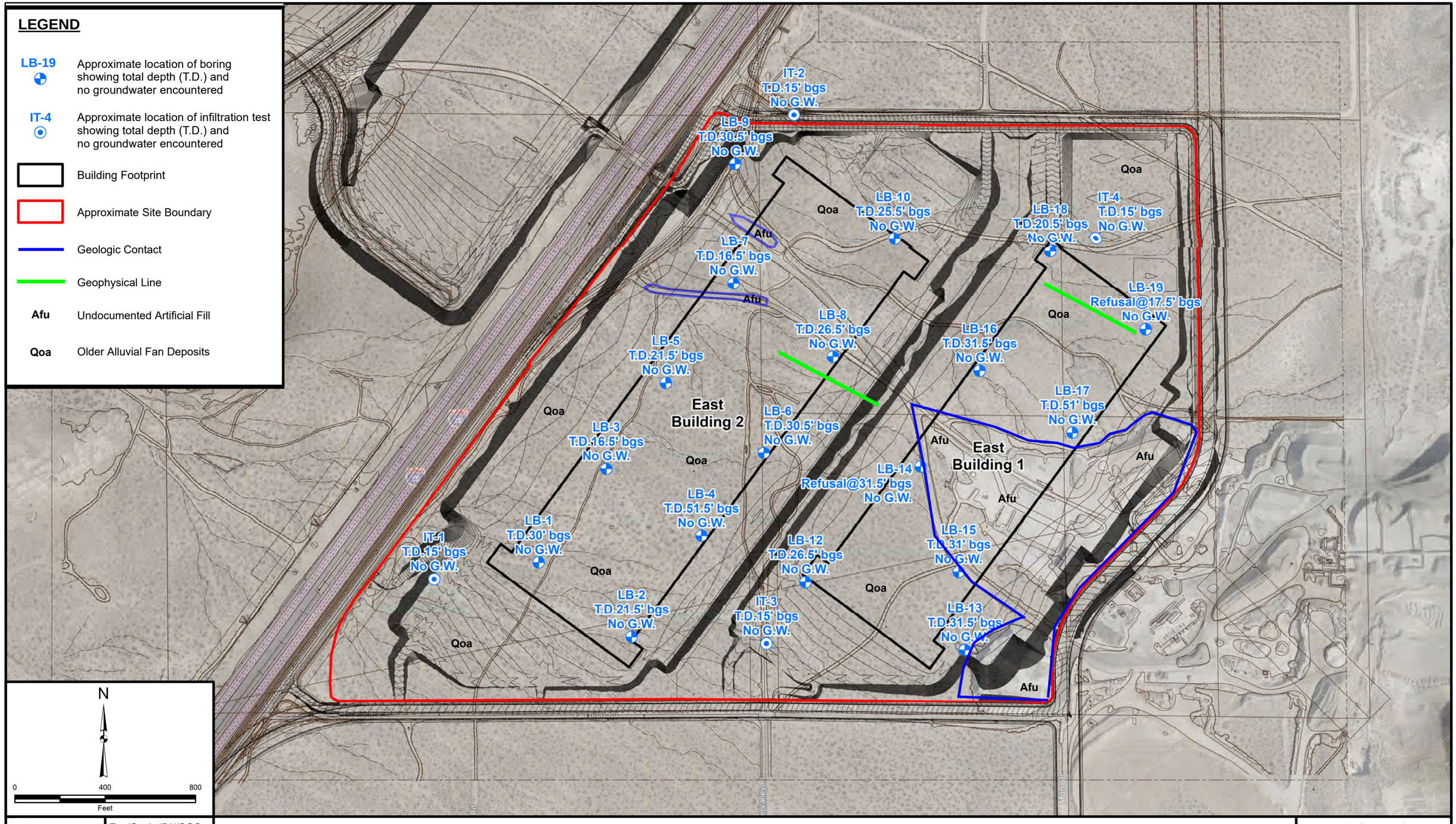
LEGEND

LB-19	Approximate location of boring showing total depth (T.D.) and no groundwater encountered
IT-4	Approximate location of infiltration test showing total depth (T.D.) and no groundwater encountered
	Building Footprint
	Approximate Site Boundary
	Geologic Contact
	Geophysical Line
Afu	Undocumented Artificial Fill
Qoa	Older Alluvial Fan Deposits



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0 400 800

Feet

Project: 13673.001	Eng/Geol: JDH/SGO
Scale:1 " = 400 '	Date: February 2023

Reference: Conceptual Site Plan, Sheet A1-0
Date: March 5, 2022 by Rexford Industrial Realty

GEOTECHNICAL MAP

Proposed Warehouse Building Development
Parcel A APN 0472-031-08,
Apple Valley, California

FIGURE 2

Leighton

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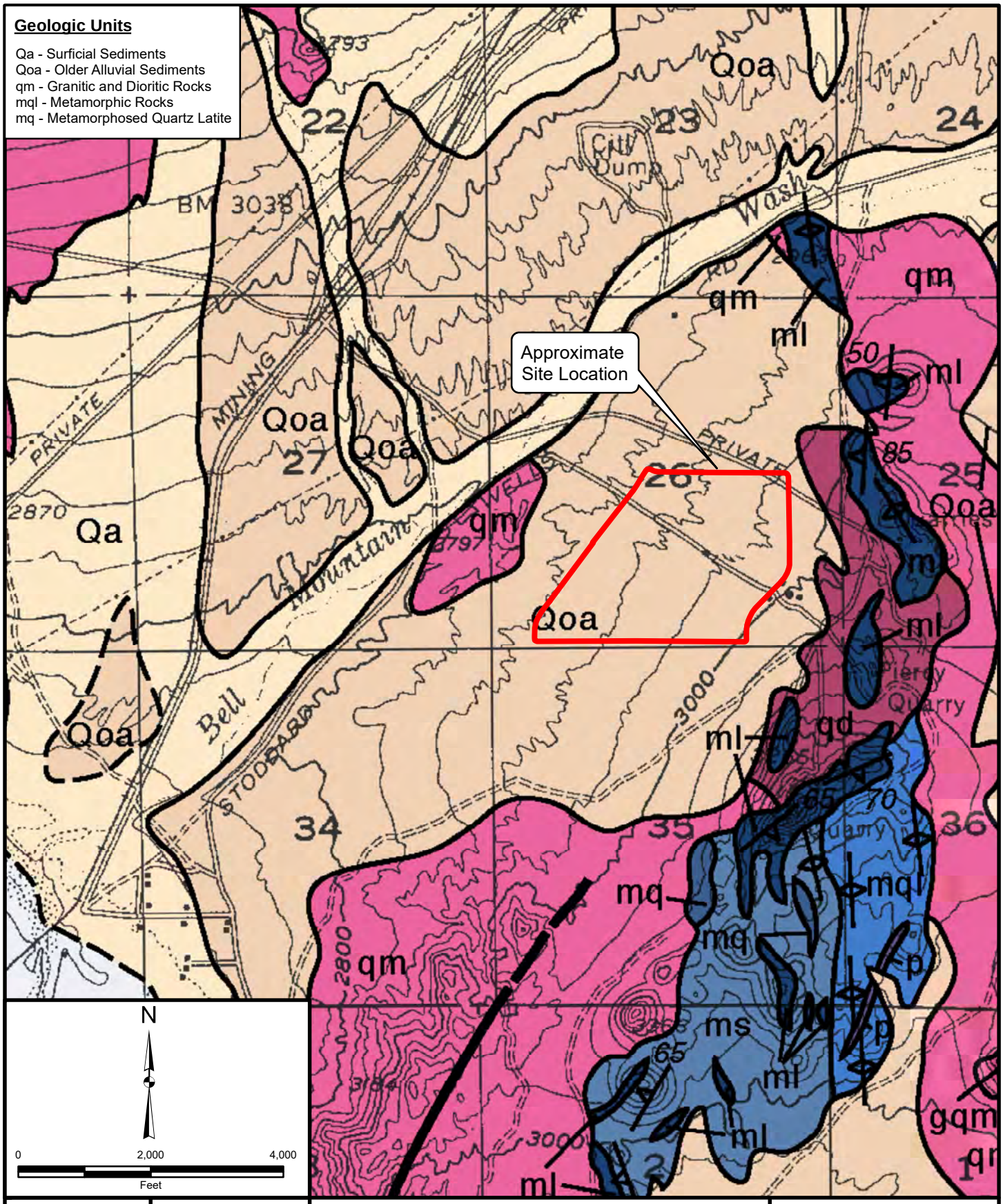

Project: 13673.001	Eng/Geol: JDH/SGO
Scale: 1 " = 2,000 '	Date: February 2023

Reference:
Geologic Map of the Shadow Mountain & Victorville
by Thomas W. Dibblee, JR., 2008

REGIONAL GEOLOGY MAP

Proposed Warehouse Building Development
Parcel A APN 0472-031-08,
Apple Valley, California

FIGURE 3

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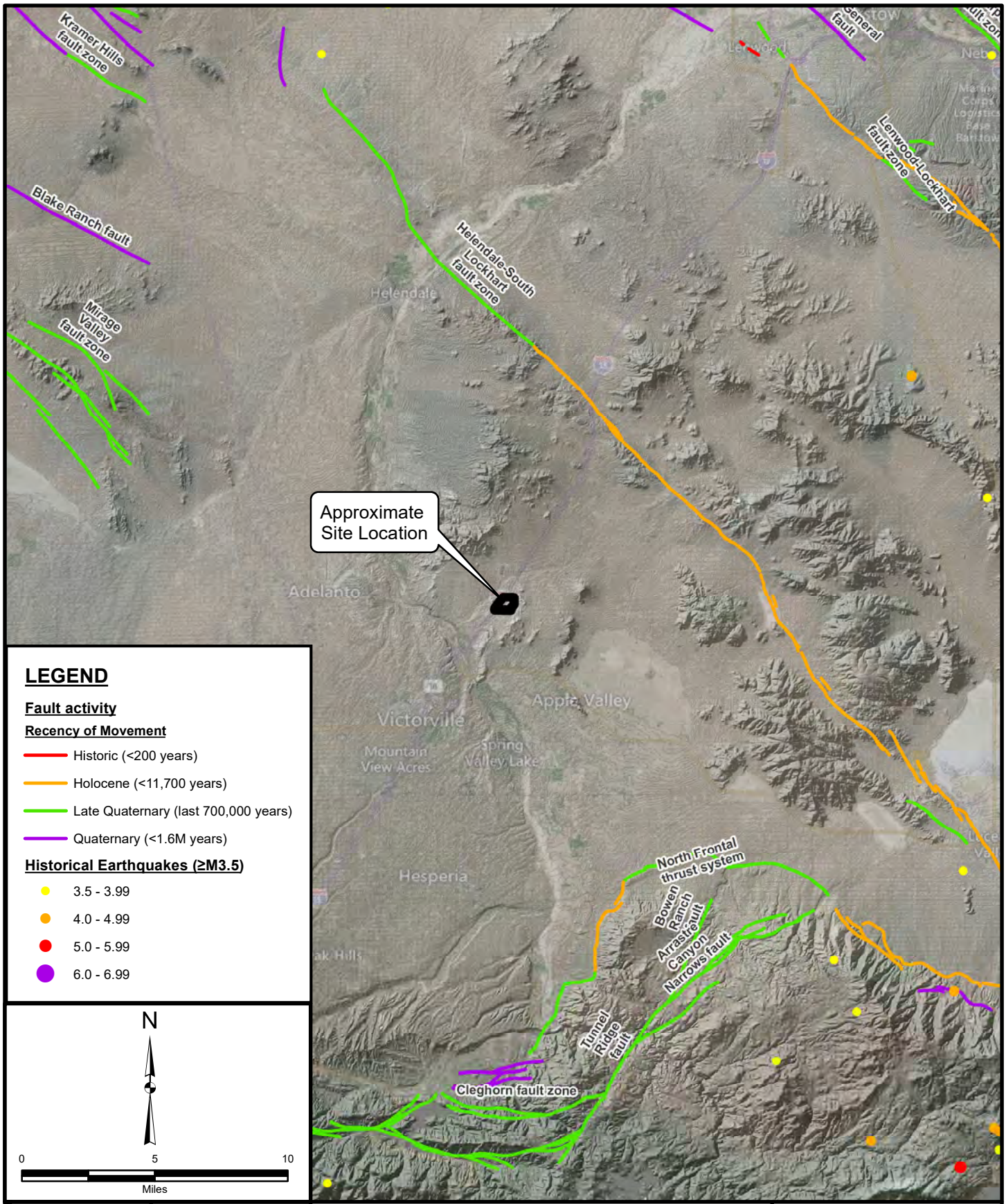

Project: 13673.001	Eng/Geol: JDH/SGO
Scale: 1 " = 5 miles	Date: February 2023

Basemap Reference: © 2022 Microsoft Corporation
Earthstar Geographics SIO © 2022 TomTom
Seismicity Data Reference: maps.conservation.ca.gov

REGIONAL FAULT AND HISTORIC SEISMICITY MAP

Proposed Warehouse Building Development
Parcel A APN 0472-031-08
Apple Valley, California

FIGURE 4

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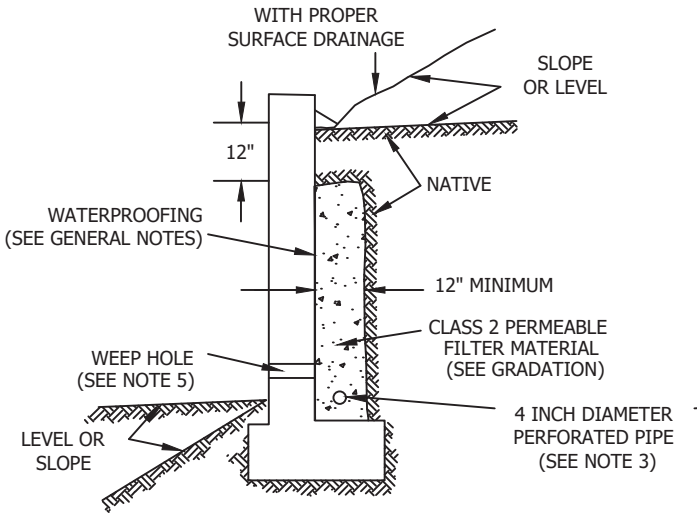
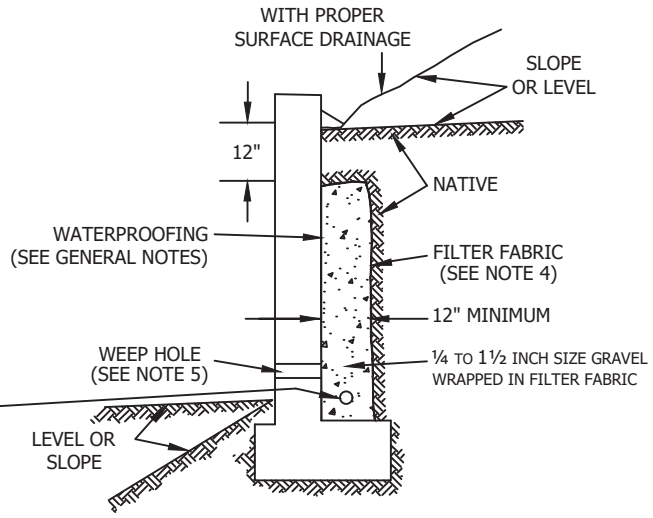
SUBDRAIN OPTIONS AND BACKFILL WHEN NATIVE MATERIAL HAS EXPANSION INDEX OF ≤50

OPTION 1: PIPE SURROUNDED WITH CLASS 2 PERMEABLE MATERIAL



OPTION 2: GRAVEL WRAPPED IN FILTER FABRIC



Class 2 Filter Permeable Material Gradation
Per Caltrans Specifications

Sieve Size	Percent Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

GENERAL NOTES:

* Waterproofing should be provided where moisture nuisance problem through the wall is undesirable.
* Water proofing of the walls is not under purview of the geotechnical engineer
* All drains should have a gradient of 1 percent minimum
*Outlet portion of the subdrain should have a 4-inch diameter solid pipe discharged into a suitable disposal area designed by the project engineer. The subdrain pipe should be accessible for maintenance (rodding)
*Other subdrain backfill options are subject to the review by the geotechnical engineer and modification of design parameters.

Notes:
1) Sand should have a sand equivalent of 30 or greater and may be densified by water jetting.
2) 1 Cu. ft. per ft. of 1/4- to 1 1/2-inch size gravel wrapped in filter fabric
3) Pipe type should be ASTM D1527 Acrylonitrile Butadiene Styrene (ABS) SDR35 or ASTM D1785 Polyvinyl Chloride plastic (PVC), Schedule 40, Armco A2000 PVC, or approved equivalent. Pipe should be installed with perforations down. Perforations should be 3/8 inch in diameter placed at the ends of a 120-degree arc in two rows at 3-inch on center (staggered)
4) Filter fabric should be Mirafi 140NC or approved equivalent.
5) Weephole should be 3-inch minimum diameter and provided at 10-foot maximum intervals. If exposure is permitted, weepholes should be located 12 inches above finished grade. If exposure is not permitted such as for a wall adjacent to a sidewalk/curb, a pipe under the sidewalk to be discharged through the curb face or equivalent should be provided. For a basement-type wall, a proper subdrain outlet system should be provided.
6) Retaining wall plans should be reviewed and approved by the geotechnical engineer.
7) Walls over six feet in height are subject to a special review by the geotechnical engineer and modifications to the above requirements.

RETAINING WALL BACKFILL AND SUBDRAIN DETAIL FOR WALLS 6 FEET OR LESS IN HEIGHT

WHEN NATIVE MATERIAL HAS EXPANSION INDEX OF ≤50

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Figure 5

V:\DRAFTING\TEMPLATES\STANDARD-FIGURES\WALL-STANDARD-FIGURES.DWG (09-02-21 9:07:35AM) Plotted by bbain

APPENDIX A

REFERENCES

APPENDIX A

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APPENDIX B

GEOTECHNICAL LOGS

APPENDIX B

FIELD EXPLORATION

Our field investigation consisted of a surface reconnaissance and a subsurface exploration. Approximate exploration locations are shown on Figure 2, *Exploration Location Map*.

Borings: On September 12-14, 2022 and September 21-22, 2022, 22 hollow-stem-auger borings (LB-1 through LB-19 and IT-1 through IT-4) were drilled, logged and sampled to depths ranging from 16.5 feet to 51 feet below the ground surface. Encountered soils were logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D 2488). Relatively undisturbed soil samples were obtained at selected intervals within these borings using both a Modified California ring-lined and Standard Penetration Test (SPT) split-spoon sampler. Standard Penetration Test (SPT) resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch outside diameter split-spoon sampler was driven 18 inches and the number of blows was recorded for each 6 inches of penetration (ASTM D 1586). In addition, 2.4-inch inside diameter brass ring samples were obtained using a Modified California sampler driven into the soil with the 140-pound hammer. Near surface bulk soil samples were also collected from the borings. Representative earth-material samples obtained from these subsurface explorations were transported to our geotechnical laboratory for evaluation and appropriate testing.

GEOTECHNICAL BORING LOG LB-1

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED SAND WITH GRAVEL (SP): Brown, dry, fine-coarse sand, 15% gravel (field estimate)	
				R-1	39 42 43	117	2	SP	@2.5: POORLY GRADED SAND WITH SILT (SP): very dense, brown, dry, fine-coarse sand, 10% fines (lab)	-200
	5			R-2	50/6"	109	4	SP	@5: POORLY GRADED SAND WITH SILT (SP): very dense, brown, dry, fine-coarse sand, 10% fines (estimate)	
				R-3	16 45 40	109	3	SM	@7.5: SILTY SAND (SM): very dense, brown, dry, fine sand, 12% fines (lab)	-200
	10			R-4	16 45 45			SP	@10: POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, brown, dry, fine sand, cemented, 10% fines, 15% gravel (field estimate)	CO
	15			S-1	27 27 30			SP	@15: POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, brown, dry, fine sand, slight cementation, 10% fines, 15% gravel (field estimate)	
	20			S-2	17 24 28			SPg	@20: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): very dense, brown, dry, fine sand, cemented, 10% fines, 20% gravel (field estimate)	
	25			S-3	20 50/6"			SPg	@25: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): very dense, brown, dry, fine sand, cemented, 10% fines, 25% gravel (field estimate)	
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-1

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30			S-4	50/5"			SP	@30: POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, brown, dry, fine sand, cemented, 10% fines, 15% gravel (field estimate) 3 inch Recovery **TOTAL DEPTH = 30 FEET** **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	35									
	40									
	45									
	50									
	55									
	60									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-2

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SPg	**Older Alluvial Sediments (Qoa)** @ Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine-coarse sand, 20% gravel (field estimate)	
				R-1	50/5"	111	3	SPg	@ 2.5: POORLY GRADED GRAVELLY SAND (SPg): very dense, brown, dry, fine-coarse sand, 20% gravel (field estimate)	
	5			R-2	27 37 45	113	3	SP	@5': POORLY GRADED SAND WITH SILT (SP): dense, light brown, slightly moist, fine-medium sand, 10% fines (field estimate)	
				S-1	11 17 10			SP	@7.5': POORLY GRADED SAND WITH SILT (SP): medium dense, light brown, slightly moist, fine-medium sand, 10% fines (field estimate)	
	10			S-2	37 43 34			SP	@10': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, medium-coarse sand, 10% fines (field estimate)	
	15			S-3	22 28 34			SP	@15': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine-medium sand, 10% fines (field estimate)	
	20			S-4	15 29 25			SP	@20': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine-medium sand, 10% fines (field estimate)	
	25								**TOTAL DEPTH = 21.5 FEET** **NO GROUNDWATER ENCOUNTERED** **CAVE-IN DEPTH: 6 FEET** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	30									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-3

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SPg	**Older Alluvial Sediments (Qoa)** @Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine-coarse sand, 20% gravel (field estimate)	
				R-1	9 14 50/5"		124	SPg	@2.5: POORLY GRADED GRAVELLY SAND (SPg): very dense, brown, dry, fine-coarse sand, 20% gravel (field estimate)	
	5				50/5"				@5': NO RECOVERY	
				R-2	8 40 43			SP	@7.5': POORLY GRADED SAND WITH GRAVEL (SP): dense, brown, dry, fine-coarse sand, 15% gravel (field estimate)	
	10			R-3	19 44 45			SPg	@10': POORLY GRADED GRAVELLY SAND (SPg): very dense, brown, dry, fine-coarse sand, slight cementation, 20% gravel (field estimate)	
	15			S-1	14 20 28			SP	@15': POORLY GRADED SAND WITH GRAVEL (SP): dense, brown, dry, fine-coarse sand, slight cementation, 15% gravel (field estimate)	
									TOTAL DEPTH = 16.5 FEET **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	20									
	25									
	30									

The Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-4

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED SAND (SP): Light brown, dry, fine-coarse sand, 5% fine sand (field estimate)	
				R-1	17 12 14	123	2	SP	@2.5: POORLY GRADED SAND WITH SILT (SP): medium dense, light brown, dry, fine-coarse sand, 10% fines (lab)	-200
	5			R-2	50/5"	101	4	SP	@5: POORLY GRADED SAND WITH SILT (SP-SM): very dense, light brown, dry, fine-coarse sand, 10% fines (estimate)	
				R-3	40 50/3"			SP	@7.5: POORLY GRADED SAND WITH SILT (SP): very dense, light brown, dry, fine sand, cemented, 10% fines (estimate)	
	10			R-4	29 41 50/4"	109	3	SP	@10: POORLY GRADED SAND WITH SILT (SP): very dense, light brown, dry, fine sand(rock grindings), cemented, 12% fines (lab)	-200
	15				50/6"				@15': NO RECOVERY	
	20			S-1	36 42 28			SP	@20: POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine-coarse sand, 10% fines (estimate)	
	25			S-2	50/5"			SM	@25: SILTY SAND (SM): very dense, white/light brown, slightly moist, fine-coarse sand, 25% fines (estimate)	
	30									

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-4

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30			S-3	14 34 40			SM	@30: SILTY SAND (SM): very dense, white/light brown, slightly moist, fine powdery sand, 24% fines (lab)	-200
	35			S-4	29 50/6"			SM	@35: SILTY SAND (SM): very dense, white/light brown, slightly moist, fine powdery sand, 25% fines (estimate)	
	40			S-5	28 40 50/3"			SM	@40: SILTY SAND (SM): very dense, white/light brown, slightly moist, fine powdery sand, 25% fines (estimate)	
	45			S-6	28 39 41			SM	@45: SILTY SAND (SM): very dense, white/light brown, slightly moist, fine powdery sand, 25% fines (estimate)	
	50			S-7	8 11 45			SM	@50: SILTY SAND (SM): very dense, white/light brown, slightly moist, fine powdery sand, 25% fines (estimate)	
	55								**TOTAL DEPTH = 51.5 FEET** **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	60									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-5

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
				R-1	50/5"	98	7	SPg	@Surface: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): Brown, dry, fine-coarse sand, 20% gravel, 10% fines (field estimate) @2.5': POORLY GRADED GRAVELLY SAND (SPg): very dense, light brown, dry, fine-coarse sand, 20% gravel (field estimate) Partial Recovery	
	5			R-2	39 35 50/5"	113	2	SMg	@5': SILTY SAND (SM): very dense, light brown, dry, fine-coarse sand, 20% fines (lab)	-200
				R-3	50/5"			SM	@8.5': SILTY SAND (SM): very dense, light brown, dry, fine-coarse sand, cemented, 15% fines (estimate)	
	10			R-4	15 50/3"			SM	@10': SILTY SAND (SM): very dense, light brown, dry, fine sand, 20% fines (estimate)	
	15			S-1	8 29 34			SM	@15': SILTY SAND (SM): very dense, light brown, dry, fine sand, 20% fines (estimate)	
	20			S-2	18 34 50/3"			SM	@20': SILTY SAND (SM): very dense, light brown, dry, fine sand, 20% fines (estimate)	
	25								**TOTAL DEPTH = 21.5 FEET** **NO GROUNDWATER ENCOUNTERED** **CAVE-IN DEPTH = 6 FEET 3 INCHES** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-6

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SP	**Older Alluvial Sediments (Qoa)** @Surface: POORLY GRADED SAND WITH GRAVEL (SP): Light brown, dry, medium - coarse sand, 15% gravel (field estimate)	SA, MD, RV, CR
				R-1	21 24 21	119	2	SM	@2.5': SILTY SAND (SM): medium - dense, brown, slightly moist, fine to medium sand, 13% fines (lab)	
	5			R-2	38 50/3"	99	5	SPg	@5': POORLY GRADED GRAVELLY SAND WITH SILT (SPg): very dense, brown, slightly moist, very dense, fine to medium sand, (fine powdery sand), 10% fines, 20% gravel less than 1" in dimension (field estimate)	
					50/6"				@7.5': NO RECOVERY	
	10			R-3	8 50/5"			SP	@10': POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, brown, slightly moist, fine to medium sand, (fine powdery sand), 10% fines, 15% gravel (field estimate) Partial Recovery, non-cohesive sand	
	15			S-1	33 50/2"			SP	@15': POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, brown, slightly moist, fine to coarse sand, 10% fines, 15% gravel (field estimate)	
	20			S-2	19 23 21			SP	@20': POORLY GRADED SAND WITH SILT AND GRAVEL (SP): dense, brown, slightly moist, fine to coarse sand, 10% fines, 10% gravel (field estimate)	
	25			S-3	50/6"			SP	@25': POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM): very dense, brown, slightly moist, fine to coarse sand, 10% fines, 15% gravel (field estimate)	
	30									

Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-6

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30				50/6"				@30': NO RECOVERY	
									TOTAL DEPTH = 30.5 FEET **NO GROUNDWATER ENCOUNTERED**	
									BACKFILLED TO SURFACE WITH SOIL CUTTINGS	
	35									
	40									
	45									
	50									
	55									
	60									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-7

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SP	**Older Alluvial Sediments (Qoa)** @Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine to coarse sand, 25% gravel (field estimate)	
				S-1	34 13 8			SPg	@2.5': POORLY GRADED SAND WITH SILT (SP-SM): medium dense, white/brown, dry, fine to medium sand, 10% fines (field estimate)	
	5			S-2	8 20 40			SP	@5': POORLY GRADED SAND WITH SILT (SP): very dense, white/brown, dry, fine to medium sand, 10% fines (field estimate)	
				S-3	25 50/6"			SP	@7.5': POORLY GRADED SAND WITH SILT (SP): very dense, white/brown, dry, fine to medium sand, slight cementation, 10% fines (field estimate)	
	10			S-4	10 50/5"			SP	@10': POORLY GRADED SAND WITH SILT (SP): very dense, white/brown, dry, fine to medium sand, trace of gravel, 10% fines (field estimate)	
	15			S-5	9 13 50/5"			SP	@15': POORLY GRADED SAND WITH SILT (SP): very dense, white/brown, dry, fine to medium sand, 10% fines (field estimate)	
									TOTAL DEPTH = 16.5 FEET **NO GROUNDWATER ENCOUNTERED**	
	20								**BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-8

Project No.	13673.001	**Date Drilled**	9-12-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): Light brown, dry, fine to coarse sand, 20% gravel (field estimate)	
				R-1	25 21 50/3"	118	2	SP	@2.5: POORLY GRADED SAND WITH GRAVEL (SP): very dense, light brown, dry, fine to coarse sand, cemented, 15% gravel (field estimate)	
	5			R-2	5 40 50/3"	116	4	SPg	@5: POORLY GRADED GRAVELLY SAND (SPg): very dense, light brown, dry, fine to coarse sand, 25% gravel (field estimate) less than 1" in dimension	
	10			S-1	38 50/3"			SPg	@10: POORLY GRADED GRAVELLY SAND (SPg): very dense, light brown, dry, fine to coarse sand, 20% gravel (field estimate) Partial Recovery	
	15			S-2	5 14 15			SP	@15: SAND WITH SILT (SP): medium dense, light brown, dry, fine to coarse sand, slight cementation, 13% fines (lab)	-200
	20			S-3	50/6"			SP	@20: SAND WITH SILT (SP): very dense, light brown, dry, fine to coarse sand, 10% fines (estimate)	
	25			S-4	27 42 37			SP	@25: SAND WITH SILT (SP): very dense, light brown, dry, fine to coarse sand, cemented, 10% fines (estimate)	
	30								**TOTAL DEPTH = 26.5 FEET** **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
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Leighton

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GEOTECHNICAL BORING LOG LB-9

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Undocumented Fill (Afu)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine to coarse sand, 25% gravel (field estimate)	
				S-1	3 3 2			SP	@2.5: POORLY GRADED SAND WITH SILT (SP): loose, reddish brown, dry, medium to coarse sand, 8% fines (lab)	-200
	5			S-2	3 3 4			SP	@5: POORLY GRADED SAND WITH SILT (SP): loose, reddish brown, dry, medium to coarse sand, 10% fines (field estimate)	
									Older Alluvial Sediments (Qoa)	
				S-3	20 50/5"			SP	@7.5: POORLY GRADED SAND WITH SILT (SP): very dense, white/brown, dry, fine to medium sand, 10% fines (field estimate)	
	10			S-4	13 20 21			SP	@10: POORLY GRADED SAND WITH SILT (SP): dense, white/brown, dry, fine to medium sand, slight cementation, 10% fines (field estimate)	
	15			S-5 B-1	8 14 21			SP SP	@15: POORLY GRADED SAND WITH SILT (SP): dense, white/brown, dry, fine to medium sand, slight cementation, 10% fines (field estimate)	MD, DS
	20			S-6				SP	@20: POORLY GRADED SAND WITH SILT (SP): white/brown, dry, fine to medium sand, slight cementation, 10% fines (field estimate)	
	25			S-7	50/6"			SP	@25: POORLY GRADED SAND WITH SILT (SP): very dense, white/brown, dry, fine to medium sand, slight cementation, 10% fines (field estimate)	
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-9

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30			S-8	50/6"			SP	@30: POORLY GRADED SAND WITH SILT (SP): very dense, white/brown, dry, fine to medium sand, 10% fines (field estimate)	
									TOTAL DEPTH = 30.5 FEET **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	35									
	40									
	45									
	50									
	55									
	60									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-10

Project No.	13673.001	**Date Drilled**	9-21-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
				S-1	17 35 50			SPg	@ Surface: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): light brown, dry, fine to coarse sand, 10% fines, 20% gravel (field estimate) @ 2.5: POORLY GRADED GRAVELLY SAND WITH SILT(SPg): very dense, light brown, dry, fine to coarse sand, 10% fines, 20% gravel (field estimate)	
	5			S-2	28 50/5"			SPg	@5': POORLY GRADED SAND WITH GRAVEL (SP): very dense, light brown, dry, fine to coarse sand, 15% gravel (field estimate)	
				S-3	16 27 35			SP	@7.5': SILTY SAND (SM): very dense, light brown, dry, fine to coarse sand, cemented, 21% fines (lab)	-200
	10			S-4	50/6"			SM	@10': SILTY SAND (SM): very dense, brown, slightly moist, fine to coarse sand, 13% fines (field estimate)	
	15			S-5	22 24 28			SM	@15': SILTY SAND (SM): very dense, brown, slightly moist, fine to coarse sand, 13% fines (lab)	-200
	20			S-6	50/5"			SM	@20': SILTY SAND (SM): very dense, brown, slightly moist, fine to coarse sand, 13% fines (field estimate)	
	25			S-7	28 50/3"			SM	@25': SILTY SAND (SM): very dense, brown, slightly moist, fine to coarse sand, 13% fines, (field estimate)	
	30								**TOTAL DEPTH = 25.5 FEET** **NO GROUNDWATER ENCOUNTERED** **CAVE-IN DEPTH: 8 FEET** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-12

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				SPg	**Older Alluvial Sediments (Qoa)** @Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine to coarse sand, 25% gravel (field estimate)	
				R-1	3 3 3			SPg	@2.5: POORLY GRADED SAND (SP): very loose, brown, dry, fine to coarse sand, 15% gravel (field estimate) Disturbed Sample	
	5			R-2	28 50/2"	121	2	SP	@5: POORLY GRADED SAND (SP): very dense, brown, dry, fine to coarse sand, slight cementation, 15% gravel (field estimate)	
				S-1	42 50/6"			SP	@7.5: POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine to medium sand, slight cementation, 10% fines (field estimate)	
	10			S-2	50/6"			SP	@10: POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine to medium sand, trace of gravel, 10% fines (field estimate)	
	15			S-3	50/4"			SP	@15: POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine to medium sand, 10% fines (field estimate) Partial Recovery	
	20			S-4	18 21 24			SP	@20': POORLY GRADED SAND WITH GRAVEL (SP): dense, light brown, slightly moist, fine-coarse sand, cemented, 15% gravel (field estimate)	
	25			S-5	7 30 45			SP	@25': POORLY GRADED SAND WITH GRAVEL (SP): very dense, light brown, slightly moist, fine-coarse sand, cemented, 15% gravel (field estimate)	
	30								**TOTAL DEPTH = 26.5 FEET** **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-13

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine to coarse sand, 30% gravel (field estimate)	
				S-1	9 11 12			SP	@2.5': POORLY GRADED SAND WITH SILT (SP): medium dense, light brown, dry, fine to coarse sand, slight cementation, 10% fines (field estimate)	
	5			S-2	16 6 13			SP	@5': POORLY GRADED SAND WITH SILT (SP): medium dense, light brown, dry, fine to coarse sand, slight cementation, 10% fines (field estimate)	
				S-3	25 45 50/3"			SP	@7.5': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, dry, fine to coarse sand, 10% fines (field estimate)	
	10			S-4	25 31 21			SP	@10': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, dry, fine to coarse sand, slight cementation, 10% fines (field estimate)	
	15			S-5 B-1	20 49 50			SM SM	@15': SILTY SAND (SM): very dense, light brown, dry, fine to coarse sand, trace of gravel, 26% fines (lab)	-200
	20			S-6	34 46 50/5"			SM	@20': SILTY SAND (SM): very dense, light brown, dry, fine to coarse sand, slight cementation, 25% fines (field estimate)	
	25			S-7	50/4"			SP	@25': POORLY GRADED SAND WITH GRAVEL (SP): very dense, light brown, slightly moist, fine to coarse sand, 5% fines, 15% gravel (field estimate)	
	30									

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-13

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30			S-8	15 30 40			SP	@30': POORLY GRADED SAND WITH GRAVEL (SP): very dense, light brown, slightly moist, fine to coarse sand, 5% fines, 15% gravel (field estimate)	
									TOTAL DEPTH = 31.5 FEET **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	35									
	40									
	45									
	50									
	55									
	60									

The Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-14

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED SAND WITH GRAVEL (SP): Brown, dry, fine to coarse sand, 15% gravel (field estimate)	
				R-1	38 50/4"	104	7	SP	@2.5': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, dry, fine-coarse sand, slight cementation, 10% fines (field estimate)	
	5			R-2	15 50/6"	114	4	SP	@5': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine-coarse sand, 10% fines (field estimate)	
				S-1	15 30 50/3"			SP	@7.5': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine-coarse sand, slight cementation, 10% fines (field estimate)	
	10				40 50/3"				@10': POORLY GRADED SAND WITH SILT (SP): very dense, light brown, slightly moist, fine-coarse sand, 10% fines (field estimate) NO RECOVERY	
									@14': Auger grinding on rock, met refusal	
	15								**MET REFUSAL AT 14 FEET** **NO GROUNDWATER ENCOUNTERED** **CAVE-IN DEPTH = 9 FEET 5 INCHES**	
									BACKFILLED TO SURFACE WITH SOIL CUTTINGS	
	20									
	25									
	30									

SOIL DESCRIPTION: This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-15

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0			B-1				SP-SM	**Older Alluvial Sediments (Qoa)** @Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine to coarse sand, 20% gravel (field estimate)	
				R-1	3 35 50/2"	87	9	SM	@2.5: SILTY SAND (SM): very dense, white/tan, dry, fine to coarse sand, 20% fines (field estimate)	
	5			R-2	14 50/6"	104	5	SM	@5: SILTY SAND (SM): very dense, white/tan, dry, fine to coarse sand, slight cementation, 20% fines (field estimate)	
				S-1	10 28 15			SM	@7.5: SILTY SAND (SM): dense, white/tan, dry, fine to coarse sand, slight cementation, 20% fines (field estimate)	
	10			S-2	14 40 50/1"			SM	@10: SILTY SAND (SM): dense, reddish brown, dry, fine to coarse sand, slight cementation, 20% fines (field estimate)	
									@14': Auger grinding on a rock	
	15			S-3	4 35 40			SM	@15: SILTY SAND (SM): very dense, reddish brown, dry, fine to coarse sand, 20% fines (field estimate)	
	20			S-4	50/6"			SM	@20: SILTY SAND (SM): very dense, reddish brown, dry, fine to coarse sand, 20% fines (field estimate) Partial Recovery	
	25			S-5	14 50/4"			SM	@25: SILTY SAND (SM): very dense, reddish brown, dry, fine to coarse sand, 20% gravel (field estimate) @26': Pieces of luminouse, white, hard stone found	
	30									

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-15

Project No.	13673.001	**Date Drilled**	9-13-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30	N S		S-6	15 50/6"			SM	@30: SILTY SAND (SM): very dense, reddish brown, dry, fine to coarse sand, slight cementation, 20% fines (field estimate)	
									TOTAL DEPTH = 31 FEET **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	35									
	40									
	45									
	50									
	55									
	60									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-16

Project No.	13673.001	**Date Drilled**	9-22-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine to coarse sand, 25% gravel (field estimate)	
				R-1	20 35 35	118	2	SM	@2.5: SILTY SAND WITH GRAVEL (SM): dense, brown, dry, fine to coarse sand, 20% fines, 15% gravel (field estimate)	
	5			R-2	12 20 18	124	2	SM	@5: SILTY SAND WITH GRAVEL (SM): medium dense, brown, dry, fine to coarse sand, 20% fines, 15% gravel (field estimate)	CO
				S-1	7 27 50/2"			SMg	@7.5: SILTY SAND WITH GRAVEL (SMg): very dense, brown, dry, fine to coarse sand, 20% fines, 25% gravel (field estimate)	
	10				50/2"				@10: NO RECCOVERY, gray sandstone present in shoe	
	15			S-2	50/5"			SP	@15: POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, light brown, slightly moist, fine to medium sand, 10% fines, 15% gravel (field estimate) Auger Grinding	
	20			S-3	50/6"			SP	@20: POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, light brown, slightly moist, fine to medium sand, slight cementation, 10% fines, 15% gravel (field estimate)	
	25			S-4	50/6"			SP	@25: POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, brown and white, slightly moist, fine to medium sand, 10% fines, 15% gravel (field estimate)	
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-16

Project No.	13673.001	**Date Drilled**	9-22-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30	N S		S-5	16 22 32			SM	@30: SILTY SAND (SM): very dense, brown, slightly moist, fine to medium sand, cemented, 40% fines (field estimate)	
									TOTAL DEPTH = 31.5 FEET **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	35									
	40									
	45									
	50									
	55									
	60									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-17

Project No.	13673.001	**Date Drilled**	9-22-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0			B-1				ML	**Older Alluvial Sediments (Qoa)** @Surface: SANDY SILT WITH GRAVEL (ML): gray, dry, fine sand, 75% low plasticity fines, 15% gravel (field estimate)	SA, MD, RV, CR
				R-1	26 50/5"	118	2	SMg	@2.5: SILTY GRAVELLY SAND (SMg): very dense, white, slightly moist, 21% fines, 22% gravel (lab)	
	5			R-2	50/4"			SMg	@5: SILTY GRAVELLY SAND (SMg): very dense, white, slightly moist, 20% fines, 20% gravel (field estimate)	
				S-1	10 14 19			SM	@7.5: SILTY SAND WITH GRAVEL (SM): dense, brown, slightly moist, fine to coarse sand, 20% fines, 15% gravel (field estimate)	
	10			S-2	37 27 18			SPg	@10: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): dense, white, slightly moist, fine to coarse sand, 10% fines, 20% gravel (field estimate) Gray sandstone present	
	15			S-3	50/6"			SPg	@15: POORLY GRADED SAND WITH SILT (SPg): very dense, white, slightly moist, fine to coarse sand, 10% fines, 20% gravel (field estimate) Poor Recovery, Auger chatter	
	20			S-4	50/6"			SPg	@20: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): very dense, white, slightly moist, fine to coarse sand, 10% fines, 25% angular gravel up to 1.5" (field estimate)	
	25			S-5	25 32 35		4	SM	@25: SILTY SAND (SM): very dense, brown, slightly moist, fine to coarse sand, 26% fines (lab)	-200
	30									

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-17

Project No.	13673.001	**Date Drilled**	9-22-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N / S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30			S-6	20 50/6"			SM	@30: SILTY SAND WITH GRAVEL (SM): very dense, brown, slightly moist, fine to coarse sand, 20% fines, 15% fine gravel (field estimate) Poor Recovery, Auger chatter	
	35			S-7	20 36 36		2	SPg	@35: POORLY GRADED GRAVELLY SAND WITH SILT AND GRAVEL (SPg): very dense, brown, slightly moist, fine to coarse sand, 11% fines (lab), 20% gravel (field estimate)	-200
	40			S-8	50/6"			SMg	@40: SILTY GRAVELLY SAND WITH GRAVEL (SMg): very dense, brown, slightly moist, fine to coarse sand, 20% fines, 20% gravel (field estimate)	
	45			S-9	50/6"			SMg	@45: SILTY GRAVELLY SAND WITH GRAVEL (SMg): very dense, brown, slightly moist, fine to coarse sand, 30% fines, 25% gravel (field estimate) Auger chatter, gravel and cobble found in cuttings	
	50			S-10	36 50/4"			SP	@50: POORLY GRADED SAND WITH SILT AND GRAVEL (SP): very dense, light brown, slightly moist, fine to medium sand, 10% fines, 15% gravel (field estimate)	
	55								**TOTAL DEPTH = 51 FEET** **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	60									

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-18

Project No.	13673.001	**Date Drilled**	9-21-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0			B-1				SP-SM	**Older Alluvial Sediments (Qoa)** @Surface: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): Light brown, dry, fine to coarse sand, 10% fines, 20% gravel (field estimate)	
				S-1	50/4"			SM	@2.5: SILTY SAND WITH AND GRAVEL (SM): very dense, white, dry, fine to medium sand, trace of gravel, 25% fines (field estimate) Poor Recovery	
	5			S-2	21 37 48			SM	@5: SILTY SAND WITH AND GRAVEL (SM): very dense, white, dry, fine to medium sand, trace of gravel, 25% fines (field estimate)	
				S-3	29 50/5"			SM	@7.5: SILTY SAND WITH AND GRAVEL (SM): very dense, white, slightly moist, fine to coarse sand, 27% fines, (lab)	-200
	10			S-4	30 50/6"			SPg	@10: POORLY GRADED GRAVELLY SAND (SPg): very dense, light brown, slightly moist, fine to coarse sand, 20% gravel (field estimate)	
	15			S-5	50/4"			SPg	@15: POORLY GRADED SAND WITH GRAVEL (SPg): very dense, white, slightly moist, fine to coarse sand, 25% gravel (field estimate) Poor Recovery	
	20			S-6	50/4"			SPg	@20: POORLY GRADED GRAVELLY SAND WITH GRAVEL (SPg): very dense, white, slightly moist, fine to coarse sand, 20% gravel (field estimate) Poor Recovery **TOTAL DEPTH = 20.5 FEET** **NO GROUNDWATER ENCOUNTERED** **BACKFILLED TO SURFACE WITH SOIL CUTTINGS**	
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG LB-19

Project No.	13673.001	**Date Drilled**	9-22-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): brown, dry, fine to coarse sand, 25% gravel (field estimate)	
				R-1	12 20 29	104	3	SPg	@2.5: POORLY GRADED GRAVELLY SAND WITH SILT (SPg): medium dense, white, dry, fine to medium sand, 10% fines, 25% gravel (field estimate)	
	5			R-2	12 40 50	104	3	SM	@5: SILTY SAND WITH GRAVEL (SM): very dense, white, slightly moist, fine to medium sand, 20% fines, 15% gravel (field estimate)	
				S-1	50/6"			SM	@7.5: SILTY SAND WITH GRAVEL (SM): very dense, white, slightly moist, fine to medium sand, 20% fines, 15% gravel (field estimate)	
	10			S-2	25 50/5"			SM	@10: SILTY SAND WITH GRAVEL (SM): very dense, white, slightly moist, fine to medium sand, 20% fines, 15% gravel (field estimate)	
	15			S-3	22 30 22			SM	@15: SILTY SAND (SM): very dense, brown, slightly moist, fine to medium sand, 20% fines (lab)	-200
									@17.5: Met Refusal, Auger grinding on rock/boulder	
	20								**MET REFUSAL AT 17.5 FEET** **NO GROUNDWATER ENCOUNTERED**	
									BACKFILLED TO SURFACE WITH SOIL CUTTINGS	
	25									
	30									

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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GEOTECHNICAL BORING LOG IT-1

Project No.	13673.001	**Date Drilled**	9-14-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine to coarse sand, 20% gravel (field estimate)	
	5									
	10			S-1	31 42 50/5"			SM	@12.5': SILTY SAND (SM): very dense, light brown, slightly moist, fine to coarse sand, slight cementation, 23% fines (lab)	SA
	15								**TOTAL DEPTH = 15 FEET** **NO GROUNDWATER ENCOUNTERED** **INFILTRATION TEST PERFORMED FROM 10 TO 15 FEET**	
	20									
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG IT-2

Project No.	13673.001	**Date Drilled**	9-21-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED SAND WITH GRAVEL (SP): Light Brown, dry, fine to coarse sand, 10% fines, 15% gravel (field estimate)	
	5									
	10			S-1	31 33 32			SM	@10: SILTY SAND (SM): very dense, light brown, dry, fine to coarse sand, 24% fines (estimate) Slight auger chatter	
				S-2	27 36 50/6"			SM	@12.5: SILTY SAND (SM): very dense, light brown, dry, fine to coarse sand, slight cementation, 24% fines (lab)	SA
	15								**TOTAL DEPTH = 15 FEET** **NO GROUNDWATER ENCOUNTERED** **INFILTRATION TEST PERFORMED FROM 10 TO 15 FEET**	
	20									
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG IT-3

Project No.	13673.001	**Date Drilled**	9-14-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): Brown, dry, fine-coarse sand, 25% gravel (field estimate)	
	5									
	10								@10': Auger grinding (drilled through rock)	
				S-1	19 40 50/5"			SM	@13.5': SILTY SAND (SM): very dense, light brown, slightly moist, fine-coarse sand, 21% fines (lab)	SA
	15								**TOTAL DEPTH = 15 FEET** **NO GROUNDWATER ENCOUNTERED** **INFILTRATION TEST PERFORMED FROM 10 TO 15 FEET**	
	20									
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG IT-4

Project No.	13673.001	**Date Drilled**	9-21-22
Project	Synergy Parcel A	**Logged By**	AA
Drilling Co.	2R Drilling	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	'
Location	See Figure 2 - Exploration Location Map	**Sampled By**	AA

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S							*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
	0								**Older Alluvial Sediments (Qoa)**	
									@Surface: POORLY GRADED GRAVELLY SAND (SPg): light brown, dry, fine-coarse sand, 10% fines, 20% gravel (field estimate)	
	5									
	10			S-1	34 50/3"			SM	@10: SILTY SAND (SM): very dense, light brown, dry, fine-coarse sand, 20% fines (lab)	-200
				S-2	19 17 12			SM	@12.5: SILTY SAND WITH GRAVEL (SM): medium dense, light brown, slightly moist, medium to coarse sand, 13% fines (lab)	-200
	15								**TOTAL DEPTH = 15 FEET** **NO GROUNDWATER ENCOUNTERED** **INFILTRATION TEST PERFORMED FROM 10 TO 15 FEET**	
	20									
	25									
	30									

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

Leighton

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Results of Well Permeameter, from USBR 7300-89 Method

Project: 13673.001

Exploration #/Location: LI-1

Depth Boring drilled, bgs (ft): 15

Tested by: AA

USCS Soil Type in test zone: SP-SM

Weather (start to finish): Sunny

Water Source/pH: H2O

Measured boring diameter: 8 in. 4 in. Well Radius

Depth to GW or aquitard, bgs: 100 ft

Well Prep: Drill to 15', bottom 10' screen pipe, sand backfilll in test zone

Initial estimated Depth to Water Surface (in.): 126

Average depth of water in well, "h" (in.): 53

approx. h/r: 13.4

Tu (Fig. 8) (ft): 89.5

Tu>3h?: yes, OK

Cross-sectional area for flow calcs based on Δh

Well pack sand porosity	0.4
Casing outer diameter, in.	2.3
Casing inner diameter, in.	2.1
Cross-sectional area, in.^2	21.9

Use of Barrels: No

Use of Flow Meter: Yes

Test Type: Constant Head

	ft	in.	Total (in.)
Depth to bottom of well measured from top of auger (or ground surface)	15.1 ft	0. in.	181
Casing stickup measured above top of auger (or ground surface) (+ is	0. ft	2. in.	2
Depth to top of sand from top of casing			

Depth of well bottom below top of casing (in): 183

Flow Meter ID: 2497 Meter Units: Gallons 0.05 gallons/pulse

Data logger ID:

Field Data **Calculations**

Date	Time	Data from Flow Meter		Depth to WL in Boring (measured from top of casing)		Water Temp (deg F)	Refilled?	Δt (min)	Total Elapsed Time (min)	Depth to WL in well (in.)	h, Height of Water in Well (in.)	Δh (in.)	Avg. h	Vol Change (in.^3)			Flow (in^3/ min)	q, Flow (in^3/ hr)	Average Infiltration Surface Area, (in^2)	V (Fig 9)	K20, Coef. Of Perme-ability at 20 deg C (in./hr)	Infiltration Rate [flow/surf area] (in./hr) (FS=1)
		Reading (gallons)	Interval Pulse Count				(or Comments)							from supply	from Δh	Total						
Start Date	Start time:	Gallons		ft	in.																	
9/27/22	11:37																					
9/27/22	11:37	1590.14		11.23					0	132.8	48.4											
9/27/22	11:40	1591.45		11.08				3	3	131.0	50.2	1.8	49	303	-39	263	88	5264	1290	0.9	0.70	3.76
9/27/22	11:45	1593.6		10.90				5	8	128.8	52.4	2.16	51	497	-47	449	90	5392	1340	0.9	0.67	3.71
9/27/22	11:53	1597.04		10.61				8	16	125.3	55.9	3.48	54	795	-76	718	90	5388	1411	0.9	0.60	3.52
9/27/22	12:03	1601.35		10.32				10	26	121.8	59.4	3.48	58	996	-76	919	92	5516	1498	0.9	0.56	3.39
9/27/22							adjust flow															
9/27/22	12:05	1601.95		10.54					28	124.5	56.7											
9/27/22	12:15	1604.3		10.97				10	38	129.6	51.6	-5.16	54	543	113	656	66	3935	1411	0.9	0.51	2.57
9/27/22	12:25	1606.67		11.00				10	48	130.0	51.2	-0.36	51	547	8	555	56	3332	1342	0.9	0.43	2.29
9/27/22	12:35	1609.04		10.95				10	58	129.4	51.8	0.6	52	547	-13	534	53	3206	1345	0.9	0.41	2.20
9/27/22	12:45	1611.38		10.90				10	68	128.8	52.4	0.6	52	541	-13	527	53	3164	1360	0.9	0.39	2.15
9/27/22	12:55	1613.73		10.83				10	78	128.0	53.2	0.84	53	543	-18	524	52	3147	1378	0.9	0.38	2.11
9/27/22	13:05	1616.08		10.80				10	88	127.6	53.6	0.36	53	543	-8	535	53	3210	1393	0.9	0.39	2.12
9/27/22	13:15	1618.44		10.78				10	98	127.4	53.8	0.24	54	545	-5	540	54	3239	1400	0.9	0.39	2.13
9/27/22	13:25	1620.78		10.71				10	108	126.5	54.7	0.84	54	541	-18	522	52	3133	1414	0.9	0.36	2.04
9/27/22	13:35	1623.12		10.70				10	118	126.4	54.8	0.12	55	541	-3	538	54	3227	1426	0.9	0.38	2.09
9/27/22	13:46	1625.69		10.69				11	129	126.3	54.9	0.12	55	594	-3	591	54	3224	1429	0.9	0.37	2.08
9/27/22	13:56	1628.03		10.68				10	139	126.2	55.0	0.12	55	541	-3	538	54	3227	1432	0.9	0.37	2.08
9/27/22	14:00	1628.95		10.68				4	143	126.2	55.0	0	55	213	0	213	53	3188	1434	0.9	0.37	2.05
																			Minimum Rate:			2.0
														Raw Rate for design, prior to application of adjustment factors:								**2.0**

Results of Well Permeameter, from USBR 7300-89 Method

Project:	13673.001
Exploration #/Location:	LI-2
Depth Boring drilled, bgs (ft):	15
Tested by:	AA
USCS Soil Type in test zone:	SP-SM
Weather (start to finish):	Sunny
Water Source/pH:	H2O
Measured boring diameter:	8 in.
Depth to GW or aquitard, bgs:	100 ft
Well Prep:	Drill to 15', bottom 5' screen pipe, sand backfill in test zone

4 in. Well Radius

Initial estimated Depth to Water Surface (in.):	150
Average depth of water in well, "h" (in.):	42
approx. h/r:	10.6
Tu (Fig. 8) (ft):	87.5
Tu>3h?:	yes, OK

Cross-sectional area for flow calcs based on Δh

Well pack sand porosity	0.4
Casing outer diameter, in.	2.3
Casing inner diameter, in.	2.1
Cross-sectional area, in.^2	21.9

	ft	in.	Total (in.)
Depth to bottom of well measured from top of auger (or ground surface)	15.5 ft	0. in.	186
Casing stickup measured above top of auger (or ground surface) (+ is	0. ft	-6. in.	-6
Depth to top of sand from top of casing			

Depth of well bottom below top of casing (in): 180

Use of Barrels:	No
Use of Flow Meter:	Yes
Test Type:	Constant Head

Flow Meter ID: 2497 Meter Units: Gallons 0.05 gallons/pulse Data logger ID:

Field Data **Calculations**

Date	Time	Data from Flow Meter		Depth to WL in Boring (measured from top of casing)		Water Temp (deg F)	Refilled? (or Comments)	Δt (min)	Total Elapsed Time (min)	Depth to WL in well (in.)	h, Height of Water in Well (in.)	Δh (in.)	Avg. h	Vol Change (in.^3)			Flow (in^3/ min)	q, Flow (in^3/ hr)	Average Infiltration Surface Area, (in^2)	V (Fig 9)	K20, Coef. Of Perme-ability at 20 deg C (in./hr)	Infiltration Rate [flow/surf area] (in./hr) (FS=1)
Start Date	Start time:	Reading (gallons)	Interval Pulse Count	ft	in.									from supply	from Δh	Total						
9/26/2022	14:28	Gallons																				
9/26/22	14:28	1540.69		11.56					0	144.7	41.3											
9/26/22	14:30	1541.31		11.5				2	2	144.0	42.0	0.72	42	143	-16	127	64	3823	1097	0.9	0.68	3.21
9/26/22							Flow Change															
9/26/22	14:35	1542.75		11.55					7	144.6	41.4											
9/26/22	14:40	1544.72		11.07				5	12	138.8	47.2	5.76	44	455	-126	329	66	3947	1163	0.9	0.57	3.13
9/26/22	14:42	1545.48		10.5				2	14	132.0	54.0	6.84	51	176	-150	26	13	771	1321	0.9	0.09	0.54
9/26/22	14:45	1546.01		11.28			Adjust flow	3	17	141.4	44.6	-9.36	49	122	205	327	109	6550	1290	0.9	1.10	4.68
9/26/22	14:50	1546.26		11.48				5	22	143.8	42.2	-2.4	43	58	53	110	22	1324	1142	0.9	0.24	1.07
9/26/22	15:00	1547.56		11.6				10	32	145.2	40.8	-1.44	42	300	32	332	33	1991	1094	0.9	0.37	1.68
9/26/22	15:10	1548.83		11.7				10	42	146.4	39.6	-1.2	40	293	26	320	32	1918	1061	0.9	0.38	1.67
9/26/22	15:20	1550.15		11.73				10	52	146.8	39.2	-0.36	39	305	8	313	31	1877	1041	0.9	0.37	1.66
9/26/22	15:30	1551.43		11.73				10	62	146.8	39.2	0	39	296	0	296	30	1774	1036	0.9	0.35	1.58
9/26/22	15:40	1552.7		11.72				10	72	146.6	39.4	0.12	39	293	-3	291	29	1744	1038	0.9	0.34	1.55
9/26/22	15:50	1553.98		11.7				10	82	146.4	39.6	0.24	39	296	-5	290	29	1743	1043	0.9	0.34	1.54
9/26/22	16:00	1555.26		11.7				10	92	146.4	39.6	0	40	296	0	296	30	1774	1046	0.9	0.35	1.56
																			Minimum Rate:			1.1
														Raw Rate for design, prior to application of adjustment factors:								**1.5**

Results of Well Permeameter, from USBR 7300-89 Method

Project: 13673.001

Exploration #/Location: LI-3

Depth Boring drilled, bgs (ft): 14

Tested by: AA

USCS Soil Type in test zone: SM / SP-SM

Weather (start to finish): Sunny

Water Source/pH: H2O

Measured boring diameter: 8 in. 4 in. Well Radius

Depth to GW or aquitard, bgs: 100 ft

Well Prep: Drill to 14', bottom 5' screen pipe, sand backfill in test zone

Initial estimated Depth to Water Surface (in.): 122

Average depth of water in well, "h" (in.): 38

approx. h/r: 9.5

Tu (Fig. 8) (ft): 89.8

Tu>3h?: yes, OK

Cross-sectional area for flow calcs based on Δh

Well pack sand porosity: 0.4

Casing outer diameter, in.: 2.3

Casing inner diameter, in.: 2.1

Cross-sectional area, in.^2: 21.9

Use of Barrels: No

Use of Flow Meter: Yes

Test Type: Constant Head

	ft	in.	Total (in.)
Depth to bottom of well measured from top of auger (or ground surface)	14. ft	4. in.	172
Casing stickup measured above top of auger (or ground surface) (+ is	0. ft	12. in.	12
Depth to top of sand from top of casing			

Depth of well bottom below top of casing (in): 184

Flow Meter ID: 2497 Meter Units: Gallons 0.05 gallons/pulse

Data logger ID:

Field Data **Calculations**

Date	Time	Data from Flow Meter		Depth to WL in Boring (measured from top of casing)		Water Temp (deg F)	Refilled?	Δt (min)	Total Elapsed Time (min)	Depth to WL in well (in.)	h, Height of Water in Well (in.)	Δh (in.)	Avg. h	Vol Change (in.^3)			Flow (in^3/ min)	q, Flow (in^3/ hr)	Average Infiltration Surface Area, (in^2)	V (Fig 9)	K20, Coef. Of Perme-ability at 20 deg C (in./hr)	Infiltration Rate [flow/surf area] (in./hr) (FS=1)
		Reading (gallons)	Interval Pulse Count				(or Comments)							from supply	from Δh	Total						
Start Date	Start time:	Gallons		ft	in.																	
9/28/22	8:42																					
9/28/22	8:42	1639.65		12.16					0	133.9	38.1											
9/28/22	8:45	1640.34		12.2				3	3	134.4	37.6	-0.48	38	159	11	170	57	3398	1001	0.9	0.72	3.13
9/28/22	8:50	1641.48		12.28				5	8	135.4	36.6	-0.96	37	263	21	284	57	3412	983	0.9	0.76	3.20
9/28/22	9:00	1643.76		12.45				10	18	137.4	34.6	-2.04	36	527	45	571	57	3428	945	0.9	0.84	3.34
9/28/22							Adjust Flow															
9/28/22	9:05	1645.32		12.21					23	134.5	37.5											
9/28/22	9:15	1648.59		12.05				10	33	132.6	39.4	1.92	38	755	-42	713	71	4280	1016	0.9	0.83	3.88
9/28/22	9:25	1651.86		11.9				10	43	130.8	41.2	1.8	40	755	-39	716	72	4296	1063	0.9	0.78	3.72
9/28/22	9:35	1655.07		11.78				10	53	129.4	42.6	1.44	42	742	-32	710	71	4260	1104	0.9	0.73	3.56
9/28/22	9:45	1657.75		11.83			Adjust Flow	10	63	130.0	42.0	-0.6	42	619	13	632	63	3793	1114	0.9	0.68	3.14
9/28/22	9:55	1659.89		12.27				10	73	135.2	36.8	-5.28	39	494	116	610	61	3660	1040	0.9	0.83	3.24
9/28/22	10:05	1662.01		12.3				10	83	135.6	36.4	-0.36	37	490	8	498	50	2986	970	0.9	0.67	2.84
9/28/22	10:15	1664.14		12.3				10	93	135.6	36.4	0	36	492	0	492	49	2952	965	0.9	0.66	2.82
9/28/22	10:25	1666.25		12.3				10	103	135.6	36.4	0	36	487	0	487	49	2924	965	0.9	0.65	2.79
9/28/22	10:35	1668.38		12.3				10	113	135.6	36.4	0	36	492	0	492	49	2952	965	0.9	0.66	2.82
9/28/22	10:45	1670.48		12.3				10	123	135.6	36.4	0	36	485	0	485	49	2911	965	0.9	0.65	2.78
																			Minimum Rate:			2.8
														Raw Rate for design, prior to application of adjustment factors:								**2.8**

Results of Well Permeameter, from USBR 7300-89 Method

Project:	13673.001
Exploration #/Location:	LI-4
Depth Boring drilled, bgs (ft):	15
Tested by:	AA
USCS Soil Type in test zone:	SP
Weather (start to finish):	Sunny
Water Source/pH:	H2O
Measured boring diameter:	8 in.
Depth to GW or aquitard, bgs:	100 ft
Well Prep:	Drill to 15', bottom 5' screen pipe, sand backfill in test zone

4 in. Well Radius

Initial estimated Depth to Water Surface (in.): 142
Average depth of water in well, "h" (in.): 39
approx. h/r: 9.7
Tu (Fig. 8) (ft): 88.1
Tu>3h?: yes, OK

Cross-sectional area for flow calcs based on Δh

Well pack sand porosity	0.4
Casing outer diameter, in.	2.3
Casing inner diameter, in.	2.1
Cross-sectional area, in.^2	21.9

Use of Barrels: No
Use of Flow Meter: Yes
Test Type: Constant Head

	ft	in.	Total (in.)
Depth to bottom of well measured from top of auger (or ground surface)	15.1 ft	0. in.	181
Casing stickup measured above top of auger (or ground surface) (+ if	0. ft	0. in.	0
Depth to top of sand from top of casing			

Depth of well bottom below top of casing (in): 181

Flow Meter ID: 2497 Meter Units: Gallons 0.05 gallons/pulse Data logger ID:

Field Data **Calculations**

Date	Time	Data from Flow Meter		Depth to WL in Boring (measured from top of casing)		Water Temp (deg F)	Refilled? (or Comments)	Δt (min)	Total Elapsed Time (min)	Depth to WL in well (in.)	h, Height of Water in Well (in.)	Δh (in.)	Avg. h	Vol Change (in.^3)			Flow (in^3/ min)	q, Flow (in^3/ hr)	Average Infiltration Surface Area, (in^2)	V (Fig 9)	K20, Coef. Of Perme-ability at 20 deg C (in./hr)	Infiltration Rate [flow/surf area] (in./hr) (FS=1)
Start Date	Start time:	Reading (gallons)	Interval Pulse Count	ft	in.									from supply	from Δh	Total						
9/26/2022	11:55	Gallons																				
9/26/22	11:55	1433.44		12.11					0	145.3	35.9											
9/26/22	12:00	1437.29		12.07				5	5	144.8	36.4	0.48	36	889	-11	879	176	10546	958	0.9	2.34	10.15
9/26/22	12:05	1441.44		12.04				5	10	144.5	36.7	0.36	37	959	-8	951	190	11409	969	0.9	2.50	10.86
9/26/22	12:15	1450.07		11.95				10	20	143.4	37.8	1.08	37	1994	-24	1970	197	11819	987	0.9	2.46	11.04
9/26/22	12:25	1458.15		11.91				10	30	142.9	38.3	0.48	38	1866	-11	1856	186	11136	1006	0.9	2.28	10.20
9/26/22	12:35	1466.53		11.88				10	40	142.6	38.6	0.36	38	1936	-8	1928	193	11567	1017	0.9	2.34	10.49
9/26/22	12:45	1474.92		11.86				10	50	142.3	38.9	0.24	39	1938	-5	1933	193	11597	1024	0.9	2.32	10.44
9/26/22	12:55	1483.35		11.82				10	60	141.8	39.4	0.48	39	1947	-11	1937	194	11621	1033	0.9	2.28	10.37
9/26/22	13:05	1491.16		11.78				10	70	141.4	39.8	0.48	40	1804	-11	1794	179	10762	1046	0.9	2.07	9.49
9/26/22	13:15	1500.17		11.72				10	80	140.6	40.6	0.72	40	2081	-16	2066	207	12393	1061	0.9	2.32	10.77
9/26/22	13:25	1508.65		11.73				10	90	140.8	40.4	-0.12	41	1959	3	1962	196	11769	1068	0.9	2.22	10.16
9/26/22	13:35	1517.01		11.75				10	100	141.0	40.2	-0.24	40	1931	5	1936	194	11619	1064	0.9	2.22	10.07
9/26/22	13:45	1525.53		11.7				10	110	140.4	40.8	0.6	41	1968	-13	1955	195	11730	1068	0.9	2.18	10.12
9/26/22	13:55	1533.89		11.72				10	120	140.6	40.6	-0.24	41	1931	5	1936	194	11619	1073	0.9	2.18	9.99
9/26/22																						
9/26/22																						

APPENDIX C

LABORATORY TEST RESULTS

APPENDIX C

GEOTECHNICAL LABORATORY TESTING

The geotechnical laboratory testing program was directed toward a quantitative and qualitative evaluation of the physical and mechanical properties of the soils underlying the site and to aid in verifying soil classification.

In-Situ Moisture and Density: The natural water content (ASTM D 2216) and in-situ dry density (ASTM D 2937) were determined for recovered relatively undisturbed ring-lined barrel drive samples, from our subsurface explorations. Results of these tests are shown on the logs at the appropriate sample depths, in Appendix B.

Expansion Index: An Expansion Index (EI) test was performed on a bulk sample of the site soils, in general accordance with the ASTM D 4829 Standard Test Method. Results of this test are presented on the "Expansion Index" sheet in this appendix.

Sieve Analysis: Sieve analyses (ASTM D 422) were performed on selected subsurface soil samples. These tests were performed to assist in the classification of the soil. Results of these tests are presented on the "*Particle Size Analysis of Soils*" figures.

Collapse Potential: Collapse potential tests were performed on selected soil samples in general accordance with ASTM Standard Test Method D 5333. Test results are presented on the "*One Dimensional Swell or Settlement*" figure.

Modified Proctor Compaction Curve: A laboratory modified Proctor compaction test (ASTM D 1557) was performed on a bulk soil sample to determine maximum laboratory dry density and optimum moisture content. Result of this test is presented on the following "*Modified Proctor Compaction Test*" plot in this appendix.

Percent Passing No. 200 Sieve: Percent fines (silt and clay) passing the No. 200 U.S. Standard Sieve was determined for soil samples in accordance with ASTM D1140 Standard Test Method. Samples were dried and passed through a No. 4 sieve, then a No. 200 sieve. Result of grain size analyses, as percent by dry weight passing the No. 200 U.S. Standard Sieve, is tabulated in this appendix and entered on our boring logs.

R-value Test: One R-value test was performed on collected bulk soil sample to evaluate pavement support characteristics of the near-surface soils. R-value test was performed in accordance with Caltrans Standard Test Method 301. The test result is presented in this appendix.

Remolded Direct Shear: One Remolded Direct Shear test was performed on a collected bulk soil sample to determine the shear strength of soils at sloped areas. Direct Shear test was performed in accordance with ASTM D3080-04. The test result is presented in this appendix.

Corrosivity Tests: To evaluate the corrosion potential of the subsurface soils at the site, we tested representative bulk samples collected during our subsurface investigation for pH, resistivity and soluble sulfate and chloride content testing. Results of these tests are presented at the end of this appendix.

EXPANSION INDEX of SOILS
ASTM D 4829

Project Name:	Parcel A Apple Valley	Tested By:	J. Gonzalez	Date:	10/05/22
Project No.:	13673.001	Checked By:	A. Santos	Date:	10/07/22
Boring No.:	LB-17	Depth (ft.):	0-5		
Sample No.:	B-1				
Soil Identification:	Light brown silty sand with gravel (SM)g				

Dry Wt. of Soil + Cont. (g)	1000.00
Wt. of Container No. (g)	0.00
Dry Wt. of Soil (g)	1000.00
Weight Soil Retained on #4 Sieve	0.00
Percent Passing # 4	100.00

MOLDED SPECIMEN	Before Test	After Test
Specimen Diameter (in.)	4.01	4.01
Specimen Height (in.)	1.0000	1.0015
Wt. Comp. Soil + Mold (g)	583.50	393.20
Wt. of Mold (g)	201.10	0.00
Specific Gravity (Assumed)	2.70	2.70
Container No.	O	O
Wet Wt. of Soil + Cont. (g)	757.60	594.30
Dry Wt. of Soil + Cont. (g)	675.80	532.22
Wt. of Container (g)	0.00	201.10
Moisture Content (%)	12.10	18.75
Wet Density (pcf)	115.3	118.4
Dry Density (pcf)	102.9	99.7
Void Ratio	0.638	0.690
Total Porosity	0.390	0.408
Pore Volume (cc)	80.7	84.7
Degree of Saturation (%) [S_{meas}]	**51.2**	73.3

SPECIMEN INUNDATION in distilled water for the period of 24 h or expansion rate < 0.0002 in./h

Date	Time	Pressure (psi)	Elapsed Time (min.)	Dial Readings (in.)
10/05/22	11:05	1.0	0	0.5055
10/05/22	11:15	1.0	10	0.5055
Add Distilled Water to the Specimen				
10/05/22	13:30	1.0	135	0.5065
10/06/22	6:00	1.0	1125	0.5070
10/06/22	7:00	1.0	1185	0.5070

Expansion Index (EI_{meas}) = ((Final Rdg - Initial Rdg) / Initial Thick.) x 1000	**2**

MODIFIED PROCTOR COMPACTION TEST

ASTM D 1557

Project Name:	Parcel A Apple Valley	Tested By:	J. Gonzalez	Date:	09/27/22
Project No.:	13673.001	Checked By:	A. Santos	Date:	10/07/22
Boring No.:	LB-6	Depth (ft.):	0-5		
Sample No.:	B-1				
Soil Identification:	Light brown silty sand with gravel (SM)g				

Note: Corrected dry density calculation assumes specific gravity of 2.70 and moisture content of 1.0% for oversize particles

Preparation Method:	X	Moist	
		Dry	
Compaction Method	X	Mechanical Ram	
		Manual Ram	

Scalp Fraction (%)	
#3/4	
#3/8	
#4	23.0

Rammer Weight (lb.) = 10.0

Height of Drop (in.) = 18.0

Mold Volume (ft³) 0.03330

TEST NO.	1	2	3	4	5	6
Wt. Compacted Soil + Mold (g)	3735	3829	3850	3810		
Weight of Mold (g)	1826	1826	1826	1826		
Net Weight of Soil (g)	1909	2003	2024	1984		
Wet Weight of Soil + Cont. (g)	469.4	468.7	491.9	480.1		
Dry Weight of Soil + Cont. (g)	440.0	429.3	443.2	425.2		
Weight of Container (g)	39.6	37.2	39.7	39.0		
Moisture Content (%)	7.34	10.05	12.07	14.22		
Wet Density (pcf)	126.4	132.6	134.0	131.3		
Dry Density (pcf)	117.7	120.5	119.6	115.0		

Maximum Dry Density (pcf) 120.5

Corrected Dry Density (pcf) 128.9

Optimum Moisture Content (%) 10.5

Corrected Moisture Content (%) 8.3

[X] Procedure A
Soil Passing No. 4 (4.75 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
May be used if +#4 is 20% or less

[ ] Procedure B
Soil Passing 3/8 in. (9.5 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
Use if +#4 is >20% and +3/8 in. is 20% or less

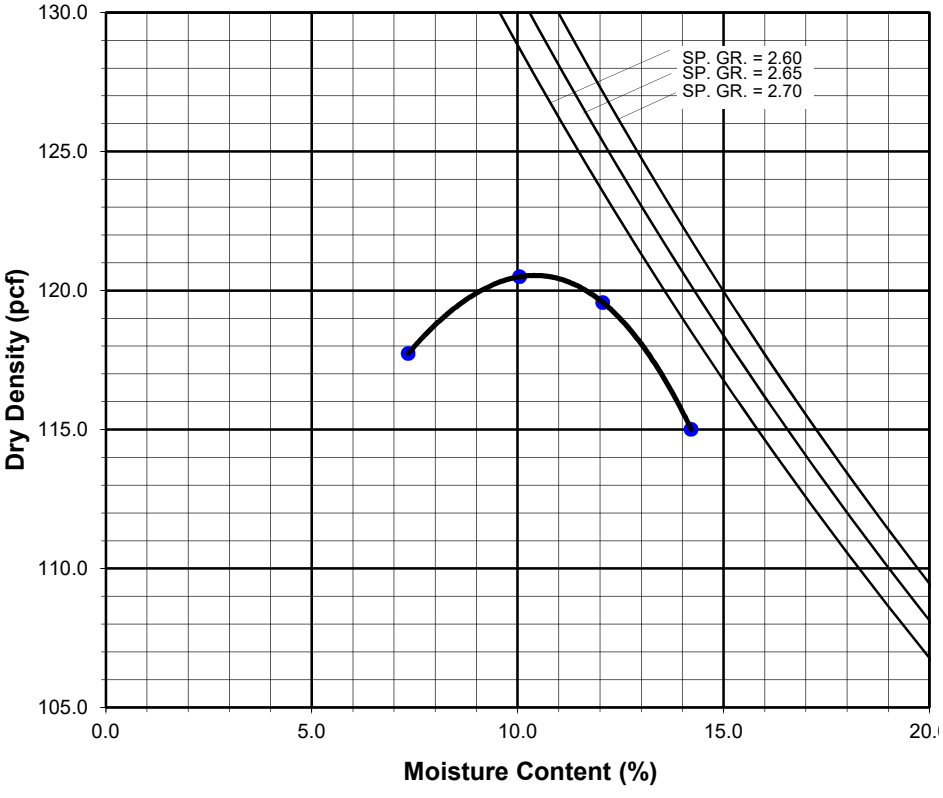
[ ] Procedure C
Soil Passing 3/4 in. (19.0 mm) Sieve
Mold : 6 in. (152.4 mm) diameter
Layers : 5 (Five)
Blows per layer : 56 (fifty-six)
Use if +3/8 in. is >20% and +¾ in. is <30%

Particle-Size Distribution:

GR:SA:FI

Atterberg Limits:

LL,PL,PI



MODIFIED PROCTOR COMPACTION TEST

ASTM D 1557

Project Name:	Parcel A Apple Valley	Tested By:	J. Gonzalez	Date:	09/27/22
Project No.:	13673.001	Checked By:	A. Santos	Date:	10/07/22
Boring No.:	LB-9	Depth (ft.):	0-5		
Sample No.:	B-1				
Soil Identification:	Light brown silty sand (SM)				

Note: Corrected dry density calculation assumes specific gravity of 2.70 and moisture content of 1.0% for oversize particles

Preparation Method:	X	Moist	
		Dry	
Compaction Method	X	Mechanical Ram	
		Manual Ram	

Scalp Fraction (%)	
#3/4	
#3/8	
#4	9.8

Rammer Weight (lb.) = 10.0

Height of Drop (in.) = 18.0

Mold Volume (ft^3) 0.03330

TEST NO.	1	2	3	4	5	6
Wt. Compacted Soil + Mold (g)	3780	3860	3921	3903		
Weight of Mold (g)	1826	1826	1826	1826		
Net Weight of Soil (g)	1954	2034	2095	2077		
Wet Weight of Soil + Cont. (g)	501.1	494.2	520.3	591.8		
Dry Weight of Soil + Cont. (g)	478.2	463.2	477.4	532.2		
Weight of Container (g)	37.3	37.3	39.9	39.6		
Moisture Content (%)	5.19	7.28	9.81	12.10		
Wet Density (pcf)	129.4	134.7	138.7	137.5		
Dry Density (pcf)	123.0	125.5	126.3	122.7		

Maximum Dry Density (pcf) 126.5

Optimum Moisture Content (%) 9.1

Corrected Dry Density (pcf) 129.7

Corrected Moisture Content (%) 8.3

[X] **Procedure A**
Soil Passing No. 4 (4.75 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
May be used if +#4 is 20% or less

[ ] **Procedure B**
Soil Passing 3/8 in. (9.5 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
Use if +#4 is >20% and +3/8 in. is 20% or less

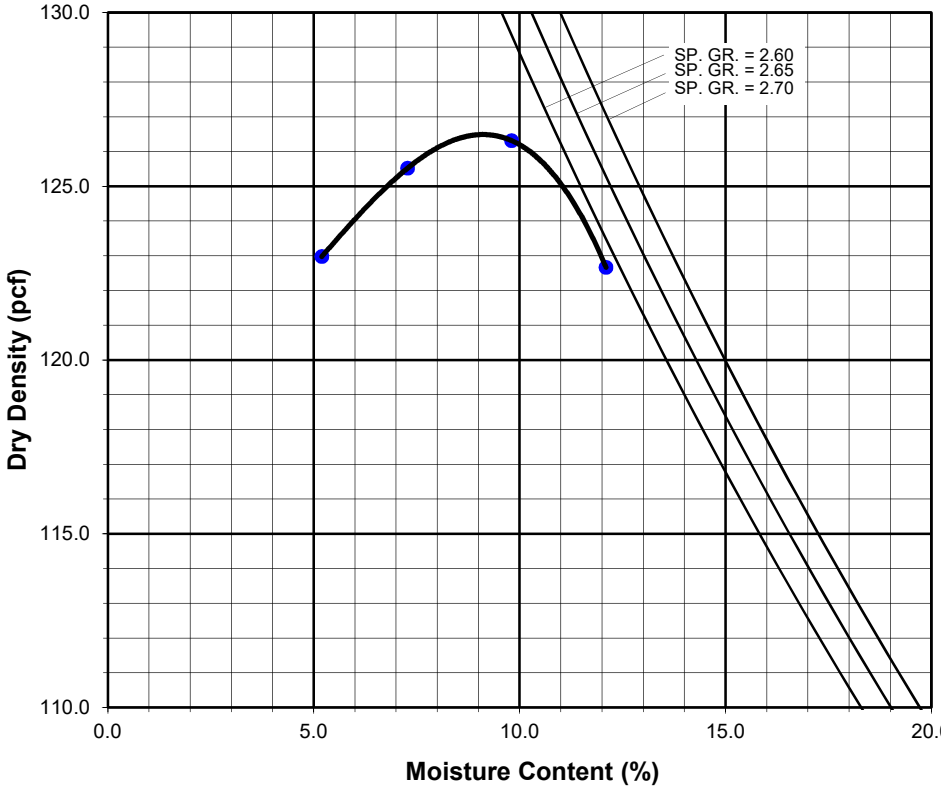
[ ] **Procedure C**
Soil Passing 3/4 in. (19.0 mm) Sieve
Mold : 6 in. (152.4 mm) diameter
Layers : 5 (Five)
Blows per layer : 56 (fifty-six)
Use if +3/8 in. is >20% and +¾ in. is <30%

Particle-Size Distribution:

GR:SA:FI

Atterberg Limits:

LL,PL,PI



MODIFIED PROCTOR COMPACTION TEST

ASTM D 1557

Project Name:	Parcel A Apple Valley	Tested By:	J. Gonzalez	Date:	09/29/22
Project No.:	13673.001	Checked By:	A. Santos	Date:	10/07/22
Boring No.:	LB-17	Depth (ft.):	0-5		
Sample No.:	B-1				
Soil Identification:	Light brown silty sand with gravel (SM)g				

Note: Corrected dry density calculation assumes specific gravity of 2.70 and moisture content of 1.0% for oversize particles

Preparation Method:	X	Moist	
		Dry	
Compaction Method	X	Mechanical Ram	
		Manual Ram	

Scalp Fraction (%)	
#3/4	
#3/8	
#4	22.0

Rammer Weight (lb.) = 10.0

Height of Drop (in.) = 18.0

Mold Volume (ft³) 0.03330

TEST NO.	1	2	3	4	5	6
Wt. Compacted Soil + Mold (g)	3650	3717	3773	3755		
Weight of Mold (g)	1826	1826	1826	1826		
Net Weight of Soil (g)	1824	1891	1947	1929		
Wet Weight of Soil + Cont. (g)	504.2	478.4	476.3	446.6		
Dry Weight of Soil + Cont. (g)	466.2	434.3	426.3	392.1		
Weight of Container (g)	37.3	37.8	40.3	37.3		
Moisture Content (%)	8.86	11.12	12.95	15.36		
Wet Density (pcf)	120.8	125.2	128.9	127.7		
Dry Density (pcf)	110.9	112.7	114.1	110.7		

Maximum Dry Density (pcf) 114.0

Corrected Dry Density (pcf) 122.7

Optimum Moisture Content (%) 13.2

Corrected Moisture Content (%) 10.5

[X] **Procedure A**
Soil Passing No. 4 (4.75 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
May be used if +#4 is 20% or less

[ ] **Procedure B**
Soil Passing 3/8 in. (9.5 mm) Sieve
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (twenty-five)
Use if +#4 is >20% and +3/8 in. is 20% or less

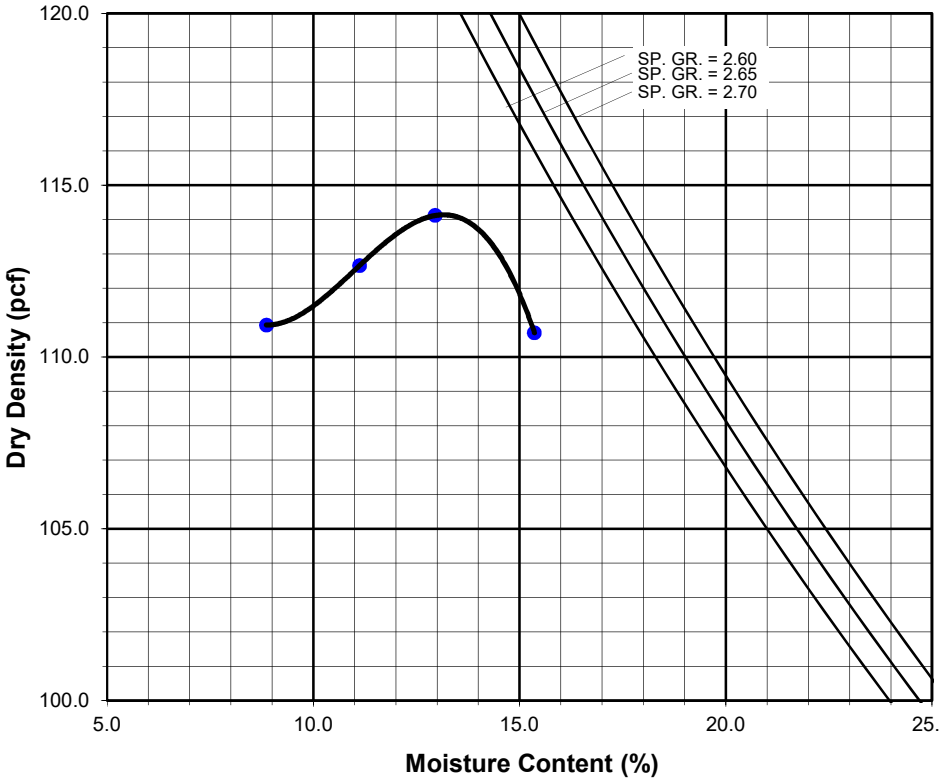
[ ] **Procedure C**
Soil Passing 3/4 in. (19.0 mm) Sieve
Mold : 6 in. (152.4 mm) diameter
Layers : 5 (Five)
Blows per layer : 56 (fifty-six)
Use if +3/8 in. is >20% and +¾ in. is <30%

Particle-Size Distribution:

GR:SA:FI

Atterberg Limits:

LL,PL,PI



TESTS for SULFATE CONTENT
CHLORIDE CONTENT and pH of SOILS

Project Name: Parcel A Apple Valley | Tested By : JD/KLD | Date: 10/07/22

Project No. : 13673-001 | Checked By: A. Santos | Date: 10/10/22

Boring No.	LB-6	LB-17		
Sample No.	B-1	B-1		
Sample Depth (ft)	0-5	0-5		
Soil Identification:	Light brown (SM)g	Light brown (SM)g		
Wet Weight of Soil + Container (g)	0.00	0.00		
Dry Weight of Soil + Container (g)	0.00	0.00		
Weight of Container (g)	1.00	1.00		
Moisture Content (%)	0.00	0.00		
Weight of Soaked Soil (g)	100.11	100.14		

SULFATE CONTENT, DOT California Test 417, Part II

Beaker No.	61	8		
Crucible No.	6	8		
Furnace Temperature (°C)	860	860		
Time In / Time Out	14:00/14:45	14:00/14:45		
Duration of Combustion (min)	45	45		
Wt. of Crucible + Residue (g)	25.7418	20.4021		
Wt. of Crucible (g)	25.7400	20.3991		
Wt. of Residue (g) (A)	0.0018	0.0030		
PPM of Sulfate (A) x 41150	74.07	123.45		
PPM of Sulfate, Dry Weight Basis	**74**	**123**		

CHLORIDE CONTENT, DOT California Test 422

ml of Extract For Titration (B)	15	30		
ml of AgNO3 Soln. Used in Titration (C)	0.4	0.5		
PPM of Chloride (C -0.2) * 100 * 30 / B	40	30		
PPM of Chloride, Dry Wt. Basis	**40**	**30**		

pH TEST, DOT California Test 643

pH Value	**8.80**	**8.10**		
Temperature °C	21.1	20.9		

SOIL RESISTIVITY TEST

DOT CA TEST 643

Project Name:	Parcel A Apple Valley		Tested By :	K. Doran	Date: 10/07/22
Project No. :	13673-001		Checked By:	A. Santos	Date: 10/10/22
Boring No.:	LB-6		Depth (ft.) :	0-5	
Sample No. :	B-1				

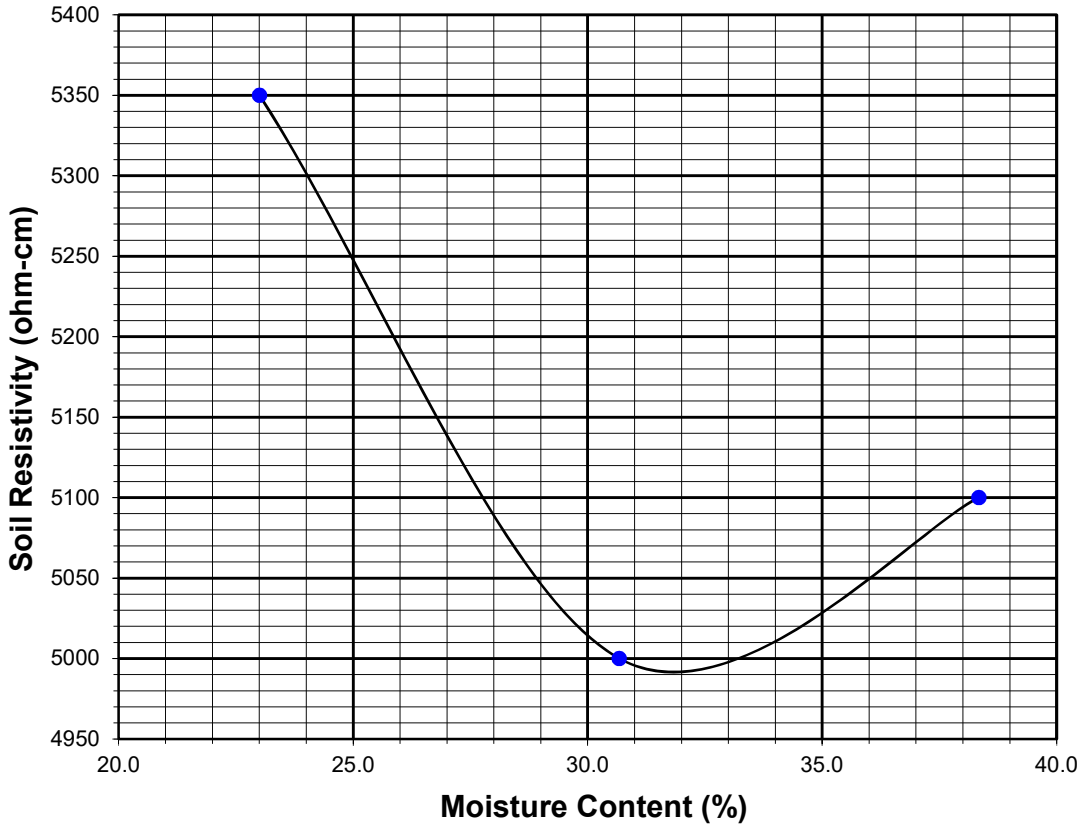
Soil Identification:* Light brown (SM)g

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	30	23.01	5350	5350
2	40	30.67	5000	5000
3	50	38.34	5100	5100
4				
5				

Moisture Content (%) (MCi)	0.00
Wet Wt. of Soil + Cont. (g)	0.00
Dry Wt. of Soil + Cont. (g)	0.00
Wt. of Container (g)	1.00
Container No.	
Initial Soil Wt. (g) (Wt)	130.40
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
4990	**32.0**	**74**	**40**	**8.80**	**21.1**



SOIL RESISTIVITY TEST

DOT CA TEST 643

Project Name:	Parcel A Apple Valley		Tested By :	K. Doran	Date: 10/07/22
Project No. :	13673-001		Checked By:	A. Santos	Date: 10/10/22
Boring No.:	LB-17		Depth (ft.) :	0-5	
Sample No. :	B-1				

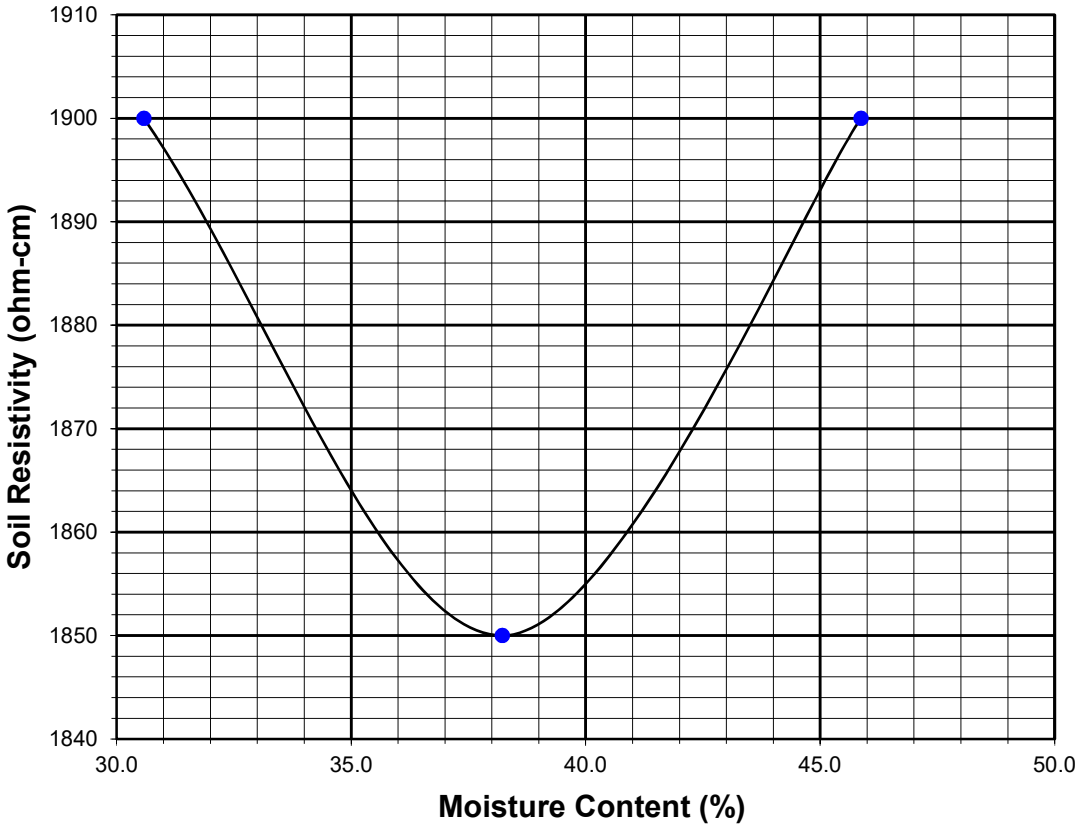
Soil Identification:* Light brown (SM)g

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	40	30.58	1900	1900
2	50	38.23	1850	1850
3	60	45.87	1900	1900
4				
5				

Moisture Content (%) (MCi)	0.00
Wet Wt. of Soil + Cont. (g)	0.00
Dry Wt. of Soil + Cont. (g)	0.00
Wt. of Container (g)	1.00
Container No.	
Initial Soil Wt. (g) (Wt)	130.80
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
1850	**38.2**	**123**	**30**	**8.10**	**20.9**



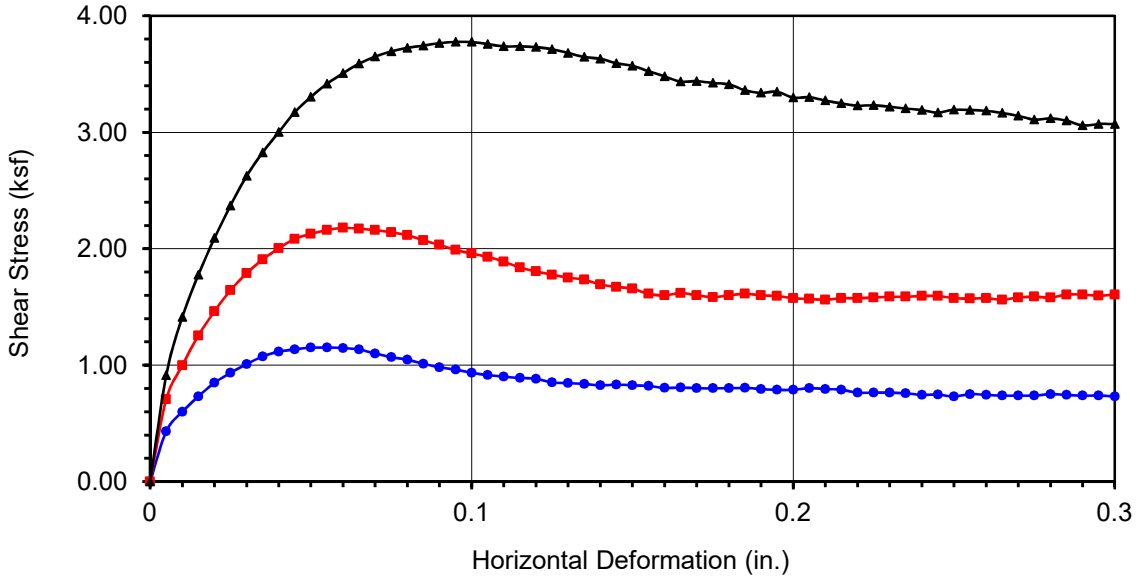
DIRECT SHEAR TEST

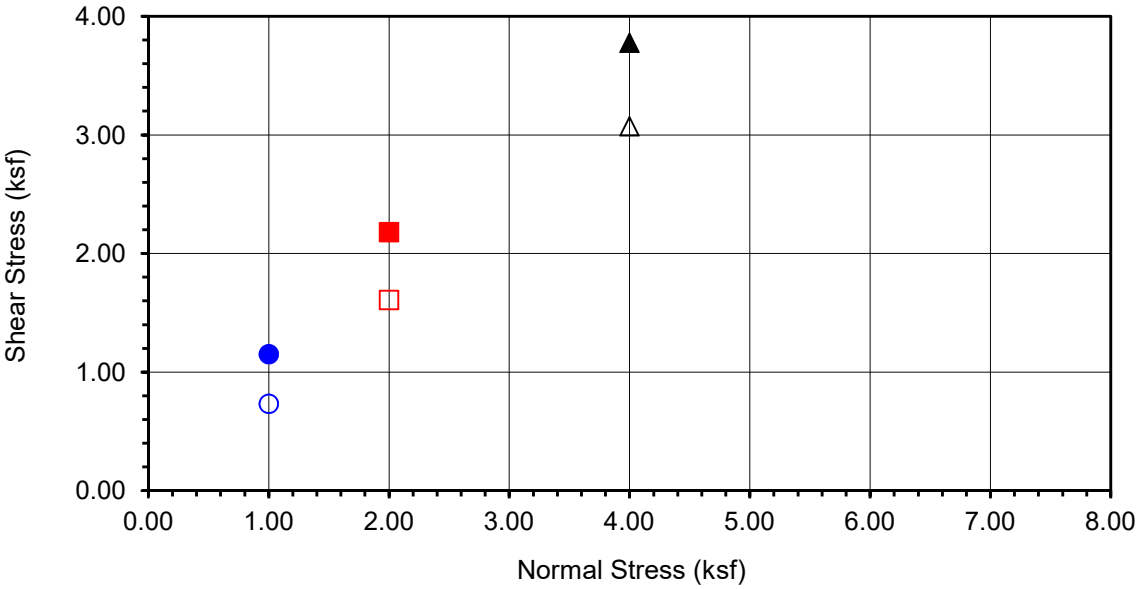
Consolidated Drained - ASTM D 3080

Project Name:	Parcel A Apple Valley	Tested By:	G. Bathala	Date:	09/29/22
Project No.:	13673.001	Checked By:	A. Santos	Date:	10/09/22
Boring No.:	LB-9	Sample Type:	90% Remold		
Sample No.:	B-1	Depth (ft.):	15-20		

Soil Identification: Light brown silty sand (SM)

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	195.22	195.25	195.81
Weight of Ring(gm):	45.45	45.44	45.64
Before Shearing			
Weight of Wet Sample+Cont.(gm):	150.26	150.26	150.26
Weight of Dry Sample+Cont.(gm):	141.25	141.25	141.25
Weight of Container(gm):	40.03	40.03	40.03
Vertical Rdg.(in): Initial	0.0000	0.2611	0.2579
Vertical Rdg.(in): Final	-0.0083	0.2710	0.2754
After Shearing			
Weight of Wet Sample+Cont.(gm):	207.60	190.05	214.79
Weight of Dry Sample+Cont.(gm):	190.40	172.92	198.26
Weight of Container(gm):	57.16	40.03	65.57
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**LB-9**
Sample No.	**B-1**
Depth (ft)	**15-20**
Sample Type:	
90% Remold	
Soil Identification:	
Light brown silty sand (SM)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.151	■ 2.179	▲ 3.776
Shear Stress @ End of Test (ksf)	○ 0.732	□ 1.606	△ 3.071
Deformation Rate (in./min.)	0.0033	0.0033	0.0033
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	8.90	8.90	8.90
Dry Density (pcf)	114.4	114.4	114.7
Saturation (%)	50.7	50.8	51.2
Soil Height Before Shearing (in.)	0.9917	0.9901	0.9825
Final Moisture Content (%)	12.9	12.9	12.5

Leighton

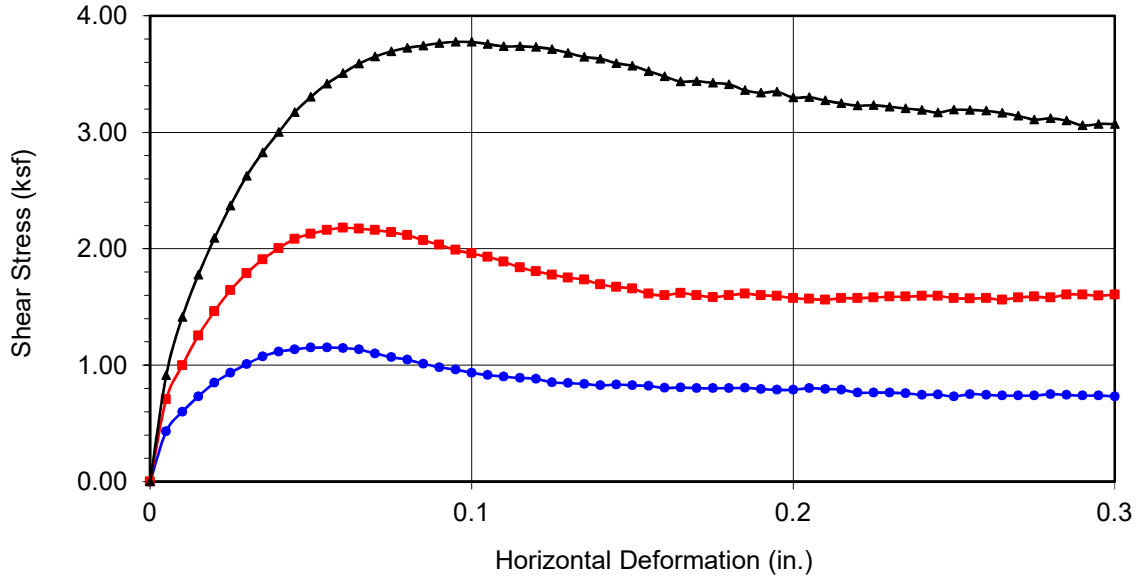
DIRECT SHEAR TEST RESULTS

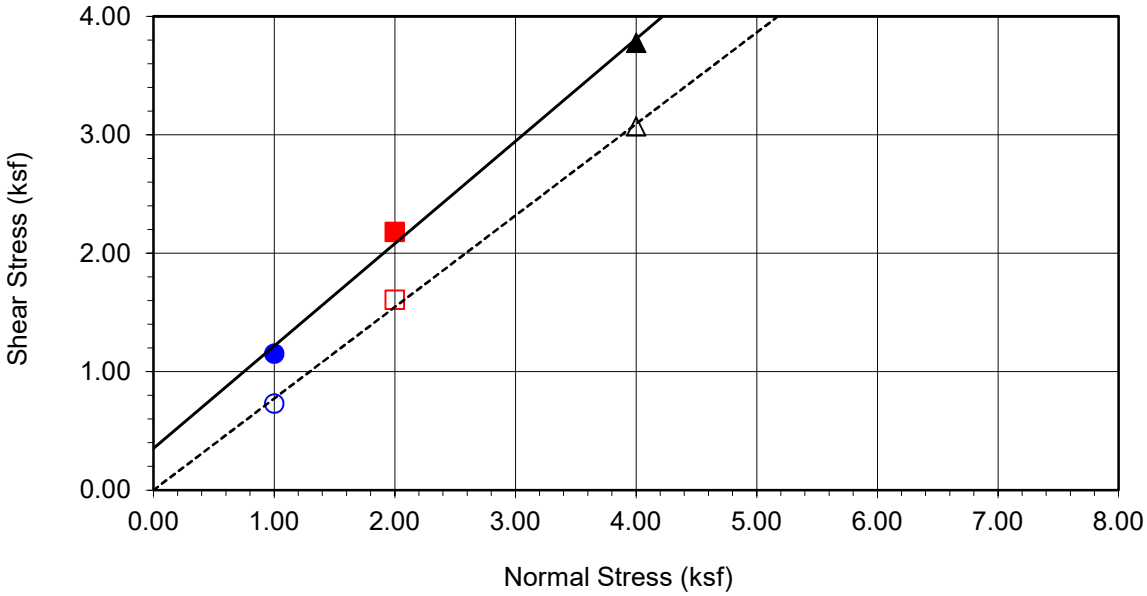
Consolidated Drained - ASTM D 3080

Project No.: 13673.001

Parcel A Apple Valley

09-22





Boring No.	**LB-9**
Sample No.	**B-1**
Depth (ft)	**15-20**
Sample Type:	90% Remold
Soil Identification:	Light brown silty sand (SM)

Strength Parameters

	C (psf)	ϕ (°)
Peak	353	41
Ultimate	0	38

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.151	■ 2.179	▲ 3.776
Shear Stress @ End of Test (ksf)	○ 0.732	□ 1.606	△ 3.071
Deformation Rate (in./min.)	0.0033	0.0033	0.0033
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	8.90	8.90	8.90
Dry Density (pcf)	114.4	114.4	114.7
Saturation (%)	50.7	50.8	51.2
Soil Height Before Shearing (in.)	0.9917	0.9901	0.9825
Final Moisture Content (%)	12.9	12.9	12.5

Leighton

DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 13673.001

Parcel A Apple Valley

09-22

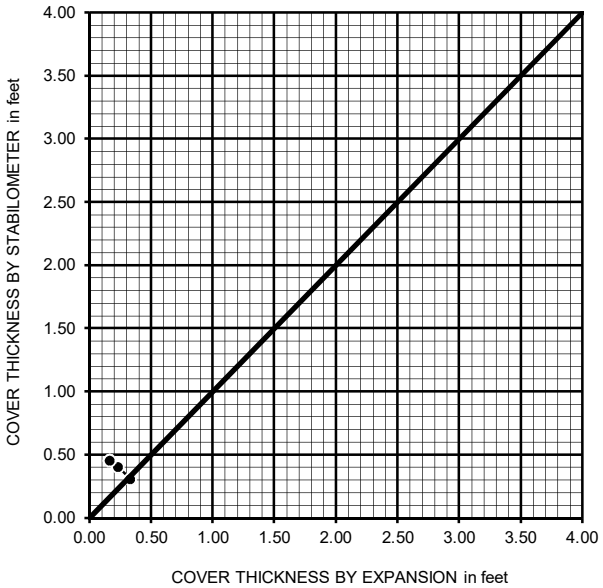
R-VALUE TEST RESULTS
DOT CA Test 301

PROJECT NAME:	Parcel A Apple Valley	PROJECT NUMBER:	13673.001
BORING NUMBER:	LB-6	DEPTH (FT.):	0-5
SAMPLE NUMBER:	B-1	TECHNICIAN:	O. Figueroa
SAMPLE DESCRIPTION:	Light brown silty sand with gravel (SM)g	DATE COMPLETED:	10/5/2022

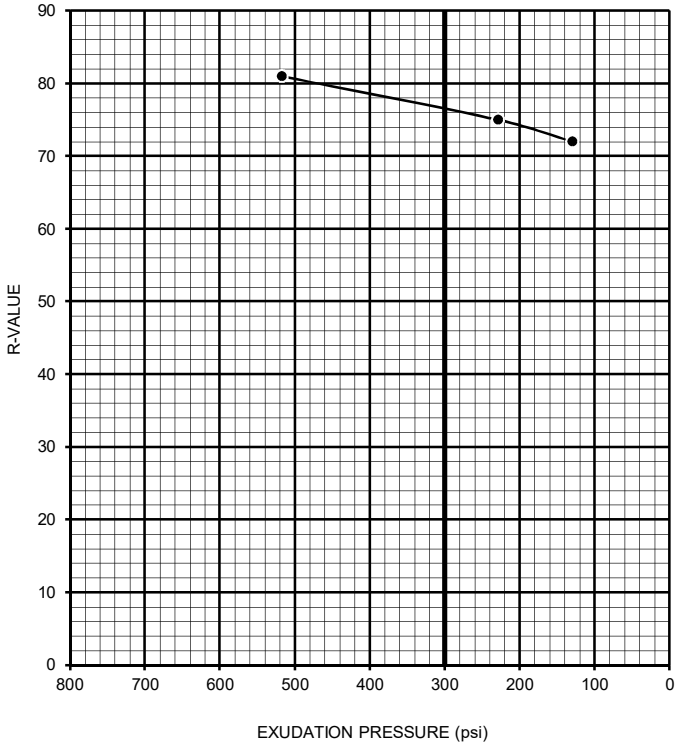
TEST SPECIMEN	a	b	c
MOISTURE AT COMPACTION %	10.5	10.9	11.8
HEIGHT OF SAMPLE, Inches	2.50	2.51	2.59
DRY DENSITY, pcf	120.7	120.3	119.6
COMPACTOR PRESSURE, psi	300	250	200
EXUDATION PRESSURE, psi	517	229	130
EXPANSION, Inches x 10exp-4	10	7	5
STABILITY Ph 2,000 lbs (160 psi)	15	21	24
TURNS DISPLACEMENT	5.49	5.64	5.80
R-VALUE UNCORRECTED	81	75	71
R-VALUE CORRECTED	81	75	72

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.30	0.40	0.45
EXPANSION PRESSURE THICKNESS, ft.	0.33	0.23	0.17

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	78
R-VALUE BY EXUDATION:	76
EQUILIBRIUM R-VALUE:	76

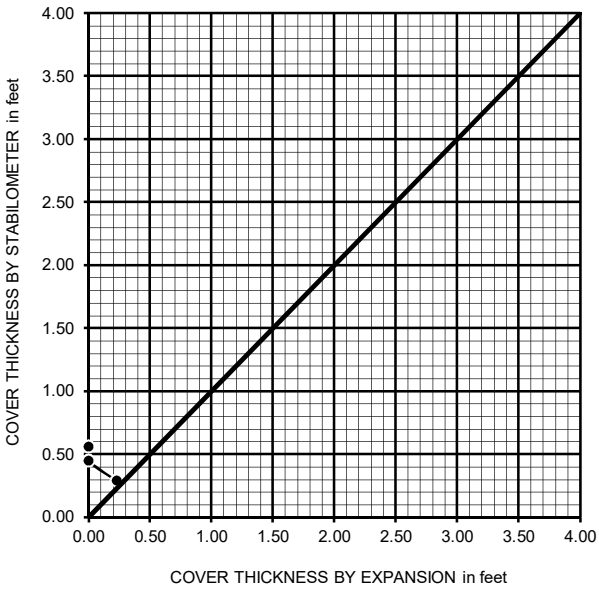
R-VALUE TEST RESULTS
DOT CA Test 301

PROJECT NAME:	Parcel A Apple Valley	PROJECT NUMBER:	13673.001
BORING NUMBER:	LB-17	DEPTH (FT.):	0-5
SAMPLE NUMBER:	B-1	TECHNICIAN:	O. Figueroa
SAMPLE DESCRIPTION:	Light brown silty sand with gravel (SM)g	DATE COMPLETED:	10/5/2022

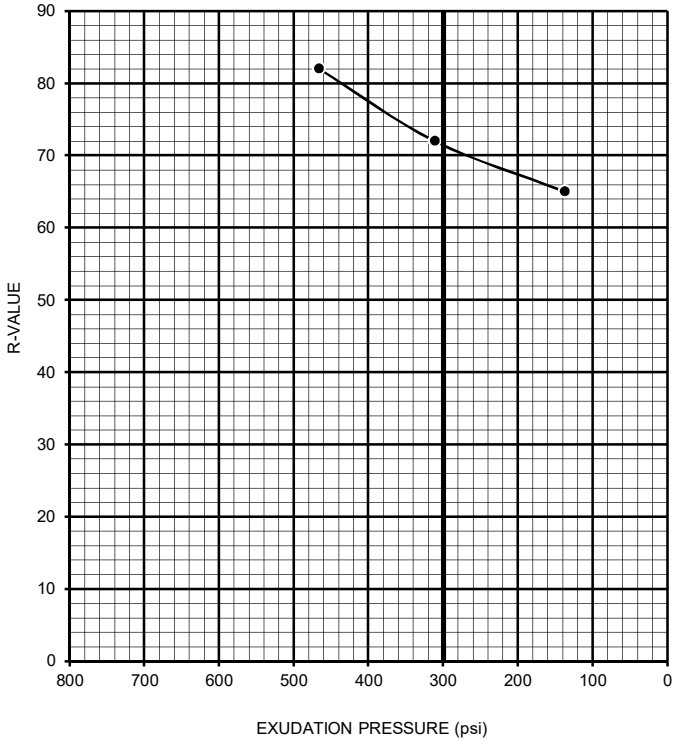
TEST SPECIMEN	a	b	c
MOISTURE AT COMPACTION %	12.4	12.8	13.2
HEIGHT OF SAMPLE, Inches	2.49	2.54	2.59
DRY DENSITY, pcf	115.8	114.1	113.5
COMPACTOR PRESSURE, psi	275	250	225
EXUDATION PRESSURE, psi	466	311	137
EXPANSION, Inches x 10exp-4	7	0	0
STABILITY Ph 2,000 lbs (160 psi)	17	23	29
TURNS DISPLACEMENT	4.72	5.75	6.40
R-VALUE UNCORRECTED	82	72	64
R-VALUE CORRECTED	82	72	65

DESIGN CALCULATION DATA	a	b	c
GRAVEL EQUIVALENT FACTOR	1.0	1.0	1.0
TRAFFIC INDEX	5.0	5.0	5.0
STABILOMETER THICKNESS, ft.	0.29	0.45	0.56
EXPANSION PRESSURE THICKNESS, ft.	0.23	0.00	0.00

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



R-VALUE BY EXPANSION:	81
R-VALUE BY EXUDATION:	72
EQUILIBRIUM R-VALUE:	72

PARTICLE-SIZE DISTRIBUTION (GRADATION) of SOILS USING SIEVE ANALYSIS

ASTM D 6913

Project Name: Parcel A Apple Valley
Project No.: 13673.001
Boring No.: IT-1
Sample No.: S-1
Soil Identification: Light brown silty sand (SM)

Tested By: J. Domingo Date: 10/06/22
Checked By: A. Santos Date: 10/07/22
Depth (feet): 12.5

		Moisture Content of Total Air - Dry Soil	
Container No.:	HA	Wt. of Air-Dry Soil + Cont. (g)	0.0
Wt. of Air-Dried Soil + Cont.(g)	884.0	Wt. of Dry Soil + Cont. (g)	0.0
Wt. of Container (g)	245.5	Wt. of Container No._____ (g)	1.0
Dry Wt. of Soil (g)	638.5	Moisture Content (%)	0.0

After Wet Sieve	Container No.	HA
	Wt. of Dry Soil + Container (g)	743.2
	Wt. of Container (g)	245.5
	Dry Wt. of Soil Retained on # 200 Sieve (g)	497.7

U. S. Sieve Size (in.)	U. S. Sieve Size (mm.)	Cumulative Weight Dry Soil Retained (g)	Percent Passing (%)
1 1/2"	37.5		
1"	25.0		
3/4"	19.0	0.0	100.0
1/2"	12.5	15.1	97.6
3/8"	9.5	30.6	95.2
#4	4.75	52.3	91.8
#8	2.36	103.2	83.8
#16	1.18	189.3	70.4
#30	0.600	281.6	55.9
#50	0.300	362.2	43.3
#100	0.150	423.5	33.7
#200	0.075	489.1	23.4
PAN			

GRAVEL: **8 %**
SAND: **69 %**
FINES: **23 %**
GROUP SYMBOL: **SM**

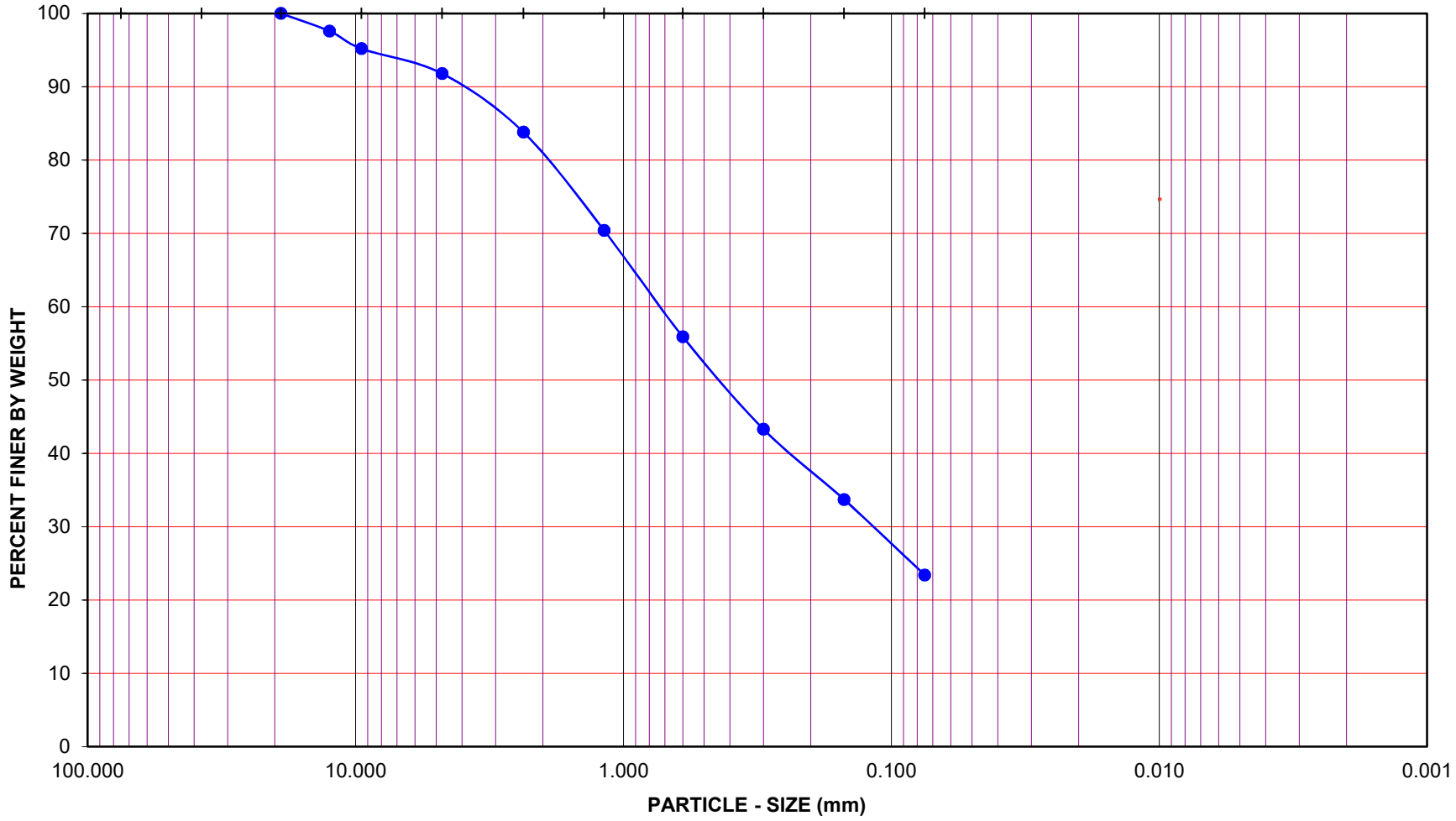
Cu = D60/D10 = _____
Cc = $(D30)^2/(D60*D10)$ = _____

Remarks: _____

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING — U.S. STANDARD SIEVE NUMBER — HYDROMETER

3.0" 1 1/2" 3/4" 3/8" #4 #8 #16 #30 #50 #100 #200



Project Name: Parcel A Apple Valley

Project No.: 13673.001

Boring No.: IT-1 Sample No.: S-1

Depth (feet): 12.5 Soil Type : SM

Soil Identification: Light brown silty sand (SM)

GR:SA:FI : (%) 8 : 69 : 23

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Oct-22

Sieve IT-1, S-1 @ 12.5

PARTICLE-SIZE DISTRIBUTION (GRADATION) of SOILS USING SIEVE ANALYSIS

ASTM D 6913

Project Name: Parcel A Apple Valley
Project No.: 13673.001
Boring No.: IT-3
Sample No.: S-1
Soil Identification: Light brown silty sand (SM)

Tested By: J. Domingo Date: 10/06/22
Checked By: A. Santos Date: 10/09/22
Depth (feet): 13.5

		Moisture Content of Total Air - Dry Soil	
Container No.:	V-O	Wt. of Air-Dry Soil + Cont. (g)	0.0
Wt. of Air-Dried Soil + Cont.(g)	880.4	Wt. of Dry Soil + Cont. (g)	0.0
Wt. of Container (g)	234.4	Wt. of Container No._____ (g)	1.0
Dry Wt. of Soil (g)	646.0	Moisture Content (%)	0.0

After Wet Sieve	Container No.	V-O
	Wt. of Dry Soil + Container (g)	750.8
	Wt. of Container (g)	234.4
	Dry Wt. of Soil Retained on # 200 Sieve (g)	516.4

U. S. Sieve Size (in.)	U. S. Sieve Size (mm.)	Cumulative Weight Dry Soil Retained (g)	Percent Passing (%)
1 1/2"	37.5		
1"	25.0		
3/4"	19.0	0.0	100.0
1/2"	12.5	21.1	96.7
3/8"	9.5	40.7	93.7
#4	4.75	81.2	87.4
#8	2.36	135.7	79.0
#16	1.18	217.9	66.3
#30	0.600	307.7	52.4
#50	0.300	393.6	39.1
#100	0.150	459.9	28.8
#200	0.075	509.7	21.1
PAN			

GRAVEL: **13 %**
SAND: **66 %**
FINES: **21 %**
GROUP SYMBOL: **SM**

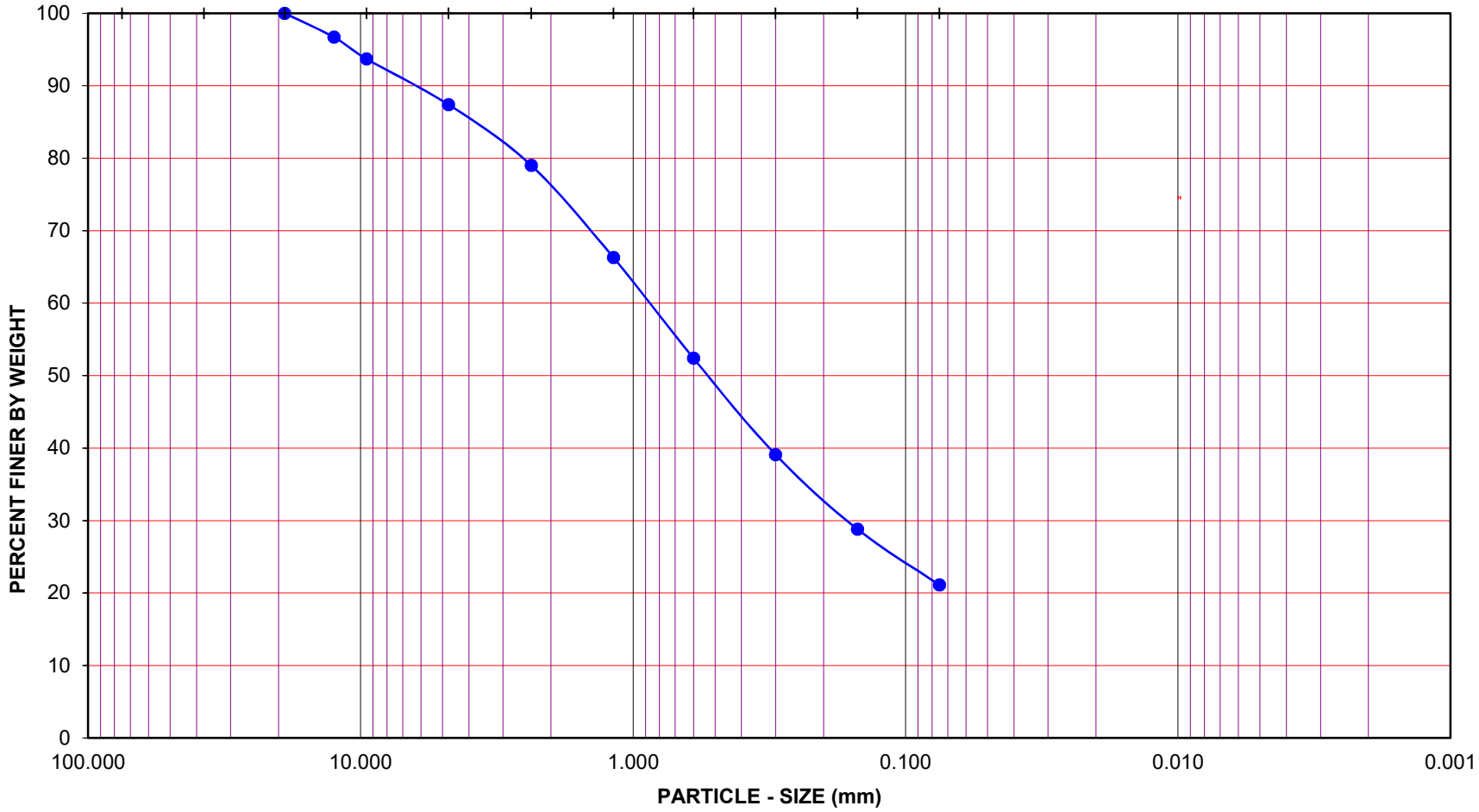
Cu = D60/D10 = _____
Cc = $(D30)^2/(D60*D10)$ = _____

Remarks: _____

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING — U.S. STANDARD SIEVE NUMBER — HYDROMETER

3.0" 1 1/2" 3/4" 3/8" #4 #8 #16 #30 #50 #100 #200



Project Name: Parcel A Apple Valley

Project No.: 13673.001

Boring No.: IT-3 Sample No.: S-1

Depth (feet): 13.5 Soil Type : SM

Soil Identification: Light brown silty sand (SM)

GR:SA:FI : (%) 13 : 66 : 21

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Oct-22

Sieve IT-3, S-1 @ 13.5

PARTICLE-SIZE DISTRIBUTION (GRADATION) of SOILS USING SIEVE ANALYSIS

ASTM D6913

Project Name: Parcel A Apple Valley
Project No.: 13673.001
Boring No.: LB-6
Sample No.: B-1
Soil Identification: Light brown silty sand with gravel (SM)g

Tested By: J. Domingo Date: 10/05/22
Checked By: A. Santos Date: 10/07/22
Depth (feet): 0-5

Calculation of Dry Weights	Whole Sample	Sample Passing #4	Moisture Contents	Whole Sample	Sample passing #4
Container No.:	A3-1	V-1	Wt. of Air-Dry Soil + Cont.(g)	0.0	0.0
Wt. Air-Dried Soil + Cont.(g)	4141.6	648.8	Wt. of Dry Soil + Cont. (g)	0.0	0.0
Wt. of Container (g)	225.3	108.7	Wt. of Container No._____(g)	1.0	1.0
Dry Wt. of Soil (g)	3916.3	540.1	Moisture Content (%)	0.0	0.0

Passing #4 Material After Wet Sieve		
	Container No.	V-1
	Wt. of Dry Soil + Container (g)	563.3
	Wt. of Container (g)	108.7
	Dry Wt. of Soil Retained on # 200 Sieve (g)	454.6

U. S. Sieve Size		Cumulative Weight of Dry Soil Retained (g)		Percent Passing (%)
	(mm.)	Whole Sample	Sample Passing #4	
3"	75.0			
1 1/2"	37.5	0.0		100.0
1"	25.0	56.3		98.6
3/4"	19.0	162.1		95.9
1/2"	12.5	418.0		89.3
3/8"	9.5	568.2		85.5
#4	4.75	907.8		76.8
#8	2.36		66.5	67.3
#16	1.18		156.0	54.6
#30	0.600		231.3	43.9
#50	0.300		297.2	34.5
#100	0.150		376.6	23.2
#200	0.075		449.0	13.0
PAN				

GRAVEL: **23 %**
SAND: **64 %**
FINES: **13 %**
GROUP SYMBOL: **(SM)g**

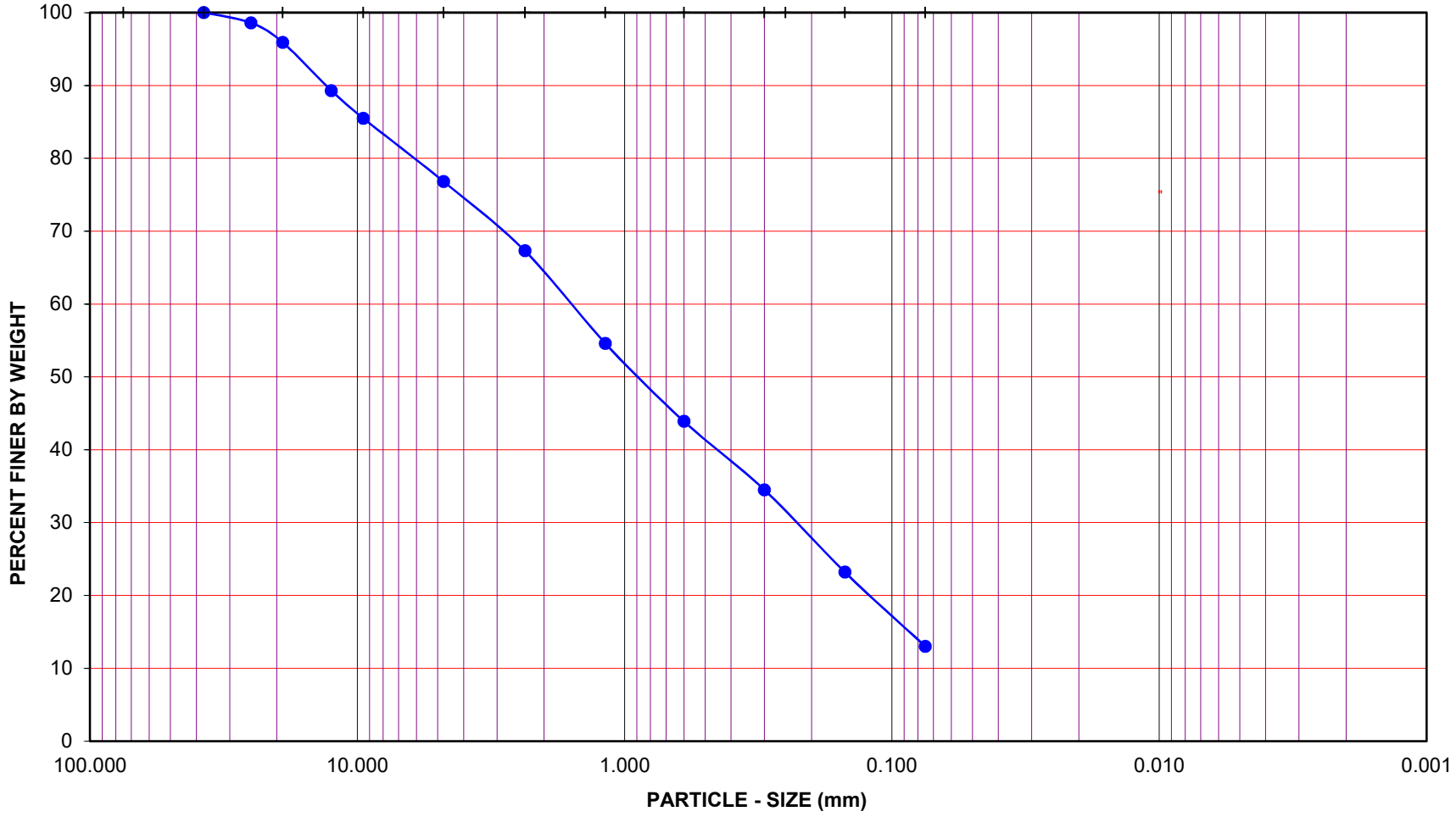
Cu = D60/D10 = _____
Cc = $(D30)^2/(D60*D10)$ = _____

Remarks: _____

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING — U.S. STANDARD SIEVE NUMBER — HYDROMETER

3.0" 1 1/2" 3/4" 3/8" #4 #8 #16 #30 #50 #100 #200



Project Name: Parcel A Apple Valley

Project No.: 13673.001

Boring No.: LB-6 Sample No.: B-1

Depth (feet): 0-5 Soil Type : (SM)g

Soil Identification: Light brown silty sand with gravel (SM)g

GR:SA:FI : (%) 23 : 64 : 13

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Oct-22

Sieve LB-6, B-1 @ 0-5

PARTICLE-SIZE DISTRIBUTION (GRADATION) of SOILS USING SIEVE ANALYSIS

ASTM D6913

Project Name: Parcel A Apple Valley
Project No.: 13673.001
Boring No.: LB-17
Sample No.: B-1
Soil Identification: Light brown silty sand with gravel (SM)g

Tested By: J. Domingo Date: 10/04/22
Checked By: A. Santos Date: 10/07/22
Depth (feet): 0-5

Calculation of Dry Weights	Whole Sample	Sample Passing #4	Moisture Contents	Whole Sample	Sample passing #4
Container No.:	P-16	916	Wt. of Air-Dry Soil + Cont.(g)	0.0	0.0
Wt. Air-Dried Soil + Cont.(g)	2402.7	607.6	Wt. of Dry Soil + Cont. (g)	0.0	0.0
Wt. of Container (g)	278.3	109.2	Wt. of Container No._____(g)	1.0	1.0
Dry Wt. of Soil (g)	2124.4	498.4	Moisture Content (%)	0.0	0.0

Passing #4 Material After Wet Sieve		
	Container No.	916
	Wt. of Dry Soil + Container (g)	481.8
	Wt. of Container (g)	109.2
	Dry Wt. of Soil Retained on # 200 Sieve (g)	372.6

U. S. Sieve Size		Cumulative Weight of Dry Soil Retained (g)		Percent Passing (%)
	(mm.)	Whole Sample	Sample Passing #4	
3"	75.0			
1 1/2"	37.5	0.0		100.0
1"	25.0	37.8		98.2
3/4"	19.0	71.7		96.6
1/2"	12.5	177.0		91.7
3/8"	9.5	269.5		87.3
#4	4.75	458.3		78.4
#8	2.36		62.6	68.6
#16	1.18		134.2	57.3
#30	0.600		202.8	46.5
#50	0.300		269.0	36.1
#100	0.150		323.5	27.5
#200	0.075		367.8	20.5
PAN				

GRAVEL: **22 %**
SAND: **57 %**
FINES: **21 %**
GROUP SYMBOL: **(SM)g**

Cu = D60/D10 = _____
Cc = $(D30)^2/(D60*D10)$ = _____

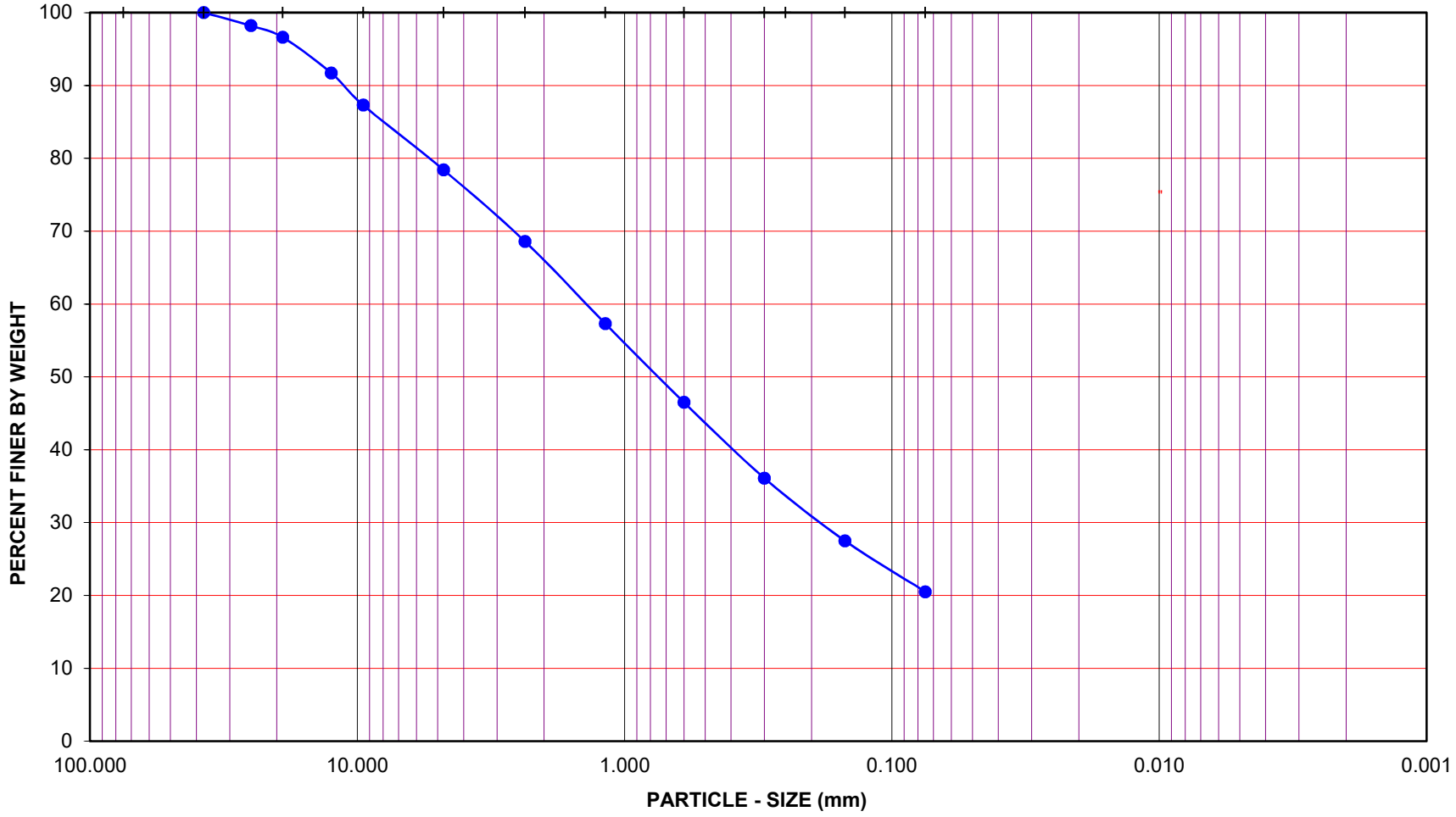
Remarks: _____

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING: 3.0" 1 1/2" 3/4" 3/8"

U.S. STANDARD SIEVE NUMBER: #4 #8 #16 #30 #50 #100 #200

HYDROMETER



Project Name: Parcel A Apple Valley

Project No.: 13673.001

Leighton

PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Boring No.: LB-17 Sample No.: B-1

Depth (feet): 0-5 Soil Type : (SM)g

Soil Identification: Light brown silty sand with gravel (SM)g

GR:SA:FI : (%) 22 : 57 : 21

Oct-22

Sieve LB-17, B-1 @ 0-5

PARTICLE-SIZE DISTRIBUTION (GRADATION) of SOILS USING SIEVE ANALYSIS

ASTM D 6913

Project Name: Parcel A Apple Valley
Project No.: 13673.001
Boring No.: LI-2
Sample No.: S-2
Soil Identification: Light brown silty sand (SM)

Tested By: J. Domingo Date: 10/06/22
Checked By: A. Santos Date: 10/07/22
Depth (feet): 12.5

		Moisture Content of Total Air - Dry Soil	
Container No.:	778	Wt. of Air-Dry Soil + Cont. (g)	0.0
Wt. of Air-Dried Soil + Cont.(g)	618.8	Wt. of Dry Soil + Cont. (g)	0.0
Wt. of Container (g)	75.9	Wt. of Container No._____ (g)	1.0
Dry Wt. of Soil (g)	542.9	Moisture Content (%)	0.0

After Wet Sieve	Container No.	778
	Wt. of Dry Soil + Container (g)	495.5
	Wt. of Container (g)	75.9
	Dry Wt. of Soil Retained on # 200 Sieve (g)	419.6

U. S. Sieve Size (in.)	U. S. Sieve Size (mm.)	Cumulative Weight Dry Soil Retained (g)	Percent Passing (%)
1 1/2"	37.5		
1"	25.0		
3/4"	19.0		
1/2"	12.5	0.0	100.0
3/8"	9.5	1.2	99.8
#4	4.75	19.4	96.4
#8	2.36	74.4	86.3
#16	1.18	153.2	71.8
#30	0.600	228.3	57.9
#50	0.300	299.7	44.8
#100	0.150	359.6	33.8
#200	0.075	414.0	23.7
PAN			

GRAVEL: **4 %**
SAND: **72 %**
FINES: **24 %**
GROUP SYMBOL: **SM**

Cu = D60/D10 = _____
Cc = $(D30)^2/(D60*D10)$ = _____

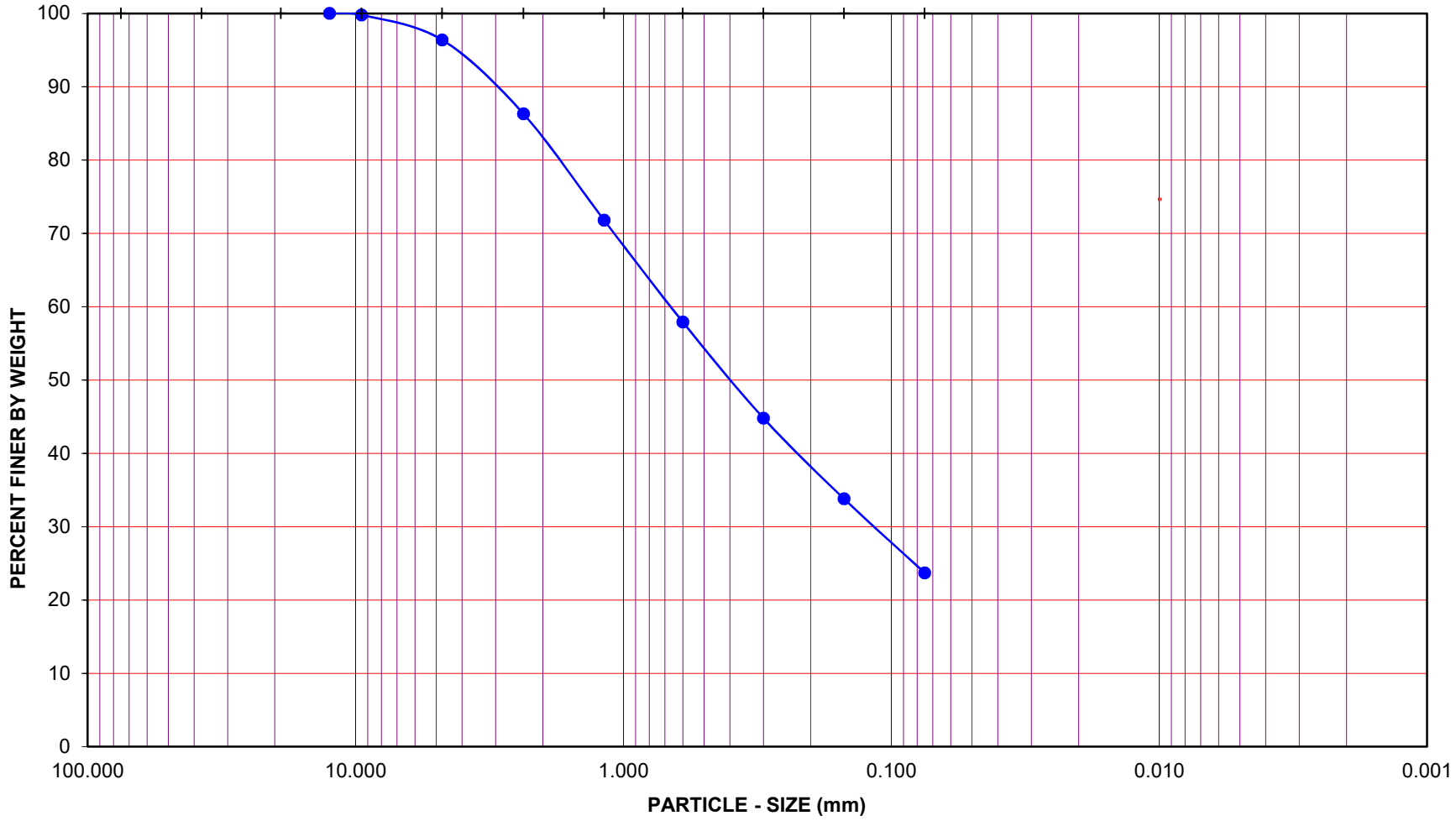
Remarks: _____

GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY

U.S. STANDARD SIEVE OPENING: 3.0" 1 1/2" 3/4" 3/8"

U.S. STANDARD SIEVE NUMBER: #4 #8 #16 #30 #50 #100 #200

HYDROMETER



Project Name: Parcel A Apple Valley

Project No.: 13673.001

Boring No.: LI-2 Sample No.: S-2

Depth (feet): 12.5 Soil Type : SM

Soil Identification: Light brown silty sand (SM)

GR:SA:FI : (%) 4 : 72 : 24

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PARTICLE - SIZE DISTRIBUTION ASTM D 6913

Oct-22

Sieve LI-2, S-2 @ 12.5

ONE-DIMENSIONAL SWELL OR SETTLEMENT POTENTIAL OF COHESIVE SOILS

ASTM D 4546

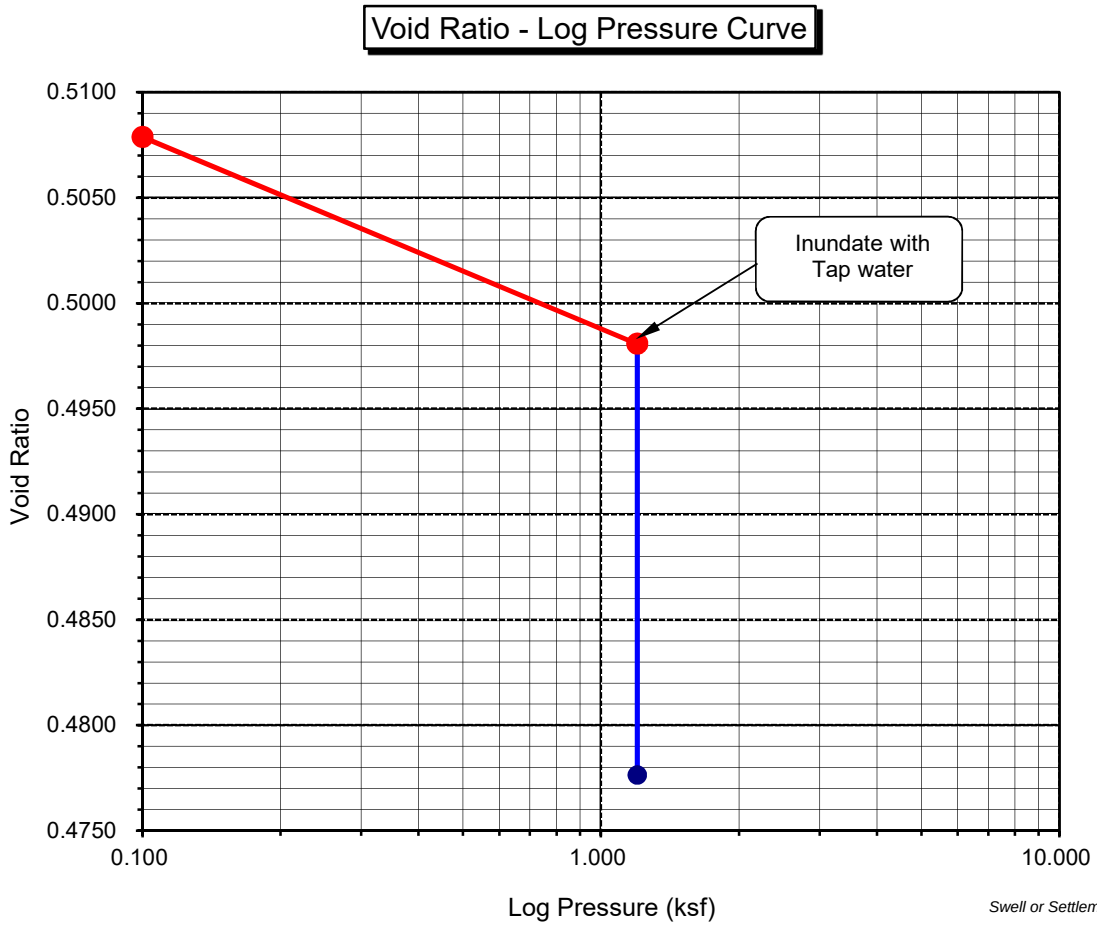
Project Name:	Parcel A Apple Valley	Tested By:	A. Santos	Date:	10/04/22
Project No.:	13673.001	Checked By:	J. Ward	Date:	10/09/22
Boring No.:	LB-1	Sample Type:	Ring		
Sample No.:	R-4	Depth (ft.)	10.0		
Sample Description:	Brown poorly-graded sand with silt and gravel (SP-SM)g				

Initial Dry Density (pcf):	111.8
Initial Moisture (%):	1.59
Initial Length (in.):	1.0000
Initial Dial Reading:	0.2611
Diameter(in):	2.415

Final Dry Density (pcf):	114.1
Final Moisture (%) :	17.9
Initial Void Ratio:	0.5080
Specific Gravity(assumed):	2.70
Initial Saturation (%)	8.5

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.100	0.2610	0.9999	0.00	-0.01	0.5079	-0.01
1.200	0.2505	0.9894	0.40	-1.06	0.4981	-0.66
H2O	0.2370	0.9759	0.40	-2.42	0.4776	-2.02

Percent Swell (+) / Settlement (-) After Inundation = -1.36



ONE-DIMENSIONAL SWELL OR SETTLEMENT POTENTIAL OF COHESIVE SOILS

ASTM D 4546

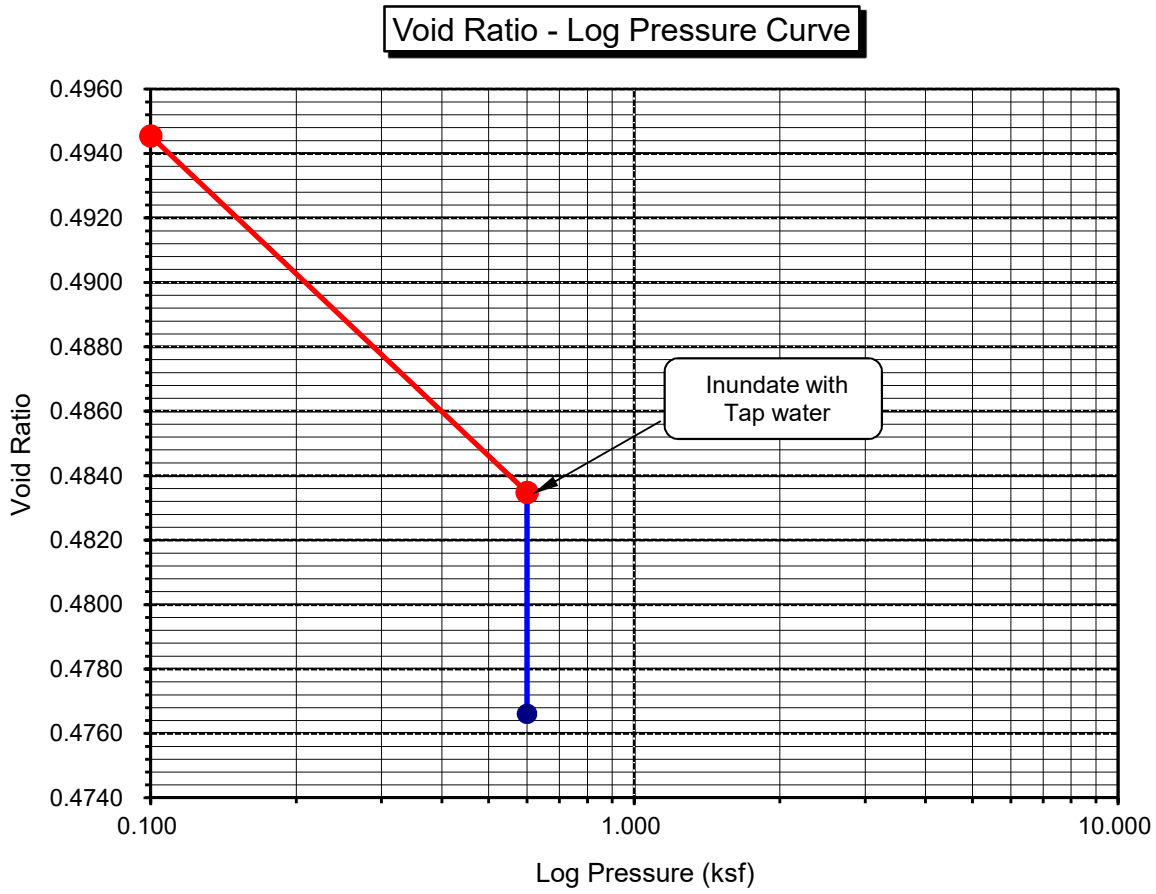
Project Name:	Parcel A Apple Valley		Tested By:	A. Santos	Date: 10/04/22
Project No.:	13673.001		Checked By:	J. Ward	Date: 10/07/22
Boring No.:	LB-16		Sample Type:	Ring	
Sample No.:	R-2		Depth (ft.)	5.0	
Sample Description:	Brown silty sand with gravel (SM)g				

Initial Dry Density (pcf):	112.8
Initial Moisture (%):	2.02
Initial Length (in.):	1.0000
Initial Dial Reading:	0.2938
Diameter(in):	2.415

Final Dry Density (pcf):	114.2
Final Moisture (%) :	15.7
Initial Void Ratio:	0.4947
Specific Gravity(assumed):	2.70
Initial Saturation (%)	11.0

Pressure (p) (ksf)	Final Reading (in)	Apparent Thickness (in)	Load Compliance (%)	Swell (+) Settlement (-) % of Sample Thickness	Void Ratio	Corrected Deformation (%)
0.100	0.2937	0.9999	0.00	-0.01	0.4945	-0.01
0.600	0.2853	0.9915	0.10	-0.85	0.4835	-0.75
H2O	0.2807	0.9869	0.10	-1.31	0.4766	-1.21

Percent Swell (+) / Settlement (-) After Inundation = -0.46



APPENDIX D

SUMMARY OF SEISMIC HAZARD ANALYSIS

Leighton

APPENDIX D

SITE-SPECIFIC SEISMIC ANALYSIS (ASCE 7-16)

VVLIG – Parcel A Apple Valley
(34.5754, -117.2675)

A site-specific ground motion study was performed in general conformance with Chapters 11, 20 and 21 of ASCE 7-16 and CGS Note 48.

The site is approximately 12.77 km from the surface trace of the closest element of the Helendale-South Lockhart fault zone. A Class C soil profile condition was considered for this site based on the results of our exploratory borings and geophysical survey. The site-specific response spectra in tabular and graphic forms are included herein (see Exhibits C-1 through C-6) and our specific analysis or approach is further discussed below:

Exhibit C-1: The probabilistic MCE spectrum was developed using spectral values obtained from USGS Unified Hazard Maps (UHGM) website, using the factors of ASCE 7-16 Section 21.1. At each spectral response period for which the acceleration is computed, ordinates of the probabilistic ground motion response spectrum is determined as the product of the risk coefficient, C_R, and the spectral response acceleration from a 5% damped acceleration response spectrum that has a 2% probability of exceedance within a 50-year period.

Exhibit C-2: A deterministic MCE spectrum was based on the maximum values of each period from the three most influential nearby faults. Scenario M7.39, 8.2, and 7.32 events on the Helendale-South Lockhart, San Andreas (San Bernardino section), and the North Frontal (West Sectin) fault zones consistent with the Next Generation West 2 (NGA-West 2) attenuation relations (PEER NGAW2 GMPEs) used for the 2014 USGS seismic source model at fault distances of 12.77, 37.76, and 19.2 km, respectively. The equally weighted spectral values from the attenuation relations of Abrahamson and others (ASK 2014), Boore and others (BSSA 2014), Campbell and Borzognia (CB 2014) and Chiou and Youngs (CY 2014) were used for the deterministic MCE spectrum. The MCE spectrum represents 84th-percentile, 5-percent-damped spectral response acceleration in the direction of maximum horizontal response (maximum rotated) for each period. Maximum rotated values were obtained using the scaling factors of ASCE 7-16 Section 21.2. Adjustment to the deterministic limit spectrum was applied as necessary. The Site Class C condition was modeled using Vs30 ≈ 560 meters/second, based on Multichannel Analysis of Surface Wave (MASW) methodology. The depth to bedrock ($Z_{1.0}$ km) was estimated to be around 197 feet (0.06 km), based on our geophysical survey results.

Exhibit C-3: The lesser of the values at any site period from the deterministic MCE_R and MCE_R probabilistic spectra forms the site-specific MCE_R spectrum. For this project site, the site-specific MCER spectrum is equivalent to the risk-modified probabilistic spectrum for site periods of .01 to 1 second and equivalent to deterministic spectrum for site periods of 2 to 5 seconds.

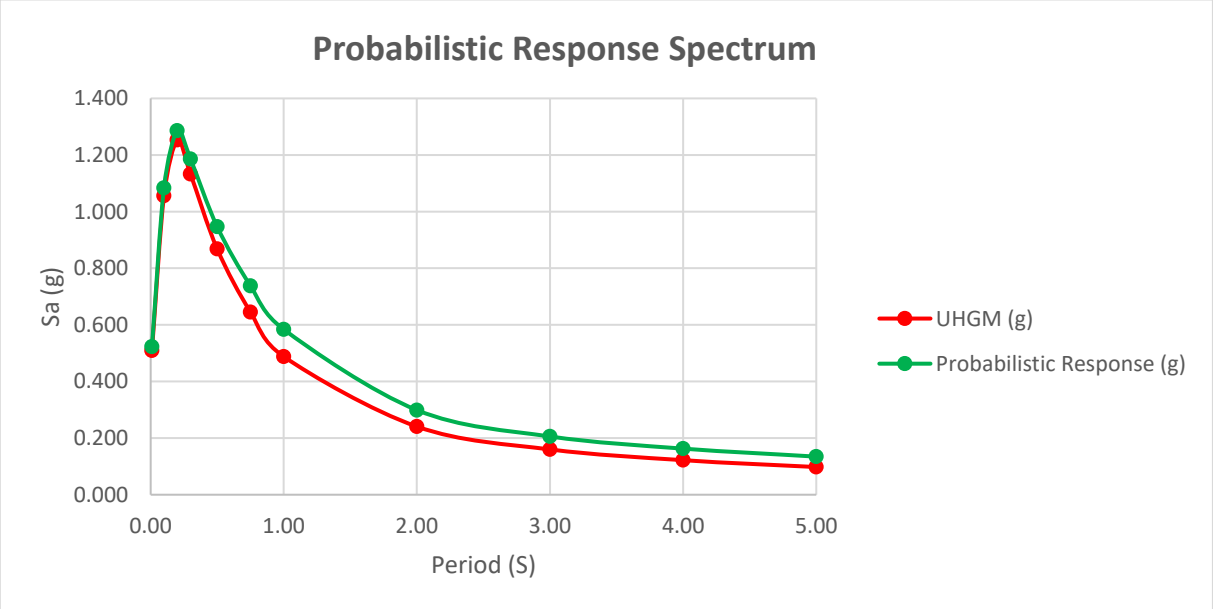
Exhibits C-4 through C-6: A design response spectrum was determined according to the procedure outlined in ASCE 7-16, Section 21.3, and is equal to two-thirds of the response spectral accelerations of the site-specific MCE_R. The design spectrum is limited by a "floor" at 80 percent of spectral acceleration determined according to ASCE 7-16, Section 11.4.6. The recommended site-specific design response spectrum is attached in tabular and graphic forms.

PROBABILISTIC RESPONSE SPECTRA

Period (S)	UHGM (g)	C_R	Ordinated Value (g)	Max Dir SF	Max Dir RTGM (g)	Probabilistic Response (g)
0.01	0.510	0.933	0.475	1.1	0.523	0.523
0.10	1.056	0.933	0.985	1.1	1.084	1.084
0.20	1.253	0.933	1.169	1.1	1.286	1.286
0.30	1.133	0.931	1.055	1.124	1.186	1.186
0.50	0.868	0.928	0.806	1.175	0.947	0.947
0.75	0.645	0.924	0.596	1.2375	0.738	0.738
1.00	0.488	0.920	0.449	1.3	0.584	0.584
2.00	0.241	0.920	0.221	1.35	0.299	0.299
3.00	0.160	0.920	0.147	1.4	0.206	0.206
4.00	0.122	0.920	0.112	1.45	0.162	0.162
5.00	0.098	0.920	0.090	1.5	0.135	0.135

Peak Sa		Fa	1.2Fa	Peak Sa < 1.2Fa	Deterministic Needed?
1.286		1.0	1.2	NO	YES

UHGM - Obtained from Unified Hazard Maps
RTGM - Risk Target Ground Motion



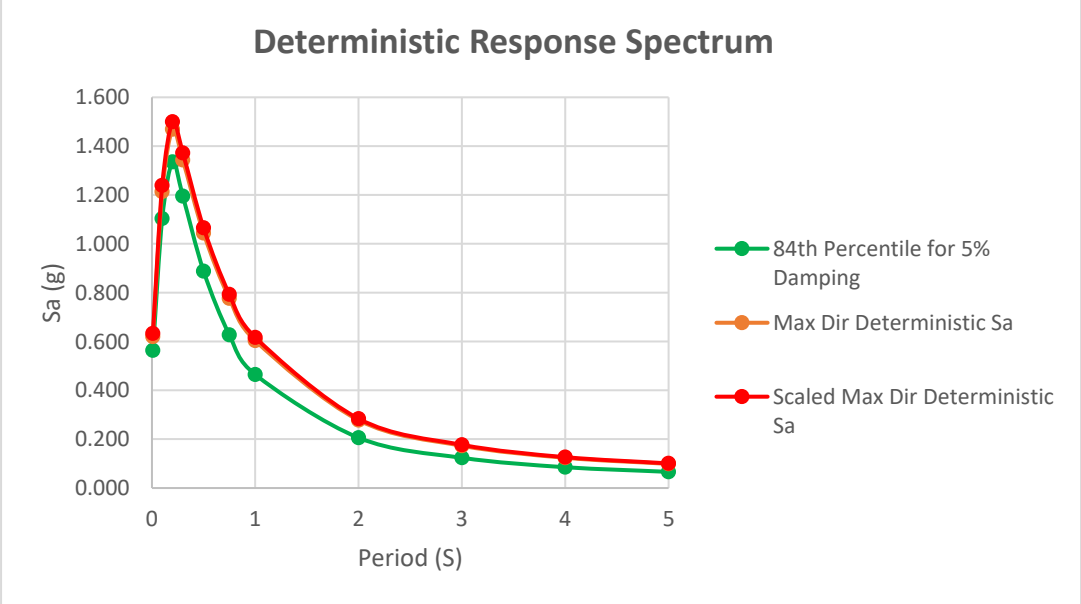
DETERMINISTIC RESPONSE SPECTRUM

Period (S)	84th Percentile for 5% Damping	Max Dir SF	Max Dir Deterministic Sa	Scaled Max Dir Deterministic Sa
0.01	0.563	1.1	0.620	0.633
0.1	1.103	1.1	1.213	1.239
0.2	1.335	1.1	1.469	1.500
0.3	1.195	1.124	1.343	1.372
0.5	0.888	1.175	1.043	1.066
0.75	0.627	1.2375	0.776	0.793
1	0.464	1.3	0.604	0.617
2	0.206	1.35	0.278	0.284
3	0.124	1.4	0.173	0.177
4	0.085	1.45	0.124	0.126
5	0.066	1.5	0.099	0.101

Obtained from NGA West 2 GMPE Worksheet - UCERF3 fault

CALCS

Peak Sa	Fa	1.5Fa	Peak Sa < 1.5Fa	Scaling Factor
1.469	1.0	1.5	YES	1.021

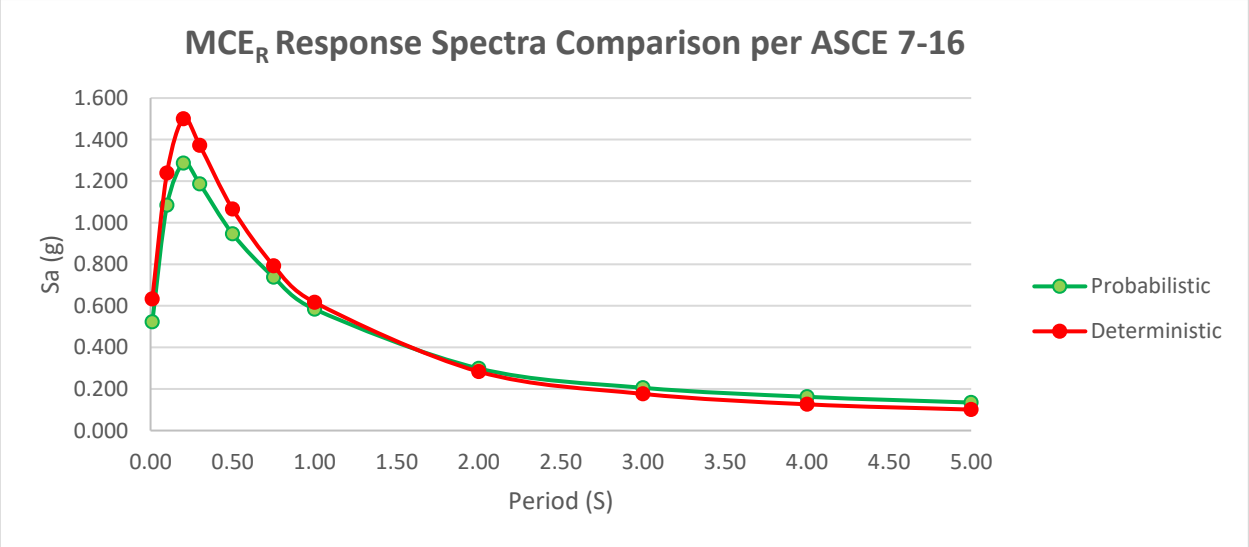


SPECTRA COMPARISION

Period (s)	Probabilistic Response (g)	Scaled Max Dir Deterministic Sa (g)	MCE_{R*} Response Spectra S_{aM} (g)	2/3 MCER Response Spectra Sa (g)
0.01	0.523	0.633	0.523	0.349
0.1	1.084	1.239	1.084	0.723
0.2	1.286	1.500	1.286	0.857
0.3	1.186	1.372	1.186	0.791
0.5	0.947	1.066	0.947	0.631
0.75	0.738	0.793	0.738	0.492
1	0.584	0.617	0.584	0.389
2	0.299	0.284	0.284	0.189
3	0.206	0.177	0.177	0.118
4	0.162	0.126	0.126	0.084
5	0.135	0.101	0.101	0.067

MCER* is the lesser of the prbabilitic and deterministic spectra

CALCS



S_s	1.037
S_1	0.401
Fa	1.2
Fv	1.5
S_{MS}	1.244
S_{M1}	0.602
S_{DS}	0.830
S_{D1}	0.401

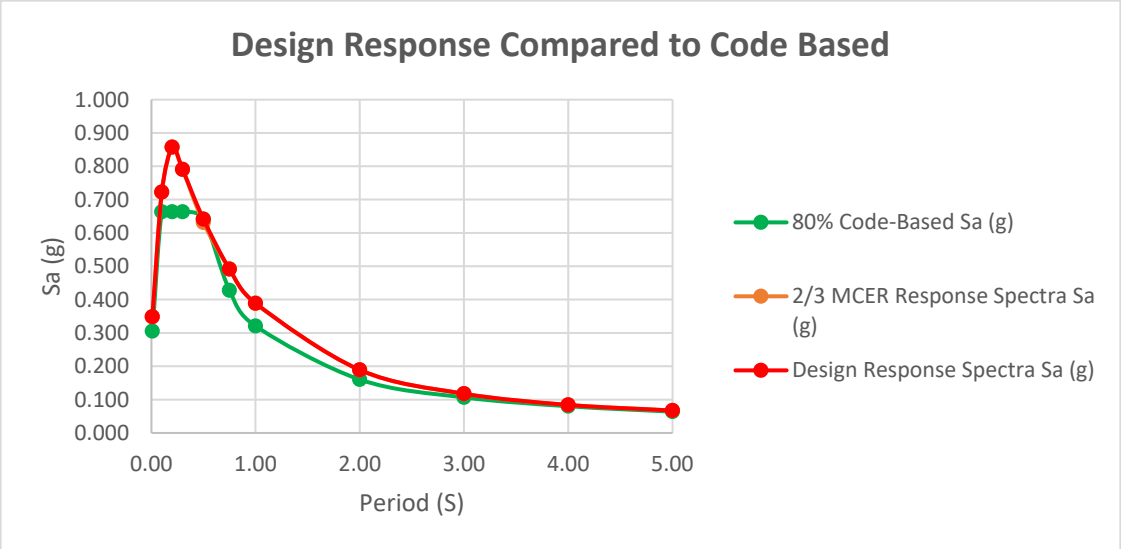
since S_1 >0.2

T_0	0.100
T_S	0.500

PGA	0.446
PGA_M	0.535

Period (S)	Code-Based Sa (g)	80% Code-Based Sa (g)	2/3 MCER Response Spectra Sa (g)	Design Response Spectra Sa (g)
0.01	0.382	0.305	0.349	0.349
0.10	0.830	0.664	0.723	0.723
0.20	0.830	0.664	0.857	0.857
0.30	0.830	0.664	0.791	0.791
0.50	0.802	0.642	0.631	0.642
0.75	0.535	0.428	0.492	0.492
1.00	0.401	0.321	0.389	0.389
2.00	0.201	0.160	0.189	0.189
3.00	0.134	0.107	0.118	0.118
4.00	0.100	0.080	0.084	0.084
5.00	0.080	0.064	0.067	0.067

FROM SEISMIC MAPS (ATC OR OSHPD)
CALCS



Period (s)	MCER* Response Spectra SaM (g)	Design Response Spectra Sa (g)	Design Values (g)	
0.01	0.523	0.349	0.314	
0.10	1.084	0.723	0.650	
0.20	1.286	0.857	**0.772**	= S_{DS}
0.30	1.186	0.791	0.712	
0.50	0.947	0.642	0.577	
0.75	0.738	0.492	0.443	
1.00	0.584	0.389	**0.389**	= S_{D1}
2.00	0.284	0.189	0.379	
3.00	0.177	0.118	0.354	
4.00	0.126	0.084	0.337	
5.00	0.101	0.067	0.337	

Max Sa between T=0.2s and 5s is **0.857**

S_{DS} = 0.9 X Max Sa = **0.772**

S_{MS} = 1.5*S_{DS} = **1.158**

Short Period Spectrum

V_{S30} = 560 m/s > 365 m/s Site Class C

Max T*S_a between T=1s and 5s is **0.389**

Therefore, S_{D1} = **0.389**

S_{M1} = 1.5*S_{D1} = **0.584**

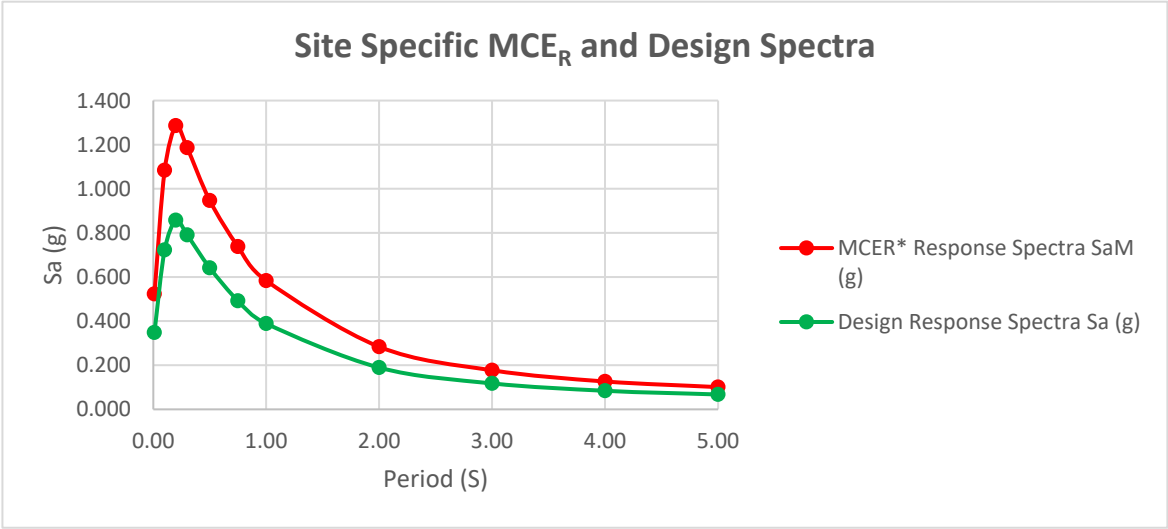
Long Period Spectrum

Probabilistic PGA **0.510**

Deterministic PGA **0.563**

80% Code-Based PGA_M **0.428**

Site-Specific PGA **0.563**



SUMMARY TABLE

Site-Specific Seismic Analysis (per ASCE 7-16)

	Site Seismic Coefficients / Coordinates	Value	
	Latitude	34.5754	
	Longitude	-117.2675	
Mapped Spectra (OSHPD)	Spectral Response – Class C (short), S_S	1.04	Exhibit C-4
	Spectral Response – Class C (1 sec), S_1	0.40	Exhibit C-4
	Site Modified Peak Ground Acceleration, PGA_M	0.54	Exhibit C-4
Site-Specific Response Spectra	Max. Considered Earthquake Spectral Response Acceleration (short), S_{MS}	1.16	Exhibit C-5
	Max. Considered Earthquake Spectral Response Acceleration – (1 sec), S_{M1}	0.58	Exhibit C-5
	5% Damped Design Spectral Response Acceleration (short), S_{DS}	0.77	Exhibit C-5
	5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.39	Exhibit C-5
	Maximum Considered Earthqauke Geometric Mean MCE_G PGA	0.56	Exhibit C-5

Site 2

Latitude, Longitude: 34.5754, -117.2675



Date	1/5/2023, 5:35:20 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	1.037	MCE_R ground motion. (for 0.2 second period)
S_1	0.401	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.245	Site-modified spectral acceleration value
S_{M1}	0.602	Site-modified spectral acceleration value
S_{DS}	0.83	Numeric seismic design value at 0.2 second SA
S_{D1}	0.401	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1.2	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.446	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.535	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	1.037	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.112	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.401	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.436	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	0.446	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.933	Mapped value of the risk coefficient at short periods
C_{R1}	0.92	Mapped value of the risk coefficient at a period of 1 s
C_V	1.107	Vertical coefficient

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Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2014 (update…

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

34.5754

Time Horizon

Return period in years

2475

Longitude

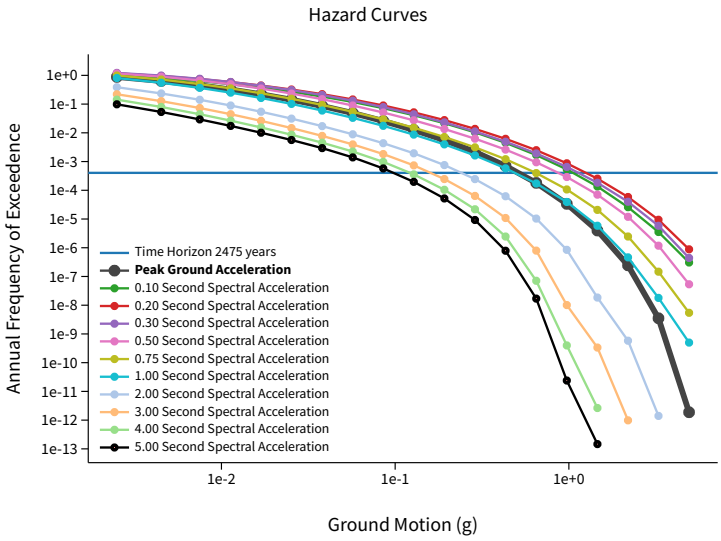
Decimal degrees, negative values for western longitudes

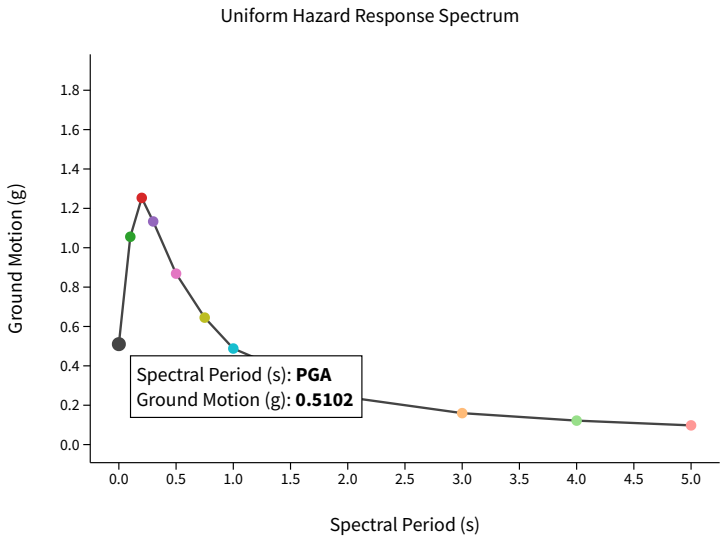
-117.2675

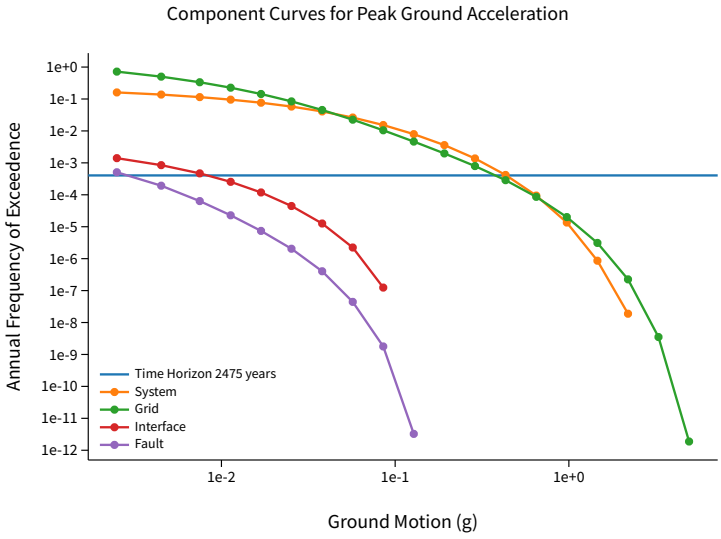
Site Class

537 m/s (Site class C)

Hazard Curve





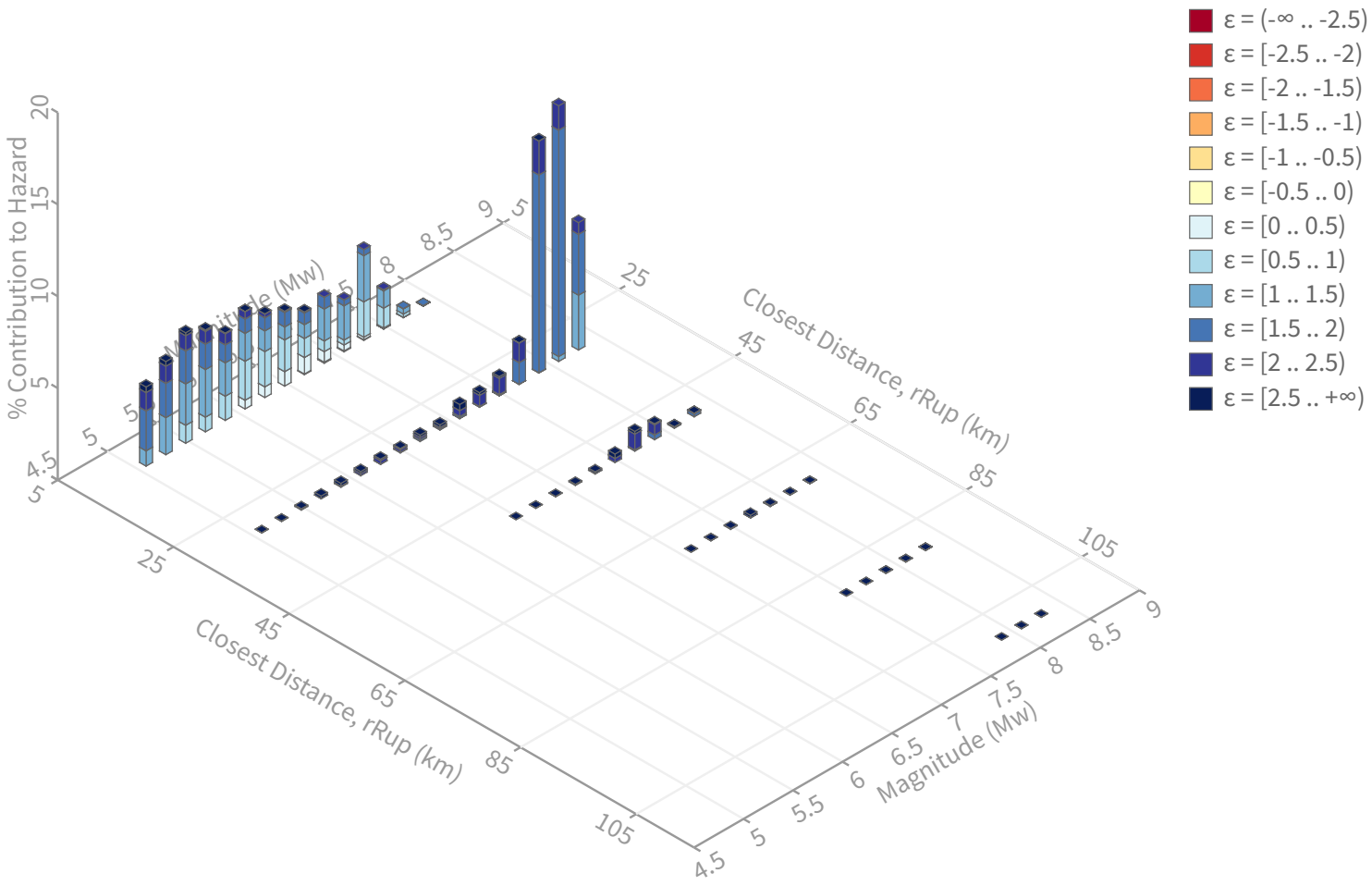


View Raw Data

Deaggregation

Component

Total


% Contribution to Hazard
0
5
10
15
20
Magnitude (Mw)
4.5
5
5.5
6
6.5
7
7.5
8
8.5
9
Closest Distance, rRup (km)
5
25
45
65
85
105
ε = (-∞ .. -2.5)
ε = [-2.5 .. -2)
ε = [-2 .. -1.5)
ε = [-1.5 .. -1)
ε = [-1 .. -0.5)
ε = [-0.5 .. 0)
ε = [0 .. 0.5)
ε = [0.5 .. 1)
ε = [1 .. 1.5)
ε = [1.5 .. 2)
ε = [2 .. 2.5)
ε = [2.5 .. +∞)

Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
PGA ground motion: 0.5102206 g

Recovered targets

Return period: 2852.2515 yrs
Exceedance rate: 0.00035060022 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.1 %

Mean (over all sources)

m: 6.93
r: 22.29 km
ε_0: 1.52 σ

Mode (largest m-r bin)

m: 8.1
r: 37.75 km
ε_0: 1.71 σ
Contribution: 13.91 %

Mode (largest m-r-ε_0 bin)

m: 8.09
r: 37.76 km
ε_0: 1.67 σ
Contribution: 12.32 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
UC33brAvg_FM32	System							27.12
San Andreas (San Bernardino N) [1]		37.76	8.03	1.77	117.465°W	34.277°N	208.74	17.01
Helendale-So Lockhart [7]		12.77	7.18	1.10	117.172°W	34.658°N	43.62	3.79
North Frontal (West) [1]		19.20	7.31	1.41	117.161°W	34.427°N	149.24	1.45
UC33brAvg_FM31	System							27.05
San Andreas (San Bernardino N) [1]		37.76	8.03	1.77	117.465°W	34.277°N	208.74	16.97
Helendale-So Lockhart [7]		12.77	7.18	1.10	117.172°W	34.658°N	43.62	3.82
North Frontal (West) [1]		19.20	7.32	1.41	117.161°W	34.427°N	149.24	1.43
UC33brAvg_FM31 (opt)	Grid							22.92
PointSourceFinite: -117.268, 34.616		6.64	5.74	0.98	117.267°W	34.616°N	0.00	3.32
PointSourceFinite: -117.268, 34.616		6.64	5.74	0.98	117.267°W	34.616°N	0.00	3.32
PointSourceFinite: -117.268, 34.652		8.79	6.01	1.17	117.267°W	34.652°N	0.00	2.22
PointSourceFinite: -117.268, 34.652		8.79	6.01	1.17	117.267°W	34.652°N	0.00	2.22
PointSourceFinite: -117.268, 34.634		8.31	5.57	1.38	117.267°W	34.634°N	0.00	1.75
PointSourceFinite: -117.268, 34.634		8.31	5.57	1.38	117.267°W	34.634°N	0.00	1.75
PointSourceFinite: -117.268, 34.670		10.29	6.01	1.38	117.267°W	34.670°N	0.00	1.27
PointSourceFinite: -117.268, 34.670		10.29	6.01	1.38	117.267°W	34.670°N	0.00	1.27
UC33brAvg_FM32 (opt)	Grid							22.90
PointSourceFinite: -117.268, 34.616		6.64	5.74	0.98	117.267°W	34.616°N	0.00	3.31
PointSourceFinite: -117.268, 34.616		6.64	5.74	0.98	117.267°W	34.616°N	0.00	3.31
PointSourceFinite: -117.268, 34.652		8.79	6.00	1.17	117.267°W	34.652°N	0.00	2.22
PointSourceFinite: -117.268, 34.652		8.79	6.00	1.17	117.267°W	34.652°N	0.00	2.22
PointSourceFinite: -117.268, 34.634		8.31	5.57	1.38	117.267°W	34.634°N	0.00	1.75
PointSourceFinite: -117.268, 34.634		8.31	5.57	1.38	117.267°W	34.634°N	0.00	1.75
PointSourceFinite: -117.268, 34.670		10.29	6.01	1.38	117.267°W	34.670°N	0.00	1.27
PointSourceFinite: -117.268, 34.670		10.29	6.01	1.38	117.267°W	34.670°N	0.00	1.27

PACIFIC EARTHQUAKE ENGINEERING RESEARCH CENTER

WEIGHTED AVERAGE of 2014 NGA WEST-2 GMPEs

Last updated: 04 14 15

by Emel Seyhan, PhD, PEER & UCLA -- email: emel.seyhan@gmail.com, peer_center@berkeley.edu

This excel file will be updated as necessary on the PEER website to fix any typos or other errors. Please check the website frequently for new versions at: http://peer.berkeley.edu/ngawest2/databases/

Legend	Pre-defined option	Main input variable	Calculated variable	Input var. flag	Internal variable

GMPE averaging	Geometric

Weighted average of the natural logarithm of the spectral values

GMPEs	ASK14	BSSA14	CB14	CY14	I14
Weight	0.25	0.25	0.25	0.25	0

# of std. dev.	1
Damping ratio (%)	5

Modification factors are calculated in Sheet DSF

ASK14 Abrahamson & Silva & Kamai 2014 NGA West-2 Model
BSSA14 Boore & Stewart & Seyhan & Atkinson 2014 NGA West-2 Model
CB14 Campbell & Bozorgnia 2014 NGA West-2 Model
CY14 Chiou & Youngs 2014 NGA West-2 Model
I14 Idriss 2014 NGA West-2 Model

Input variables **Errors and warnings**

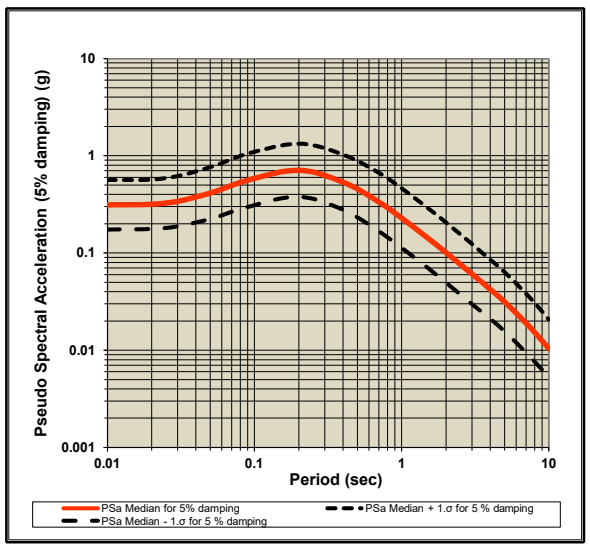
M_w	7.39
R_{RUP} (km)	15
R_{JB} (km)	12.7
R_X (km)	12.7
Ry0 (km)	999 — *If unknown use 999*
V_{S30} (m/sec)	560
U (BSSA13)	0 — *1: Unspecified fault mech.*
F_{RV}	0 — *1: reverse fault*
F_{NM}	0 — *1: normal fault*
F_{HW}	0 — *1: hanging wall side*
Dip (deg)	90
Z_{TOR} (km)	8.2 — *If unknown use 999*
Z_{HYP} (km)	999 — *If unknown use 999*
$Z_{1.0}$ (km)	0.06 — *If unknown use 999*
$Z_{2.5}$ (km)	0.26 — *If unknown use 999*
W (km)	11.5 — *If unknown use 999*
Vs30Flag	inferred — *Choose options for V_{s30} from the list*
F_{AS}	no — *Aftershock effect is not applicable.*
Region	California — *Choose region from the list*

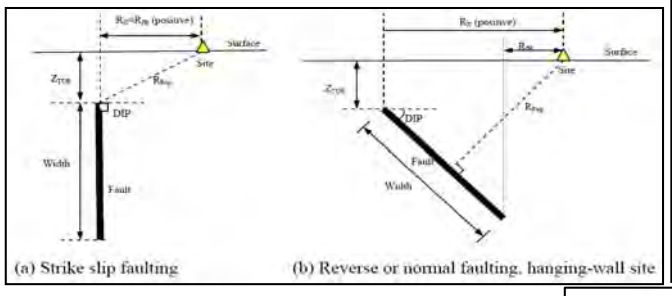
Calculated Variables/Flags

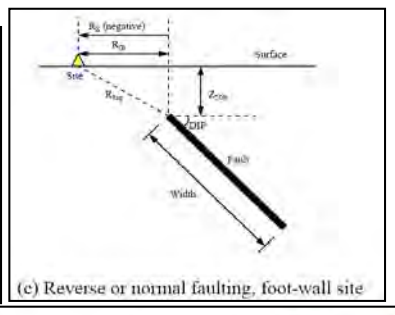
ΔDPP	0 — *Always 0 for median calcs.*
PGA_r (g)	0.237
Z_{BOT} (km) (CB14)	15 — *Enter for default W calcs*
SS	1 — *auto calculated*
$V_{s30Flag}$	0 — *inferred*
F_{AS}	0 — *Aftershock effect is not applicable.*
Region	0 — *California*
Option for Sa value	1 — *Weighted average of the natural logarithm of the spectral values*

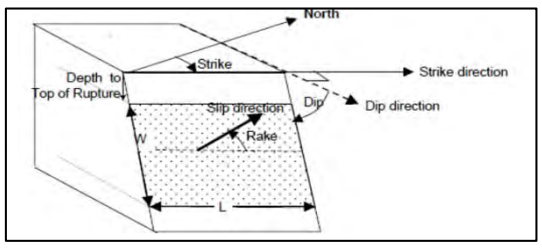
RotD50 Horizontal Component of PGA, PGV and *IMs*

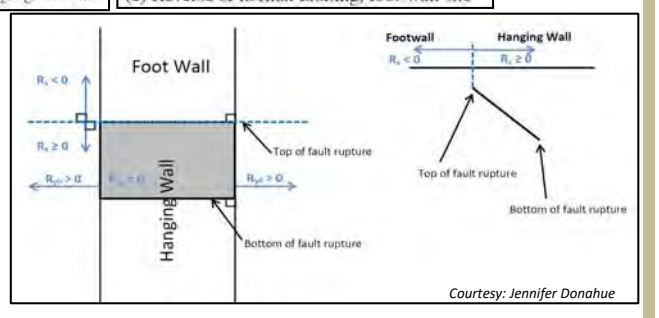
GMP	T (s)	Baseline: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5% damping	PSa Median - 1.σ for 5% damping	S_d Median for 5% damping	User defined: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5 % damping	PSa Median - 1.σ for 5 % damping	Sd Median for 5 % damping
PSa (g), S_d (cm)	0.01	0.31362	0.56333	0.17460	0.00078	0.31362	0.56333	0.17460	0.00078
	0.02	0.31777	0.57160	0.17666	0.00316	0.31777	0.57160	0.17666	0.00316
	0.03	0.34147	0.61891	0.18840	0.00763	0.34113	0.61829	0.18821	0.00762
	0.05	0.41358	0.76252	0.22433	0.02567	0.41358	0.76252	0.22433	0.02567
	0.075	0.51299	0.96120	0.27378	0.07163	0.51452	0.96408	0.27460	0.07184
	0.1	0.58436	1.09984	0.31048	0.14506	0.58611	1.10314	0.31141	0.14550
	0.15	0.67980	1.27315	0.36298	0.37969	0.68116	1.27569	0.36371	0.38045
	0.2	0.70999	1.33272	0.37824	0.70499	0.71141	1.33538	0.37900	0.70640
	0.25	0.68004	1.27968	0.36139	1.05507	0.68140	1.28223	0.36211	1.05718
	0.3	0.62760	1.19268	0.33025	1.40215	0.62886	1.19507	0.33091	1.40495
	0.4	0.53462	1.02737	0.27821	2.12340	0.53516	1.02839	0.27848	2.12553
	0.5	0.45515	0.88720	0.23350	2.82461	0.45560	0.88808	0.23373	2.82744
	0.75	0.31293	0.62724	0.15611	4.36948	0.31293	0.62724	0.15611	4.36948
	1	0.22916	0.46441	0.11308	5.68856	0.22916	0.46441	0.11308	5.68856
	1.5	0.14368	0.29271	0.07053	8.02505	0.14382	0.29300	0.07060	8.03308
	2	0.10116	0.20616	0.04964	10.04436	0.10106	0.20595	0.04959	10.03432
	3	0.06078	0.12375	0.02985	13.57795	0.06078	0.12375	0.02985	13.57795
	4	0.04240	0.08547	0.02104	16.84176	0.04236	0.08539	0.02102	16.82491
	5	0.03167	0.06392	0.01569	19.65199	0.03157	0.06373	0.01564	19.59304
	7.5	0.01707	0.03430	0.00849	23.82858	0.01700	0.03416	0.00846	23.73326
	10	0.01049	0.02084	0.00528	26.03193	0.01044	0.02075	0.00526	25.92781
PGA (g)	0	0.31219	0.56033	0.17394	0.00077	0.31219	0.56033	0.17394	0.00077
PGV (cm/s)	-1	28.76293	52.47866	15.76462	0.07140	NA	NA	NA	NA











Courtesy: Jennifer Donahue

Definition of Parameters

Damping ratio = Viscous damping ratio (%) See Sanaz et al. (2012) PEER Report
PSA = Pseudo-absolute acceleration response spectrum (g)
PGA = Peak ground acceleration (g)
PGV = Peak ground velocity (cm/s)
S_d = Relative displacement response spectrum (cm)
M_w = Moment magnitude
R_{RUP} = Closest distance to coseismic rupture (km), used in ASK13, CB13 and CY13. See Figures a, b and c for illustation
R_{JB} = Closest distance to surface projection of coseismic rupture (km). See Figures a, b and c for illustation
R_X = Horizontal distance from top of rupture measured perpendicular to fault strike (km). See Figures a, b and c for illustation
R_{y0} = The horizontal distance off the end of the rupture measured parallel to strike (km)
V_{S30} = The average shear-wave velocity (m/s) over a subsurface depth of 30 m
U = Unspecified-mechanism factor: 1 for unspecified; 0 otherwise
F_{RV} = Reverse-faulting factor: 0 for strike slip, normal, normal-oblique; 1 for reverse, reverse-oblique and thrust
F_{NM} = Normal-faulting factor: 0 for strike slip, reverse, reverse-oblique, thrust and normal-oblique; 1 for normal
F_{HW} = Hanging-wall factor: 1 for site on down-dip side of top of rupture; 0 otherwise
Dip = Average dip of rupture plane (degrees)
Z_{TOR} = Depth to top of coseismic rupture (km)
Z_{HYP} = Hypocentral depth from the earthquake
$Z_{1.0}$ = Depth to Vs=1 km/sec
$Z_{2.5}$ = Depth to Vs=2.5 km/sec
W = Fault rupture width (km)
$V_{s30flag}$ = 1 for measured, 0 for inferred Vs30
F_{AS} = 0 for mainshock; 1 for aftershock
Region = Specific regions considered in the models, Click on Region to see codes
ΔDPP = Directivity term, direct point parameter; uses 0 for median predictions
PGA_r (g) = Peak ground acceleration on rock (g), this specific cell is updated in the cell for BSSA14 and CB14, for others it is taken account for in the macros
Z_{BOT} (km) = The depth to the bottom of the seismogenic crust
Z_{BOR} (km) = The depth to the bottom of the rupture plane
SS = 1 for strike slip, automatically updated in the cell

Input variables with defaults (If entered 999 as input):

Red colored value: The value is used in the code when input is unknown

DEFAULTs	USER defined	ASK14	BSSA14	CB14	CY14	I14
W (km)	11.50			15.000		
$Z_{1.0}$ (km)	0.060	0.060			0.162	
$\delta Z_{1.0}$ (km)	-0.102		-0.102			
$Z_{2.5}$ (V_{S30}=1100)(km)	0.260			0.398		
$Z_{2.5}$ (V_{S30})(km)	0.260			0.861		
Z_{hyp} (km)	999.00			10.227		
Z_{tor} (km)	8.20			0.000	0.000	
Z_{BOR} (km)	-			15.000		

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Silvia Mazzoni, Consultant

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PACIFIC EARTHQUAKE ENGINEERING RESEARCH CENTER

WEIGHTED AVERAGE of 2014 NGA WEST-2 GMPEs

Last updated: 04 14 15

by Emel Seyhan, PhD, PEER & UCLA -- email: emel.seyhan@gmail.com, peer_center@berkeley.edu

This excel file will be updated as necessary on the PEER website to fix any typos or other errors. Please check the website frequently for new versions at: http://peer.berkeley.edu/ngawest2/databases/

Legend	Pre-defined option	Main input variable	Calculated variable	Input var. flag	Internal variable

GMPE averaging	Geometric

Weighted average of the natural logarithm of the spectral values

GMPEs	ASK14	BSSA14	CB14	CY14	I14
Weight	0.25	0.25	0.25	0.25	0

# of std. dev.	1
Damping ratio (%)	5

Modification factors are calculated in Sheet DSF

ASK14 Abrahamson & Silva & Kamai 2014 NGA West-2 Model
BSSA14 Boore & Stewart & Seyhan & Atkinson 2014 NGA West-2 Model
CB14 Campbell & Bozorgnia 2014 NGA West-2 Model
CY14 Chiou & Youngs 2014 NGA West-2 Model
I14 Idriss 2014 NGA West-2 Model

RotD50 Horizontal Component of PGA, PGV and *IMs*

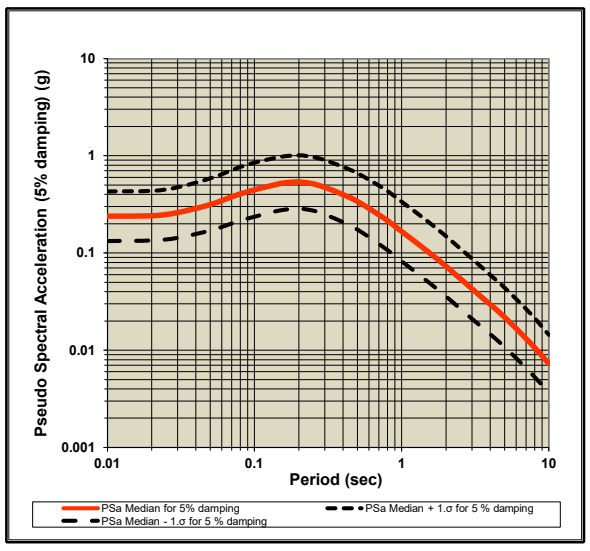
Input variables **Errors and warnings**

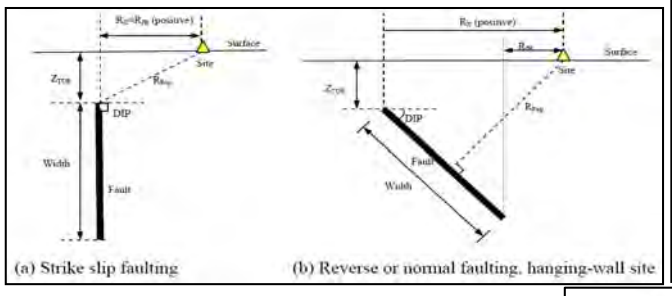
M_w	7.32	
R_{RUP} (km)	22	
R_{JB} (km)	19.2	
R_X (km)	19.2	
Ry0 (km)	999	*If unknown use 999*
V_{S30} (m/sec)	560	
U (BSSA13)	0	*1: Unspecified fault mech.*
F_{RV}	0	*1: reverse fault*
F_{NM}	0	*1: normal fault*
F_{HW}	0	*1: hanging wall side*
Dip (deg)	49	
Z_{TOR} (km)	10.1	*If unknown use 999*
Z_{HYP} (km)	999	*If unknown use 999*
$Z_{1.0}$ (km)	0.06	*If unknown use 999*
$Z_{2.5}$ (km)	0.26	*If unknown use 999*
W (km)	18.72	*If unknown use 999*
Vs30Flag	inferred	*Choose options for V_{s30} from the list*
F_{AS}	no	*Aftershock effect is not applicable.*
Region	California	*Choose region from the list*

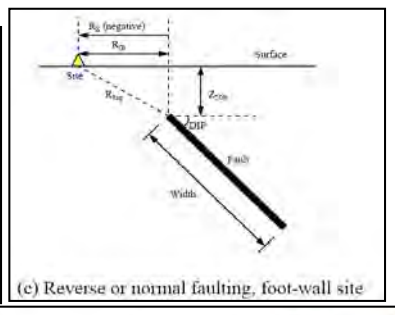
Calculated Variables/Flags

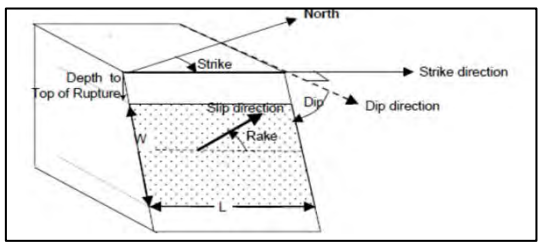
ΔDPP	0	*Always 0 for median calcs.*
PGA_r (g)	0.176	
Z_{BOT} (km) (CB14)	15	*Enter for default W calcs*
SS	1	*auto calculated*
$V_{s30Flag}$	0	*inferred*
F_{AS}	0	*Aftershock effect is not applicable.*
Region	0	*California*
Option for Sa value	1	*Weighted average of the natural logarithm of the spectral values*

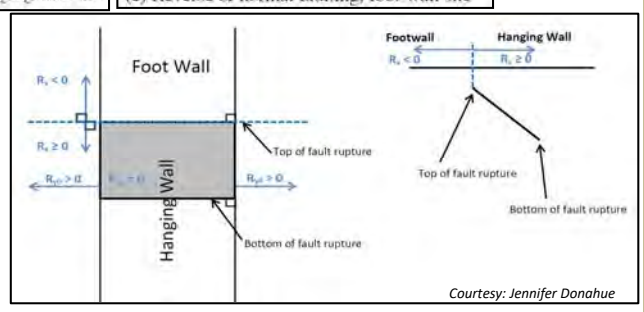
GMP	T (s)	Baseline: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5% damping	PSa Median - 1.σ for 5% damping	S_d Median for 5% damping	User defined: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5 % damping	PSa Median - 1.σ for 5 % damping	Sd Median for 5 % damping
PSa (g), S_d (cm)	0.01	0.23980	0.43179	0.13318	0.00060	0.23980	0.43179	0.13318	0.00060
	0.02	0.24251	0.43734	0.13447	0.00241	0.24251	0.43734	0.13447	0.00241
	0.03	0.26052	0.47373	0.14327	0.00582	0.26052	0.47373	0.14327	0.00582
	0.05	0.31592	0.58517	0.17056	0.01961	0.31592	0.58517	0.17056	0.01961
	0.075	0.39227	0.73888	0.20825	0.05477	0.39344	0.74110	0.20888	0.05494
	0.1	0.44690	0.84564	0.23617	0.11094	0.44824	0.84818	0.23688	0.11127
	0.15	0.51709	0.97290	0.27483	0.28881	0.51813	0.97485	0.27538	0.28939
	0.2	0.53738	1.01145	0.28551	0.53359	0.53846	1.01348	0.28608	0.53466
	0.25	0.51376	0.96823	0.27261	0.79709	0.51427	0.96919	0.27288	0.79789
	0.3	0.47283	0.89923	0.24862	1.05637	0.47378	0.90103	0.24912	1.05848
	0.4	0.39992	0.76880	0.20804	1.58841	0.40032	0.76957	0.20825	1.59000
	0.5	0.33888	0.66075	0.17380	2.10307	0.33922	0.66142	0.17398	2.10517
	0.75	0.23091	0.46292	0.11518	3.22423	0.23091	0.46292	0.11518	3.22423
	1	0.16713	0.33874	0.08246	4.14871	0.16713	0.33874	0.08246	4.14871
	1.5	0.10412	0.21214	0.05111	5.81570	0.10423	0.21235	0.05116	5.82151
	2	0.07291	0.14860	0.03577	7.23944	0.07284	0.14845	0.03574	7.23220
	3	0.04291	0.08739	0.02107	9.58753	0.04291	0.08739	0.02107	9.58753
	4	0.02959	0.05963	0.01468	11.75067	0.02953	0.05951	0.01465	11.72717
	5	0.02192	0.04424	0.01086	13.60237	0.02185	0.04411	0.01083	13.56156
	7.5	0.01190	0.02392	0.00592	16.61644	0.01184	0.02380	0.00589	16.53336
	10	0.00731	0.01452	0.00368	18.14183	0.00727	0.01445	0.00366	18.05112
PGA (g)	0	0.23874	0.42952	0.13269	0.00059	0.23874	0.42952	0.13269	0.00059
PGV (cm/s)	-1	20.55907	37.51310	11.26741	0.05104	NA	NA	NA	NA











Courtesy: Jennifer Donahue

Definition of Parameters

Damping ratio = Viscous damping ratio (%) See Sanaz et al. (2012) PEER Report
PSA = Pseudo-absolute acceleration response spectrum (g)
PGA = Peak ground acceleration (g)
PGV = Peak ground velocity (cm/s)
S_d = Relative displacement response spectrum (cm)
M_w = Moment magnitude
R_{RUP} = Closest distance to coseismic rupture (km), used in ASK13, CB13 and CY13. See Figures a, b and c for illustation
R_{JB} = Closest distance to surface projection of coseismic rupture (km). See Figures a, b and c for illustation
R_X = Horizontal distance from top of rupture measured perpendicular to fault strike (km). See Figures a, b and c for illustation
R_{y0} = The horizontal distance off the end of the rupture measured parallel to strike (km)
V_{S30} = The average shear-wave velocity (m/s) over a subsurface depth of 30 m
U = Unspecified-mechanism factor: 1 for unspecified; 0 otherwise
F_{RV} = Reverse-faulting factor: 0 for strike slip, normal, normal-oblique; 1 for reverse, reverse-oblique and thrust
F_{NM} = Normal-faulting factor: 0 for strike slip, reverse, reverse-oblique, thrust and normal-oblique; 1 for normal
F_{HW} = Hanging-wall factor: 1 for site on down-dip side of top of rupture; 0 otherwise
Dip = Average dip of rupture plane (degrees)
Z_{TOR} = Depth to top of coseismic rupture (km)
Z_{HYP} = Hypocentral depth from the earthquake
$Z_{1.0}$ = Depth to Vs=1 km/sec
$Z_{2.5}$ = Depth to Vs=2.5 km/sec
W = Fault rupture width (km)
$V_{s30flag}$ = 1 for measured, 0 for inferred Vs30
F_{AS} = 0 for mainshock; 1 for aftershock
Region = Specific regions considered in the models, Click on Region to see codes
ΔDPP = Directivity term, direct point parameter; uses 0 for median predictions
PGA_r (g) = Peak ground acceleration on rock (g), this specific cell is updated in the cell for BSSA14 and CB14, for others it is taken account for in the macros
Z_{BOT} (km) = The depth to the bottom of the seismogenic crust
Z_{BOR} (km) = The depth to the bottom of the rupture plane
SS = 1 for strike slip, automatically updated in the cell

Input variables with defaults (If entered 999 as input):

Red colored value: The value is used in the code when input is unknown

DEFAULTs	USER defined	ASK14	BSSA14	CB14	CY14	I14
W (km)	18.72			19.875		
$Z_{1.0}$ (km)	0.060	0.060			0.162	
$\delta Z_{1.0}$ (km)	-0.102		-0.102			
$Z_{2.5}$ (V_{S30}=1100)(km)	0.260			0.398		
$Z_{2.5}$ (V_{S30})(km)	0.260			0.861		
Z_{hyp} (km)	999.00			10.227		
Z_{tor} (km)	10.10			0.000	0.000	
Z_{BOR} (km)	-			15.000		

ACKNOWLEDGEMENTS

Nick Gregor, Bechtel
Silvia Mazzoni, Consultant

All NGA West-2 participants are acknowledged for their constructive comments and feedback.

PACIFIC EARTHQUAKE ENGINEERING RESEARCH CENTER

WEIGHTED AVERAGE of 2014 NGA WEST-2 GMPEs

Last updated: 04 14 15

by Emel Seyhan, PhD, PEER & UCLA -- email: emel.seyhan@gmail.com, peer_center@berkeley.edu

This excel file will be updated as necessary on the PEER website to fix any typos or other errors. Please check the website frequently for new versions at: http://peer.berkeley.edu/ngawest2/databases/

Legend	Pre-defined option	Main input variable	Calculated variable	Input var. flag	Internal variable

GMPE averaging	**Geometric**

Weighted average of the natural logarithm of the spectral values

GMPEs	ASK14	BSSA14	CB14	CY14	I14
Weight	0.25	0.25	0.25	0.25	0

# of std. dev.	1
Damping ratio (%)	5

Modification factors are calculated in Sheet DSF

ASK14 Abrahamson & Silva & Kamai 2014 NGA West-2 Model
BSSA14 Boore & Stewart & Seyhan & Atkinson 2014 NGA West-2 Model
CB14 Campbell & Bozorgnia 2014 NGA West-2 Model
CY14 Chiou & Youngs 2014 NGA West-2 Model
I14 Idriss 2014 NGA West-2 Model

Input variables **Errors and warnings**

M_w
8.2

R_{RUP} (km)
38.4

R_{JB} (km)
37.7

R_X (km)
37.7

Ry0 (km) *If unknown use 999*
999

V_{S30} (m/sec)
560

U (BSSA13) *1: Unspecified fault mech.*
0

F_{RV} *1: reverse fault*
0

F_{NM} *1: normal fault*
0

F_{HW} *1: hanging wall side*
0

Dip (deg)
90

Z_{TOR} (km) *If unknown use 999*
7.68

Z_{HYP} (km) *If unknown use 999*
999

$Z_{1.0}$ (km) *If unknown use 999*
0.06

$Z_{2.5}$ (km) *If unknown use 999*
0.26

W (km) *If unknown use 999*
12.8

Vs30Flag
inferred *Choose options for V_{s30} from the list*

F_{AS}
no *Aftershock effect is not applicable.*

Region
California *Choose region from the list*

Calculated Variables/Flags

ΔDPP *Always 0 for median calcs.*
0

PGA_r (g)
0.164

Z_{BOT} (km) (CB14) *Enter for default W calcs*
15

SS
1 *auto calculated*

$V_{s30Flag}$
0 *inferred*

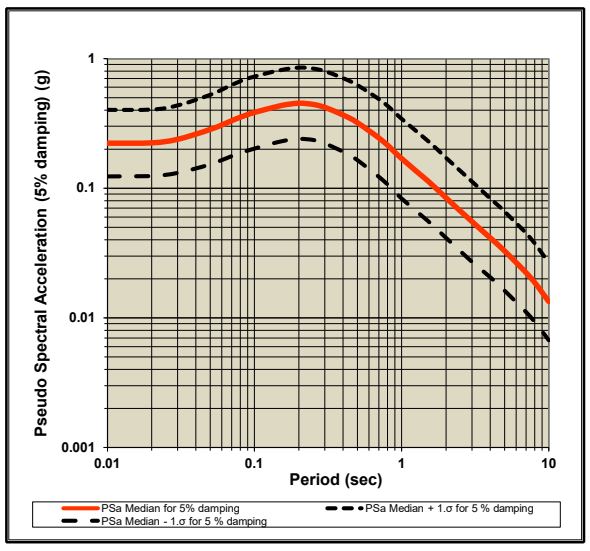
F_{AS}
0 *Aftershock effect is not applicable.*

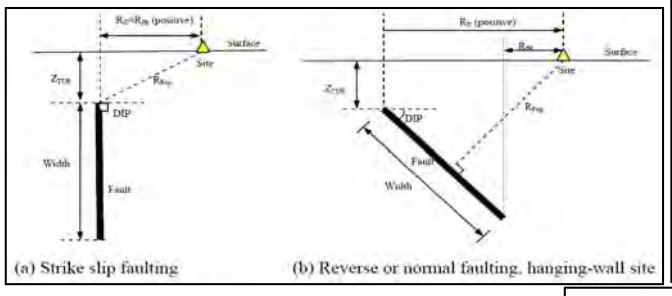
Region
0 *California*

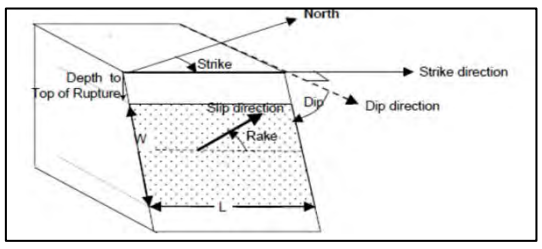
Option for Sa value
1 *Weighted average of the natural logarithm of the spectral values*

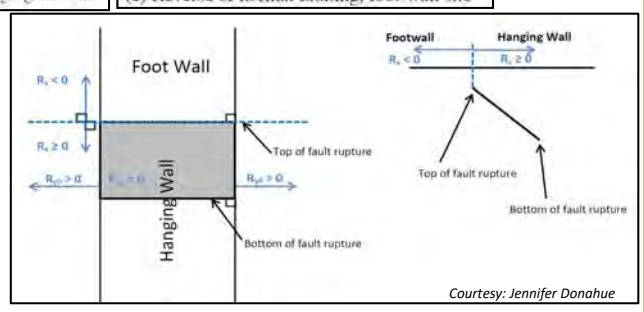
RotD50 Horizontal Component of PGA, PGV and *IMs*

GMP	*T* (s)	Baseline: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5% damping	PSa Median - 1.σ for 5% damping	S_d Median for 5% damping	User defined: 5% Damping: PSa Median for 5% damping	PSa Median + 1.σ for 5 % damping	PSa Median - 1.σ for 5 % damping	Sd Median for 5 % damping
PSa (g), S_d (cm)	**0.01**	0.22287	0.40160	0.12369	0.00055	0.22287	0.40160	0.12369	0.00055
	0.02	0.22442	0.40503	0.12435	0.00223	0.22442	0.40503	0.12435	0.00223
	0.03	0.23911	0.43524	0.13137	0.00534	0.23888	0.43480	0.13123	0.00534
	0.05	0.28374	0.52635	0.15295	0.01761	0.28402	0.52688	0.15310	0.01763
	0.075	0.34287	0.64704	0.18169	0.04788	0.34390	0.64898	0.18224	0.04802
	0.1	0.38256	0.72534	0.20177	0.09497	0.38409	0.72824	0.20258	0.09535
	0.15	0.43146	0.81309	0.22895	0.24098	0.43275	0.81553	0.22963	0.24170
	0.2	0.45139	0.85035	0.23961	0.44821	0.45275	0.85290	0.24033	0.44955
	0.25	0.44317	0.83560	0.23504	0.68758	0.44362	0.83644	0.23528	0.68826
	0.3	0.41957	0.79812	0.22057	0.93738	0.42083	0.80051	0.22123	0.94019
	0.4	0.36704	0.70562	0.19092	1.45779	0.36777	0.70703	0.19130	1.46071
	0.5	0.32069	0.62532	0.16447	1.99021	0.32069	0.62532	0.16447	1.99021
	0.75	0.22907	0.45923	0.11426	3.19855	0.22930	0.45969	0.11437	3.20175
	1	0.16925	0.34303	0.08350	4.20129	0.16925	0.34303	0.08350	4.20129
	1.5	0.11449	0.23325	0.05619	6.39446	0.11460	0.23348	0.05625	6.40085
	2	0.08438	0.17198	0.04140	8.37883	0.08430	0.17181	0.04136	8.37045
	3	0.05523	0.11247	0.02712	12.34014	0.05523	0.11247	0.02712	12.34014
	4	0.04150	0.08365	0.02059	16.48309	0.04142	0.08348	0.02055	16.45012
	5	0.03281	0.06623	0.01626	20.36196	0.03274	0.06609	0.01622	20.32124
	7.5	0.02062	0.04145	0.01026	28.79342	0.02048	0.04116	0.01019	28.59187
	10	0.01344	0.02671	0.00677	33.37250	0.01338	0.02658	0.00673	33.20564
PGA (g)	**0**	0.22190	0.39953	0.12325	0.00055	0.22190	0.39953	0.12325	0.00055
PGV (cm/s)	**-1**	23.23043	42.38680	12.73162	0.05767	NA	NA	NA	NA









Courtesy: Jennifer Donahue

Definition of Parameters

Damping ratio = Viscous damping ratio (%) See Sanaz et al. (2012) PEER Report
PSA = Pseudo-absolute acceleration response spectrum (g)
PGA = Peak ground acceleration (g)
PGV = Peak ground velocity (cm/s)
S_d = Relative displacement response spectrum (cm)
M_w = Moment magnitude
R_{RUP} = Closest distance to coseismic rupture (km), used in ASK13, CB13 and CY13. See Figures a, b and c for illustation
R_{JB} = Closest distance to surface projection of coseismic rupture (km). See Figures a, b and c for illustation
R_X = Horizontal distance from top of rupture measured perpendicular to fault strike (km). See Figures a, b and c for illustation
R_{y0} = The horizontal distance off the end of the rupture measured parallel to strike (km)
V_{S30} = The average shear-wave velocity (m/s) over a subsurface depth of 30 m
U = Unspecified-mechanism factor: 1 for unspecified; 0 otherwise
F_{RV} = Reverse-faulting factor: 0 for strike slip, normal, normal-oblique; 1 for reverse, reverse-oblique and thrust
F_{NM} = Normal-faulting factor: 0 for strike slip, reverse, reverse-oblique, thrust and normal-oblique; 1 for normal
F_{HW} = Hanging-wall factor: 1 for site on down-dip side of top of rupture; 0 otherwise
Dip = Average dip of rupture plane (degrees)
Z_{TOR} = Depth to top of coseismic rupture (km)
Z_{HYP} = Hypocentral depth from the earthquake
$Z_{1.0}$ = Depth to Vs=1 km/sec
$Z_{2.5}$ = Depth to Vs=2.5 km/sec
W = Fault rupture width (km)
$V_{s30flag}$ = 1 for measured, 0 for inferred Vs30
F_{AS} = 0 for mainshock; 1 for aftershock
Region = Specific regions considered in the models, Click on Region to see codes
ΔDPP = Directivity term, direct point parameter; uses 0 for median predictions
PGA_r (g) = Peak ground acceleration on rock (g), this specific cell is updated in the cell for BSSA14 and CB14, for others it is taken account for in the macros
Z_{BOT} (km) = The depth to the bottom of the seismogenic crust
Z_{BOR} (km) = The depth to the bottom of the rupture plane
SS = 1 for strike slip, automatically updated in the cell

Input variables with defaults (If entered 999 as input):

Red colored value: The value is used in the code when input is unknown

DEFAULTs	USER defined	ASK14	BSSA14	CB14	CY14	I14
W (km)	12.80			15.000		
$Z_{1.0}$ (km)	0.060	0.060			0.162	
$\delta Z_{1.0}$ (km)	-0.102		-0.102			
$Z_{2.5}$ (V_{S30}=1100)(km)	0.260			0.398		
$Z_{2.5}$ (V_{S30})(km)	0.260			0.861		
Z_{hyp} (km)	999.00			10.227		
Z_{tor} (km)	7.68			0.000	0.000	
Z_{BOR} (km)	-			15.000		

ACKNOWLEDGEMENTS

Nick Gregor, Bechtel
Silvia Mazzoni, Consultant

All NGA West-2 participants are acknowledged for their constructive comments and feedback.

Determination of Site Class and Estimation of Shear Wave Velocity

Project: 13673.001

Depth (ft)	di, Layer Thick (ft)	Field Blow Counts, Ni Corrected for Cs and sampler type Blows per foot (bpf)								Average Ni (bpf)	Ni Hammer Corr:	di / Ni
		LB-1	LB-4	LB-6	LB-9	LB-13	LB-15	LB-16	LB-17		**1.3**	
5	7.5	60	60	60	7	19	60	23	60	44	57	0.13
10	5	54	55	60	41	52	100	100	45	63	82	0.06
15	5	57	100	100	35	99	75	100	100	83	100	0.05
20	5	52	70	44	30	96	100	100	100	74	96	0.05
25	5	100	100	100	100	100	100	100	67	96	100	0.05
30	5	100	74	100	100	70	100	54	100	87	100	0.05
35	5		100						72	86	100	0.05
40	5		90						100	95	100	0.05
45	5		81						100	91	100	0.05
50	7.5		56						100	78	100	0.08
60	10		50	*Assumed based on blowcount at 50'						50	65	0.15
70	10		50							50	65	0.15
80	10		50							50	65	0.15
90	10		50							50	65	0.15
100	5		50							50	65	0.08
Summatior	100											1.31
											Navg = Sum(di) / Sum(di / Ni) =	**76**

Extract of ASCE 7-16 Table 20.3-1 Site Classification (2019 CBC 1613A.2.2):

Site Class	Soil Profile Name	Avg. N upper 100' from	to	Vs30 (ft/sec) from	to	Vs30 (m/s) from	to	Site Avg N	Interpolated vs30 (ft/s)
A	Hard Rock	-		5000	10000	1524	3048		
B	Rock	-		2500	5000	762	1524		
C	VD soil & soft rock	**50.001**	**100**	1200	2500	366	762	**76**	1881
D	Stiff Soil	15	50	600	1200	183	366		
E	Soft Soil	0	14.999	0	600	0	183		
F		-	-			0	0		

SITE CLASS, Table 20.3-1: **C**

Estimation of Average Shear Wave Velocity in upper 100 ft (Vs30):

	ft/s	m/s
Approx. Vs30 (interpolation of Table 20.3-1) =	1881	573
Approx. Vs30 sands (Imai and Tonouchi, 1982) =	1365	416
Approx. Vs30 sands (Sykora and Stokoe, 1983) =	1128	344
Approx. Vs30 (Maheswari, Boominathan, Dodagoudar, 2009) =	1112	339

APPENDIX E

GEOPHYSICAL DATA



MASW and Seismic Refraction Array

Seismic Refraction Array

MASW Array

Notes:
Coordinate System:NAD 1983 StatePlane California V FIPS 0405 Feet
Base map source: San Bernardino County, Earthstar Geographics, San Bernardino County, Maxar

GEOVision geophysical services

Date:	11/8/2022
GV Project:	22441
Developed by:	A Martin
Drawn by:	T Rodriguez
Approved by:	A Martin
File Name:	GV-22441

FIGURE 1
SITE MAP

FGFW PARCELS A AND B
VICTORVILLE AND
APPLE VALLEY, CALIFORNIA

PREPARED FOR
LEIGHTON CONSULTING, INC.

Table 2 Array 1-1 S-wave Velocity Model (FGFW Parcel B)

Depth to Top of Layer (ft)	Layer Thickness (ft)	S-Wave Velocity (ft/s)	Inferred P-Wave Velocity (ft/s)	Inferred Poisson's Ratio	Inferred Unit Weight (lb/ft^3)
0.0	5.0	570	1067	0.300	111.0
5.0	8.0	1081	2023	0.300	121.0
13.0	13.0	1461	2734	0.300	125.0
26.0	18.0	2002	3744	0.300	129.0
44.0	24.0	2041	3818	0.300	129.5
68.0	36.0	3708	6937	0.300	138.0
104.0	48.0	5601	10479	0.300	146.0
152.0	Half Space	6967	13033	0.300	151.0

Table 3 Array 2 S-wave Velocity Model (FGFW Parcel A)

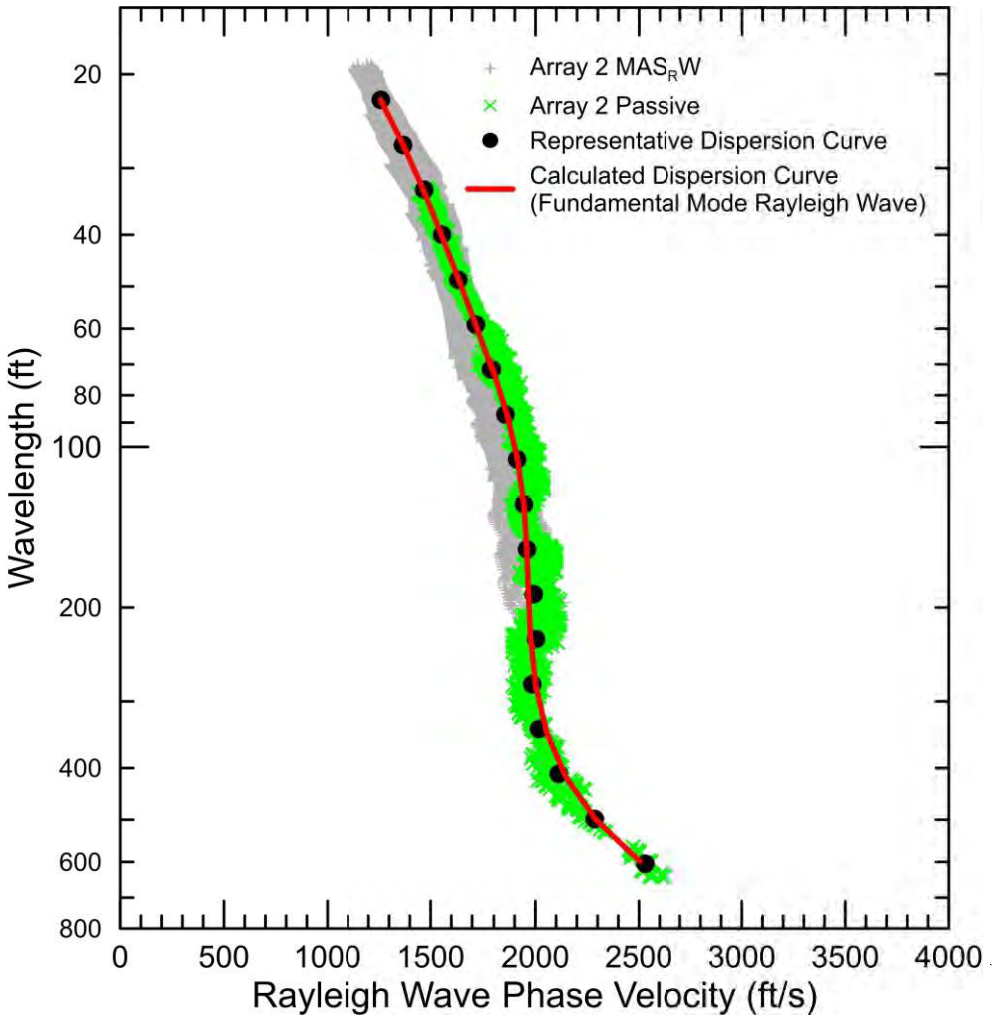
Depth to Top of Layer (ft)	Layer Thickness (ft)	S-Wave Velocity (ft/s)	Inferred P-Wave Velocity (ft/s)	Inferred Poisson's Ratio	Inferred Unit Weight (lb/ft^3)
0.0	6.0	912	1706	0.300	120.0
6.0	10.0	1767	3305	0.300	127.0
16.0	16.0	2096	3922	0.300	129.0
32.0	24.0	2383	4459	0.300	131.0
56.0	36.0	2317	4335	0.300	131.0
92.0	48.0	2089	3911	0.300	129.0
140.0	68.0	2178	4075	0.300	130.0
208.0	86.0	2727	5099	0.300	134.0
294.0	Half Space	7997	14958	0.300	153.0

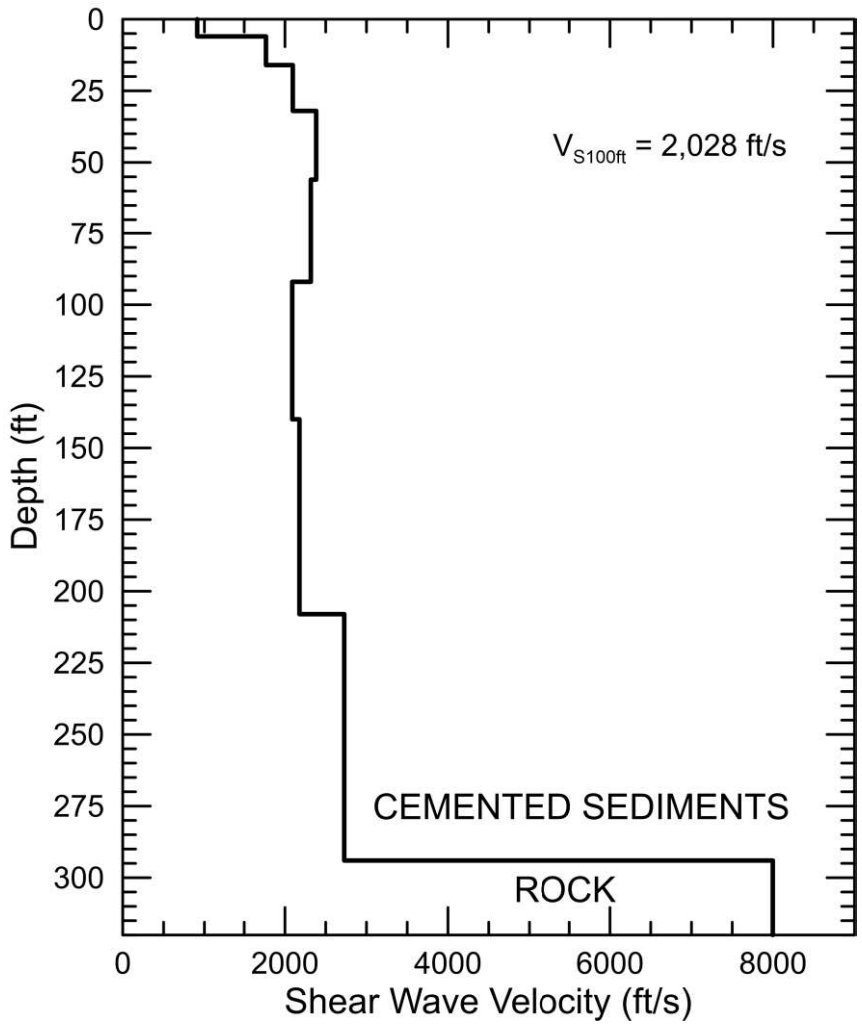
Table 4 Array 3 S-wave Velocity Model (FGFW Parcel A)

Depth to Top of Layer (ft)	Layer Thickness (ft)	S-Wave Velocity (ft/s)	Inferred P-Wave Velocity (ft/s)	Inferred Poisson's Ratio	Inferred Unit Weight (lb/ft^3)
0.0	4.0	671	1255	0.300	114.0
4.0	6.0	1465	2741	0.300	125.0
10.0	8.0	2369	4430	0.300	131.0
18.0	12.0	2962	5540	0.300	135.0
30.0	16.0	2582	4831	0.300	132.0
46.0	24.0	2397	4486	0.300	131.0
70.0	30.0	2656	4969	0.300	133.0
100.0	Half Space	3037	5679	0.300	135.0

Table 5 Array 4 S-wave Velocity Model (VVLIG Cordova Road Warehouse)

Depth to Top of Layer (ft)	Layer Thickness (ft)	S-Wave Velocity (ft/s)	Inferred P-Wave Velocity (ft/s)	Inferred Poisson's Ratio	Inferred Unit Weight (lb/ft^3)
0.0	6.0	582	1088	0.300	112.0
6.0	10.0	1054	1972	0.300	120.0
16.0	16.0	1701	3182	0.300	127.0
32.0	20.0	3904	7303	0.300	139.0
52.0	30.0	5399	10100	0.300	144.0
82.0	Half Space	6209	11616	0.300	147.0





GEOVision geophysical services

Project No: 22441	FIGURE 5 SURFACE WAVE MODEL - ARRAY 2
Date: NOV 4, 2022	FGFW PARCEL A APPLE VALLEY, CALIFORNIA
Drawn By: A MARTIN	
Approved By: Antony J Martin	PREPARED FOR LEIGHTON CONSULTING, INC.

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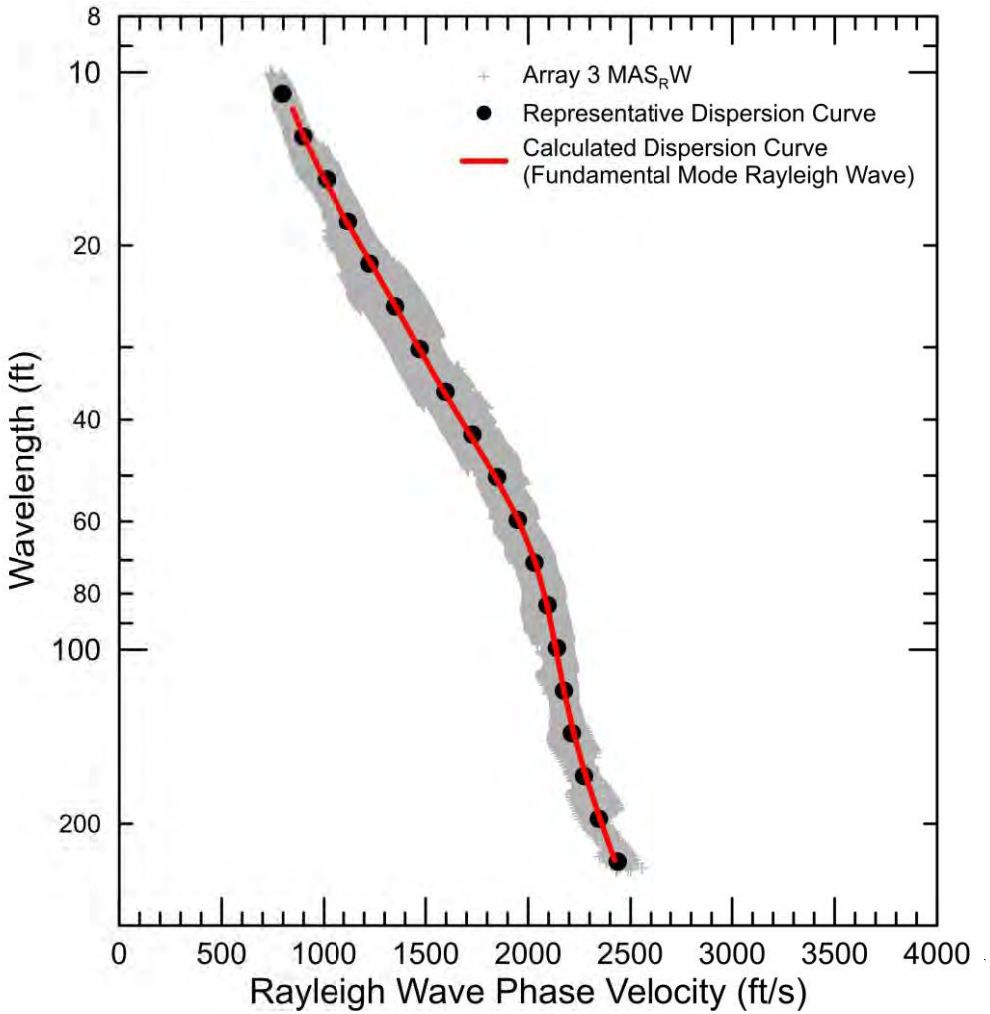

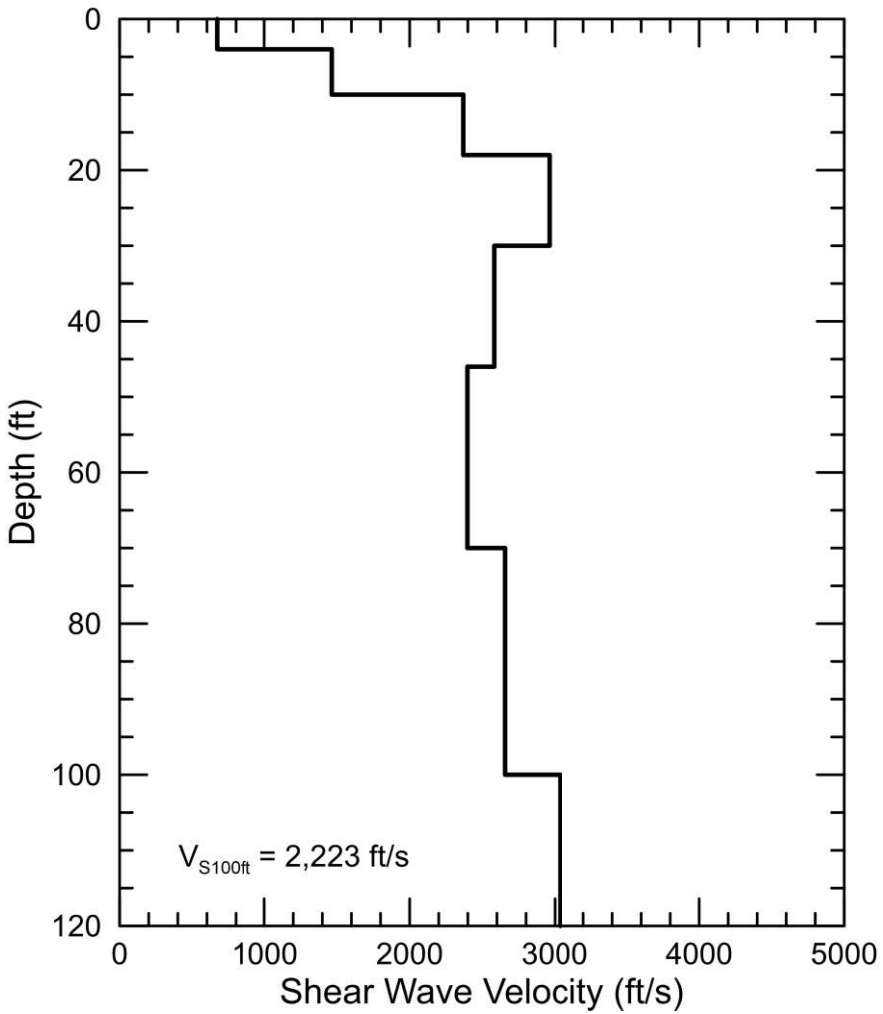

GEOVision geophysical services

Project No: 22441	FIGURE 6 SURFACE WAVE MODEL - ARRAY 3
Date: NOV 4, 2022	FGFW PARCEL A APPLE VALLEY, CALIFORNIA
Drawn By: A MARTIN	
Approved By: Antony J Martin	PREPARED FOR LEIGHTON CONSULTING, INC.

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APPENDIX F

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

Leighton

APPENDIX F

LEIGHTON CONSULTING, INC.

EARTHWORK AND GRADING GUIDE SPECIFICATIONS

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D-1.0 GENERAL

D-1.1 Intent

These Earthwork and Grading Guide Specifications are for grading and earthwork shown on the current, approved grading plan(s) and/or indicated in the Leighton Consulting, Inc. geotechnical report(s). These Guide Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the project-specific recommendations in the geotechnical report shall supersede these Guide Specifications. Leighton Consulting, Inc. shall provide geotechnical observation and testing during earthwork and grading. Based on these observations and tests, Leighton Consulting, Inc. may provide new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

D-1.2 Role of Leighton Consulting, Inc.

Prior to commencement of earthwork and grading, Leighton Consulting, Inc. shall meet with the earthwork contractor to review the earthwork contractor's work plan, to schedule sufficient personnel to perform the appropriate level of observation, mapping and compaction testing. During earthwork and grading, Leighton Consulting, Inc. shall observe, map, and document subsurface exposures to verify geotechnical design assumptions. If observed conditions are found to be significantly different than the interpreted assumptions during the design phase, Leighton Consulting, Inc. shall inform the owner, recommend appropriate changes in design to accommodate these observed conditions, and notify the review agency where required. Subsurface areas to be geotechnically observed, mapped, elevations recorded, and/or tested include (1) natural ground after clearing to receiving fill but before fill is placed, (2) bottoms of all "remedial removal" areas, (3) all key bottoms, and (4) benches made on sloping ground to receive fill.

Leighton Consulting, Inc. shall observe moisture-conditioning and processing of the subgrade and fill materials, and perform relative compaction testing of fill to determine the attained relative compaction. Leighton Consulting, Inc. shall provide *Daily Field Reports* to the owner and the Contractor on a routine and frequent basis.

D-1.3 The Earthwork Contractor

The earthwork contractor (Contractor) shall be qualified, experienced and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Guide

Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing grading and backfilling in accordance with the current, approved plans and specifications.

The Contractor shall inform the owner and Leighton Consulting, Inc. of changes in work schedules at least one working day in advance of such changes so that appropriate observations and tests can be planned and accomplished. The Contractor shall not assume that Leighton Consulting, Inc. is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish earthwork and grading in accordance with the applicable grading codes and agency ordinances, these Guide Specifications, and recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of Leighton Consulting, Inc., unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, adverse weather, etc., are resulting in a quality of work less than required in these specifications, Leighton Consulting, Inc. shall reject the work and may recommend to the owner that earthwork and grading be stopped until unsatisfactory condition(s) are rectified.

D-2.0 PREPARATION OF AREAS TO BE FILLED

D-2.1 Clearing and Grubbing

Vegetation, such as brush, grass, roots and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies and Leighton Consulting, Inc.. Care should be taken not to encroach upon or otherwise damage native and/or historic trees designated by the Owner or appropriate agencies to remain. Pavements, flatwork or other construction should not extend under the “drip line” of designated trees to remain.

Leighton Consulting, Inc. shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 3 percent of organic materials (by dry weight: ASTM D2974). Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area. As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that

are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed.

D-2.2 Processing

Existing ground that has been declared satisfactory for support of fill, by Leighton Consulting, Inc., shall be scarified to a minimum depth of 6 inches (15 cm). Existing ground that is not satisfactory shall be over-excavated as specified in the following Section D-2.3. Scarification shall continue until soils are broken down and free of large clay lumps or clods and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

D-2.3 Overexcavation

In addition to removals and over-excavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be over-excavated to competent ground as evaluated by Leighton Consulting, Inc. during grading. All undocumented fill soils under proposed structure footprints should be excavated

D-2.4 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), (>20 percent grade) the ground shall be stepped or benched. The lowest bench or key shall be a minimum of 15 feet (4.5 m) wide and at least 2 feet (0.6 m) deep, into competent material as evaluated by Leighton Consulting, Inc.. Other benches shall be excavated a minimum height of 4 feet (1.2 m) into competent material or as otherwise recommended by Leighton Consulting, Inc.. Fill placed on ground sloping flatter than 5:1 (horizontal to vertical units), (<20 percent grade) shall also be benched or otherwise over-excavated to provide a flat subgrade for the fill.

D-2.5 Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by Leighton Consulting, Inc. as suitable to receive fill. The Contractor shall obtain a written acceptance (*Daily Field Report*) from Leighton Consulting, Inc. prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys and benches.

D-3.0 FILL MATERIAL

D-3.1 Fill Quality

Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by Leighton Consulting, Inc. prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to Leighton Consulting, Inc. or mixed with other soils to achieve satisfactory fill material.

D-3.2 Oversize

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 6 inches (15 cm), shall not be buried or placed in fill unless location, materials and placement methods are specifically accepted by Leighton Consulting, Inc.. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 feet (3 m) measured vertically from finish grade, or within 2 feet (0.61 m) of future utilities or underground construction.

D-3.3 Import

If importing of fill material is required for grading, proposed import material shall meet the requirements of Section D-3.1, and be free of hazardous materials ("contaminants") and rock larger than 3-inches (8 cm) in largest dimension. All import soils shall have an Expansion Index (EI) of 20 or less and a sulfate content no greater than ($\leq$) 500 parts-per-million (ppm). A representative sample of a potential import source shall be given to Leighton Consulting, Inc. at least four full working days before importing begins, so that suitability of this import material can be determined and appropriate tests performed.

D-4.0 FILL PLACEMENT AND COMPACTION

D-4.1 Fill Layers

Approved fill material shall be placed in areas prepared to receive fill, as described in Section D-2.0, above, in near-horizontal layers not exceeding 8 inches (20 cm) in loose thickness. Leighton Consulting, Inc. may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers, and only if the building officials with the appropriate jurisdiction approve. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

D-4.2 Fill Moisture Conditioning

Fill soils shall be watered, dried back, blended and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM) Test Method D 1557.

D-4.3 Compaction of Fill

After each layer has been moisture-conditioned, mixed, and evenly spread, each layer shall be uniformly compacted to not-less-than (≥) 90 percent of the maximum dry density as determined by ASTM Test Method D 1557. In some cases, structural fill may be specified (see project-specific geotechnical report) to be uniformly compacted to at-least (≥) 95 percent of the ASTM D1557 modified Proctor laboratory maximum dry density. For fills thicker than (>) 15 feet (4.5 m), the portion of fill deeper than 15 feet below proposed finish grade shall be compacted to 95 percent of the ASTM D1557 laboratory maximum density. Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

D-4.4 Compaction of Fill Slopes

In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by back rolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet (1 to 1.2 m) in fill elevation, or by other methods producing satisfactory results acceptable to Leighton Consulting, Inc.. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of the ASTM D1557 laboratory maximum density.

D-4.5 Compaction Testing

Field-tests for moisture content and relative compaction of fill soils shall be performed by Leighton Consulting, Inc.. Location and frequency of tests shall be at the Leighton Consulting, Inc. field representative(s) discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at fill/bedrock benches).

D-4.6 Compaction Test Locations

Leighton Consulting, Inc. shall document approximate elevation and horizontal coordinates of each density test location, relying on site survey control provided by others. The Contractor shall coordinate with the project surveyor to assure that

sufficient grade stakes are established so that Leighton Consulting, Inc. can determine test locations with sufficient accuracy. Adequate grade stakes shall be provided.

D-5.0 EXCAVATION

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by Leighton Consulting, Inc. during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by Leighton Consulting, Inc. based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, then observed and reviewed by Leighton Consulting, Inc. prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by Leighton Consulting, Inc..

D-6.0 TRENCH BACKFILLS

D-6.1 Safety

The Contractor shall follow all OSHA and Cal/OSHA requirements for safety of trench excavations. Work should be performed in accordance with Article 6 of the *California Construction Safety Orders*, 2015 Edition or more current (see also: http://www.dir.ca.gov/title8/sb4a6.html).

D-6.2 Bedding and Backfill

All utility trench bedding and backfill shall be performed in accordance with applicable provisions of the 2018 Edition of the *Standard Specifications for Public Works Construction* (Green Book). Bedding material shall have a Sand Equivalent greater than 30 (SE>30). Bedding shall be placed to 1-foot (0.3 m) over the top of the conduit, and densified by jetting in areas of granular soils, if allowed by the permitting agency. Otherwise, the pipe-bedding zone should be backfilled with Controlled Low Strength Material (CLSM) consisting of at least (≥) one-sack of Portland cement per cubic-yard of sand, conforming to Section 201-6 of the 2018 Edition of the *Standard Specifications for Public Works Construction* (Green Book). Backfill over the bedding zone shall be placed and densified mechanically to a minimum of 90 percent of relative compaction (ASTM D1557) from 1 foot (0.3 m) above the top of the conduit to the surface. Backfill above the pipe zone shall **not** be jetted. Jetting of the bedding around the conduits shall be observed by Leighton Consulting, Inc. and backfill above the pipe zone (bedding) shall be observed and tested by Leighton Consulting, Inc..

D-6.3 Lift Thickness

Lift thickness of trench backfill shall not exceed those allowed in the *Standard Specifications for Public Works Construction* unless the Contractor can demonstrate to Leighton Consulting, Inc. and the Owner that their proposed fill lift can be compacted to the specified relative compaction using the proposed alternative equipment and method; and only if the building official, with the appropriate jurisdiction, approves this proposed lift thickness.

Appendix G

Phase I Environmental Site Assessment

Phase I
Environmental Site Assessment
(ESA)

Report o
Phase I Environmental Site Assessment ESA
Highway 15 Falchion Road
Town o Apple Valley
County o San Bernardino, Cali ornia
APN: 0472-031-089
177.89 Acres

Prepared or

FGDW IV LLC
C/o Her Krumsick
400 N. Woodlawn, Suite 210
Wichita, KS 67208

Prepared y

Je rey Tartaglino
Environmental Pro essional
9037 Kara Circle, Riverside, CA 92508
951 283-1804

January 4, 2023

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I.0 EXECUTIVE SUMMARY

FGFW IV, LLC (the "Client"), has engaged Jeffrey Tartaglino ("the "Environmental Professional") to conduct a Phase 1 Environmental Site Assessment ("ESA") of the property located at Highway 15 & Falchion Rd., Apple Valley CA, subsequently referred to in this report as "the subject property". This assessment was prepared in general accordance with the American Society of Testing and Materials ("ASTM") Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process ("ASTM Designation: E1527-21").

Location of Site: HIGHWAY 15 & FALCHION RD.
City: TOWN OF APPLE VALLEY
County/State: SAN BERNARDINO / STATE OF CALIFORNIA
Assessor Parcel Number(s): APN: 0472-031-08

The site is located on approximately 177.89 acres of land. The current status of the property is Vacant Land. The current zoning is: Commercial

The results of this assessment have revealed no de minimis conditions associated with the property.

Except for the limitations and exceptions discussed in Section 2.4, this Phase 1 ESA complies with the ASTM Standard E1527-21.

No additional services beyond the scope of the ASTM Standard E1527-21 were conducted as part of this assessment.

FINDINGS AND OPINIONS

The Environmental Professional has performed this Phase 1 Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of the property located at Highway 15 & Falchion Rd., Apple Valley, California. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. The assessment has identified no evidence of recognized environmental conditions (RECS) in connection with the Subject Property.

It is our professional opinion that **"No Further Investigation is Required".**

2.0 INTRODUCTION

FGFW IV, LLC (the "Client"), has engaged Jeffrey Tartaglino (Environmental Professional) to conduct a Phase 1 Environmental Site Assessment (ESA) of the property located at Highway 15 & Falchion Rd., Apple Valley, CA., subsequently referred to in this report as "the subject property". This assessment was prepared in general accordance with the American Society of Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (ASTM Designation: E1527-21).

2.1 Purpose

The assessment was designed to provide an objective, independent, professional opinion of the potential environmental risks, if any, associated with the subject property. The purpose of this environmental assessment was to identify recognized environmental conditions at the subject property. "Recognized Environmental Conditions" means the presence or likely presence of substances that is neither certain nor proven, but can be reasonably believed based on the logic, experience, and/or evidence found by the environmental professional of any hazardous substances or petroleum products in, on, or at the property: (1) due to any release to the environment, (2) under conditions indicative of a release to the environment or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and the generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

The identification of recognized environmental conditions in connection with the subject property may impose an environmental liability on owners or operators of the site, reduce the value of the site, or restrict the use or marketability of the site, and therefore, further investigation may be warranted to evaluate the scope and extent of potential environmental liabilities.

2.2 Scope of Services

This assessment was performed in accordance with the scope of services outlined in the American Society of Testing and Materials (ASTM) E1527-21, Standard Practice for Environmental Site Assessments. There are no exceptions or deletions from the ASTM Practice E1527-21. The services performed by the Environmental Professional for this Phase 1 Environmental Site Assessment was conducted in a manner consistent with the level of care and skill ordinarily exercised by firms similar doing Phase 1 Environmental Site Assessments. The scope of this assessment includes the following:

Records Review - Review of records (environmental database, local and state records, historical records, etc.)

Site Reconnaissance – A physical inspection of the subject property.

Interviews – Interviews conducted with present and past owners (if feasible), operators and occupants of the subject property and with local and/or state government officials.

Report Preparation – The evaluation of information and the preparation of the report including the findings and conclusions, if any, for additional investigations.
Soils Samples – Were not part of the scope of work for this Phase 1.

Typically, a Phase 1 ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials. These activities would be carried out in a Phase II ESA, if required.

2.3 Significant Assumptions

There is a possibility though even with the proper application of these methodologies that there may be conditions that exist on the subject property that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. The Environmental Professional believes that the information obtained from the record review and interviews concerning the subject property are reliable. However, the Environmental Professional cannot and does not warrant or guarantee that the information provided by these sources is accurate or complete. The methodologies of this assessment are not intended to produce all-inclusive or comprehensive results, but rather to provide the Client with information relating to the subject property.

2.4 Limitations and Exceptions

This report has been prepared for the exclusive use of the Client, and should not be reproduced or disseminated without the written approval of the Environmental Professional and the Client. The Environmental Professional has retained a copy of this report. No additions or deletions are permitted without the express written consent of the Environmental Professional. Use of this report in whole or in part by parties without permission from the Environmental Professional and the Client is prohibited.

Information obtained from public records review, the site inspection, and interviews were used to characterize the subject property. Although the services provided are extensive, findings and conclusions are limited to and by the information obtained. If information becomes available concerning the subject property that was not included in this report, it should be made available to the Environmental Professional so that the conclusions can be re-examined and modified, if applicable. Further non-intrusive and intrusive investigations and assessment methods are available that could further characterize the subject property's soils and groundwater conditions.

The Environmental Professional interviews are limited by the quality and completeness of answers provided by the proposed questions during the interview(s). The extent of historical research performed by Environmental Professional is limited to availability, cost, and timeliness of utilizing various resources such as aerial photographs, historical Sanborne Maps, Land Evidence Records (deeds pertaining to historical site ownership), and local directories, all of which may indicate the historical utilization of the subject property. It should be noted that while the chain-of-ownership research and information provided should be accurate, it should in no way be construed as an actual Title search and should not be utilized or relied upon for any legal purposes.

Events occurring on the subject property after the date of the inspection are beyond the scope of this report. The Environmental Professional makes no expressed or implied representations or warranties regarding any changes in condition of the premises after this date.

In addition, except in the event of gross negligence or willful misconduct by the Environmental Professional which directly and materially contributes to a defect or deficiency in a plan, permit, entitlement, drawing, specification or other instrument or item of work product of the Environmental Professional or work product of any sub-consultant engaged by the Environmental Professional with consent and approval of Client. The Client shall look solely to the party undertaking the defective

work and not to the Environmental Professional. This report is not intended to have any direct bearing on the value of the property.

The Environmental Professional shall not be liable for any special, consequential or exemplary damages resulting in whole or in part from customer use of the data. Liability on the part of the Environmental Professional is limited to the monetary value paid for this report. This report does not constitute a legal opinion.

2.5 Special Terms and Conditions

Authorization to perform this assessment was given by FGFW IV, LLC. Instructions as to the location of the subject property, access, and an explanation of the subject property and facilities to be assessed were provided by FGFW IV, LLC.

The following is a list of terminology that is used throughout this report and therefore should be defined:

Actual Knowledge: The knowledge actually possessed by an individual who is a real person, rather than an entity.

Adjoining Properties: Any real property or properties the border of which is contiguous or partially contiguous with that of the subject property, or that would be contiguous or partially contiguous with that of the subject property but for a street, road, or other public thoroughfare separating them.

All Appropriate Inquiry: That inquiry constituting all appropriate inquiry into previous ownership and uses of the subject property consistent with good commercial or customary practice, as defined in CERCLA, 42 U.S.C. 9607 (b)(3), 9607 (b)(4) and 9607 (r), assuming compliance with other elements of the defense.

Activity and Use Limitation (AUL): Legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment.

Business Environmental Risk: A risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in the E 1527-21 practice. Considerations of business environmental risk may involve addressing on or more non-scope considerations.

Controlled Recognized Environmental Condition: A REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls.

Data Failure: A failure to achieve the historical research objectives of ASTM E1527-21 even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

Data Gap: A Data Gap that a□ects the a□ility o□ the environmental pro□essional to identi□y a recogni□ed environmental condition. An example o□a signi□icant data gap could include a □uilding that is located on a su□□ect property which is inaccessi□le during the site reconnaissance, and □ased upon the EP□s experience, such a □uilding is one that involves activities that can lead to REC□s.

Environmental Pro□essional: A person meeting the education, training and experience re□uirements, as set □orth in the ASTM E 1527-21 practice □example, someone who has □een a Registered Environmental Assessor with the State o□Cali□ornia□

Ha□ardous Su□stance: A su□stance de□ined as a ha□ard su□stance pursuant to CERCLA 42 USC 9601□14□, as interpreted □y USEPA regulations and the courts.

Historical Recogni□ed Environmental Condition: A past release o□ any ha□ardous su□stances or petroleum products that has occurred in connection with the property and has □een addressed to the satis□action o□ the applica□le regulatory authority or meeting unrestricted residential use criteria esta□lished □y a regulatory authority, without su□□ecting the property to any re□uired controls □e.g., property use restrictions, AUL□s, institutional controls, or engineering controls□ Be□ore calling the past release and HREC, the EP must determine whether the past release is a REC at the time the Phase I ESA is conducted □e.g., i□there has □een a change in the regulatory criteria□ I□the EP considers this past release to □e a REC at the time the Phase I is conducted, the condition shall □e included in the conclusions section o□the report as a REC.

Migrate / Migration: Re□ers to movement o□ha□ardous su□stances or petroleum products in any □orm, including, □or example, solid and li□uid at the sur□ace or su□sur□ace, and vapor in the su□sur□ace.

O□vious: That which is plain or evident□a condition or □act that could not □e ignored or overlooked □y a reasona□le o□server while visually or physically o□serving the su□□ect property.

Occupants: Those tenants, su□tenants, or other persons or entities using the su□□ect property or a portion o□the su□□ect property.

Owner: Generally the □ee owner o□record o□the su□□ect property.

Practically Reviewa□le: In□ormation that is practically reviewa□le means that the in□ormation is provided □y the source in a manner and in a □orm that, upon examination, yields in□ormation relevant to the su□□ect property without the need □or extraordinary analysis o□irrelevant date.

Reasona□le Ascertaina□le: In□ormation that is □1□pu□licly availa□le, □2□o□taina□le □rom its source within reasona□le time and cost constraints, and □3□practically reviewa□le.

Recogni□ed Environmental Conditions: The presence or likely presence o□any ha□ardous su□stances or petroleum products in, on, or at the property: □1□due to any release to the environment□□2□under conditions indicative o□a release to the environment□or □3□under conditions that pose a material threat o□a □uture release to the environment.

Shelve Li□e o□ESA Report: ASTM E1527-21, a Phase 1 ESA Report will remain via□le i□it was completed no more than 180 days prior to the date o□ac□uisition □or, □or transactions not involving an ac□uisition such as a lease or re□inance, the date o□the intended transaction□, or up to one year, i□ □ive speci□ic components o□the Report have □een updated. The □ive components include: □1□ Interviews, □2□ Searched □or recorded environmental cleanup items, □3□ Review o□ government records, □4□ Site reconnaissance o□ the su□□ect property and ad□oining properties, □5□ The

Environmental Professional Declaration. The ASTM E1527-21 standard requires that the date on which each of the components were completed be identified in the Phase 1 Report, and that the 180 day or 1 year time period begins with the date upon which the earliest of these components was completed.

Subject Property: The real property that is subject to this Phase 1 Environmental Site Assessment.

User: The party seeking to use Practice E1527-21 to perform an environmental assessment of the subject property.

2.6 User Reliance

This report is for the use and benefit of, and may be relied upon by FGFW IV, LLC and any of its affiliates, and third parties authorized by FGFW IV, LLC and the Environmental Professional, including lenders in connection with a secured financing of the property, and their respective successors and assigns.

3.0 SITE DESCRIPTION

3.1 Site Description

Location: Highway 15 & Falchion Rd., Apple Valley CA

Legal Description: Real property in the Town of Apple Valley, County of San Bernardino, State of California, described as follows:
ALL THAT PORTION OF THE SOUTH 1/2 OF SECTION 26, TOWNSHIP 6 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE TOWN OF APPLE VALLEY, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF LYING SOUTHEASTERLY OF THE SOUTHEAST BOUNDARY OF THE STATE HIGHWAY AS CONVEYED BY DEED RECORDED JUNE 4, 1957, IN BOOK 4246, PAGE 339, OFFICIAL RECORDS. EXCEPTING THEREFROM THE EAST 1/2 OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 26. ALSO EXCEPTING THEREFROM THE SOUTH 1/2 OF THE SOUTH 1/2 OF THE WEST 1/2 OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 26. ALSO EXCEPTING THEREFROM TO THE STATE OF CALIFORNIA ALL OIL, GAS, OIL SHALE, PHOSPHATE, SODIUM, GOLD, SILVER AND ALL OTHER MINERAL DEPOSITS CONTAINED IN SAID LANDS, EXCEPTING ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIAL, WHETHER OR NOT OF COMMERCIAL VALUE, AND FURTHER RESERVING TO THE STATE OF CALIFORNIA, AND PERSONS AUTHORIZED BY THE STATE, THE RIGHT TO DRILL FOR AND EXTRACT SUCH DEPOSITS OF OIL AND GAS OR GAS AND TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS OF OTHER MINERALS FROM SAID LANDS EXCEPTING ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIALS, WHETHER OR NOT OF COMMERCIAL VALUE, AND TO OCCUPY AND USE SO MUCH OF THE SURFACE OF SAID LANDS AS MAY BE REQUIRED THEREFOR, UPON COMPLIANCE WITH THE CONDITIONS AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF CHAPTER 5, PART I, DIVISION 6 OF THE PUBLIC RESOURCES CODE, AS RESERVED IN THE PATENT RECORDED NOVEMBER 7, 1952, IN BOOK 3051, PAGE 11, OFFICIAL RECORDS. EXCEPTING THEREFROM THOSE PORTIONS CONVEYED TO THE STATE OF CALIFORNIA BY DEEDS RECORDED NOVEMBER 21, 2001 AS INSTRUMENT NO. 2001-531644 THROUGH 2001-531646 OFFICIAL RECORDS OF SAID COUNTY.

Current Use:	Vacant Land
Parcel Numbers:	0472-031-08
Total Land Area:	177.89 acres

Current Zoning: Commercial

Elevation: 2,944 ft. above sea level

Owner Information: FGFW IV, LLC

Current Uses of Adjoining Properties
Observations regarding properties located on the south, west, north and east sides of the Site are presented below:

Direction	Description
North	Vacant Land
South	Vacant Land
East	Vacant Land and Quarry
West	Highway 15

3.2 Structures, Roads, Other Improvements on the Site

There are structures and mobile trailers on the site.

There are public roads to the property.

Water purveyor is the Golden State Water Company.
Water improvements are not at the property.

Sewer purveyor is the Town of Apple Valley Wastewater Division.
Sewer improvements are not at the property.

Electrical Services are provided by the SCE.
Electrical Services improvements are not at the property.

Gas Services are provided by Southwest Gas.
Gas Services improvements are not at the property.

4.0 USER PROVIDED INFORMATION

4.1 Title Records

The following information is based on historical data reviewed and limited information from San Bernardino County Assessor pertaining to Parcel Number 0472-031-08.

Title to said estate or interest at the date hereof is vested in: FGFW IV, LLC.

4.2 Environmental Liens or Activity and Use Limitations (AUL's)

As of this report dated December 23, 2022 there were no known environmental liens, other activity and use limitations (AULs).

4.3 Special Knowledge

No specialized knowledge in connection with the subject property or facility operations was identified by the User / Client.

4.4 Commonly Known or Reasonably Ascertainable Information

No information was provided regarding any commonly known or reasonably ascertainable information within the local community that is material to RECs in connection with the property. Environmental Professional researched online sources for any obvious or commonly known and reasonably ascertainable information regarding the subject property. No information was identified that there is material to RECs in connection with the property.

4.5 Valuation Reduction for Environmental Issues

The Federal AAI rule (81 CFR 312.29) and ASTM E1527-21 require that persons seeking defense to or protection from liability under CERCLA must take into account the relationship of the purchase price to the fair Market value of the property if it were not contaminated to assess whether or not the differential is due to the presence of releases or threatened releases of hazardous substances. This portion of the inquiry is the reasonability of the User, and the User has the option of sharing or not sharing this information with the Environmental Professional performing the Phase 1 ESA.

The Environmental Professional was not provided with an appraisal for the subject property. No environmental issues were identified by the User / Client that could result in property value reduction.

4.6 Owner, Property Manager and Occupant Information

The subject property is owned by FGFW IV, LLC.

4.7 Reason for Performing Phase 1 ESA

The reason for conducting this Phase 1 ESA is part of a commercial real estate due diligence process.

5.0 RECORDS REVIEW

5.1 Standard Environmental Records

Relevant, readily available and practically reviewable documents, records, and other information were obtained and reviewed as part of this Phase 1 ESA.

<u>Federal Source Records and Information</u>

- Environmental Data Resources Inc. (EDR), Federal environmental record database search report.
- U.S. Geological Survey (USGS), Topographic Map of Property.

<u>State of California Source Records and Information</u>

- Environmental Data Resources Inc. (EDR), state environmental record database search report.

<u>Local Municipal Records and Information</u>

- Historical aerial photographs o□the su□□ect property and vicinity o□tained □y EDR, Inc.
- Historical city directories o□the su□□ect property and vicinity o□tained □y EDR, Inc.
- Historical San□orn Fire Insurance maps o□the su□□ect property and vicinity researched □y EDR, Inc.
- Topographic Maps o□tained □y EDR, Inc.
- Town o□Apple Valley Planning and Building and Sa□ety.
- County o□San Bernardino Assessor
- County o□San Bernardino Planning

5.2 Federal and State Database Records Search

Environmental Pro□essional engaged EDR, Inc. to scan □oth □ederal and state environmental record data□ases and provide a summary o□□acilities that are identi□ied on any o□the lists searched. The □ederal data□ases searched, and speci□ied search radii, are as □ollows.

Federal Database	Search Distance	Target Property	< 1/8	1/8 – 1/4	1/4 - 1/2	1/2 - 1	Total Plotted
Federal Priorities List □NPL□Facilities	1.0 mile	0	0	0	0	0	0
Proposed NPL	1.0 mile	0	0	0	0	0	0
NPL Liens	1.0 mile	0	0	0	0	0	0
De-listed NPL Facilities	1.0 mile	0	0	0	0	0	0
Federal CERCLIS Facilities	.50 mile	0	0	0	0	0	0
SEMS	.50 mile	0	0	0	0	NR	0
SEMS Archive	.50 mile	0	0	0	0	NR	0
RCRA CORRACTS TSDF	1.0 mile	0	0	0	0	0	0
RCRA Non-CORRACTS TSDF	.50 mile	0	0	0	0	0	0
RCRA-L□G	.25 mile	0	0	0	0	0	0
RCRA-S□G	.25 mile	0	0	0	NR	NR	0
RCRA-VS□G	.25 mile	0	0	0	NR	NR	0
LUCIS	.50 mile	0	0	0	0	NR	0
US Eng. Controls	.50 mile	0	0	0	0	NR	0
US Inst Controls	.50 mile	0	0	0	0	NR	0
Federal EARNS	TP	NR	NR	NR	NR	NR	0
Ha□ardous Wastes Sites	.25 mile	0	0	0	0	0	0
E□uivalent NPL Facilities	.25 mile	0	0	0	0	0	0
E□uivalent CERCLIS Facilities	.50 mile	0	0	0	0	0	0
State and Tri□al Response	1 mile	0	0	0	0	0	0
State and Tri□al Envirostor	1 mile	0	0	0	0	0	0
State and Tri□al Leaking Tanks	.50 mile	0	0	0	0	NR	0

State Database	Search Distance	Target Property	< 1/8	1/8 – 1/4	1/4 - 1/2	1/2 - 1	Total Plotted
SWF/LF	.50 mile	0	0	0	0	NR	0
Indian LUST	.50 mile	0	0	0	0	NR	0
CPS-SLIC	.50 mile	0	0	0	0	NR	0
FEMA Lust	.25 mile	0	0	0	NR	NR	0
UST	.25 mile	0	0	0	NR	NR	0
AST	.25 mile	0	0	0	NR	NR	0
Indian VCP	.50 mile	0	0	0	0	NR	0
VCP	.50 mile	0	0	0	0	NR	0
Brown□ield Sites	.50 mile	0	0	0	0	NR	0
US Brown□ield Sites	.50 mile	0	0	0	0	NR	0
WMUD/SWAT	.50 mile	0	0	0	0	NR	0
SWRCY	.50 mile	0	0	0	0	NR	0
Haulers	TP	0	NR	NR	NR	NR	0
Indian ODI	.50 mile	0	0	0	0	NR	0
De□ris Region 9	.50 mile	0	0	0	0	NR	0
ODI	.50 mile	0	0	0	0	NR	0
HIS Open Dumps	.50 mile	0	0	0	0	NR	0
US Hist CDL	TP	0	NR	NR	NR	NR	0
Hist UST Cal Sites	1 mile	0	0	0	0	0	0
SCH	.25 mile	0	0	0	NR	NR	0
CDL	TP	0	NR	NR	NR	NR	0
CERS HA□ Waste	.25 mile	0	0	0	NR	NR	0
Toxic Pits	1 mile	0	0	0	0	NR	0
US CDL	TP	0	NR	NR	NR	NR	0
PFAS	.50 mile	0	0	0	0	NR	0
Sweeps UST	.25 mile	0	0	0	NR	NR	0
Hist UST	.25 mile	0	0	0	0	0	0
CA FID UST	.25 mile	0	0	0	NR	NR	0
CERS Tanks	.25 mile	0	1	0	NR	NR	1
Liens	TP	0	NR	NR	NR	NR	0
Liens 2	TP	0	NR	NR	NR	NR	0
Emergency Release Reports	TP	0	0	0	0	0	0
RCRA NonGen / NLR	.25 mile	0	0	0	NR	NR	0

State Database	Search Distance	Target Property	< 1/8	1/8 – 1/4	1/4 - 1/2	1/2 - 1	Total Plotted
FUDS	1 mile	0	0	0	0	0	0
DOD	1 mile	0	0	0	0	0	0
ROD	1 mile	0	0	0	0	N/R	0
RAATS	.25 mile	0	0	NR	NR	NR	0
PRP	.25 mile	0	0	NR	NR	NR	0
CONSENT	1 mile	0	0	0	0	0	0
FUSRAP	1 mile	0	0	0	0	0	0
US Mines	.25 mile	0	0	0	NR	NR	0
A□andoned Mines	.25 mile	0	0	1	NR	NR	1
ECHO	TP	0	1	NR	NR	NR	1
FINDS	TP	0	1	NR	NR	NR	1
UXO	1 mile	0	0	0	0	0	0
CA Bond Exp. Plan	1 mile	0	0	0	0	0	0
Cortese	.50 mile	0	0	0	0	NR	0
DRYCLEANERS	.25 mile	0	0	0	NR	NR	0
HA□NET	TP	0	2	NR	NR	NR	2
HIST Cortese	.50 mile	0	0	0	0	NR	0
NPDES	.25 mile	0	2	0	0	0	2
San Bernardino County Permits	.25 mile	0	1	0	NR	NR	1
CIW□S	.25 mile	0	2	0	0	0	2
CERS	.25 mile	0	2	0	0	0	2
HWP	1 mile	0	0	0	0	0	0
Noti□y 65	1 mile	0	0	0	0	0	0
MO ROC	1 mile	0	0	0	0	0	0
EDR Hist Auto	.25 mile	0	0	0	0	0	0
EDR Hist Cleaner	.25 mile	0	0	0	0	0	0
TOTALS		**0**	**12**	**1**	**0**	**0**	**13**

There was one CERS TANKS listed site con□irmed □rom the EDR report within .25 mile o□the target property. Dated: 7/18/22

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Scheerer	18400 Falchion Rd.	0 □ 1/8	B4	9

There was one FINDS listed sites confirmed from the EDR report within .001 mile of the target property. Dated: 8/3/22

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Cutting Edge Aggregate	18400 Falchion	0 - 1/8	B2	9

There was one ECHO listed site confirmed from the EDR report within .001 mile of the target property. Dated: 6/25/22

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Cutting Edge Aggregate	18400 Falchion	0 - 1/8	B2	9

There were two HAZNET listed sites confirmed from the EDR report within .001 mile of the target property. Dated: 12/31/21

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Calportland	18400 Falchion	0 - 1/8	A1	9
Calportland Scheerer	18400 Falchion	0 - 1/8	B5	9

There was one US MINES listed site confirmed from the EDR report within .25 mile of the target property. Dated: 8/31/22

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Scheerer Quarry	18400 Falchion	0 - 1/8	6	10

There was one San Bern. Permit listed site confirmed from the EDR report within .25 mile of the target property. Dated: 8/31/22

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Scheerer Quarry	18400 Falchion	0 - 1/8	6	10

There were two CIWMS listed sites confirmed from the EDR report within .001 mile of the target property. Dated: 8/16/22

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Calportland	18400 Falchion	0 - 1/8	A3	9
Scheerer	18400 Falchion	0 - 1/8	B4	9

There were two CERS listed sites confirmed from the EDR report within .001 mile of the target property. Dated: 7/18/22

Equal / Higher Elevation	Address	Dist./Dir	Map ID	Page
Calportland	18400 Falchion	0 - 1/8	A1	9
Scheerer	18400 Falchion	0 - 1/8	B4	9

5.3 Additional Environmental Record Sources

The following records were reviewed:

- EDR Radius Map Report
- Sanborne Fire Insurance Map database: EDR
- Aerial Photos: EDR
- City Directory: EDR
- Historical Topo Map Report: EDR
- Town of Apple Valley Planning
- Town of Apple Valley Building and Safety
- County of San Bernardino Planning
- County of San Bernardino Assessor

5.4 Physical Setting Source(s)

A current USGS 7.5 Minute Topographic Map, 120115943 Apple Valley North CA, Series 7.5 was reviewed to determine the physical setting of the property. Version Date: 2018

The Dominant Soil Composition in General Area of Target Property:

The following information is based on Soil Conservation Service STATSGO data.

Soils Surface Component Name: MIRAGE

Hydrologic Group: Class C – Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Drainage Class: Well drained

Rock Stratigraphic Unit		Geologic Age Identification
Era:	Mesozoic	Category: Plutonic and Intrusive Rocks
System:	Cretaceous	
Series:	Cretaceous Granite Rocks	
Code:	Kg	

Any form of Geotechnical report or testing of soils is beyond the scope of this assessment.

5.5 Historical Use Information on the Property

The objective of consulting historical sources is to develop a history of the previous uses of the property in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the property. Historical use information describing the subject property was obtained from a variety of sources as discussed below. This information is summarized in the table below.

Period/Date	Land Use	Source(s) of Information
2020	Vacant Land, Structures, mobile trailers	USDA / NAIP

2016	Vacant Land, Structures, mo□ile trailers	USDA / NAIP
2012	Vacant Land, Structures, mo□ile trailers	USDA / NAIP
2009	Vacant Land, Structures, mo□ile trailers	USDA / NAIP
2005	Vacant Land, Structures, mo□ile trailers	USDA / NAIP
1994	Vacant Land, Structures, mo□ile trailers	USGS/DO□□
1984	Vacant Land, Structures, mo□ile trailers	USDA
1975	Vacant Land, Structures, mo□ile trailers	USGS
1973	Vacant Land, Structures, mo□ile trailers	USGS
1968	Vacant Land, Structures, mo□ile trailers	USDA
1959	Vacant Land, Structures, mo□ile trailers	USDA
1953	Vacant Land, Structures, mo□ile trailers	USDA

5.6 Historical Use Information on Adjoining Properties

The o□□ective o□consulting historical sources is to develop a history o□the previous uses o□the surrounding properties in order to help identi□y the likelihood o□past uses having led to recogni□ed environmental conditions in connection with the property. The historical uses o□ad□oining properties to the su□□ect property are summari□ed □elow. These uses were determined using the standard historical sources noted a□ove.

North Historical Land Use

Period/Date	Land Use	Source(s) of Information
2020	Vacant Land	USDA / NAIP
2016	Vacant Land	USDA / NAIP
2012	Vacant Land	USDA / NAIP
2009	Vacant Land	USDA / NAIP
2005	Vacant Land	USDA / NAIP
1994	Vacant Land	USGS/DO□□
1984	Vacant Land	USDA
1975	Vacant Land	USGS
1973	Vacant Land	USGS
1968	Vacant Land	USDA
1959	Vacant Land	USDA
1953	Vacant Land	USDA

South Historical Land Use

Period/Date	Land Use	Source(s) of Information
2020	Vacant Land	USDA / NAIP

2016	Vacant Land	USDA / NAIP
2012	Vacant Land	USDA / NAIP
2009	Vacant Land	USDA / NAIP
2005	Vacant Land	USDA / NAIP
1994	Vacant Land	USGS/DO□□
1984	Vacant Land	USDA
1975	Vacant Land	USGS
1973	Vacant Land	USGS
1968	Vacant Land	USDA
1959	Vacant Land	USDA
1953	Vacant Land	USDA

West Historical Land Use

Period/Date	Land Use	Source(s) of Information
2020	Highway 15	USDA / NAIP
2016	Highway 15	USDA / NAIP
2012	Highway 15	USDA / NAIP
2009	Highway 15	USDA / NAIP
2005	Highway 15	USDA / NAIP
1994	Highway 15	USGS/DO□□
1984	Highway 15	USDA
1975	Highway 15	USGS
1973	Highway 15	USGS
1968	Highway 15	USDA
1959	Highway 15	USDA
1953	Highway 15	USDA

East Historical Land Use

Period/Date	Land Use	Source(s) of Information
2020	Vacant Land, □uarry	USDA / NAIP
2016	Vacant Land, □uarry	USDA / NAIP
2012	Vacant Land, □uarry	USDA / NAIP
2009	Vacant Land, □uarry	USDA / NAIP
2005	Vacant Land, □uarry	USDA / NAIP
1994	Vacant Land, □uarry	USGS/DO□□
1984	Vacant Land, □uarry	USDA

1975	Vacant Land, □uarry	USGS
1973	Vacant Land, □uarry	USGS
1968	Vacant Land, □uarry	USDA
1959	Vacant Land, □uarry	USDA
1953	Vacant Land, □uarry	USDA

5.7 CITY DIRECTORY REVIEW

The City Directory Review □or this property is located in Appendix E i□applica□le.

5.8 Sanborn Fire Insurance Maps

The San□orn Fire Insurance Map Report □or this property is located in Appendix F.

5.9 Other Environmental Reports

There were no other environmental reports availa□le at the time o□the report.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

This Phase 1 ESA was prepared in a manner consistent with the level o□skill ordinarily exhi□ited □y mem□ers o□the environmental auditing pro□ession in this geographic region. No representations, expressed or implied, and no warranty or guarantee is included or intended in connection with this report. The Environmental Pro□essional cannot □e reasona□le □or any use, or the in□ormation contained in this report, or □or any misrepresentation o□the in□ormation. The in□ormation contained in this report has □een o□tained □rom pu□licly availa□le sources, interviews, third party a data resources and □rom visual o□servations o□the su□□ect property, that may have □een limited □y secures areas, overgrown vegetation or □y other o□structions. Although great care has □een taken □y Environmental Pro□essional in compiling and checking the in□ormation contained in this report to ensure that it is current and accurate, the Environmental Pro□essional disclaims any and all lia□ility □or any errors, omissions, or inaccuracies o□such in□ormation and data, whether attri□uta□le to an advertence or otherwise, and □or any conse□uences arising there-□rom. It is understood that the Environmental Pro□essional makes no representations or warranties o□any kind, including, □ut not limited to the warranties o□□itness □or a particular purpose o□merchanta□ility, nor should any such representation or warranty □e implied with the respect to customer, its employees or agents use thereo□.

On Decem□er 26, 2022, the Environmental Pro□essional per□ormed a walking / driving inspection o□ the su□□ect property. The Environmental Pro□essional inspected the su□□ect property and sites located within the government records search re□uirements o□ASTM Standard Practice □or Environmental Site Assessments, E1527-21. The weather conditions were Warm □70s□ at the time o□the site inspection. Limiting conditions are discussed in Section 2.4, Limitations and Expectations, o□this report.

The property is primary vacant land except □or mo□ile trailers located at the eastern □oundary. The property was walked / driven in sections and inspected with the □est practices and knowledge. There were numerous areas o□heavy de□ris dumped on the property including approximately 50□ tires, □urniture and landscape de□ris.

6.2 General Site Setting

6.2.1 Current Use(s) of the Property

The current property has various structures and mo□ile trailers located at the eastern □oundary.

During the inspection o□the ad□oining properties there were no Recogni□ed Environmental Concerns.

6.2.2 Past Use(s) of the Property

The past uses o□the property derived □rom the Aerial Photographs provided □y EDR were as □ollows. 2020 - 1953 The property was vacant land except □or mo□ile trailers located at the eastern □oundary.

6.2.3 Current Use(s) of Adjoining Properties

The current uses o□the ad□oining properties are:

North	Vacant Land
South	Vacant Land
East	Vacant Land and □uarry
West	Vacant Land

The □ollowing Recogni□ed Environmental Concerns □REC□s□ were identi□ied on the □ollowing properties.

North:	None
South:	None
East:	None
West:	None

6.2.4 Past Use(s) of Adjoining Properties

The past uses o□the ad□oining properties are:

North:	Vacant Land
South:	Vacant Land
East:	Vacant Land and □uarry
West:	Vacant Land

6.2.5 Current or Past Uses in the Surrounding Area

The current □oning is Commercial.
The current Land Use Designation is Commercial.
The general area around the property is Commercial.

6.2.6 Geologic, Hydrogeological, Hydrologic, Topographic Conditions and Wetlands

The topography o□the property is □lat sloping SW. The topography o□the surrounding area is a sloping General NW.

FEMA Flood Plain Panel at Property: 06071C5810H FEMA FRIM Flood Data.

6.2.7 General Description of Structures

There are structures on the property and mo□ile trailers on the eastern □oundary.

6.2.8 Roads

There are pu□lic roads to the property.

6.2.9 Potable Water Supply

Water purveyor is the Golden State Water Company
Water improvements are not at the property.

6.2.10 Sewage Disposal System

Sewer purveyor is the City o□Town o□Apple Valley Wastewater Division.
Sewer improvements are not at the property

6.2.10 Interior and Exterior Observations

6.3.1 Petroleum Products

No signs o□spills or leaks were noted around the property.

6.3.2 Hazardous Materials

No ha□ardous materials were noted around the property.

6.3.3 Drums or Containers

No drums or containers were noted around the property.

6.3.4 Storage Tanks

Determining the presence o□A□oveground Storage Tanks □ASTs□and Underground Storage Tanks □USTs□is considered essential in assessing potential contamination sources. Visual inspection and the review o□tank registration records are used to determine the possi□le existence o□past and present storage tanks in the area o□the su□□ect property. It must □e noted however, that the a□sence o□certain site conditions or lack o□records may restrict or prevent the determination o□the num□er and contents o□storage tanks on the su□□ect property.
There were known storage tanks at the su□□ect property.

6.3.5 Intermodal Shipping Containers

There are intermodal shipping containers at the subject property.

6.3.6 Indications of Polychlorinated Biphenyls (PCB's)

Polychlorinated biphenyls (PCB) are a chemical component of many dielectric fluids, heat transfer fluids, hydraulic fluids, lubricating oils, paints, or coatings manufactured prior to July 2, 1979. Equipment that may potentially contain PCBs includes electrical equipment such as transformers or capacitors or hydraulically operated equipment, such as elevators, compaction equipment, or manufacturing equipment. The manufacture and distribution in commerce of PCBs was banned for use in 1979 by the United States Congress, which enacted the Toxic Substance and Control Act (TSCA). PCBs in electric equipment are controlled by United States EPA regulation 7.81 CFR, Part 761. According to this regulation there are three categories for classifying electrical equipment: less than 50 ppm of PCBs is considered "Non-PCB", between 50 and 500 ppm is considered "PCB-Contaminated", and greater than 500 ppm is considered "PCB".

There were no transformers on the subject property.

6.3.7 Pits, Ponds and Lagoons

No evidence of pits, pond and / or lagoons were noted on the subject property.

6.3.8 Odors

No significant odors were noted on the subject property.

6.3.9 Stained Soils or Pavement

No evidence of significantly stained soil or pavement was noted on the subject property.

6.3.10 Pools of Liquid

No unidentified pools of liquid were noted on the subject property.

6.3.11 Stress Vegetation

No evidence of stressed vegetation anticipated to be caused by contamination was noted on the subject property.

6.3.12 Solid Waste Disposal

No solid waste concerns were noted on the property.

6.3.13 Medical/Biological Wastes/X-Ray or other Radioactive Activities

No medical or biological wastes were observed. No X-ray or other radioactive activities were observed or reported.

6.3.14 Drains and Sumps

There were no drains or sumps noted on the property.

6.3.15 Septic Tanks

No septic tanks noted on the property.

6.3.16 Storm / Waste Water

All storm and waste water designs are to □e approved □y the County o□San Bernardino and the Town o□Apple Valley. Currently no improvements are on the su□□ect property.

6.3.17 Wells

There were no water wells located on the su□□ect property.

6.4 Out of Scope Considerations

6.4.1 Wetlands / Flood Plain

There were no wetlands or □urisdictional areas at the su□□ect property.

6.4.2 Lead-Based Paint

A lead paint survey was beyond the scope of this assessment.

6.4.3 Potential Asbestos Containing Building Materials (ACBM's)

A asbestos survey was beyond the scope of this assessment

National Emission Standards □or Ha□ardous Air Pollutants □NESHAP□ regulations re□uire sampling potential ACBM prior to demolition or extensive renovation, regardless o□the date o□construction□ there□ore, i□such activities are planned, it may □e re□uired to conduct a survey o□the entire □acility, or that portion slated □or renovation or demolition, □e□ore initiating such destructive activities. That survey should include an assessment o□all su□□ect □uilding materials, including those areas which are normally inaccessi□le. Any materials □ound to □e ACBM should □e handled in accordance with applica□le regulations.

6.4.4 Microbial Contamination (Mold)

A comprehensive mold survey was beyond the scope of this assessment.

6.4.5 Radon

The Federal EPA Radon □one □or San Bernardino County is □one 2, 18 sites tested.

Area	Average Activity	%<4pCi/L	%<4-20 pCi/L	%>20 pCi/L
Living Area □ 1st Floor	.678 pCi/L	100□	0□	0□
Living Area □ 2nd	N/A	N/A	N/A	N/A

Radon testing is beyond the scope of this assessment.

6.4.6 Lead in Drinking Water

A test for lead in the drinking water is beyond the scope of this assessment. The water purveyor is City of Victorville Water District.

A test for lead in drinking water is beyond the scope of this assessment.

6.4.7 Indoor Air Quality

A test for indoor air quality is beyond the scope of this assessment.

6.4.8 Regulatory Compliance

The subject property is not subject to any regulatory compliance issues.

7.0 INTERVIEWS

The purpose of an interview is to obtain information indicating recognized environmental conditions in connection with the property.

7.1 Interviews with Past and Present Owners and Occupants

The Phase 1 questionnaire is in Appendix H.

7.2 Interviews with State and/or Local Governmental Officials

Records search included: facilities with hazardous waste generator permits, hazardous materials handler permits, underground storage tanks permits, universal waste permits, tiered permits, EPCRA facilities, RMP facilities, CAL ARP facilities, and/or waste recycling generators, including inactive and/or out of business records as well as non-permitted facility actions, logs of permits for the removal, installation, and/or modification of underground storage tanks. Records and databases pertaining to illicit dumping, spill reports and release notifications, and complaints. Incidents responded to by the hazardous material emergency response team and sites undergoing remediation for contaminated soil and/or groundwater.

8.0 FINDINGS AND OPINIONS

The Environmental Professional has performed this Phase 1 Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of the property located at Highway 15 & Falchion Rd., Apple Valley California. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. The assessment has identified no evidence of recognized environmental conditions (RECs) in connection with the Subject Property.

It is our professional opinion that **"No Further Investigation is Required".**

Under the All Appropriate Inquiry Rule, future and continuing obligations are required to maintain landowner liability protections under CERCLA. Specifically, (1) complying with land use restrictions and institutional controls; (2) taking reasonable steps with respect to hazardous substance releases; (3) providing full cooperation, assistance and access to persons that are authorized to conduct response actions or natural resource restoration; (4) complying with information requests and administration subpoenas; and (5) providing legally required notices.

In the event that undocumented areas of contamination are encountered during future excavation and or construction activities, work should be discontinued until appropriate health and safety procedures are implemented. A contingency plan should be prepared to address contactor procedures for such an event to minimize the potential for costly construction delays. In addition, County Department of Environmental Health or Regional Water Quality Control Board, depending on the nature of the contamination, should be notified regarding the contamination. Any contamination remediation and removal activities should be conducted in accordance with the pertinent local, state, and federal regulatory guidelines, under the oversight of the appropriate agency.

9.0 DATA GAPS

There were no data gaps that significantly affected our ability to identify recognized environmental conditions associated with the property.

10.0 DEVIATIONS

No deviations from the recommended scope of ASTM Standard E 1527-21 were performed as part of this Phase 1 ESA.

11.0 ADDITONAL SERVICES

There were no additional services rendered with this report.

12.0 REFERENCES

The following documents, maps or other publications may have been used in the preparation of this report.

- American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (ASTM E1527-21).
- American Society for Testing and Materials Guide for Environmental Site Assessments: Transaction Screen Process (ASTM E1528).
- Environmental Date Research Database.
    - Sanborne Fire Insurance Map database: EDR
    - Aerial Photos: EDR
    - Historical Topographic Maps: EDR
    - Radius Map Database: EDR
    - Topographic Maps: EDR
- Town of Apple Valley Planning and Building and Safety
- San Bernardino County Assessor
- Preliminary Title Report

13.0 Shelf Life of ESA Report

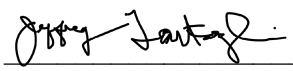
ASTM E1527-21, a Phase 1 ESA Report will remain via□le i□it was completed no more than 180 days prior to the date o□ac□uisition □or, □or transactions not involving an ac□uisition such as a lease or re□inance, the date o□the intended transaction□, or up to one year, i□□ive speci□ic components o□the Report have □een updated. The □ive components include: □1□Interviews, □2□Searched □or recorded environmental cleanup items, □3□ Review o□ government records, □4□ Site reconnaissance o□ the su□□ect property and ad□oining properties, □5□ The Environmental Pro□essional Declaration. The ASTM E1527-21 standard re□uires that the date on which each o□the components were completed □e identi□ied in the Phase 1 Report, and that the 180 day or 1 year time period □egins with the date upon which the earliest o□these components was completed.

□1□Interviews: 12/22/2022
□2□Searched Recorded Environmental Cleanup Items: 12/22/22
□3□Review o□Government Records: 12/26/22
□4□Site Reconnaissance: 12/26/22

14.0 Signatures of Environmental Professionals

We declare that, to the □est o□our pro□essional knowledge and □ehal□, we meet the de□initions o□the Environmental Pro□essional as de□ined in 312.10 o□40 CFR 312. We have the speci□ic □uali□ications □ased on education, training, and experience to assess a property on the nature, history, and setting on the su□□ect property. We have developed and pre□ormed the all appropriate in□uiries in con□ormance with standards and practices set □orth in 40 CFR Part 312. No other warranty is expressed or intended. This report is exclusively □or the use and □ene□it o□those listed on the title page o□ this report and may not □e relied upon □y any other person or entity without written permission □orm the Environmental Pro□essional.

Prepared by:



1/4/23

Jeffrey Tartaglino — **Date**
Environmental Professional

Environmetal Professional: A person meeting the education, training and experience requirements, as set forth in the ASTM E1527-21 practice (example: someone who has been a Registerd Environmental Assessor with the State of California)

APPENDIX A

PROPERTY PHOTOGRAPHS



Looking east at Falchion Road



Looking northeast from Falchion Road



Frontage Road looking south



Frontage Road looking east



Frontage Road looking southeast



Norco Road looking southwest



Norco Road north of Main Street looking south



Norco Road looking west



Looking southwest towards Apply Valley Road



Apply Valley Road looking east at Quarry



Debris along Apple Valley Road



Apple Valley Road looking north



Apple Valley Road looking east



Falchion Road eastern boundary looking west

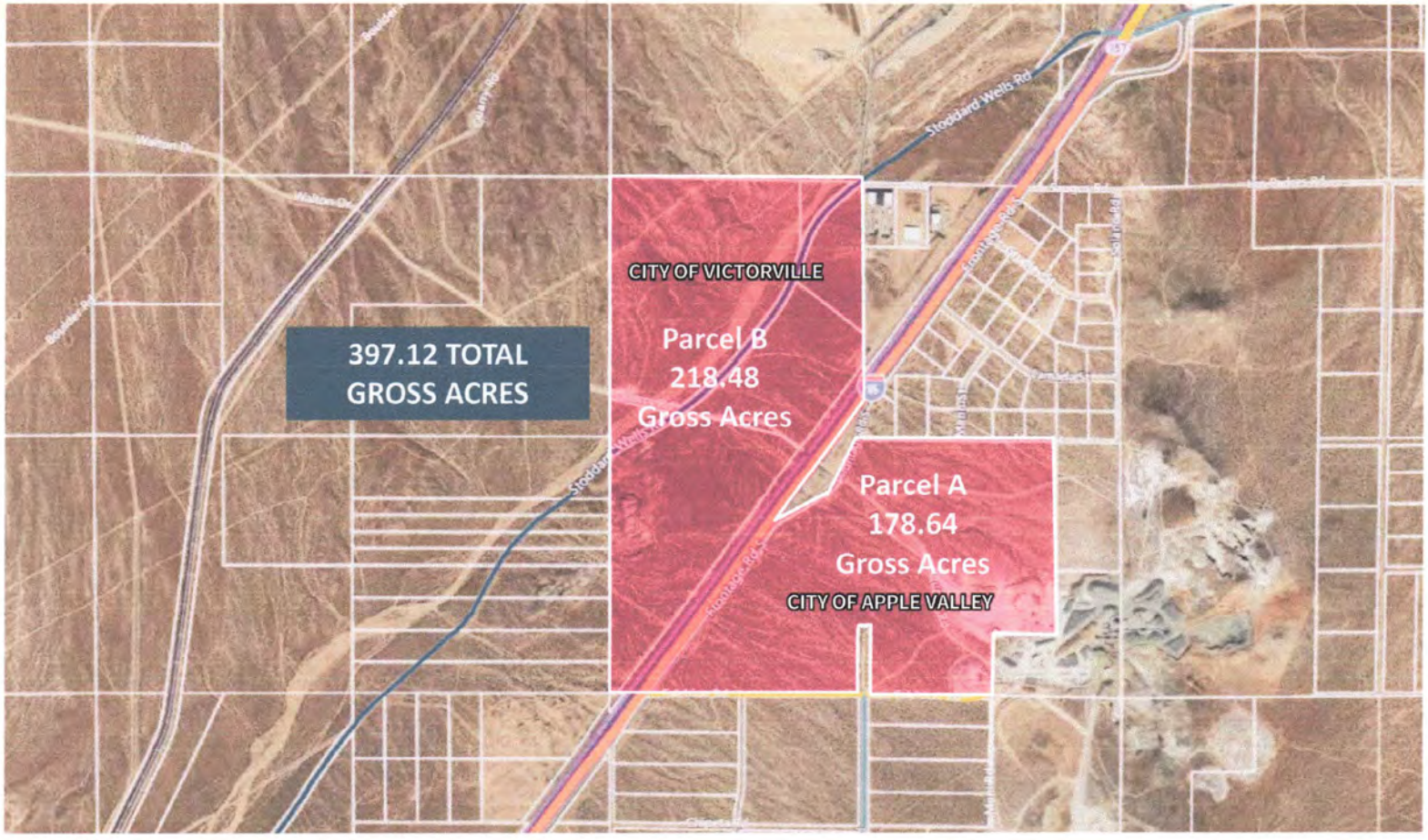
APPENDIX B

PROPERTY MAPS AND DRAWINGS

SITE LOCATION | ALTA SURVEY GROSS ACRES

APPLE VALLEY | VICTORVILLE, CA

Carney Commerce Center



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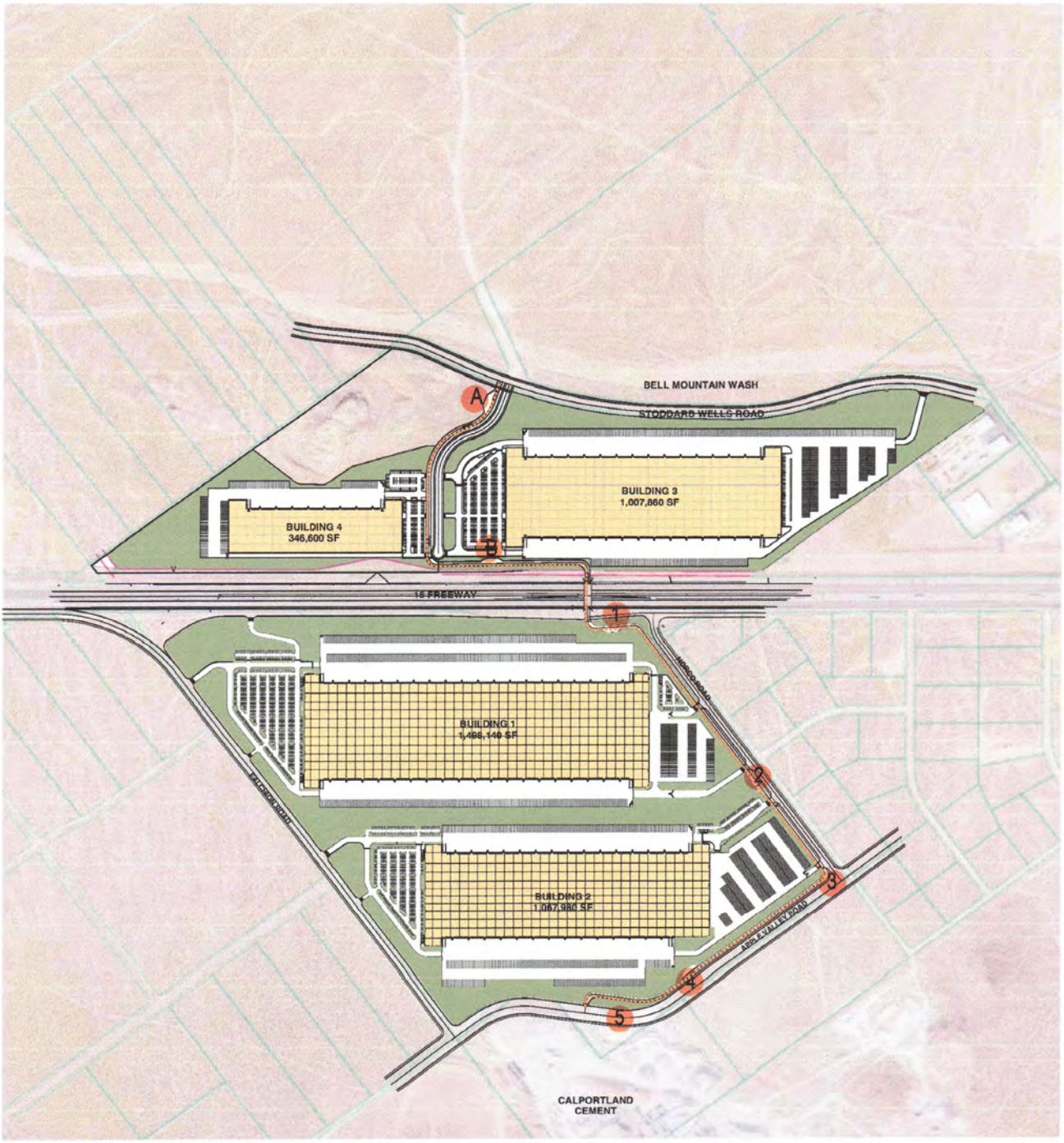
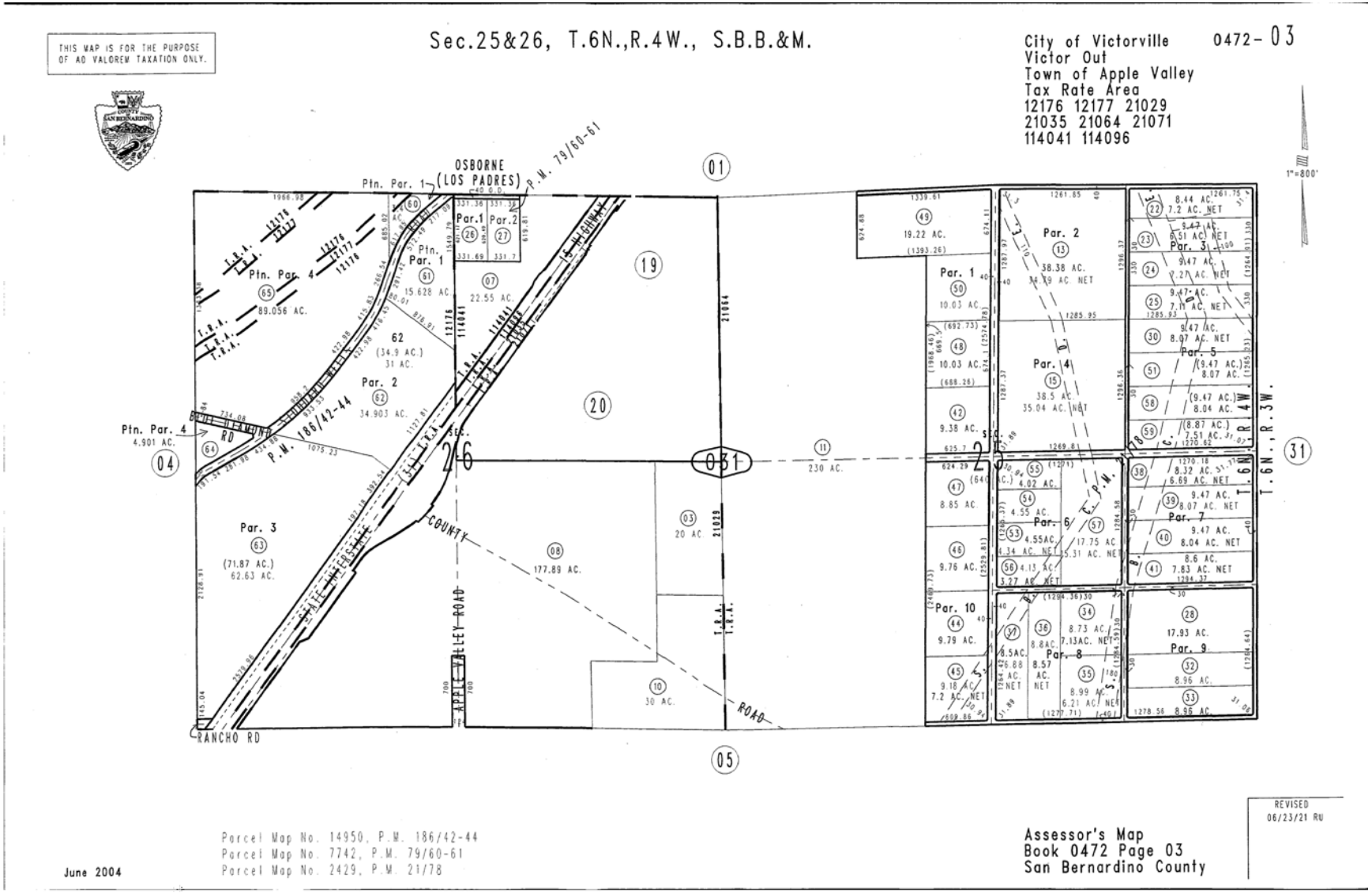
HIGHWAY 15 & FALCHION ROAD
TOWN OF APPLE VALLEY
COUNTY OF SAN BERNARDINO, CA



PROJECT: Calportland and IENLC Quarry Truck Circulation		DATE: 8.29.2022	VERSION: 2
LOCATION Apple Valley and Victorville CA		PROJECT NO. 22-320	

APN: 0472-031-08

HIGHWAY 15 & FALCHION ROAD
TOWN OF APPLE VALLEY
COUNTY OF SAN BERNARDINO, CA



January 4, 2023

APPENDIX C

PLANNING & BUILDING PERMIT REPORT

“No permits available from the Town of Apple Valley”

APPENDIX D

HISTORICAL AERIAL PHOTOGRAPHS

Inland Empire North Logistics Center, Apple Valley

Not Reported

Apple Valley, CA 92307

Inquiry Number: 7209986.8

December 23, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

12/23/22

Site Name:

Inland Empire North Logistics C
Not Reported
Apple Valley, CA 92307
EDR Inquiry # 7209986.8

Client Name:

Pacific Beacon Group
9037 Kara Circle
Riverside, CA 92508
Contact: Jeffrey Tartaglino

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Search Results:

Year	*Scale*	*Details*	*Source*
2020	1"=625'	Flight Year: 2020	USDA/NAIP
2016	1"=625'	Flight Year: 2016	USDA/NAIP
2012	1"=625'	Flight Year: 2012	USDA/NAIP
2009	1"=625'	Flight Year: 2009	USDA/NAIP
2005	1"=625'	Flight Year: 2005	USDA/NAIP
1994	1"=625'	Acquisition Date: May 29, 1994	USGS/DOQQ
1984	1"=625'	Flight Date: October 07, 1984	USDA
1975	1"=625'	Flight Date: December 01, 1975	USGS
1973	1"=625'	Flight Date: June 04, 1973	USGS
1968	1"=625'	Flight Date: May 28, 1968	USDA
1959	1"=625'	Flight Date: June 22, 1959	USDA
1953	1"=625'	Flight Date: January 23, 1953	USDA

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INQUIRY #: 7209986.8
YEAR: 2020
= 625'
N
EDR


INQUIRY #: 7209986.8
YEAR: 2016
= 625'
N
EDR


INQUIRY #: 7209986.8
YEAR: 2012
= 625'
N
EDR


INQUIRY #: 7209986.8
YEAR: 2009
= 625'
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EDR


INQUIRY #: 7209986.8
YEAR: 2005
= 625'
N
EDR


INQUIRY #: 7209986.8
YEAR: 1994
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EDR


INQUIRY #: 7209986.8
YEAR: 1984
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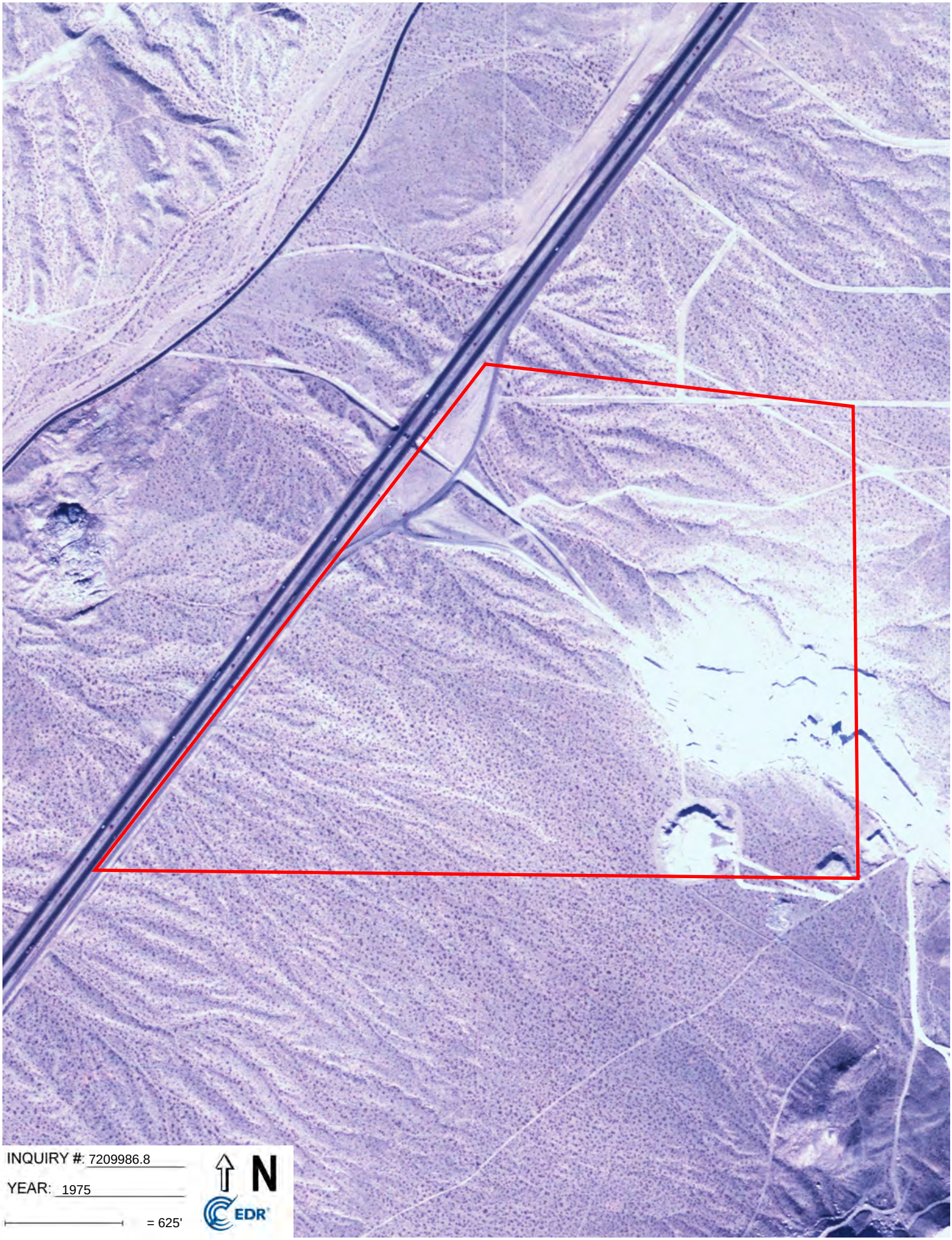
EDR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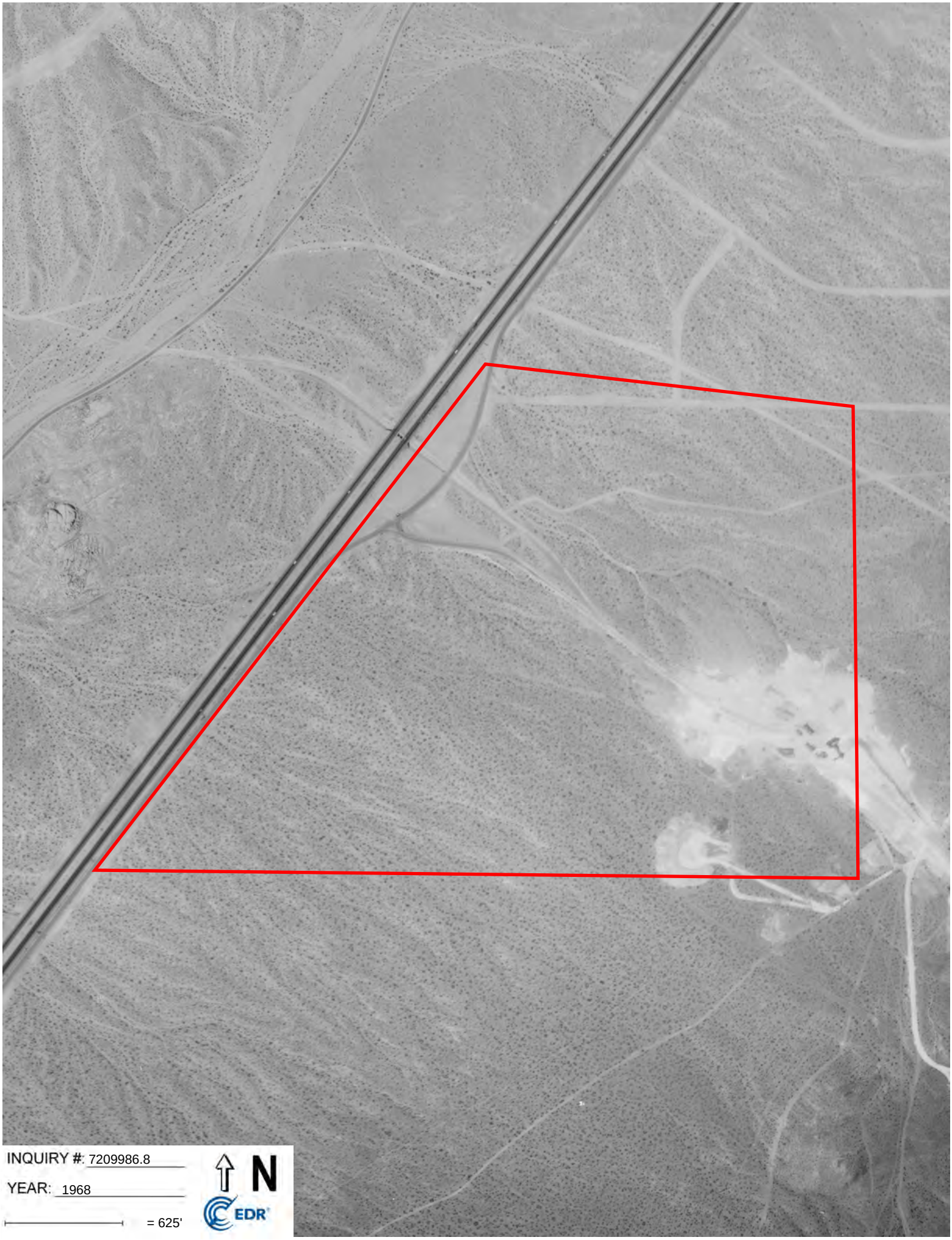
EDR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EDR



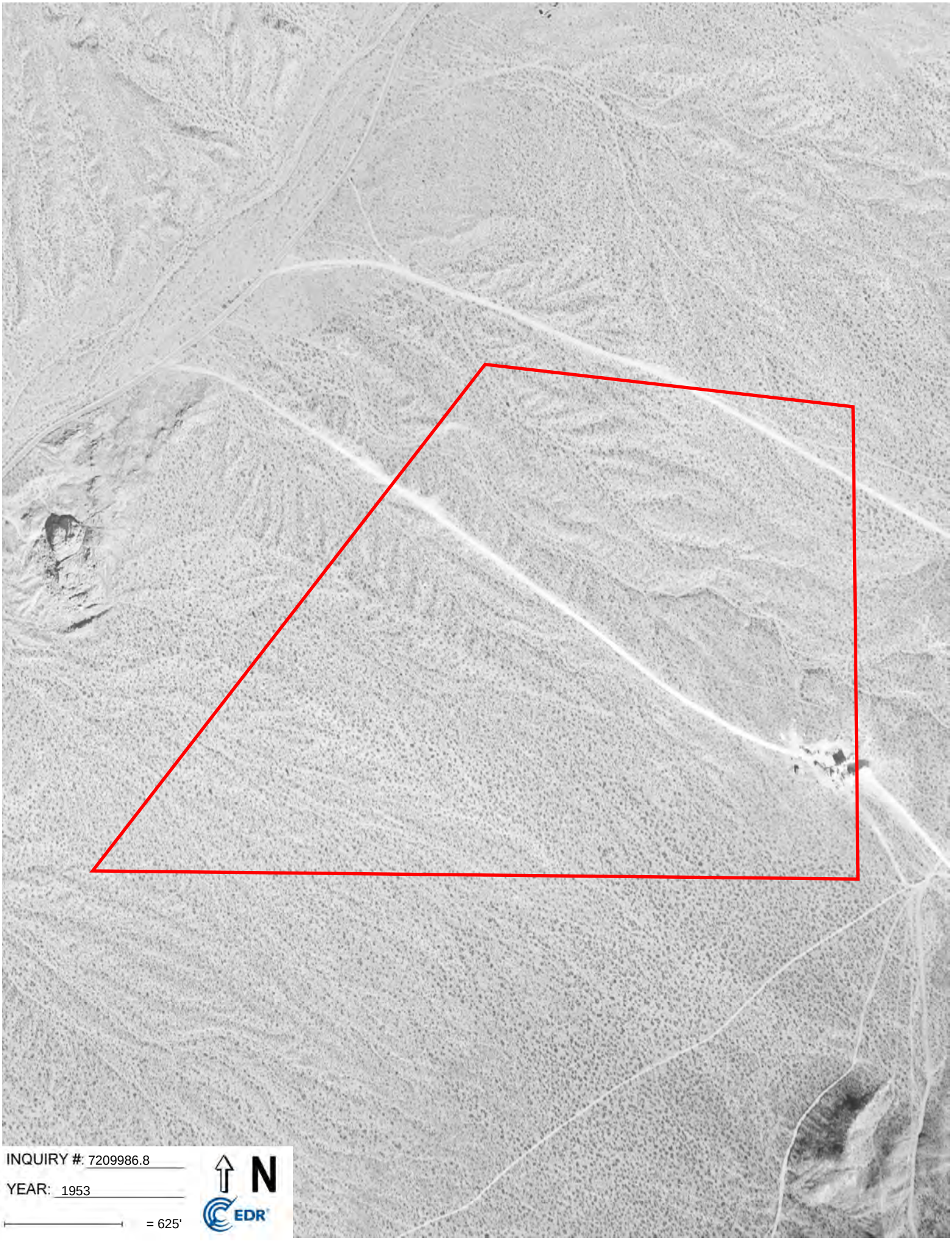
INQUIRY #: 7209986.8

YEAR: 1959

= 625'

N

EDR


INQUIRY #: 7209986.8
YEAR: 1953
= 625'
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EDR

APPENDIX E

HISTORICAL CITY DIRECTORY

APPENDIX F

HISTORICAL SANBORN INSURANCE MAPS

Inland Empire North Logistics Center, Apple Valley

Not Reported

Apple Valley, CA 92307

Inquiry Number: 7209986.3

December 21, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/21/22

Site Name:	Client Name:
Inland Empire North Logistics C	Pacific Beacon Group
Not Reported	9037 Kara Circle
Apple Valley, CA 92307	Riverside, CA 92508
EDR Inquiry # 7209986.3	Contact: Jeffrey Tartaglino

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 75EF-476B-9D90

PO # 31

Project FGFW IV LLC Apple Valley

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 75EF-476B-9D90

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX G

HISTORICAL TOPO MAPS

Inland Empire North Logistics Center, Apple Valley

Not Reported

Apple Valley, CA 92307

Inquiry Number: 7209986.4

December 21, 2022

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

12/21/22

Site Name:	Client Name:
Inland Empire North Logistics C	Pacific Beacon Group
Not Reported	9037 Kara Circle
Apple Valley, CA 92307	Riverside, CA 92508
EDR Inquiry # 7209986.4	Contact: Jeffrey Tartaglino

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Pacific Beacon Group were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:		*Coordinates:*	
P.O.#	31	**Latitude:**	34.575119 34° 34' 30" North
Project:	FGFW IV LLC Apple Valley	**Longitude:**	-117.267753 -117° 16' 4" West
		UTM Zone:	Zone 11 North
		UTM X Meters:	475441.44
		UTM Y Meters:	3825959.59
		Elevation:	2944.29' above sea level

Maps Provided:

2018
2015
2012
1993
1968, 1970
1956
1934
1932

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Topo Sheet Key

This EDR Topo Map Report is □ased upon the □ollowing USGS topographic map sheets.

2018 Source Sheets



Victorville
2018
7.5-minute, 24000



Apple Valley North
2018
7.5-minute, 24000

2015 Source Sheets



Victorville
2015
7.5-minute, 24000



Apple Valley North
2015
7.5-minute, 24000

2012 Source Sheets



Victorville
2012
7.5-minute, 24000



Apple Valley North
2012
7.5-minute, 24000

1993 Source Sheets



Apple Valley North
1993
7.5-minute, 24000
Aerial Photo Revised 1989



Victorville
1993
7.5-minute, 24000
Aerial Photo Revised 1989

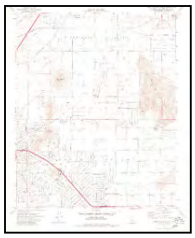
Topo Sheet Key

This EDR Topo Map Report is □ased upon the □ollowing USGS topographic map sheets.

1968, 1970 Source Sheets



Victorville
1968
7.5-minute, 24000
Aerial Photo Revised 1968



Apple Valley North
1970
7.5-minute, 24000
Aerial Photo Revised 1969

1956 Source Sheets



Victorville
1956
7.5-minute, 24000
Aerial Photo Revised 1952

1934 Source Sheets



Barstow
1934
30-minute, 125000

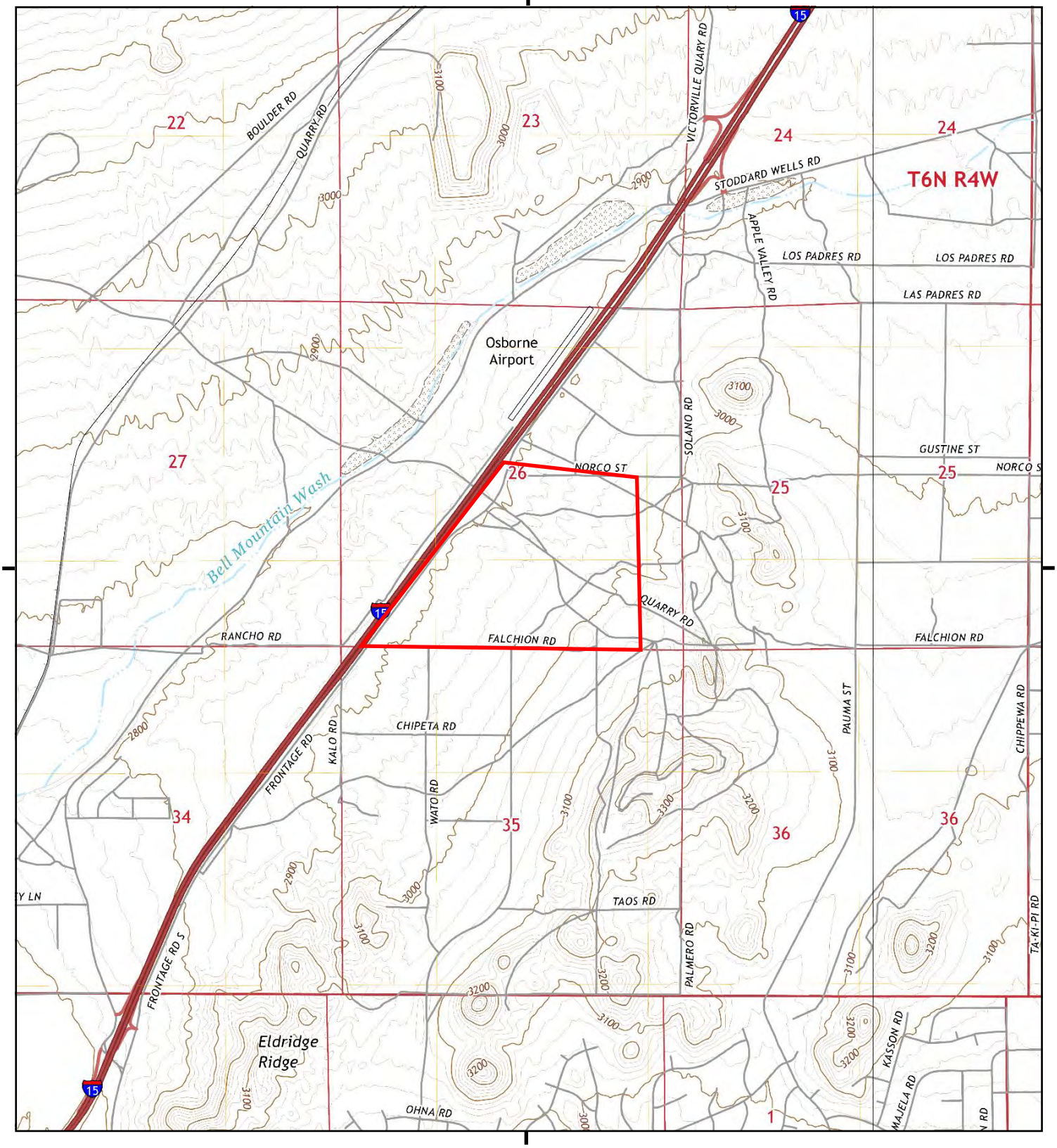
1932 Source Sheets



Barstow
1932
30-minute, 125000

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

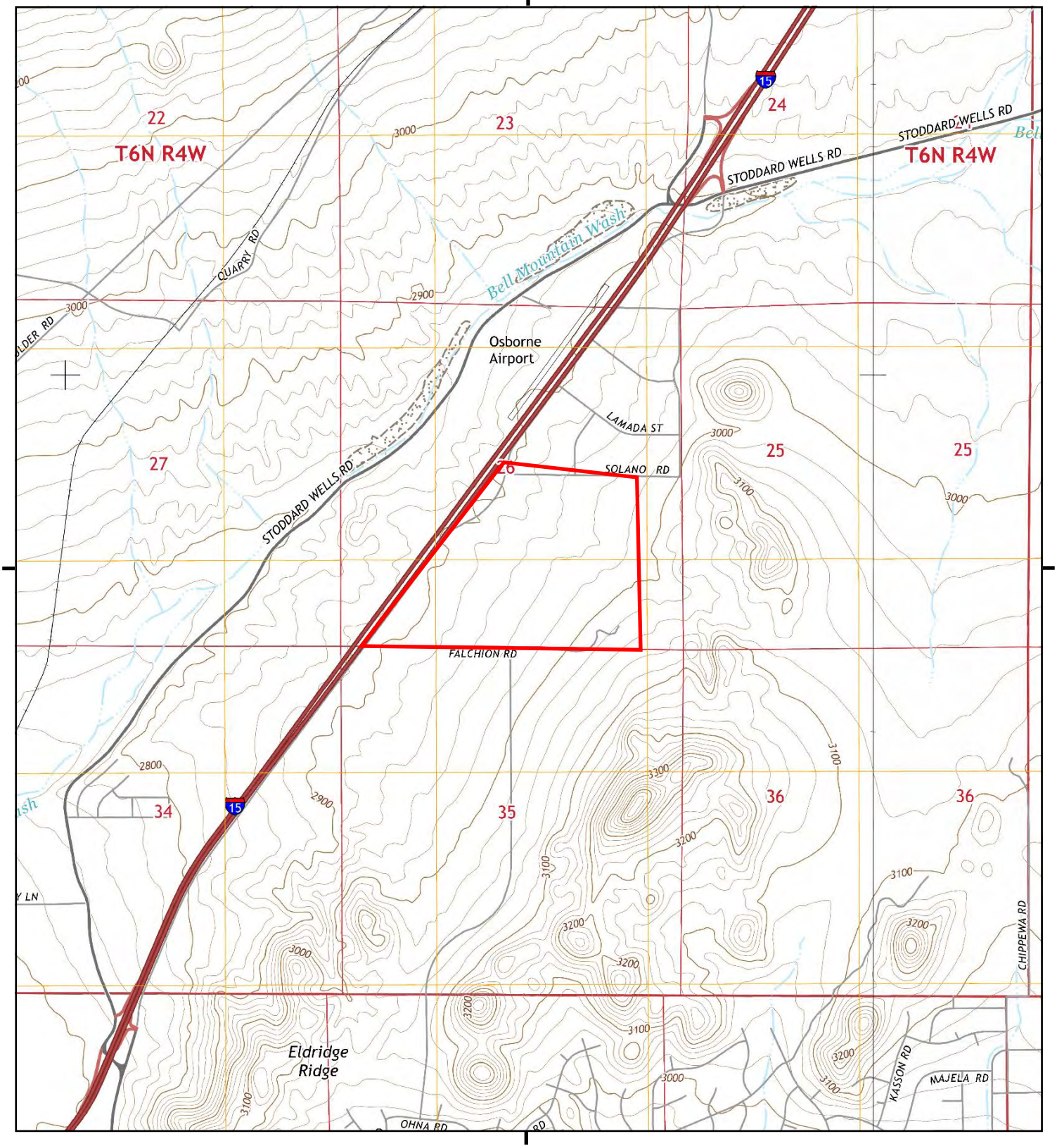
TP, Victorville, 2018, 7.5-minute
E, Apple Valley North, 2018, 7.5-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N

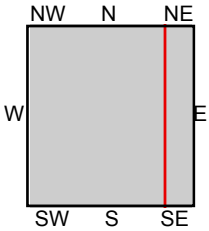
Historical Topo Map

2015



This report includes information from the following map sheets.

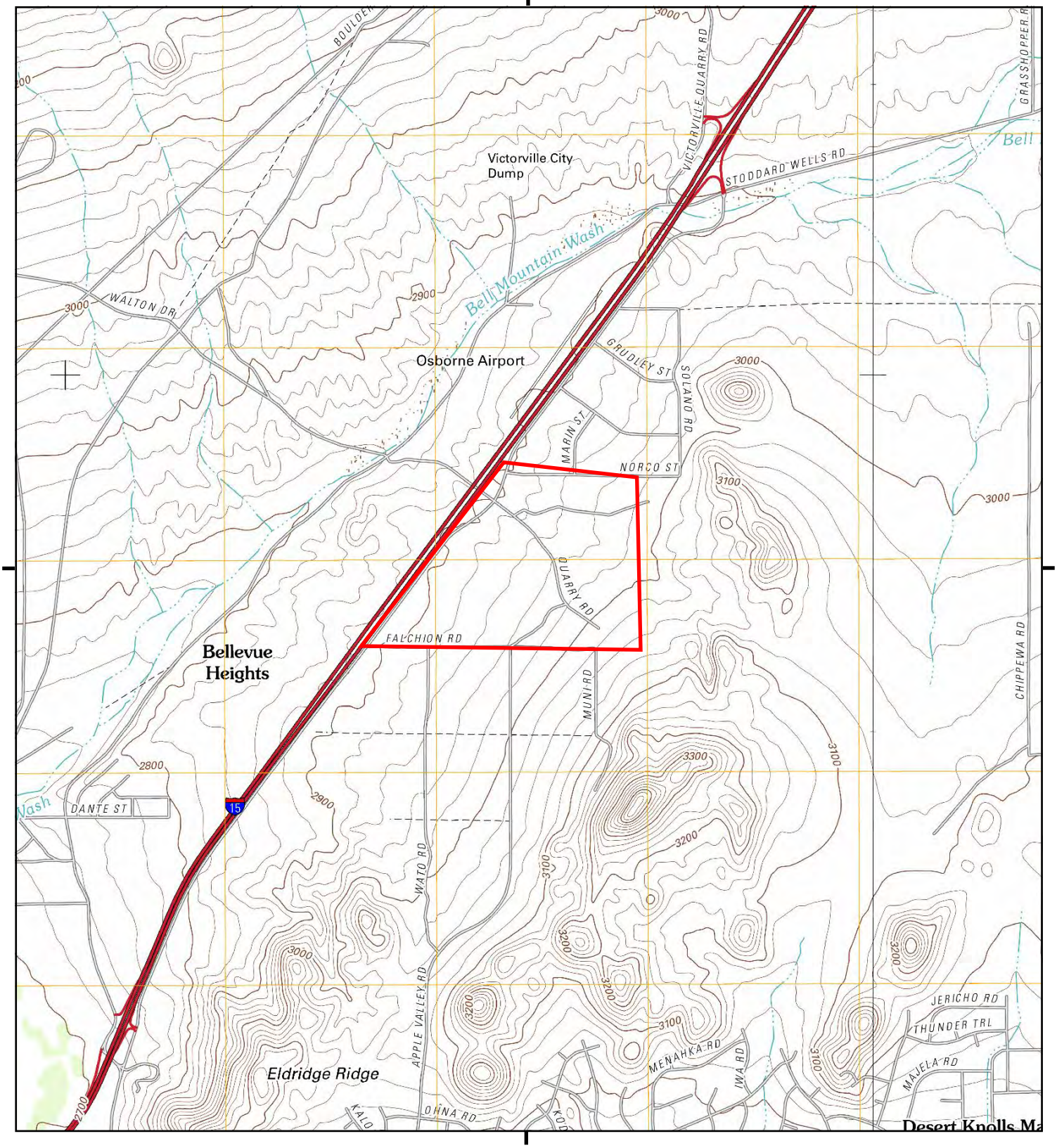
0 Miles 0.25 0.5 1 1.5



TP, Victorville, 2015, 7.5-minute
E, Apple Valley North, 2015, 7.5-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N



This report includes information from the following map sheet(s).

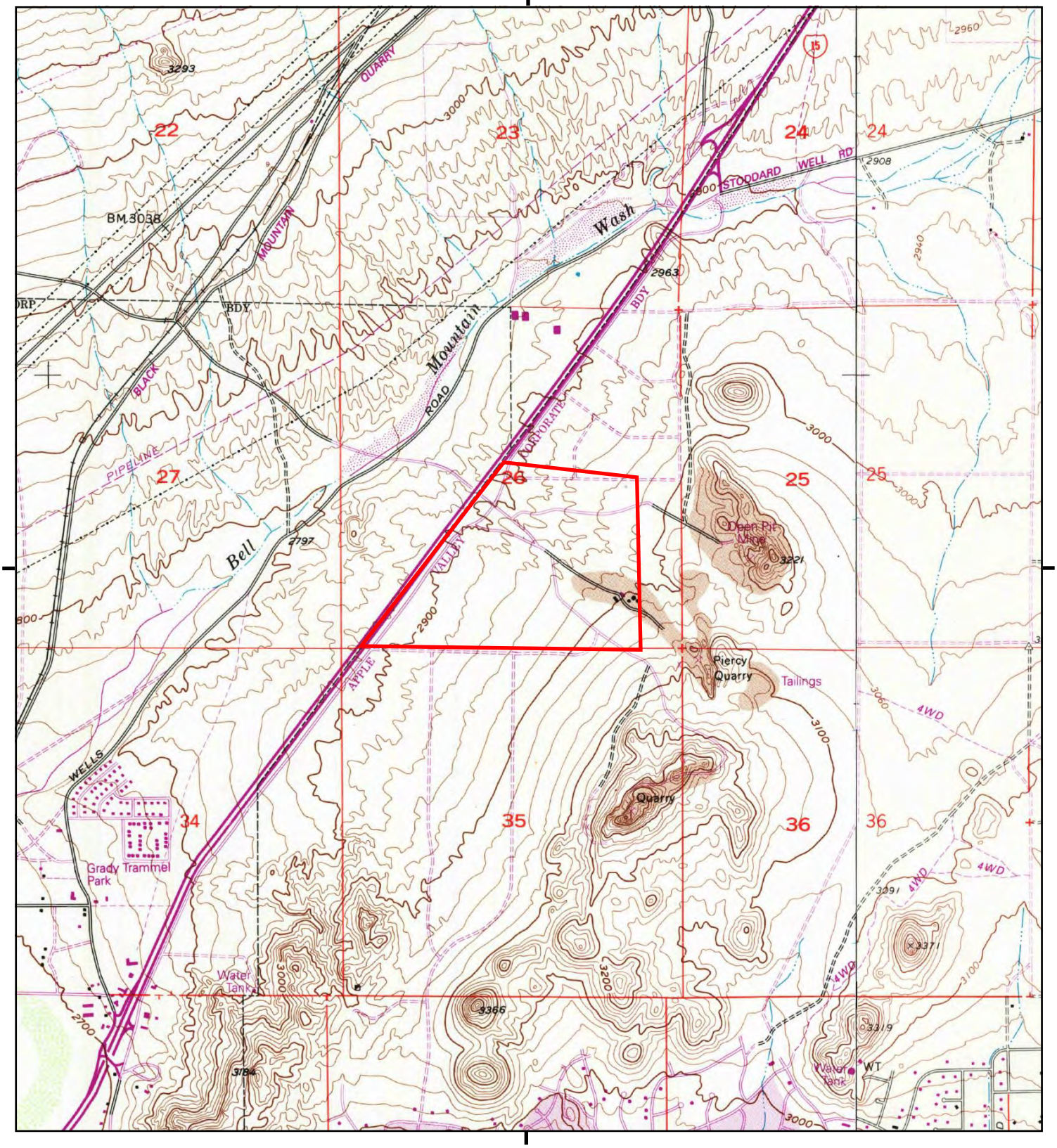
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Victorville, 2012, 7.5-minute
E, Apple Valley North, 2012, 7.5-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N



This report includes information from the following map sheet(s).

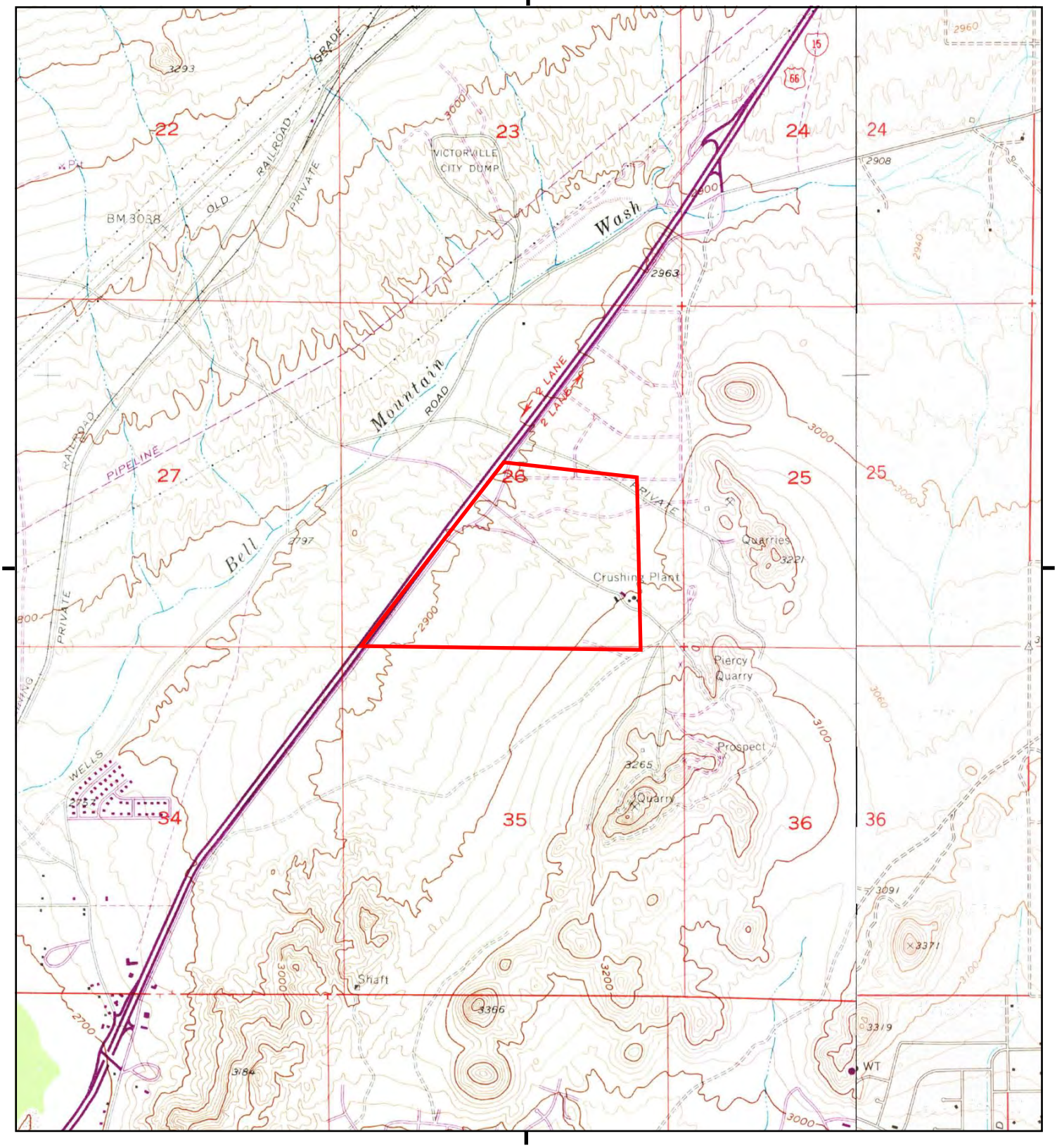
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Victorville, 1993, 7.5-minute
E, Apple Valley North, 1993, 7.5-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

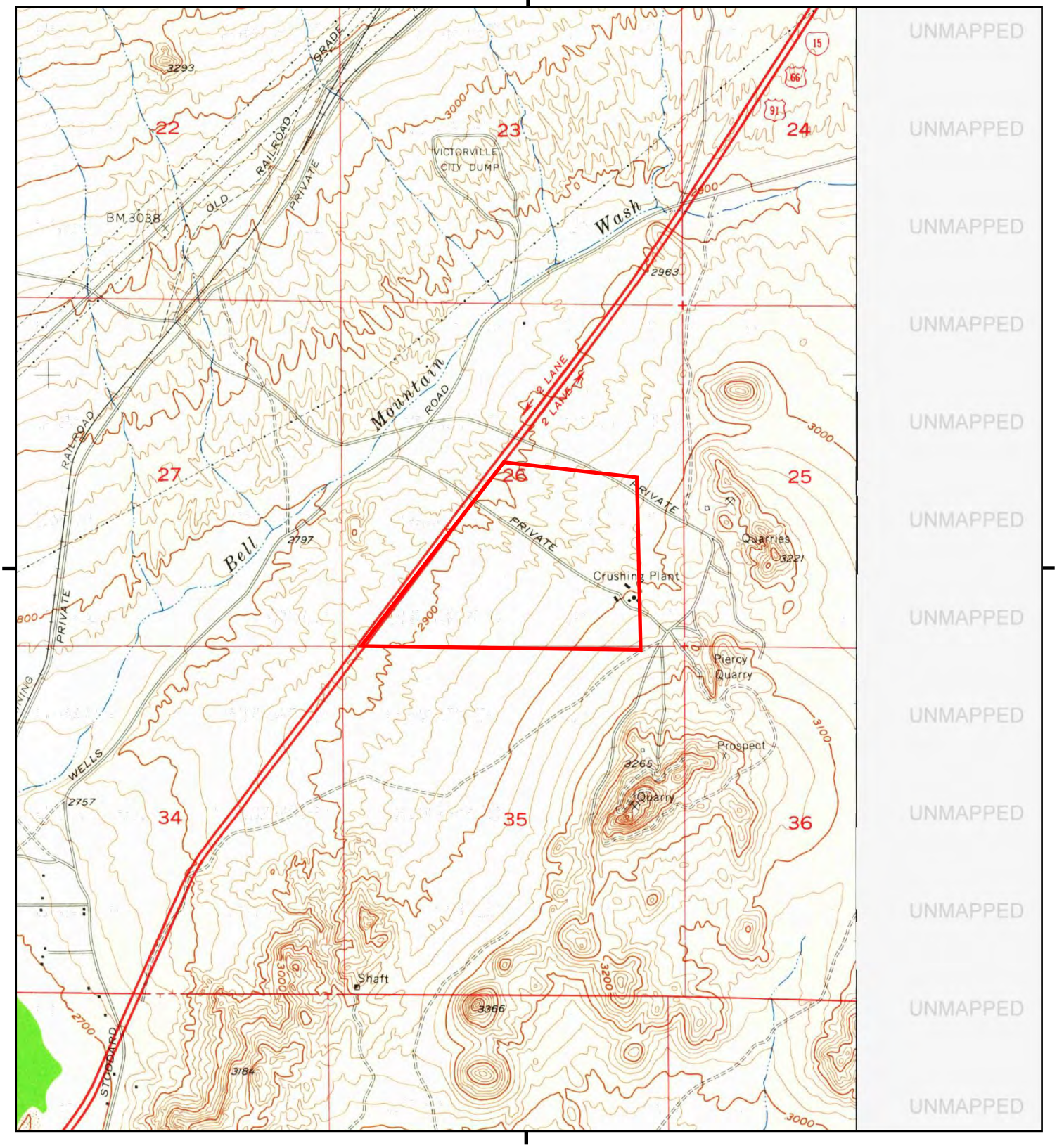
TP, Victorville, 1968, 7.5-minute
E, Apple Valley North, 1970, 7.5-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N

Historical Topo Map

1956



This report includes information from the following map sheet(s).

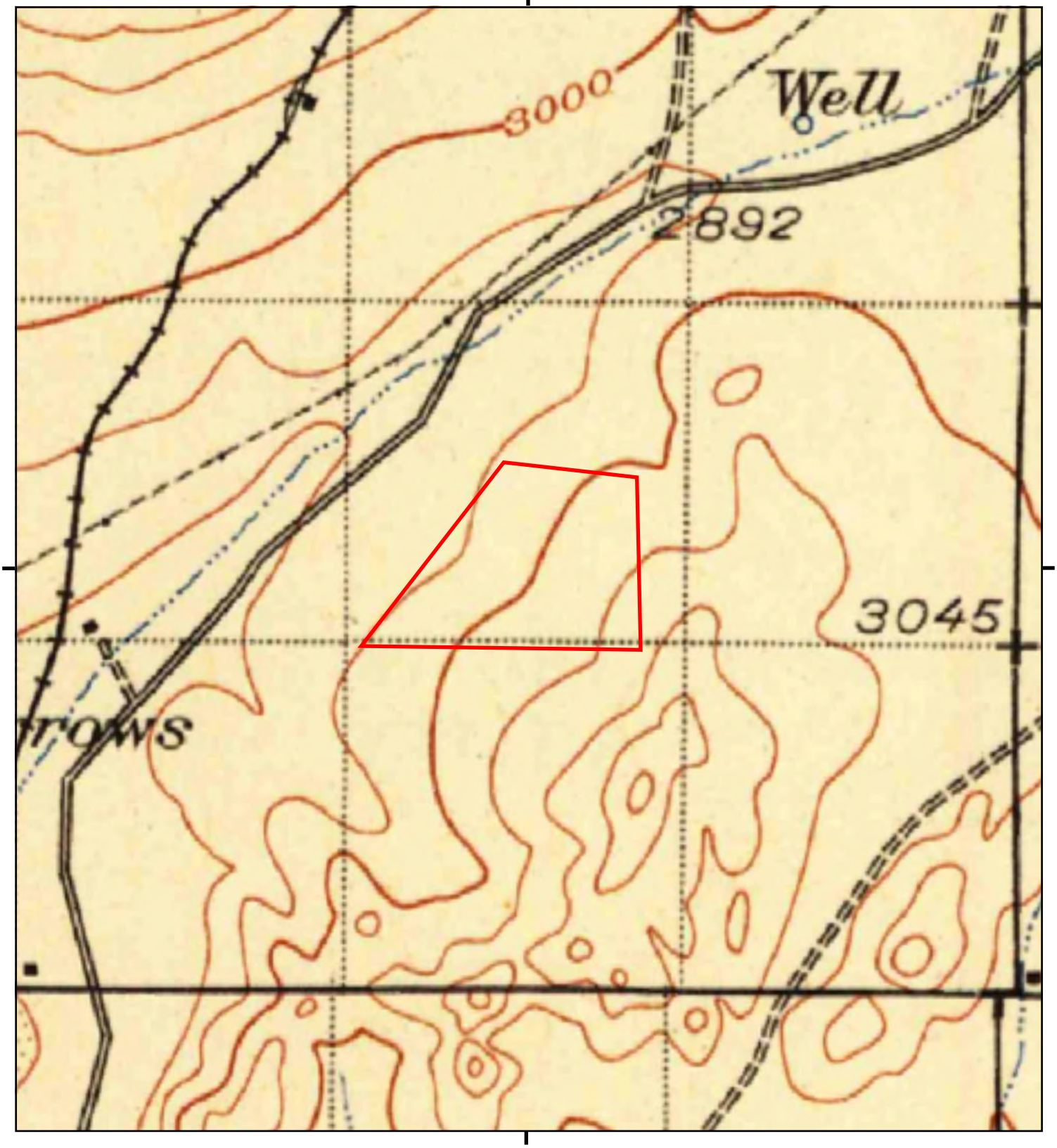
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Victorville, 1956, 7.5-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N



This report includes information from the following map sheets.

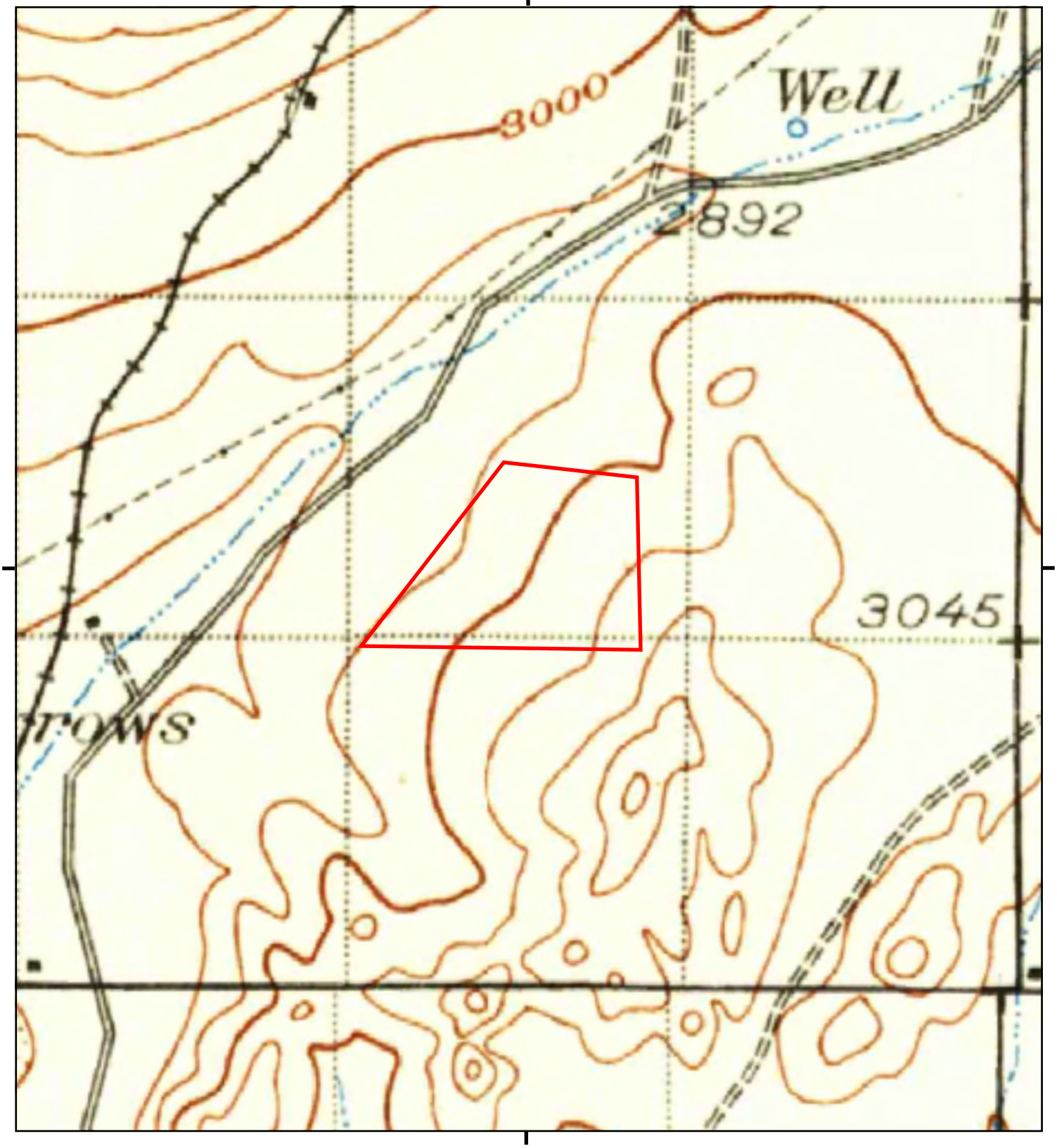
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barstow, 1934, 30-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Barstow, 1932, 30-minute

SITE NAME: Inland Empire North Logistics Center, Ap
ADDRESS: Not Reported
Apple Valley, CA 92307
CLIENT: Pacific Beacon Group

N

APPENDIX H

ENVIRONMETAL REGULATORY DATABASES

Inland Empire North Logistics Center, Apple Valley
Not Reported
Apple Valley, CA 92307

Inquiry Number: 7209986.2s
December 22, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NOT REPORTED
APPLE VALLEY, CA 92307

COORDINATES

Latitude (North):	34.5751190 - 34ˆ 34' 30.42''
Longitude (West):	117.2677530 - 117ˆ 16' 3.91''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	475440.9
UTM Y (Meters):	3825763.2
Elevation:	2944 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	12016037 VICTORVILLE, CA
Version Date:	2018
East Map:	12015943 APPLE VALLEY NORTH, CA
Version Date:	2018

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140527, 20140529
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NOT REPORTED
APPLE VALLEY, CA 92307

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	CALPORTLAND	18400 FALCHION ROAD	HAZNET, NPDES, CERS, HWTS	Higher	1 ft.
B2	CUTTING EDGE AGGREGA	18400 FALCHION RD	FINDS, ECHO	Higher	1 ft.
A3	CALPORTLAND	18400 FALCHION ROAD	CIWQS	Higher	1 ft.
B4	SCHEERER	18400 FALCHION RD	CERS TANKS, NPDES, San Bern. Co. Permit, CIWQS,...	Higher	1 ft.
B5	CALPORTLAND SCHEERER	18400 FALCHION RD	HAZNET, HWTS	Higher	1 ft.
6	SCHEERER QUARRY	P.O. BOX 158	MINES	Higher	1200, 0.227, East

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---- National Priority List
Proposed NPL ---- Proposed National Priority List Sites
NPL LIENS ---- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---- Federal Facility Site Information listing
SEMS ---- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---- RCRA - Large Quantity Generators
RCRA-SQG ---- RCRA - Small Quantity Generators
RCRA-VSQG ---- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---- Land Use Control Information System

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE..... State Response Sites

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR..... EnviroStor Database

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF..... Solid Waste Information System

Lists of state and tribal leaking storage tanks

LUST..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC..... Statewide SLIC Cases

Lists of state and tribal registered storage tanks

FEMA UST..... Underground Storage Tank Listing
UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties
INDIAN VCP..... Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI	Open Dump Inventory
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
Toxic Pits	Toxic Pits Cleanup Act Sites
CERS HAZ WASTE	CERS HAZ WASTE
US CDL	National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST	SWEEPS UST Listing
HIST UST	Hazardous Substance Storage Container Database
CA FID UST	Facility Inventory Database

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data

EXECUTIVE SUMMARY

COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing
PFAS	PFAS Contamination Site Location Listing
AQUEOUS FOAM	Former Fire Training Facility Assessments Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	ICE
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MWMP	Medical Waste Management Program Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)

EXECUTIVE SUMMARY

SAMPLING POINT---------- SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ---------- Well Stimulation Project (GEOTRACKER)
HWTS---------- Hazardous Waste Tracking System
MINES MRDS---------- Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 07/18/2022 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SCHEERER	***18400 FALCHION RD***	***0 - 1/8 (0.000 mi.)***	***B4***	***19***

Other Ascertainable Records

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 08/03/2022 has revealed that there is 1 FINDS site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CUTTING EDGE AGGREGA	***18400 FALCHION RD***	***0 - 1/8 (0.000 mi.)***	***B2***	***17***
Registry ID:: 110070097566				
Registry ID:: 110070270998				

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 06/25/2022 has revealed that there is 1 ECHO site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CUTTING EDGE AGGREGA	***18400 FALCHION RD***	***0 - 1/8 (0.000 mi.)***	***B2***	***17***
Registry ID: 110070270998				
Registry ID: 110070097566				

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the HAZNET list, as provided by EDR, and dated 12/31/2021 has revealed that there are 2 HAZNET sites within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CALPORTLAND	***18400 FALCHION ROAD***	***0 - 1/8 (0.000 mi.)***	***A1***	***9***
GEPAID: CAL000342659				
CALPORTLAND SCHEERER	***18400 FALCHION RD***	***0 - 1/8 (0.000 mi.)***	***B5***	***24***
GEPAID: CAL000461817				

MINES: A listing of mine site locations from the Office of Mine Reclamation.

A review of the MINES list, as provided by EDR, and dated 08/31/2022 has revealed that there is 1 MINES site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SCHEERER QUARRY	P.O. BOX 158	E 1/8 - 1/4 (0.227 mi.)	6	25

NPDES: A listing of NPDES permits, including stormwater.

A review of the NPDES list, as provided by EDR, and dated 08/08/2022 has revealed that there are 2 NPDES sites within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CALPORTLAND Facility Status: Active	***18400 FALCHION ROAD***	***0 - 1/8 (0.000 mi.)***	***A1***	***9***
SCHEERER	***18400 FALCHION RD***	***0 - 1/8 (0.000 mi.)***	***B4***	***19***

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 08/22/2022 has revealed that there is 1 San Bern. Co. Permit site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SCHEERER Facility Status: ACTIVE Facility Id: FA0018695	***18400 FALCHION RD***	***0 - 1/8 (0.000 mi.)***	***B4***	***19***

CIWQS: The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

A review of the CIWQS list, as provided by EDR, and dated 08/16/2022 has revealed that there are 2 CIWQS sites within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CALPORTLAND	18400 FALCHION ROAD	0 - 1/8 (0.000 mi.)	A3	18
SCHEERER	***18400 FALCHION RD***	***0 - 1/8 (0.000 mi.)***	***B4***	***19***

CERS: The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

A review of the CERS list, as provided by EDR, and dated 07/18/2022 has revealed that there are 2 CERS sites within approximately 0.001 miles of the target property.

EXECUTIVE SUMMARY

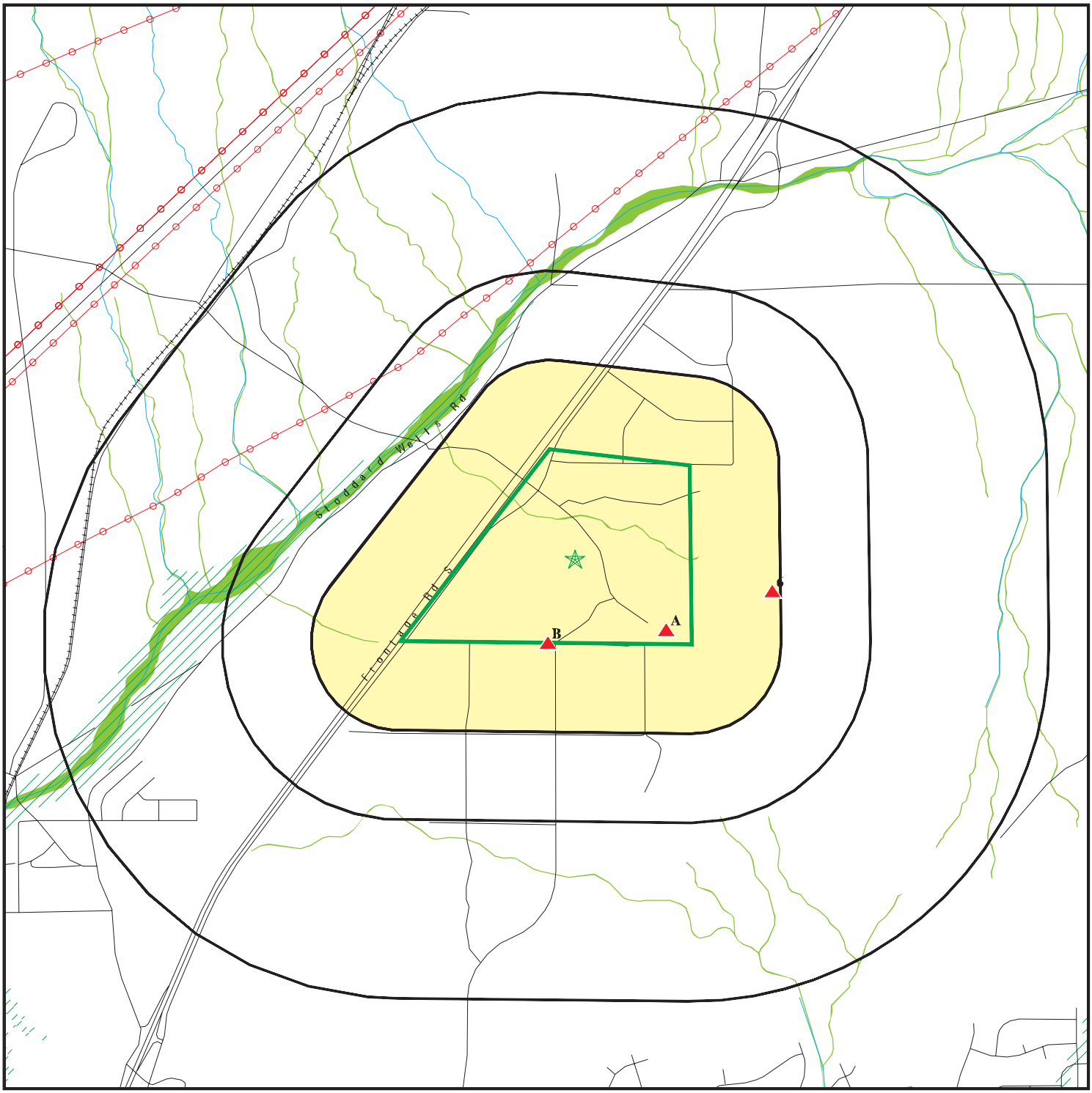
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CALPORTLAND	*18400 FALCHION ROAD*	*0 - 1/8 (0.000 mi.)*	*A1*	*9*
SCHEERER	*18400 FALCHION RD*	*0 - 1/8 (0.000 mi.)*	*B4*	*19*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
	CDL
	CDL
	CDL
	CDL
	CDL

OVERVIEW MAP - 7209986.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA
Power transmission lines
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory
State Wetlands

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Inland Empire North Logistics Center, Apple Valley	CLIENT:	Pacific Beacon Group
ADDRESS:	Not Reported Apple Valley CA 92307	CONTACT:	Jeffrey Tartaglino
LAT/LONG:	34.575119 / 117.267753	INQUIRY #:	7209986.2s
		DATE:	December 22, 2022 8:09 am

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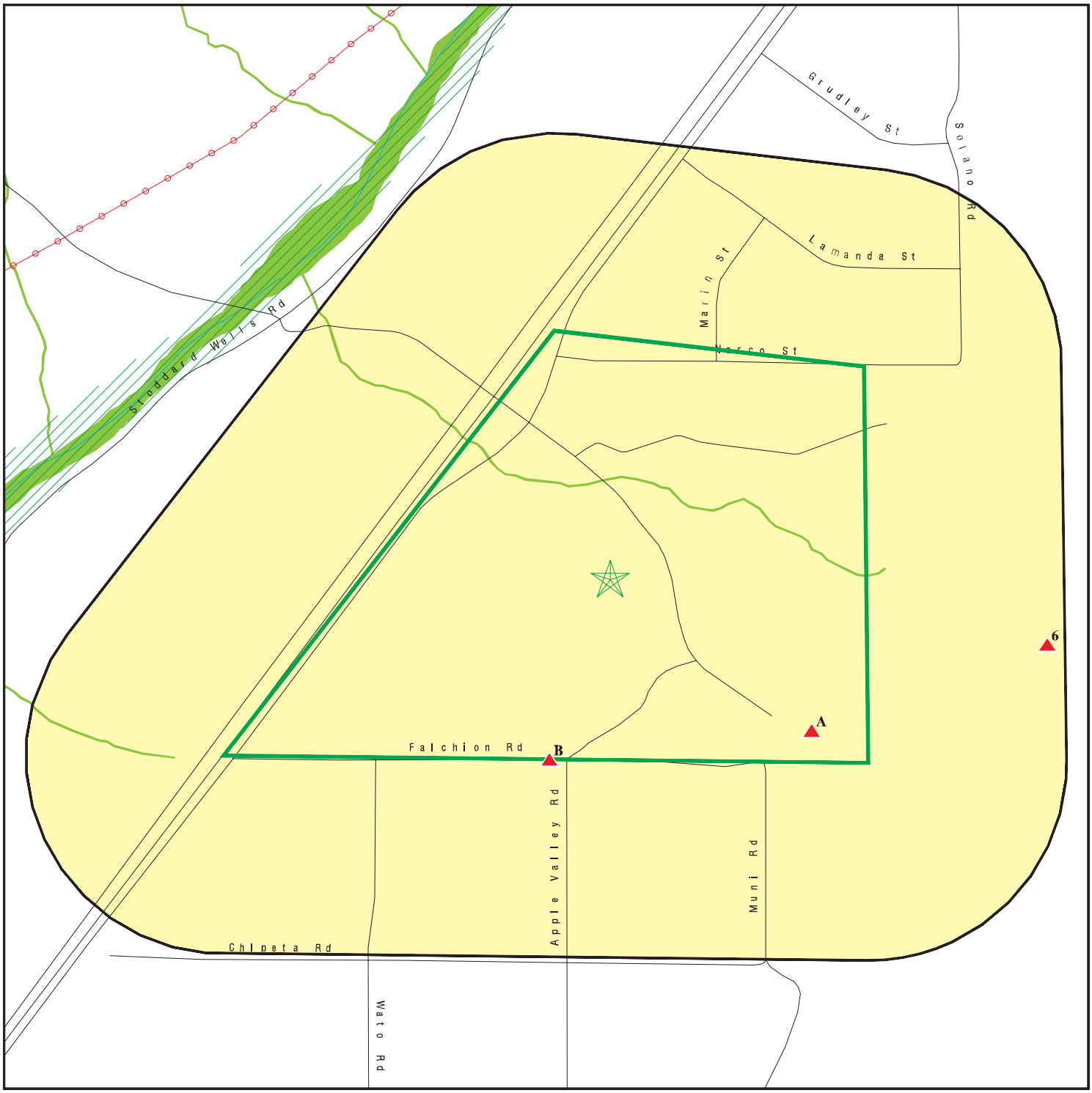
DETAIL MAP - 7209986.2S



0 1/8 1/4 1/2 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Inland Empire North Logistics Center, Apple Valley	CLIENT:	Pacific Beacon Group
ADDRESS:	Not Reported Apple Valley CA 92307	CONTACT:	Jeffrey Tartaglino
LAT/LONG:	34.575119 / 117.267753	INQUIRY #:	7209986.2s
		DATE:	December 22, 2022 8:10 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.000		0	0	0	0	NR	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		1	0	NR	NR	NR	1
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		1	NR	NR	NR	NR	1
ECHO	0.001		1	NR	NR	NR	NR	1
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HAZNET	0.001		2	NR	NR	NR	NR	2
MINES	0.250		0	1	NR	NR	NR	1
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		2	NR	NR	NR	NR	2
San Bern. Co. Permit	0.250		1	0	NR	NR	NR	1
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		2	NR	NR	NR	NR	2
CERS	0.001		2	NR	NR	NR	NR	2
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	12	1	0	0	0	13

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **CALPORTLAND** **HAZNET** **S113798225**
18400 FALCHION ROAD **NPDES** **N/A**
< 1/8 **APPLE VALLEY, CA 91741** **CERS**
1 ft. **HWTS**

Site 1 of 2 in cluster A

Relative: Higher

Actual: 3026 ft.

HAZNET:

Name:	CUTTING EDGE AGGREGATES, INC.
Address:	18400 FALCHION RD
Address 2:	Not reported
City,State,Zip:	APPLE VALLEY, CA 92307
Contact:	KIRK SCHULTHESS
Telephone:	7609552888
Mailing Name:	Not reported
Mailing Address:	PO BOX 398
Year:	2012
Gepaid:	CAL000342659
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.6255

Additional Info:

Year:	2012
Gen EPA ID:	CAL000342659
Shipment Date:	20121218
Creation Date:	3/7/2013 22:15:08
Receipt Date:	20121220
Manifest ID:	010858017JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.6255
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

NPDES:

Name:	CALPORTLAND
Address:	18400 FALCHION ROAD
City,State,Zip:	APPLE VALLEY, CA 91741

CALPORTLAND (Continued) **S113798225**

Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	6B36I027168
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Active
Status Date:	05/16/2017
Operator Name:	CalPortland Co
Operator Address:	2025 E Financial Wy
Operator City:	Glendora
Operator State:	California
Operator Zip:	91741

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	6B
Regulatory Measure ID:	486123
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	6B36I027168
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/04/2017
Processed Date:	05/16/2017
Status:	Active
Status Date:	05/16/2017
Place Size:	390
Place Size Unit:	Acres
Contact:	Desirea Haggard
Contact Title:	Environmental Manager
Contact Phone:	626-691-1966
Contact Phone Ext:	Not reported
Contact Email:	dhaggard@calportland.com

CALPORTLAND (Continued) **S113798225**

Operator Name:	CalPortland Co
Operator Address:	2025 E Financial Wy
Operator City:	Glendora
Operator State:	California
Operator Zip:	91741
Operator Contact:	Juan Ayon
Operator Contact Title:	Plant Manager
Operator Contact Phone:	909-644-1979
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	jayon@calportland.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Bell Mountain Wash/ Mojave River
Certifier:	Juan Ayon
Certifier Title:	Chief Mining Engineer
Certification Date:	14-JUN-17
Primary Sic:	1429-Crushed and Broken Stone, NEC
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	6B
Regulatory Measure ID:	486123
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	6B36I027168
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported

CALPORTLAND (Continued) **S113798225**

Effective Date Of Regulatory Measure:	05/16/2017
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	CalPortland Co
Discharge Address:	2025 E Financial Wy
Discharge City:	Glendora
Discharge State:	California
Discharge Zip:	91741
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported

CALPORTLAND (Continued) **S113798225**

Receiving Water Name: Not reported
Certifier: Not reported
Certifier Title: Not reported
Certification Date: Not reported
Primary Sic: Not reported
Secondary Sic: Not reported
Tertiary Sic: Not reported

Name: CALPORTLAND
Address: 18400 FALCHION ROAD
City,State,Zip: APPLE VALLEY, CA 91741
Facility Status: Active
NPDES Number: CAS000001
Region: 6B
Agency Number: 0
Regulatory Measure ID: 486123
Place ID: Not reported
Order Number: 97-03-DWQ
WDID: 6B36I027168
Regulatory Measure Type: Enrollee
Program Type: Industrial
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 05/16/2017
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: 2025 E Financial Wy
Discharge Name: CalPortland Co
Discharge City: Glendora
Discharge State: California
Discharge Zip: 91741
Status: Not reported
Status Date: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported

NPDES as of 03/2018:
NPDES Number: Not reported
Status: Not reported
Agency Number: Not reported
Region: 6B
Regulatory Measure ID: 486123
Order Number: Not reported
Regulatory Measure Type: Industrial
Place ID: Not reported
WDID: 6B36I027168
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Discharge Name: Not reported
Discharge Address: Not reported
Discharge City: Not reported
Discharge State: Not reported

CALPORTLAND (Continued) **S113798225**

Discharge Zip:	Not reported
Received Date:	05/04/2017
Processed Date:	05/16/2017
Status:	Active
Status Date:	05/16/2017
Place Size:	390
Place Size Unit:	Acres
Contact:	Desirea Haggard
Contact Title:	Environmental Manager
Contact Phone:	626-691-1966
Contact Phone Ext:	Not reported
Contact Email:	dhaggard@calportland.com
Operator Name:	CalPortland Co
Operator Address:	2025 E Financial Wy
Operator City:	Glendora
Operator State:	California
Operator Zip:	91741
Operator Contact:	Juan Ayon
Operator Contact Title:	Plant Manager
Operator Contact Phone:	909-644-1979
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	jayon@calportland.com
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Bell Mountain Wash/ Mojave River
Certifier:	Juan Ayon
Certifier Title:	Chief Mining Engineer
Certification Date:	14-JUN-17
Primary Sic:	1429-Crushed and Broken Stone, NEC
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CALPORTLAND (Continued) **S113798225**

NPDES Number:	CAS000001
Status:	Active
Agency Number:	0
Region:	6B
Regulatory Measure ID:	486123
Order Number:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	6B36I027168
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	05/16/2017
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	CalPortland Co
Discharge Address:	2025 E Financial Wy
Discharge City:	Glendora
Discharge State:	California
Discharge Zip:	91741
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported

CALPORTLAND (Continued) **S113798225**

Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CERS:

Name:	CALPORTLAND
Address:	18400 FALCHION ROAD
City,State,Zip:	APPLE VALLEY, CA 91741
Site ID:	528429
CERS ID:	855148
CERS Description:	Industrial Facility Storm Water

Affiliation:

Affiliation Type Desc:	Owner/Operator
Entity Name:	CalPortland Co
Entity Title:	Operator
Affiliation Address:	2025 E Financial Wy
Affiliation City:	Glendora
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	91741
Affiliation Phone:	,

HWTS:

Name:	CUTTING EDGE AGGREGATES INC
Address:	18400 FALCHION RD
Address 2:	Not reported
City,State,Zip:	APPLE VALLEY, CA 92307
EPA ID:	CAL000342659
Inactive Date:	02/21/2020
Create Date:	04/30/2009
Last Act Date:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 398
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ORO GRANDE, CA 92368
Owner Name:	CUTTING EDGE AGGREGATES INC
Owner Address:	18020 NATIONAL TRAILS HWY
Owner Address 2:	Not reported
Owner City,State,Zip:	ORO GRANDE, CA 92368

CALPORTLAND (Continued) **S113798225**

Contact Name:	KIRK SCHULTHESS
Contact Address:	18020 NATIONAL TRAILS HWY
Contact Address 2:	Not reported
City,State,Zip:	ORO GRANDE, CA 92368
Facility Status:	Inactive
Facility Type:	PERMANENT
Category:	STATE
Latitude:	34.571809
Longitude:	-117.234833

NAICS:

EPA ID:	CAL000342659
Create Date:	2009-04-30 09:17:41.833
NAICS Code:	23594
NAICS Description:	Wrecking and Demolition Contractors
Issued EPA ID Date:	2009-04-30 09:17:41.81700
Inactive Date:	2020-02-21 00:00:00
Facility Name:	CUTTING EDGE AGGREGATES INC
Facility Address:	18400 FALCHION RD
Facility Address 2:	Not reported
Facility City:	APPLE VALLEY
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92307

B2 **CUTTING EDGE AGGREGATES, INC.** **FINDS 1023700456**
18400 FALCHION RD **ECHO N/A**
< 1/8 **APPLE VALLEY, CA 92307**
1 ft.

Site 1 of 3 in cluster B

Relative: Higher

Actual: 2957 ft.

FINDS:
Registry ID: 110070270998

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
OSHA ESTABLISHMENT
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.
Registry ID: 110070097566

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.
OSHA ESTABLISHMENT

CUTTING EDGE AGGREGATES, INC. (Continued) **1023700456**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1023700456
Registry ID:	110070270998
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110070270998
Name:	CUTTING EDGE AGGREGATES, INC.
Address:	18400 FALCHION RD
City,State,Zip:	APPLE VALLEY, CA 92307

Envid:	1023700456
Registry ID:	110070097566
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110070097566
Name:	CALPORTLAND
Address:	18400 FALCHION RD
City,State,Zip:	APPLE VALLEY, CA 92307

A3 **CALPORTLAND** **CIWQS** **S120709299**
18400 FALCHION ROAD **N/A**
< 1/8 **APPLE VALLEY, CA 91741**
1 ft.

Site 2 of 2 in cluster A

Relative: Higher
Actual: 3026 ft.

CIWQS:

Name:	CALPORTLAND
Address:	18400 FALCHION ROAD
City,State,Zip:	APPLE VALLEY, CA 91741
Agency:	CalPortland Co
Agency Address:	2025 E Financial Wy, Glendora, CA 91741
Place/Project Type:	Industrial - Crushed and Broken Stone, NEC
SIC/NAICS:	1429
Region:	6V
Program:	INDSTW
Regulatory Measure Status:	Active
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	6B36I027168
NPDES Number:	CAS000001
Adoption Date:	Not reported
Effective Date:	05/16/2017
Termination Date:	Not reported
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	34.572308
Longitude:	-117.263281

B4 **SCHEERER** **CERS TANKS** **S117710311**
18400 FALCHION RD **NPDES** **N/A**
< 1/8 **APPLE VALLEY, CA 92307** **San Bern. Co. Permit**
1 ft. **CIWQS**
Site 2 of 3 in cluster B **CERS**

Relative:
Higher

Actual:
2961 ft.

CERS TANKS:

Name:	SCHEERER
Address:	18400 FALCHION RD
City,State,Zip:	APPLE VALLEY, CA 92307
Site ID:	569272
CERS ID:	10734397
CERS Description:	Aboveground Petroleum Storage

NPDES:

Name:	SCHEERER QUARRY
Address:	18400 FALCHION RD
City,State,Zip:	APPLE VALLEY, CA 92307
Facility Status:	Not reported
NPDES Number:	Not reported
Region:	Not reported
Agency Number:	Not reported
Regulatory Measure ID:	Not reported
Place ID:	Not reported
Order Number:	Not reported
WDID:	6B36I002060
Regulatory Measure Type:	Industrial
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Discharge Address:	Not reported
Discharge Name:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Status:	Terminated
Status Date:	03/30/1992
Operator Name:	Partin Limestone Product Inc
Operator Address:	PO Box 697
Operator City:	Apple Valley
Operator State:	California
Operator Zip:	92307

NPDES as of 03/2018:

NPDES Number:	Not reported
Status:	Not reported
Agency Number:	Not reported
Region:	6B
Regulatory Measure ID:	279461
Order Number:	Not reported
Regulatory Measure Type:	Industrial
Place ID:	Not reported
WDID:	6B36I002060
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported

SCHEERER (Continued) **S117710311**

Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	05/09/2008
Processed Date:	03/30/1992
Status:	Terminated
Status Date:	03/30/1992
Place Size:	390
Place Size Unit:	Acres
Contact:	Luther Lynn
Contact Title:	Not reported
Contact Phone:	760-243-7878
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Partin Limestone Product Inc
Operator Address:	PO Box 697
Operator City:	Apple Valley
Operator State:	California
Operator Zip:	92307
Operator Contact:	Luther Lynn
Operator Contact Title:	Not reported
Operator Contact Phone:	760-243-7878
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Private Business
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	California
Developer Zip:	Not reported
Developer Contact:	Not reported
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	760-243-7878
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commertial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Mojave River
Certifier:	Not reported

SCHEERER (Continued) **S117710311**

Certifier Title: Not reported
Certification Date: Not reported
Primary Sic: 1422-Crushed and Broken Limestone
Secondary Sic: Not reported
Tertiary Sic: Not reported

San Bern. Co. Permit:
Name: SCHEERER
Address: 18400 FALCHION RD
City,State,Zip: APPLE VALLEY, CA 92307
Region: SAN BERNARDINO
Facility ID: FA0018695
Owner: CalPortland Company
Permit Number: PT0040370
Permit Category: HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 12/31/2022

Name: SCHEERER
Address: 18400 FALCHION RD
City,State,Zip: APPLE VALLEY, CA 92307
Region: SAN BERNARDINO
Facility ID: FA0018695
Owner: CalPortland Company
Permit Number: PT0040369
Permit Category: APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status: ACTIVE
Expiration Date: 12/31/2022

CIWQS:
Name: SCHEERER QUARRY
Address: 18400 FALCHION RD
City,State,Zip: APPLE VALLEY, CA 92307
Agency: Partin Limestone Product Inc
Agency Address: PO Box 697, Apple Valley, CA 92307
Place/Project Type: Industrial - Crushed and Broken Limestone
SIC/NAICS: 1422
Region: 6V
Program: INDSTW
Regulatory Measure Status: Terminated
Regulatory Measure Type: Storm water industrial
Order Number: 2014-0057-DWQ
WDID: 6B36I002060
NPDES Number: CAS000001
Adoption Date: Not reported
Effective Date: 03/30/1992
Termination Date: Not reported
Expiration/Review Date: Not reported
Design Flow: Not reported
Major/Minor: Not reported
Complexity: Not reported
TTWQ: Not reported
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: Not reported

SCHEERER (Continued) **S117710311**

Longitude: Not reported

CERS:
Name: SCHEERER
Address: 18400 FALCHION RD
City,State,Zip: APPLE VALLEY, CA 92307
Site ID: 569272
CERS ID: 10734397
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 569272
Site Name: Scheerer
Violation Date: 10-28-2020
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Description: Failure to test or inspect each aboveground container for integrity based on industry standards as discussed in the SPCC Plan: 1. On a regular schedule. 2. After making material repairs. 3. Use non-destructive testing. 4. Inspect each container s supports, foundations, and outside for signs of deterioration, discharges, or accumulation of oil inside diked areas.
Violation Notes: Returned to compliance on 11/17/2020. OBSERVATION: Per SPCC Plan, inspections are conducted on a monthly and annual basis in accordance with STI SP001; however, at the time of the inspection, interstitial space of the (1) 2,000 AST of diesel was not being inspected. CORRECTIVE ACTION: Conduct an inspection of the interstitial space of the tank and submit a copy of the monthly STI SP001 inspection form to this Division.
Violation Division: San Bernardino County Fire Department
Violation Program: APSA
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-28-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-28-2020
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: APSA
Eval Source: CERS,

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Catalina Fernandez-Moores
Entity Title: Not reported

SCHEERER (Continued) **S117710311**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Environmental Contact
Entity Name:	Catalina Fernandez-Moores
Entity Title:	Not reported
Affiliation Address:	P.O. Box 146
Affiliation City:	Oro Grande
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92368
Affiliation Phone:	,
Affiliation Type Desc:	Legal Owner
Entity Name:	CalPortland Company
Entity Title:	Not reported
Affiliation Address:	2025 E. Financial Way
Affiliation City:	Glendora
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91741
Affiliation Phone:	(626) 852-6200,
Affiliation Type Desc:	Operator
Entity Name:	CalPortland Company
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(626) 852-6200,
Affiliation Type Desc:	Parent Corporation
Entity Name:	CalPortland Company
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401,

SCHEERER (Continued) **S117710311**

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O. Box 146, ATTN: Environmental
Affiliation City:	Oro Grande
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92368
Affiliation Phone:	,
Affiliation Type Desc:	Identification Signer
Entity Name:	Catalina Fernandez-Moores
Entity Title:	Environmental Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

B5 **CALPORTLAND SCHEERER AGGREGATE PLANT** **HAZNET** **S127127080**
18400 FALCHION RD **HWTS** **N/A**
< 1/8 **APPLE VALLEY, CA 92307**
1 ft.

Site 3 of 3 in cluster B

Relative: Higher
Actual: 2957 ft.

HAZNET:

Name:	CALPORTLAND SCHEERER AGGREGATE PLANT
Address:	18400 FALCHION RD
Address 2:	Not reported
City,State,Zip:	APPLE VALLEY, CA 92307
Contact:	ALISON BREWER
Telephone:	6266912459
Mailing Name:	Not reported
Mailing Address:	2025 E. FINANCIAL WAY
Year:	2021
Gepaid:	CAL000461817
TSD EPA ID:	CAD044429835
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.45

HWTS:

Name:	CALPORTLAND SCHEERER AGGREGATE PLANT
Address:	18400 FALCHION RD
Address 2:	Not reported
City,State,Zip:	APPLE VALLEY, CA 92307
EPA ID:	CAL000461817
Inactive Date:	Not reported
Create Date:	04/12/2021
Last Act Date:	Not reported
Mailing Name:	Not reported
Mailing Address:	2025 E. FINANCIAL WAY

CALPORTLAND SCHEERER AGGREGATE PLANT (Continued) **S127127080**

Mailing Address 2:	Not reported
Mailing City,State,Zip:	GLENDORA, CA 91741
Owner Name:	CALPORTLAND COMPANY
Owner Address:	2025 E FINANCIAL WAY
Owner Address 2:	Not reported
Owner City,State,Zip:	GLENDORA, CA 91741
Contact Name:	ALISON BREWER
Contact Address:	PO BOX 146
Contact Address 2:	Not reported
City,State,Zip:	ORO GRANDE, CA 92368
Facility Status:	Active
Facility Type:	PERMANENT
Category:	STATE
Latitude:	34.57178003
Longitude:	-117.2690951

NAICS:

EPA ID:	CAL000461817
Create Date:	2021-04-12 16:57:19.543
NAICS Code:	212321
NAICS Description:	Construction Sand and Gravel Mining
Issued EPA ID Date:	2021-04-12 16:57:19.52700
Inactive Date:	Not reported
Facility Name:	CALPORTLAND SCHEERER AGGREGATE PLANT
Facility Address:	18400 FALCHION RD
Facility Address 2:	Not reported
Facility City:	APPLE VALLEY
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92307

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6 **SCHEERER QUARRY** **MINES** **S117662570**
East **P.O. BOX 158** **N/A**
1/8-1/4 **, CA**
0.227 mi.
1200 ft.

Relative:
Higher

Actual:
3037 ft.

MINES:

Name:	SCHEERER QUARRY
Address:	P.O. BOX 158
City,State,Zip:	CA
Latitude:	34.573056
Longitude:	-117.261389
Lead Agency identification code:	36.05
Lead Agency name:	City of Apple Valley
Year of the operator supplied annual report:	2021
Type of report submitted by operator:	2
Number of acres disturbed by the mine:	143.5
Status of mining operation:	ACTIVE
Status of mine reclamation:	RECLAMATION NOT STARTED
Mine operator:	Henao Ruiz
Operator Address:	PO BOX 158
Operator City, State, Zip:	ORO GRANDE, CA 92368
Operator County:	US
Mine owner:	Azusa Rock, LLC
Owner Address:	PO BOX 158
Owner City, State, Zip:	ORO GRANDE, CA 92368

SCHEERER QUARRY (Continued) **S117662570**

Owner County:	US
Reclamation plan identification number:	Not reported
Primary product produced by the mine:	Sand and Gravel
Other products produced by the mine:	Not reported
Conditional use permit identification number:	Not reported
Number of acres permitted for mining disturbance:	215
Total amount of funds posted by the mine for reclamation:	590644.02
Financial Assurance Cost Estimate for reclamation:	1085711.7
X Coordinates:	-13053478.113
Y Coordinates:	4106011.466

Count: 5 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
APPLE VALLEY	S107530385		19599 HWY 18 (APPLE VALLEY MTR		CDL
APPLE VALLEY	S107528818		14900 APPLE VALLEY INN RD NR H		CDL
APPLE VALLEY	S107538262		DALE EVANS, 500 YDS ON FALCHIO	92307	CDL
APPLE VALLEY	S107538486		FALCHION RD (SEE CLUE FOR MORE		CDL
APPLE VALLEY	S107539823		ON FALCHION, 1/2 MI W OF DALE	92307	CDL

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 08/25/2022
Date Data Arrived at EDR: 09/06/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/16/2022
Date Data Arrived at EDR: 08/22/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/15/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/15/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/12/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 12/19/2022
Number of Days to Update: 5

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 07/25/2022
Date Data Arrived at EDR: 07/25/2022
Date Made Active in Reports: 10/05/2022
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 07/25/2022
Date Data Arrived at EDR: 07/25/2022
Date Made Active in Reports: 10/05/2022
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/08/2022
Date Made Active in Reports: 10/20/2022
Number of Days to Update: 73

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 06/02/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 79

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/28/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 08/24/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/21/2022
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/28/2022
Number of Days to Update: 89

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 06/02/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 79

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/14/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/07/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/28/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 07/25/2022
Date Data Arrived at EDR: 07/25/2022
Date Made Active in Reports: 10/05/2022
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/19/2022
Date Data Arrived at EDR: 09/19/2022
Date Made Active in Reports: 12/07/2022
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/07/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/18/2022
Number of Days to Update: 79

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 08/12/2022
Date Data Arrived at EDR: 08/16/2022
Date Made Active in Reports: 08/26/2022
Number of Days to Update: 10

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/18/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/25/2022
Date Data Arrived at EDR: 07/25/2022
Date Made Active in Reports: 10/05/2022
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 11/23/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 07/18/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 74

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/18/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 08/04/2022
Date Data Arrived at EDR: 08/04/2022
Date Made Active in Reports: 10/20/2022
Number of Days to Update: 77

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 07/18/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 74

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 08/24/2022
Date Made Active in Reports: 11/14/2022
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/19/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 08/25/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 11/14/2022
Number of Days to Update: 81

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/19/2022
Date Data Arrived at EDR: 09/19/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 11

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 06/30/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 74

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 50

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/13/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/12/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/18/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 07/29/2022
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/18/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/04/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/27/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/26/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 13

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/23/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 12/20/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2022
Date Data Arrived at EDR: 07/21/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 71

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/27/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/03/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 14

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/17/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 08/01/2022
Date Data Arrived at EDR: 08/02/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 59

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 11/28/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/21/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/21/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/13/2022
Date Data Arrived at EDR: 09/14/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 82

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/03/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 60

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/25/2022
Date Data Arrived at EDR: 07/01/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/30/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 50

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 07/08/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 123

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 10/26/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 10/31/2022
Number of Days to Update: 61

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 09/06/2022
Date Data Arrived at EDR: 09/06/2022
Date Made Active in Reports: 10/26/2022
Number of Days to Update: 50

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 10/09/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/19/2022
Date Data Arrived at EDR: 09/19/2022
Date Made Active in Reports: 12/07/2022
Number of Days to Update: 79
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 12/07/2021
Date Data Arrived at EDR: 05/09/2022
Date Made Active in Reports: 05/17/2022
Number of Days to Update: 8
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/25/2022
Date Data Arrived at EDR: 05/26/2022
Date Made Active in Reports: 08/11/2022
Number of Days to Update: 77
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 11/14/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 08/18/2022
Date Data Arrived at EDR: 08/29/2022
Date Made Active in Reports: 11/14/2022
Number of Days to Update: 77
Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/27/2021
Date Data Arrived at EDR: 09/01/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 79
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 11/07/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/30/2022
Number of Days to Update: 78
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/15/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/12/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 09/29/2022
Number of Days to Update: 73

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/19/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/06/2022
Date Data Arrived at EDR: 07/21/2022
Date Made Active in Reports: 10/03/2022
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/09/2022
Date Data Arrived at EDR: 08/10/2022
Date Made Active in Reports: 08/30/2022
Number of Days to Update: 20

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 10/28/2022
Number of Days to Update: 78

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 10/28/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/03/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/15/2022
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 07/05/2022
Date Made Active in Reports: 09/19/2022
Number of Days to Update: 76

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Annually

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/18/2022
Number of Days to Update: 79

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 11/14/2022
Number of Days to Update: 81

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/08/2022
Date Made Active in Reports: 10/20/2022
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 08/25/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 11/14/2022
Number of Days to Update: 81

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/18/2022
Number of Days to Update: 79
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/07/2022
Date Data Arrived at EDR: 09/08/2022
Date Made Active in Reports: 11/29/2022
Number of Days to Update: 82
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/18/2022
Number of Days to Update: 79
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/18/2022
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 08/16/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 08/18/2022
Number of Days to Update: 1

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data
The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 07/18/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 74

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)
Non-Case Information sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)
Other Oil & Gas Projects sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 08/31/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/17/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/05/2022
Date Data Arrived at EDR: 04/05/2022
Date Made Active in Reports: 04/26/2022
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/22/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 09/28/2022
Date Data Arrived at EDR: 09/29/2022
Date Made Active in Reports: 12/14/2022
Number of Days to Update: 76

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 07/22/2022
Date Data Arrived at EDR: 07/27/2022
Date Made Active in Reports: 08/01/2022
Number of Days to Update: 5

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/13/2022
Date Data Arrived at EDR: 12/15/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 6

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 07/20/2022
Date Data Arrived at EDR: 07/20/2022
Date Made Active in Reports: 10/03/2022
Number of Days to Update: 75

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 05/04/2022
Date Data Arrived at EDR: 05/06/2022
Date Made Active in Reports: 07/28/2022
Number of Days to Update: 83

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/09/2022
Date Made Active in Reports: 09/01/2022
Number of Days to Update: 23

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/30/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 07/13/2022
Date Data Arrived at EDR: 07/14/2022
Date Made Active in Reports: 09/29/2022
Number of Days to Update: 77

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/03/2022
Date Data Arrived at EDR: 10/05/2022
Date Made Active in Reports: 12/16/2022
Number of Days to Update: 72

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 10/03/2022
Date Data Arrived at EDR: 10/05/2022
Date Made Active in Reports: 12/16/2022
Number of Days to Update: 72

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 07/22/2022
Date Data Arrived at EDR: 07/25/2022
Date Made Active in Reports: 10/05/2022
Number of Days to Update: 72

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/03/2022
Date Data Arrived at EDR: 10/04/2022
Date Made Active in Reports: 12/15/2022
Number of Days to Update: 72

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/07/2022
Date Data Arrived at EDR: 10/07/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 75

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/07/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/21/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/12/2022
Date Made Active in Reports: 04/04/2022
Number of Days to Update: 82

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 08/30/2022
Date Data Arrived at EDR: 09/20/2022
Date Made Active in Reports: 12/07/2022
Number of Days to Update: 78

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 08/30/2022
Date Data Arrived at EDR: 09/20/2022
Date Made Active in Reports: 12/08/2022
Number of Days to Update: 79

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 05/26/2021
Date Data Arrived at EDR: 07/09/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 82

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/22/2022
Date Data Arrived at EDR: 07/19/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 73

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 12/19/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/15/2022
Date Data Arrived at EDR: 02/17/2022
Date Made Active in Reports: 05/11/2022
Number of Days to Update: 83

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 12/19/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/21/2022
Date Data Arrived at EDR: 07/25/2022
Date Made Active in Reports: 07/28/2022
Number of Days to Update: 3

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/24/2022
Date Data Arrived at EDR: 08/09/2022
Date Made Active in Reports: 10/28/2022
Number of Days to Update: 80

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 04/08/2022
Date Data Arrived at EDR: 05/18/2022
Date Made Active in Reports: 08/03/2022
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/24/2022
Date Data Arrived at EDR: 08/01/2022
Date Made Active in Reports: 10/20/2022
Number of Days to Update: 80

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 08/26/2022
Date Data Arrived at EDR: 08/29/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 78

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 11/22/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 09/22/2022
Date Data Arrived at EDR: 09/26/2022
Date Made Active in Reports: 12/09/2022
Number of Days to Update: 74
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 09/22/2022
Date Data Arrived at EDR: 09/26/2022
Date Made Active in Reports: 12/09/2022
Number of Days to Update: 74
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 06/18/2021
Date Data Arrived at EDR: 09/28/2021
Date Made Active in Reports: 12/14/2021
Number of Days to Update: 77
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/04/2022
Date Data Arrived at EDR: 06/30/2022
Date Made Active in Reports: 07/05/2022
Number of Days to Update: 5
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/09/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 07/27/2022
Date Data Arrived at EDR: 07/27/2022
Date Made Active in Reports: 10/11/2022
Number of Days to Update: 76
Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/22/2022
Date Data Arrived at EDR: 08/23/2022
Date Made Active in Reports: 11/11/2022
Number of Days to Update: 80

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 08/25/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 82

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/27/2021
Date Data Arrived at EDR: 03/04/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 88

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 11/22/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 08/04/2022
Date Data Arrived at EDR: 08/04/2022
Date Made Active in Reports: 10/20/2022
Number of Days to Update: 77

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 08/04/2022
Date Data Arrived at EDR: 08/04/2022
Date Made Active in Reports: 10/20/2022
Number of Days to Update: 77

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Quarterly

SAN FRANCISO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing
a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/27/2022
Number of Days to Update: 97

Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 10/07/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 08/10/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 10/28/2022
Number of Days to Update: 78

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/09/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 11/30/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28
Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/16/2022
Date Data Arrived at EDR: 05/18/2022
Date Made Active in Reports: 08/04/2022
Number of Days to Update: 78
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/22/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/22/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 08/03/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 11/14/2022
Number of Days to Update: 81

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 11/23/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 07/27/2022
Date Data Arrived at EDR: 07/27/2022
Date Made Active in Reports: 10/11/2022
Number of Days to Update: 76

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 07/13/2022
Date Data Arrived at EDR: 07/14/2022
Date Made Active in Reports: 09/29/2022
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 10/07/2022
Date Data Arrived at EDR: 10/07/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 75

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 05/26/2022
Date Data Arrived at EDR: 07/21/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 71

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/19/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 05/26/2022
Date Data Arrived at EDR: 07/25/2022
Date Made Active in Reports: 10/05/2022
Number of Days to Update: 72

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/29/2022
Date Data Arrived at EDR: 08/31/2022
Date Made Active in Reports: 11/21/2022
Number of Days to Update: 82
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/02/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 09/21/2022
Date Data Arrived at EDR: 09/30/2022
Date Made Active in Reports: 12/14/2022
Number of Days to Update: 75
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/19/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 10/25/2022
Date Data Arrived at EDR: 10/26/2022
Date Made Active in Reports: 10/31/2022
Number of Days to Update: 5
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/08/2022
Date Made Active in Reports: 10/21/2022
Number of Days to Update: 74
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 12/20/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.
Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.
Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

INLAND EMPIRE NORTH LOGISTICS CENTER, APPLE VALLEY
NOT REPORTED
APPLE VALLEY, CA 92307

TARGET PROPERTY COORDINATES

Latitude (North):	34.575119 - 34ˆ 34’ 30.43’’
Longitude (West):	117.267753 - 117ˆ 16’ 3.91’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	475440.9
UTM Y (Meters):	3825763.2
Elevation:	2944 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12016037 VICTORVILLE, CA
Version Date:	2018
East Map:	12015943 APPLE VALLEY NORTH, CA
Version Date:	2018

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

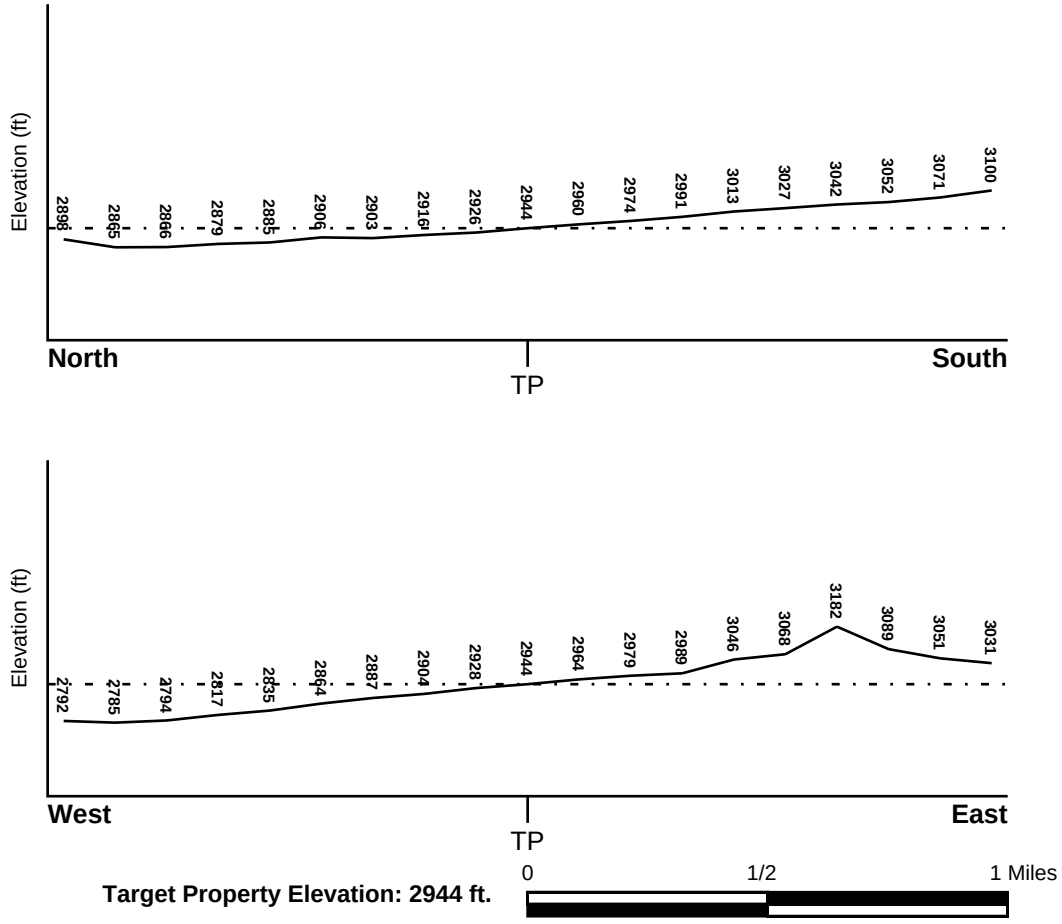
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06071C5810H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06071C5820H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
VICTORVILLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

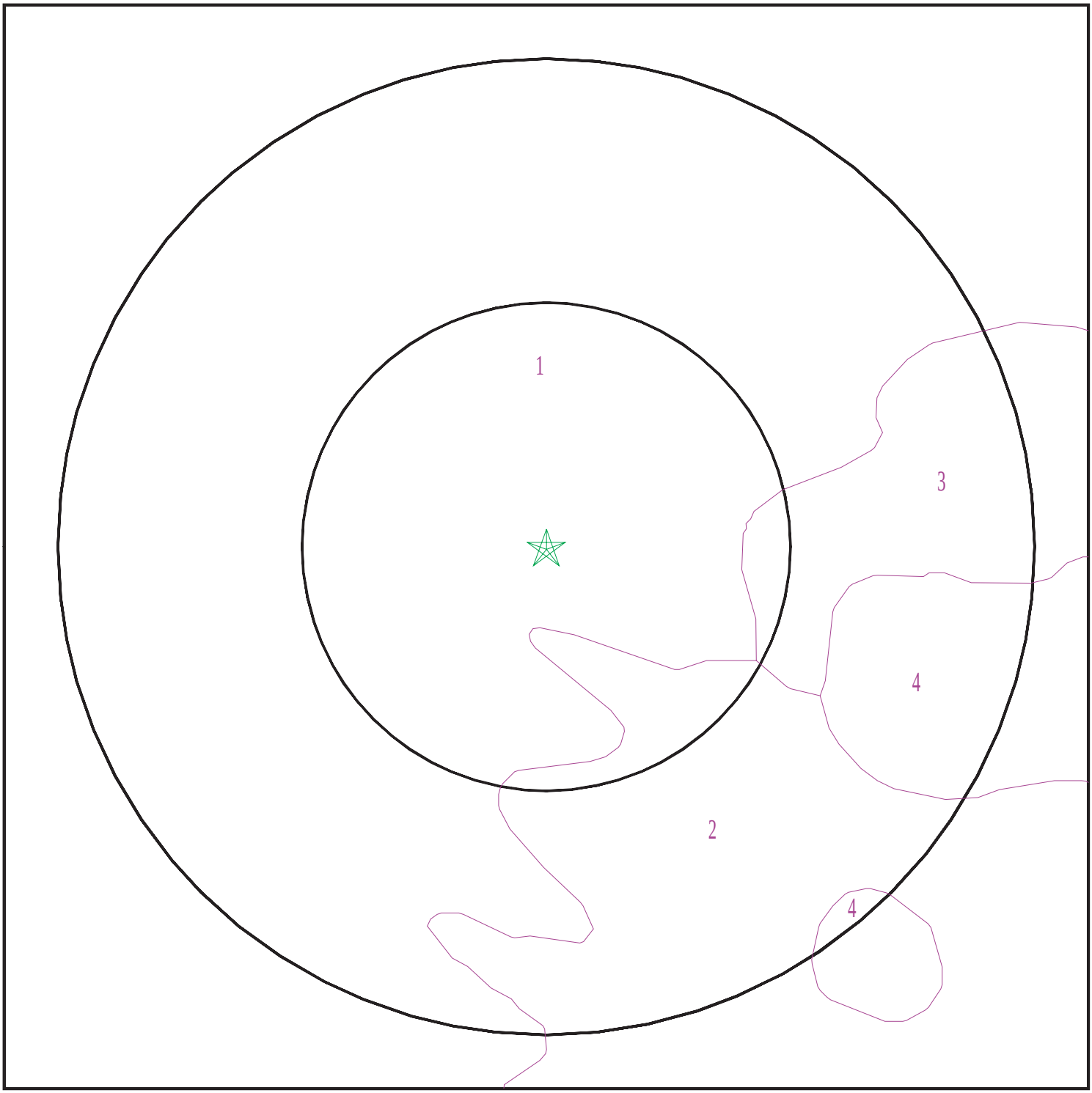
Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7209986.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Inland Empire North Logistics Center, Apple Valley	CLIENT:	Pacific Beacon Group
ADDRESS:	Not Reported Apple Valley CA 92307	CONTACT:	Jeffrey Tartaglino
		INQUIRY #:	7209986.2s
LAT/LONG:	34.575119 / 117.267753	DATE:	December 22, 2022 8:10 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: MIRAGE

Soil Surface Texture:
Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
2	5 inches	20 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
3	20 inches	38 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
4	38 inches	59 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4

Soil Map ID: 2

Soil Component Name: CAJON

Soil Surface Texture:
Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
2	5 inches	59 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4

Soil Map ID: 3

Soil Component Name: TRIGGER

Soil Surface Texture:

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches		Not reported	Not reported	Max: Min:	Max: Min:
2	11 inches	16 inches		Not reported	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 4

Soil Component Name: PITS

Soil Surface Texture:
Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS40000147315	1/4 - 1/2 Mile ESE
A3	USGS40000147298	1/4 - 1/2 Mile ESE
B5	USGS40000147502	1/2 - 1 Mile North

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

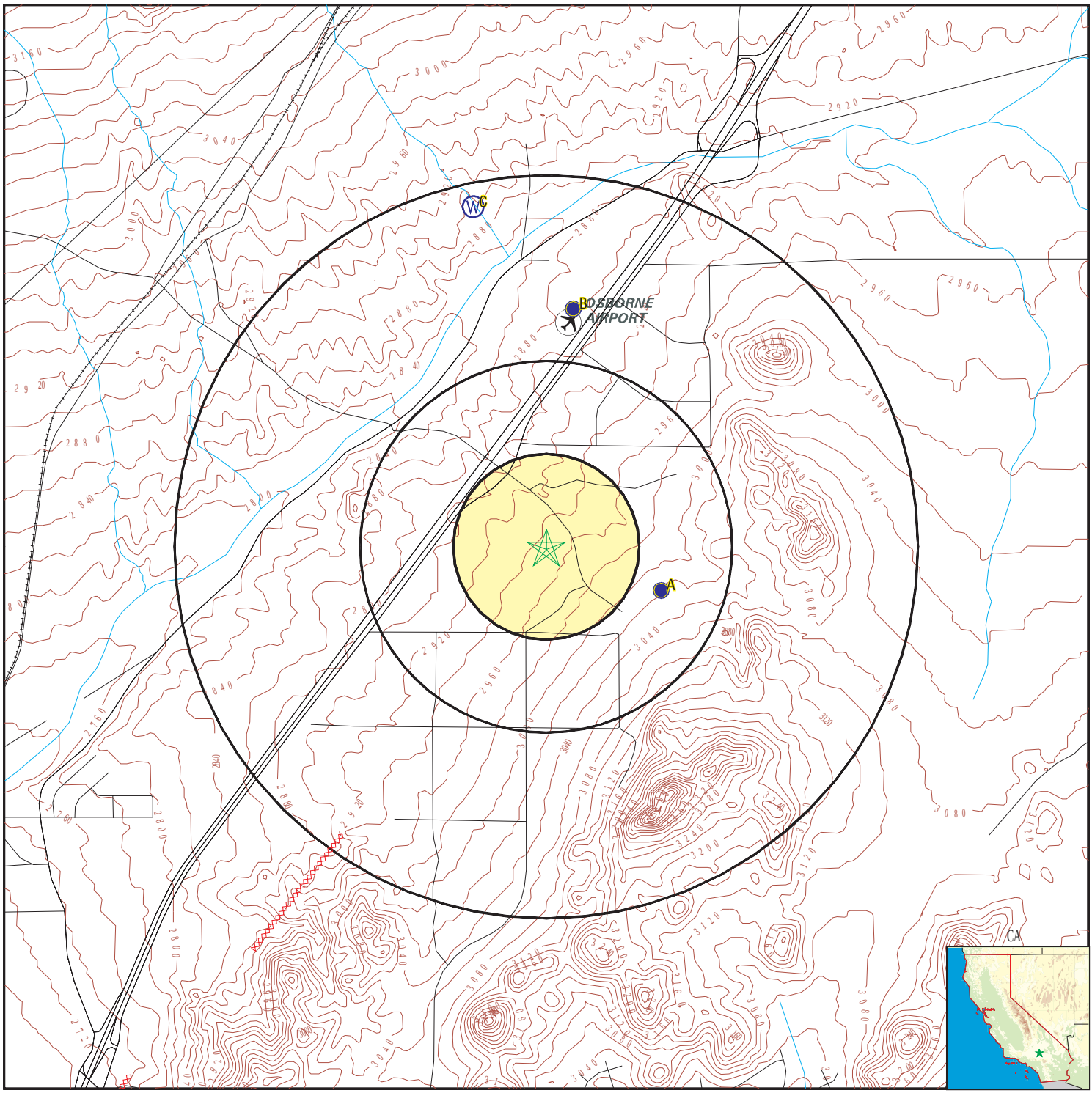
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CADWR9000010567	1/4 - 1/2 Mile ESE
B4	CADWR9000010658	1/2 - 1 Mile North
B6	CADWR0000002746	1/2 - 1 Mile North
C7	CAEDF0000115885	1/2 - 1 Mile NNW
C8	CAPFAS000000739	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 7209986.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Inland Empire North Logistics Center, Apple Valley	CLIENT:	Pacific Beacon Group
ADDRESS:	Not Reported Apple Valley CA 92307	CONTACT:	Jeffrey Tartaglino
LAT/LONG:	34.575119 / 117.267753	INQUIRY #:	7209986.2s
		DATE:	December 22, 2022 8:10 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
ESE
1/4 - 1/2 Mile
Higher

CA WELLS **CADWR9000010567**

State Well #:	06N04W26R001S	Station ID:	28929
Well Name:	Not Reported	Basin Name:	Upper Mojave River Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

A2
ESE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000147315**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N004W26R001S	Type:	Well
Description:	COMPUTER GENERATED LAT/LONG ACCURATE +/- 500 FT		
HUC:	18090208	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Basin and Range basin-fill aquifers
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1957-08-30
Feet below surface:	186.38	Feet to sea level:	Not Reported
Note:	Not Reported		

A3
ESE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000147298**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N004W26R002S	Type:	Well
Description:	MPUTER GENERATED LAT/LONG. +/- 500FT		
HUC:	18090208	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Basin and Range basin-fill aquifers
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	146.3
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B4
North
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000010658**

State Well #:	06N04W26B001S	Station ID:	28928
Well Name:	Not Reported	Basin Name:	Upper Mojave River Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

B5
North
1/2 - 1 Mile
Lower

FED USGS **USGS40000147502**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N004W26B001S	Type:	Well
Description:	COMPUTER GENERATED LAT/LONG ACCURATE +/- 500 FT		
HUC:	18090208	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Basin and Range basin-fill aquifers
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1957-08-30
Feet below surface:	191.14	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1955-09-02	Feet below surface:	190.20
Feet to sea level:	Not Reported	Note:	Not Reported

B6
North
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000002746**

Well ID:	06N04W26B001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	06N04W26B001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=06N04W26B001S&store_num=		
GeoTracker Data:	Not Reported		

C7
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000115885**

Well ID:	L10004389991-VSL-12	Well Type:	MONITORING
Source:	EDF	Other Name:	VSL-12
GAMA PFAS Testing:	Not Reported		

Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10004389991&assigned_name=VSL-12&store_num=
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10004389991&assigned_name=VSL-12

C8
NNW
1/2 - 1 Mile
Lower

CA WELLS **CAPFAS000000739**

Well ID:	L10004389991-VSL-12	Well Type:	MONITORING
Source:	EDF	Other Name:	VSL-12
GAMA PFAS Testing:	Yes		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10004389991&assigned_name=VSL-12&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92307	30	1

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN BERNARDINO COUNTY, CA

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.678 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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PHASE I ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE

The following questionnaire is required by the ASTM Standard E 1527-13, which adheres to the All Appropriate Inquiries (AAI) Rule (United States Environmental Protection Agency) (40 CFR 312).

As defined by ASTM, the User of the report is the *"party seeking to use Practice E 1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice."*

PROPERTY ADDRESS:	Highway 15 & Falchion Road
PROPERTY CITY, STATE ZIP:	Town of Apple Valley, CA

1. **Environmental liens that are filed or recorded against the property (40 CFR 312.25)**

   Did a search of recorded land title records (or judicial records) identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?

   ☐ YES ☑ NO

2. **Activity and use limitations (AULs) that are in place on the property or that have been filed or records against the property (40 CFR 312.26(a)(1)(v) and (vi))**

   Did a search of recorded land title records (or judicial records) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?

   ☐ YES ☑ NO

3. **Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28)**

   Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

   ☐ YES ☑ NO

4. **Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29)**
   Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?
   ☑ YES ☐ NO

---

5. **Commonly known or reasonably ascertainable information about the Property (40 CFR 312.30)**
   Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?
   ☐ YES ☑ NO

---

   a. Do you know the past uses of the property?
   ☐ YES ☑ NO

---

   b. Do you know of specific chemicals that are present or once were present at the property?
   ☐ YES ☑ NO

---

   c. Do you know of spills or other chemical releases that have taken place at the property?
   ☐ YES ☑ NO

---

   d. Do you know of any environmental cleanups that have taken place at the property?
   ☐ YES ☑ NO

---

   e. Do you have any prior knowledge that the property was developed as a gas station, dry cleaner, manufacturing/industrial facility in the past?
   ☐ YES ☑ NO

---

   f. Are you aware of historical use of hazardous materials or petroleum products used or present on the property?
   ☐ YES ☑ NO

---

g. Do you know if the property is currently or was formerly equipped with underground storage tanks (USTs) or septic tanks?

☐ YES ☑ NO

h. Do you know of any past, threatened or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the property by any owner or occupant of the property?

☐ YES ☑ NO

6. The degree of obviousness of the presence or likely presence of contamination at the property**, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31)**

Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?

☐ YES ☑ NO

Signature of User/Person Interviewed: _____

Name of User/Person Interviewed: (via phone)

Title/Relationship to Property: _____

Phone Number/Email: _____

Date: December 26, 2022

Contact for additional information:

Name: _____

Relationship to Property: _____

Phone Number/Email: _____



First American Title

First American Title Company

1250 Corona Pointe Court, Ste 200
Corona, CA 92879

FGFW IV LLC
150 N. Market
Wichita, KS 67206

Customer Reference:	APNs 0472-031-08, 60 through 65
Order Number:	NHSC-6814522 (tc)
Title Officer:	Terrell Crutchfield
Phone:	(951)256-5879
Fax No.:	(866)558-2872
E-Mail:	tcrutchfield@firstam.com
Buyer:	

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Exhibit A attached. *The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties*. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit A. Copies of the policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

Please be advised that any provision contained in this document, or in a document that is attached, linked or referenced in this document, that under applicable law illegally discriminates against a class of individuals based upon personal characteristics such as race, color, religion, sex, sexual orientation, gender identity, familial status, disability, national origin, or any other legally protected class, is illegal and unenforceable by law.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of April 05, 2022 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

To Be Determined

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

FGFW IV, LLC, A KANSAS LIMITED LIABILITY COMPANY

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A fee.

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2022-2023, a lien not yet due or payable.

2. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

3. An easement for road purposes and incidental purposes, recorded July 9, 1952 as Book 2981, Page 431 of Official Records.
   In Favor of: Riverside Cement Company
   Affects: Parcels 2 and 3 of Parcel Two, as described therein

   Reference is also made to Supplement To Easement Agreement Dated March 14, 1957, between Riverside Cement Company, A Corporation And Victorville Lime Rock Co., A Corporation Recorded March 27, 1957, In Book 4190, Page 591, Official Records.

   The location of the easement cannot be determined from record information.

4. Right of way granted to the United States relating to irrigation and reclamation; together with a reservation to the people for the absolute right to fish thereupon, as provided by section 25 of article i of the constitution of the State Of California, as contained in the patent from the State Of California Recorded November 7, 1952, In Book 3051, Page 11, Official Records.

5. An easement for pole lines and incidental purposes, recorded July 12, 1954 as Book 3419, Page 295 of Official Records.
   In Favor of: California Interstate Telephone Company
   Affects: Parcel One, as described therein

6. An easement for pole lines and incidental purposes, recorded July 12, 1954 as Book 3419, Page 297 of Official Records.
   In Favor of: California Interstate Telephone Company
   Affects: Parcel One, as described therein

7. Abutter's rights of ingress and egress to or from State Highway #15 have been relinquished in the document recorded June 04, 1957 as Book 4246, Page 339 of Official Records.

8. An easement for pipe lines and incidental purposes in the document recorded July 1, 1957 as Book 4268, Page 484 of Official Records.

   (Affects Parcel 4 of Parcel Two)

9. An easement for either or both pole lines, conduits and incidental purposes in the document recorded August 08, 1980 as Instrument No. 80-177081 of Official Records.

   (Affects Parcels 1 and 4 of Parcel Two, as described therein)

10. An easement for public utilities and incidental purposes in the document recorded March 03, 1988 as Instrument No. 1988-66060 of Official Records.

11. The fact that the land lies within the boundaries of the 1993 Victor Valley Redevelopment Project Area, as disclosed by the document recorded December 29, 1993 as Instrument No. 1993-565775 of Official Records.

12. An easement shown or dedicated on the Map as referred to in the legal description

    For: Drainage and incidental purposes.

    Affects: Parcels 1 and 4 of Parcel Two

13. An easement shown or dedicated on the Map as referred to in the legal description

    For: Pole line and incidental purposes.

    Affects: Parcel 4 of Parcel Two

14. An easement shown or dedicated on the Map as referred to in the legal description

For: Right of way and incidental purposes.

Said offer of dedication was accepted by the City Council of Victorville Subject to their improvements.

Affects: Parcel Two

15. The following matters shown or disclosed by the filed or recorded map referred to in the legal description: City Engineer's Statement of Improvements Required

Affects: Parcel Two

16. The terms and provisions contained in the document entitled "Land Division Improvement Construction Agreement" recorded December 8, 1998 as Instrument No. 1998-522838 of Official Records.

(Affects Parcel One)

17. An easement for drainage and incidental purposes, recorded October 22, 2001 as Instrument No. 2001-480158 of Official Records.

In Favor of: State of California
Affects: Parcel 3 of Parcel Two, as described therein

18. An easement for drainage and incidental purposes, recorded October 22, 2001 as Instrument No. 2001-480160 of Official Records.

In Favor of: State of California
Affects: Parcel 2 of Parcel Two, as described therein

19. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document recorded November 21, 2001 as Instrument No. 2001-531644 of Official Records.

20. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document recorded November 21, 2001 as Instrument No. 2001-531645 of Official Records.

21. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway or roadway, as contained in the document recorded November 21, 2001 as Instrument No. 2001-531646 of Official Records.

22. An easement for drainage and incidental purposes, recorded November 21, 2001 as Instrument No. 2001-531647 of Official Records.
In Favor of: State of California
Affects: as described therein

23. An easement for drainage and incidental purposes, recorded November 21, 2001 as Instrument No. 2001-531648 of Official Records.
In Favor of: State of California
Affects: as described therein

24. An easement for drainage and incidental purposes, recorded November 26, 2001 as Instrument No. 2001-533745 of Official Records.
In Favor of: State of California
Affects: as described therein

25. The terms and provisions contained in the document entitled "Notice of Conditional Use Permit" recorded April 21, 2004 as Instrument No. 2004-274808 of Official Records.

(Affects Parcel 3 of Parcel Two)

26. An easement for street and highway including public road and public utility and incidental purposes, recorded June 18, 2012 as Instrument No. 2012-244767 of Official Records.
In Favor of: The Town of Apple Valley, a municipal corporation and body corporate and politic in the County of San Bernardino, State of California
Affects: Parcel One

27. The effect of a map purporting to show the land and other property, filed Book 152, Page 28 through 51 of Record of Surveys.

28. A Deed of Trust to secure an original indebtedness of $8,100,000.00 recorded January 29, 2019 as Instrument No. 2019-28338 of Official Records.

Dated:	January 25, 2019
Trustor:	FGFW IV, LLC, a Kansas limited liability company
Trustee:	First American Title Insurance Company, a Nebraska corporation
Beneficiary:	CrossFirst Bank, a Kansas banking corporation

29. Rights of the public in and to that portion of the Land lying within any Road, Street, Alley or Highway.

30. Water rights, claims or title to water, whether or not shown by the Public Records.

31. Rights of parties in possession.

Prior to the issuance of any policy of title insurance, the Company will require:

32. With respect to FGFW IV, LLC, a Kansas limited liability company:
a. A copy of its operating agreement and any amendments thereto;
b. If it is a California limited liability company, that a certified copy of its articles of organization (LLC-1) and any certificate of correction (LLC-11), certificate of amendment (LLC-2), or restatement of articles of organization (LLC-10) be recorded in the public records;
c. If it is a foreign limited liability company, that a certified copy of its application for registration (LLC-5) be recorded in the public records;
d. With respect to any deed, deed of trust, lease, subordination agreement or other document or instrument executed by such limited liability company and presented for recordation by the Company or upon which the Company is asked to rely, that such document or instrument be executed in accordance with one of the following, as appropriate:
(i) If the limited liability company properly operates through officers appointed or elected pursuant to the terms of a written operating agreement, such document must be executed by at least two duly elected or appointed officers, as follows: the chairman of the board, the president or any vice president, and any secretary, assistant secretary, the chief financial officer or any assistant treasurer;
(ii) If the limited liability company properly operates through a manager or managers identified in the articles of organization and/or duly elected pursuant to the terms of a written operating agreement, such document must be executed by at least two such managers or by one manager if the limited liability company properly operates with the existence of only one manager.
e. Other requirements which the Company may impose following its review of the material required herein and other information which the Company may require

INFORMATIONAL NOTES

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

1. General and special taxes and assessments for the fiscal year 2021-2022

Affects	APN	TRA	1st Half, STATUS	Penalty	2nd half, STATUS	Penalty
Parcel One	0472-031-08-0-000	021029	$41,732.80, PAID	$0.00	$41,732.77, PAID	$0.00
Portion of Parcel 1 of Parcel Two	0472-031-60-0-000	012176	$591.64, PAID	$0.00	$591.61, PAID	$0.00
Portion of Parcel 1 of Parcel Two	0472-031-61-0-000	012176	$2,859.06, PAID	$0.00	$2,859.02, PAID	$0.00
Parcel 2 of Parcel Two	0472-031-62-0-000	012176	$8,028.78, PAID	$0.00	$8,028.74, PAID	$0.00
Parcel 3 of Parcel Two	0472-031-63-0-000	012176	$16,723.48, PAID	$0.00	$16,723.46, PAID	$0.00
Portion of Parcel 4 of Parcel Two	0472-031-64-0-000	012176	$899.72, PAID	$0.00	$899.68, PAID	$0.00
Portion of Parcel 4 of Parcel Two	0472-031-65-0-000	012176	$8,842.19, PAID	$0.00	$8,842.15, PAID	$0.00

2. The property covered by this report is vacant land.

3. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

First American Title Company
1250 Corona Pointe Court, Suite 200
Corona, CA 92879
(951)256-5880
Fax - (909)476-2401

First American Title

WIRE INSTRUCTIONS

for

First American Title Company, Demand/Draft Sub-Escrow Deposits
Riverside County, California

First American Trust, FSB
5 First American Way
Santa Ana, CA 92707
Banking Services: (877) 600-9473

ABA 122241255
Credit to First American Title Company
Account No. 3097840000

Reference Title Order Number 6814522 and Title Officer Terrell Crutchfield

Please wire the day before recording.

LEGAL DESCRIPTION

Real property in the Town of Apple Valley, County of San Bernardino, State of California, described as follows:

PARCEL ONE: (APN: 0472-031-08-0-000)

ALL THAT PORTION OF THE SOUTH 1/2 OF SECTION 26, TOWNSHIP 6 NORTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE TOWN OF APPLE VALLEY, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF LYING SOUTHEASTERLY OF THE SOUTHEAST BOUNDARY OF THE STATE HIGHWAY AS CONVEYED BY DEED RECORDED JUNE 4, 1957, IN BOOK 4246, PAGE 339, OFFICIAL RECORDS.

EXCEPTING THEREFROM THE EAST 1/2 OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 26.

ALSO EXCEPTING THEREFROM THE SOUTH 1/2 OF THE SOUTH 1/2 OF THE WEST 1/2 OF THE EAST 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 26.

ALSO EXCEPTING THEREFROM TO THE STATE OF CALIFORNIA ALL OIL, GAS, OIL SHALE, PHOSPHATE, SODIUM, GOLD, SILVER AND ALL OTHER MINERAL DEPOSITS CONTAINED IN SAID LANDS, (EXCEPTING ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIAL, WHETHER OR NOT OF COMMERCIAL VALUE), AND FURTHER RESERVING TO THE STATE OF CALIFORNIA, AND PERSONS AUTHORIZED BY THE STATE, THE RIGHT TO DRILL FOR AND EXTRACT SUCH DEPOSITS OF OIL AND GAS OR GAS AND TO PROSPECT FOR, MINE AND REMOVE SUCH DEPOSITS OF OTHER MINERALS FROM SAID LANDS (EXCEPTING ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIALS, WHETHER OR NOT OF COMMERCIAL VALUE), AND TO OCCUPY AND USE SO MUCH OF THE SURFACE OF SAID LANDS AS MAY BE REQUIRED THEREFOR, UPON COMPLIANCE WITH THE CONDITIONS AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF CHAPTER 5, PART I, DIVISION 6 OF THE PUBLIC RESOURCES CODE, AS RESERVED IN THE PATENT RECORDED NOVEMBER 7, 1952, IN BOOK 3051, PAGE 11, OFFICIAL RECORDS.

EXCEPTING THEREFROM THOSE PORTIONS CONVEYED TO THE STATE OF CALIFORNIA BY DEEDS RECORDED NOVEMBER 21, 2001 AS INSTRUMENT NO. 2001-531644 THROUGH 2001-531646 OFFICIAL RECORDS OF SAID COUNTY.

The Land referred to herein below is situated in the City of Victorville, County of San Bernardino, State of California, and is described as follows:

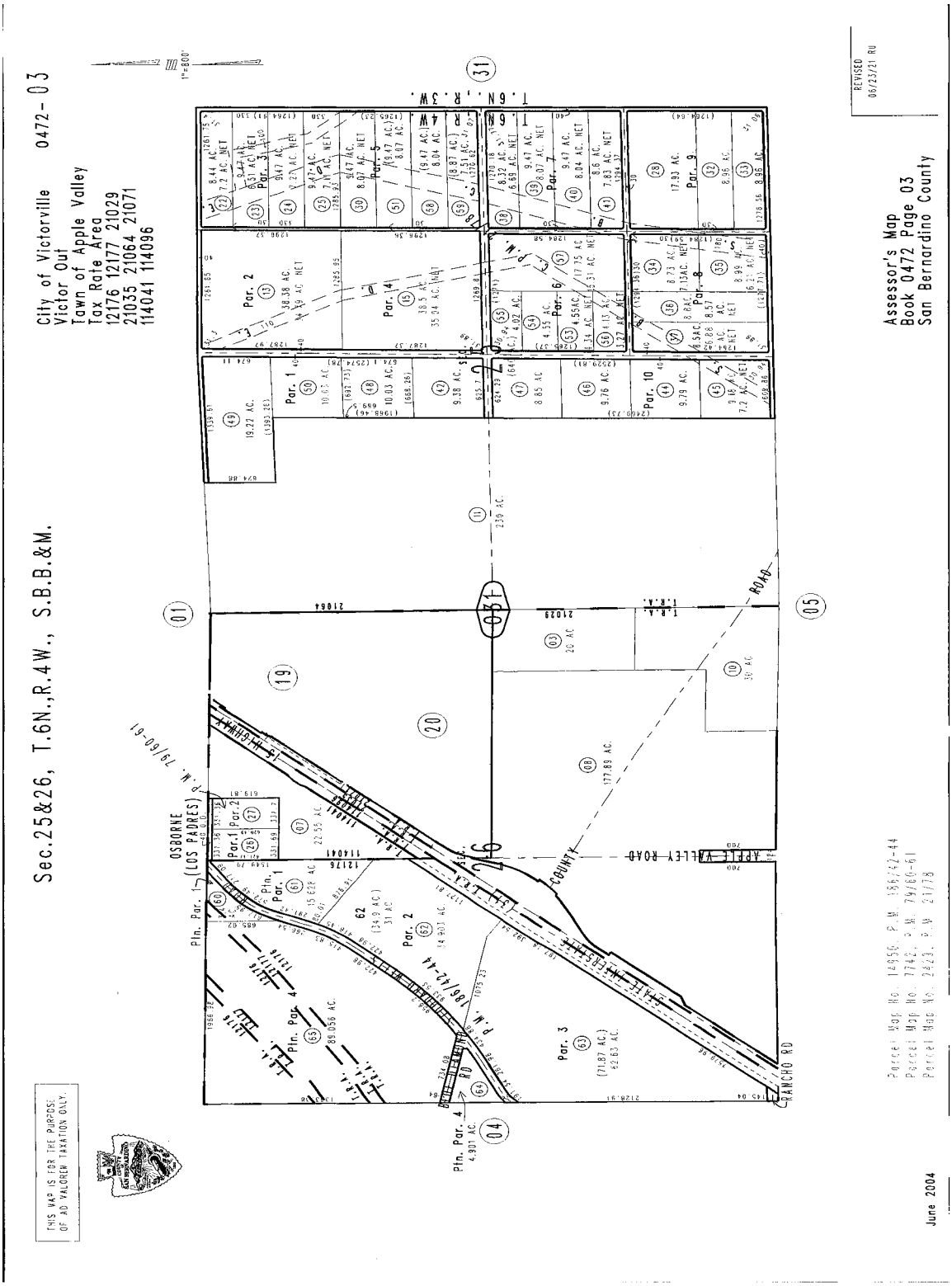
PARCEL TWO : (APN: 0472-031-60-0-000 (Portion of Parcel 1), 0472-031-61-0-000 (Portion of Parcel 1), 0472-031-62-0-000 (Parcel 2), 0472-031-63-0-000 (Parcel 3), 0472-031-64-0-000 (Portion of Parcel 4) and 0472-031-65-0-000 (Portion of Parcel 4)

PARCELS 1, 2, 3 AND 4 OF PARCEL MAP NO. 14950, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, AS PER MAP RECORDED IN BOOK 186, PAGES 42 TO 44, OF PARCEL MAPS, RECORDS OF SAID COUNTY.

EXCEPTING FROM SAID PARCEL 3, THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA BY DEED RECORDED OCTOBER 22, 2001 AS INSTRUMENT NO. 2001-480157 OFFICIAL RECORDS.

EXCEPTING FROM SAID PARCEL 2, THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA BY DEED RECORDED OCTOBER 22, 2001 AS INSTRUMENT NO. 2001-480159 OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM TO THE STATE OF CALIFORNIA ALL OIL, GAS, OIL, SHALE, PHOSPHATE, SODIUM, GOLD, SILVER, AND ALL OTHER MINERAL DEPOSITS CONTAINED IN SAID LANDS, (EXCEPTING ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIALS, WHETHER OR NOT OF COMMERCIAL VALUE), AND FURTHER RESERVING TO THE STATE OF CALIFORNIA, AND PERSONS AUTHORIZED BY THE STATE, THE RIGHT TO DRILL FOR AND EXTRACT SUCH DEPOSITS OF OIL AND GAS, OR GAS, AND TO PROSPECT, FOR, MINE, AND REMOVE SUCH DEPOSITS OR OTHER MINERALS FROM SAID LANDS (EXCEPTING ALL URANIUM, THORIUM OR ANY OTHER MATERIAL WHICH IS OR MAY BE DETERMINED TO BE PECULIARLY ESSENTIAL TO THE PRODUCTION OF FISSIONABLE MATERIALS, WHETHER OR NOT OF COMMERCIAL VALUE), AND TO OCCUPY AND USE SO MUCH OF THE SURFACE OF SAID LANDS AS MAY BE REQUIRED THEREFOR, UPON COMPLIANCE WITH THE CONDITIONS AND SUBJECT TO THE PROVISIONS AND LIMITATIONS OF CHAPTER 5, PART I, DIVISION 6 OF THE PUBLIC RESOURCES CODE, AS RESERVED IN THE PATENT RECORDED NOVEMBER 7, 1952, IN BOOK 3051, PAGE 11, OFFICIAL RECORDS.


0472- 03
City of Victorville
Victor Out
Town of Apple Valley
Tax Rate Area
12176 12177 21029
21035 21064 21071
114041 114096
Sec.25&26, T.6N.,R.4W., S.B.B.&M.
T. 6N., R. 3W.
1"=800'
REVISED 06/23/21 RU
Assessor's Map
Book 0472 Page 03
San Bernardino County
June 2004
THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY.
OSBORNE (LOS PADRES)
APPLE VALLEY ROAD
RANCHO RD
Par. 1
Par. 2
Par. 3
Par. 4
Par. 5
Par. 6
Par. 7
Par. 8
Par. 9
Par. 10
Par. 14
Pln. Par. 1
Pln. Par. 2
Pln. Par. 4
Parcel Map No. 14956, P.M. 186/42-44
Parcel Map No. 7742, P.M. 79/60-61
Parcel Map No. 2823, P.M. 21/78

NOTICE

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)

CLTA STANDARD COVERAGE POLICY – 1990
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
   Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public, records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material unless such lien is shown by the public records at Date of Policy.

CLTA/ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building;
   b. zoning;
   c. land use;
   d. improvements on the Land;
   e. land division; and
   f. environmental protection.
   This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.
   This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:
For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.
The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1% of Policy Amount Shown in Schedule A or $2,500 (whichever is less)	$10,000
Covered Risk 18:	1% of Policy Amount Shown in Schedule A or $5,000 (whichever is less)	$25,000
Covered Risk 19:	1% of Policy Amount Shown in Schedule A or $5,000 (whichever is less)	$25,000
Covered Risk 21:	1% of Policy Amount Shown in Schedule A or $2,500 (whichever is less)	$5,000

2006 ALTA LOAN POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;

(iii) the subdivision of land; or
(iv) environmental protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
(a) created, suffered, assumed, or agreed to by the Insured Claimant;
(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
(a) a fraudulent conveyance or fraudulent transfer, or
(b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

[Except as provided in Schedule B - Part II,[t[or T]his policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

[PART I

[The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material unless such lien is shown by the Public Records at Date of Policy.

PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:]

2006 ALTA OWNER'S POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

(i) the occupancy, use, or enjoyment of the Land;
(ii) the character, dimensions, or location of any improvement erected on the Land;
(iii) the subdivision of land; or
(iv) environmental protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
(a) created, suffered, assumed, or agreed to by the Insured Claimant;
(b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 or 10); or
(e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
(a) a fraudulent conveyance or fraudulent transfer, or
(b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:
[The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material unless such lien is shown by the Public Records at Date of Policy.
7. [Variable exceptions such as taxes, easements, CC&R's, etc. shown here.]

ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (07-26-10)
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

(i) the occupancy, use, or enjoyment of the Land;
(ii) the character, dimensions, or location of any improvement erected on the Land;
(iii) the subdivision of land; or
(iv) environmental protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d),

14 or 16.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.
10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

First American Title™

Privacy Notice

Effective: October 1, 2019

Notice Last Updated: January 1, 2022

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Contact Us dataprivacy@firstam.com or toll free at 1-866-718-0097.

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First American Title™

For California Residents

If you are a California resident, you may have certain rights under California law, including but not limited to the California Consumer Privacy Act of 2018 ("CCPA"). All phrases used in this section shall have the same meaning as those phrases are used under California law, including the CCPA.

Right to Know. You have a right to request that we disclose the following information to you: (1) the categories of personal information we have collected about or from you; (2) the categories of sources from which the personal information was collected; (3) the business or commercial purpose for such collection and/or disclosure; (4) the categories of third parties with whom we have shared your personal information; and (5) the specific pieces of your personal information we have collected. To submit a verified request for this information, go to our online privacy policy at www.firstam.com/privacy-policy to submit your request or call toll-free at 1-866-718-0097. You may also designate an authorized agent to submit a request on your behalf by going to our online privacy policy at www.firstam.com/privacy-policy to submit your request or by calling toll-free at 1-866-718-0097

Right of Deletion. You also have a right to request that we delete the personal information we have collected from and about you. This right is subject to certain exceptions available under the CCPA and other applicable law. To submit a verified request for deletion, go to our online privacy policy at www.firstam.com/privacy-policy to submit your request or call toll-free at 1-866-718-0097. You may also designate an authorized agent to submit a request on your behalf by going to our online privacy policy at www.firstam.com/privacy-policy to submit your request or by calling toll-free at 1-866-718-0097.

Verification Process. For either a request to know or delete, we will verify your identity before responding to your request. To verify your identity, we will generally match the identifying information provided in your request with the information we have on file about you. Depending on the sensitivity of the information requested, we may also utilize more stringent verification methods to verify your identity, including but not limited to requesting additional information from you and/or requiring you to sign a declaration under penalty of perjury.

Notice of Sale. We do not sell California resident information, nor have we sold California resident information in the past 12 months. To the extent any First American affiliated entity has a different practice, it will be stated in the applicable privacy policy. We have no actual knowledge of selling the information of minors under the age of 16.

Right of Non-Discrimination. You have a right to exercise your rights under California law, including under the CCPA, without suffering discrimination. Accordingly, First American will not discriminate against you in any way if you choose to exercise your rights under the CCPA.

Notice of Collection. To learn more about the categories of personal information we have collected about California residents over the last 12 months, please see "What Information Do We Collect About You" in https://www.firstam.com/privacy-policy. To learn about the sources from which we have collected that information, the business and commercial purpose for its collection, and the categories of third parties with whom we have shared that information, please see "How Do We Collect Your Information", "How Do We Use Your Information", and "How Do We Share Your Information" in https://www.firstam.com/privacy-policy.

Notice of Sale. We have not sold the personal information of California residents in the past 12 months.

Notice of Disclosure. To learn more about the categories of personal information we may have disclosed about California residents in the past 12 months, please see "How Do We Use Your Information" and "How Do We Share Your Information" in https://www.firstam.com/privacy-policy.

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Appendix H1
Preliminary Hydrology Report

INLAND EMPIRE NORTH LOGISTIC CENTER

PRELIMINARY HYDROLOGY REPORT

APN 0472-231-08

Prepared for:

FGFW IV LLC
150 N. Market Street
Wichita, KS 67206
(702) 330-1715

Prepared by:

David Evans and Associates
18484 Outer Highway 18 North, Suite 225
Apple Valley, CA 92307
Tel: (760) 524-9100
Attn: Bret Thorpe

Prepared Under the Supervision of:

Bret Thorpe, P.E. R.C.E. 82754

August 15, 2022
Job No: FGFW0000001

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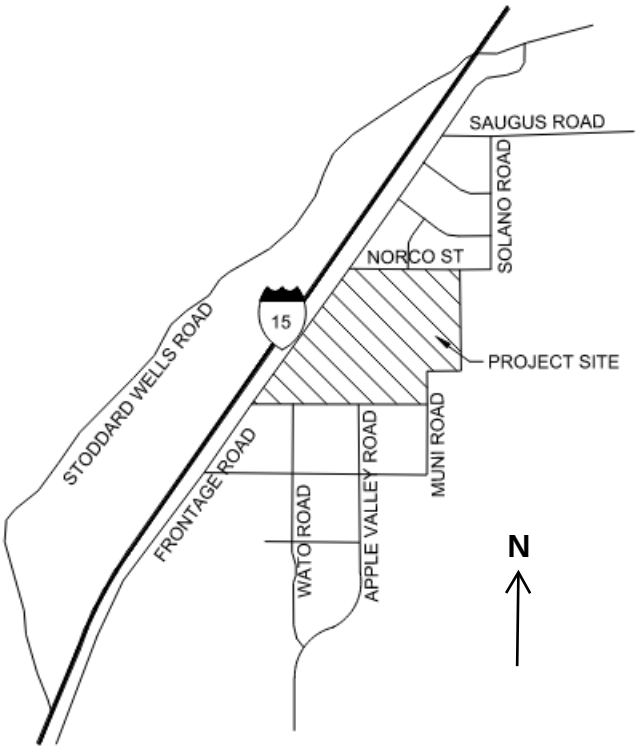
Section 1 - Introduction:

1.1. Location

The Project Owner is FGFW IV LLC 150 N. Market Street, Wichita, KS 67206 (702) 330-1715. Hydrology Study prepared by David Evans and Associates 18484 Outer Highway 18 North, Suite 225, Apple Valley, CA 92307 Phone No. (760) 524-9100.

The Project site is located within the Town of Apple Valley north of Falchion Road, South of Norco Road and east of the I-15 Freeway.
APN No. 0472-231-08
Latitude 34d 34m 32s, Longitude -117d 16m 1s.

Location map



VICINITY MAP
N.T.S.

1.2 Property Description:

1.2.1. Gross Land Acreage: 180.83 Acres, Net Land 171.56 Acres. A small portion (1.22 acre) of the property will not be developed and is designated as the remainder on the Tentative Parcel Map. Two large warehouse type building are proposed as shown on the Developed Hydrology Exhibit in Appendix A

1.2.2. The proposed Project site is vacant except for a portion that is currently used as a mining site for minerals such as lime used in the cement making business. The site slopes from east to west toward the I-15 Freeway at an approximate slope of 4% and consists of multiple flow paths, ridges, and sparse native desert plants. All the storm flows that pass through the Project site are conveyed under the I-15 Freeway in eight CMP culverts ranging in size from 2.5' in diameter to 42" in diameter. There also is one undercrossing that conveys the largest amount of existing storm flows due to that watershed being the largest area flowing through the Project site.

1.2.3. The Project consists of two large warehouse buildings. Building 1 covers approximately 34.37 acres and Building 2 covers approximately 24.95 acres and adjoining areas include loading docks, parking lots, drive aisles and landscaping. The site will be graded into two large pad areas for the buildings and storm water from the paved/roof areas of the site will be picked up in catch basins and conveyed to underground infiltration basin systems. Overflows will drain to a landscaped series of sumps and outflows into the existing CMP storm drain pipes under the freeway. The Project is a Regulated Project and will require a WQMP.

1.2.4 The offsite flows are proposed to be intercepted in streets and picked up in storm drain to be diverted around the buildings and outlet into a series of flow control sumps to be outlet into the culverts under the Freeway or outlet into its natural drainage course where offsite flows flow onto the site and off again as it does in the north east corner. Since Apple Valley Road on the east will not be constructed with this project, grading and sump inlets will pickup the offsite flows into storm drain for conveyance through the site.

1.2.5. The Project site lies northeast of the Mojave River and easterly of the Bell Mountain Wash westerly of the Freeway. The Project site flows west to the Bell Mountain Wash and The Bell Mountain Wash flows southerly to the Mojave river, Upper Narrows to Lower Narrows, approximately 1.5 miles south of the Project site. The site lies within an "D" Zone, "areas in which flood hazards are undetermined, but possible," as shown on the Flood Insurance Rate Map (FIRM) No. 06071C5810H, Map revised August 28, 2008. See copy of FEMA map in Appendix B, References.

1.2.6. The receiving Waters would be the Mojave River, southwest of the Project site.

Section 2 - Hydrologic Analysis:

2.1. Conditions, Resources and Methods

2.1.1. The existing Project site is vacant except for some mining operation as it south easterly side where land has been disturbed and there are some maintenance buildings.

The area east and south of the Project site slopes up, is mostly vacant, except, where the bulk of the mining/land disturbing operation at the tops of the hills above the Project site exists. This area drains through the Project site. The areas to the north drain onto and off the project site , before flowing under the Freeway.On the north side on the Project site is unimproved Norco Road.

The proposed development for the site consists of two large box warehouse buildings.

Soil classification is Hydrologic Soils Group (HSG) "A", (9.5%), HSG "C", (77%), HSG "D", (8.5%) and 5.2% undetermined. The undetermined area seems to fall where the mining operation is and will be considered HSG "D". The soil classification boundary limit is based on the Web Soil Survey from the USDA Natural Resources Conservation Service included in Appendix 'B' of this report.

NOAA 14 was used for the 10 year and 100-year rainfall estimates. The ten year, 24-hour is 2.13 inches. The 100 year, 24-hour is 3.42 inches. See Section 2.2. Table of Results for runoff coefficients and/or loss rate parameters, and time of concentration.

2.1.2. As stated above, the NOAA Atlas 14 was used for the rainfall values and Soils was based on the Web Soil Survey from the USDA Natural Resources Conservation Service. USGS Topography Maps and the San Bernardino County Hydrology Manual were also used to determine watershed conditions.

2.2. Table of Results

Unit Hydrograph Analysis

Unit Hydrograph

Area ID	TC (hour)	Qp10 (cfs)	Volume10 (Ac ft)	Qp100 (cfs)	Volume100 (Ac ft)
Area A	0.12	252.9	6.8491	553.8	32.1453
Developed					
Area A-D		299.2	25.6714*	542.47	45.0234*
Difference		**46.3**	**18.7773** (817,939 CF)**	**11.3**	**12.8691* (560,578 CF)**

* Tentative values for Developed for initial design consideration and to compare with Developed, 10year below. This initial value uses only HSG C, whereas the areas in the table below used HSG A, C, and D which are estimated off the USDA soils information for the site.

**10-year volume difference is larger than 100-year, therefore 10-year prevails as to volume mitigation.

Unit Hydrograph by Area

Developed, 10-year

Area ID	TC (hour)	Qp (cfs)	Qp (cfs) after basin routing	Volume (Ac ft)	Volume (CF)
Area A	0.22087	62.17	20.2	6.9477	302,642
Area B	0.2196	62.89	20.1	7.0372	306,540
Area C	0.208	49.79	13.2	5.6539	246,280
Area D	0.184	54.05	10.2	5.5083	239,942
Total		**228.9**	**67.7**	**25.1522**	**1,095,404**

Take difference in 10-year volume=817,939 cf divided by site acreage = 171.56 ac= 4,768 cf/acre.

Area	Acreage	Minimum Volume by acre (cf)
A	47.41	226,051
B	48.02	228,960
C	38.57	183,902
D	37.56	179,086
Total	**171.56**	**817,999 > 817,939 ok**

Developed, 100-year

Area ID	TC (hour)	Qp (cfs)	Qp (cfs) after basin routing	Volume (Ac ft)	Volume (CF)
Area A	0.22087	116.1	74.0	12.4288	514,399
Area B	0.2196	117.5	74.5	12.5890	548,377
Area C	0.208	93.1	64.6	10.1140	440,566
Area D	0.184	103.0	61.4	9.8543	429,253
Total		**429.7**	**274.5**	**44.9861**	**1,932,577**

Rational Method

Existing Condition

Offsite and on-site Q10 and Q100

Area ID	Area (ac)	Q10 (cfs)	Q100 (cfs)	TC10/TC100 (hour)	nodes
A1	3.14	3.55	9.69		101-102
A2	28.18	14.56	57.01		102-103
A3 (onsite)	6.21	0	3.83		103-104
		18.11	**70.61**	**25.63/21.81**	**confluence**
B1	9.96	12.78	33.42		201-202
B2	59.4	34.26	127.56		202-203
B3 (onsite)	20.04	0.825	23.15		203-204
		47.87	**184.11**	**22.97/19.37**	**confluence**
C1 (onsite)	3.94	3.92	9.95		301-302
C2 (onsite)	8.1	2.02	12.93		302-303
		5.94	**22.79**	**23.85/21.54**	**confluence**
D1	4.01	5.85	13.63		401-402
D2	6.0	5.0	14.88		402-403
D3 (onsite)	46.37	22.19	85.42		403-404
		33.04	113.92	23.72/20.34	**confluence**
E1	9.59	14.51	32.92		201-502
E2	15.73	22.85	52.76		502-503
E3 (onsite)	22.12	0	0		503-504
		37.37	**85.68**	**27.37/25.68**	**confluence**
F1	9.52	15.21	34.2		601-602
F2	30.65	34.94	89.35		602-603
F3	74.4	49.5	160.65		603-604
F4	39.61	16.09	68.1		604-605
F5 (onsite)	53.98	0	39.16		605-606
		115.74	**391.46**	**26.59/22.51**	**confluence**
G1	9.35	10.98	26.58		701-702
G2	13.34	9.93	29.58		702-703
G3 (onsite)	24.62	6.78	36.38		703-704
		27.69	**92.55**	**23.69/21.31**	**confluence**

Rational Method Developed

Parcel 1, Area A=47.41 acres (HSG=C)

Area ID	Q10 (cfs)	TC (Min)		Q100 (cfs)	TC (Min)
A1	12.2	10.643		22.05	10.64
A2	10.3	12.10		19.2	11.9
A2a	3.6	14.34		7.3	13.85
Confluence	**26.1**	**14.34**		**48.6**	**14.34**
A3	13.3	10.056		24	10.056
A4	11.09	11.52		20.7	11.32
A5	20.50	13.25		38.6	12.83
Confluence	**48.6**	**13.25**		**83.8**	**13.25**
Total	**70.35**	**13.25**		**130.8**	**13.25**

Rational Method Developed

Parcel 1, Area B=48.02 acres, (HSG=C)

Area ID	Q10 (cfs)	TC (Min)		Q100 (cfs)	TC (Min)
B1	12.9	9.61		23.3	9.961
B2	10.3	11.48		19.3	11.27
B3	13.1	10.116		24.9	12.75
Confluence	**36.4**			**67.57**	**13.18**
B4	13.6	10.116		24.6	10.116
B5	8.4	11.58		15.8	11.38
B6	4.4	12.79		8.5	12.43
B7	10.8	13.24		20.3	12.81
Confluence	**37.2**			**69.10**	**15.08**
Total	**72.2**	**13.178**		**134.3**	**13.178**

Rational Method Developed

Parcel 2, Area C=38.57 acres, (HSG use 60%A, 20%C and 20% D)

Area ID	Q10 (cfs)	TC (Min)		Q100 (cfs)	TC (Min)
C1	9.6	9.332		17.6	9.332
C2	7.6	10.65		14.4	10.46
C3	7.4	12.48		14.7	12.03
C4	4.4	12.48		10.3	12.03
Confluence	**29.0**	**12.48**		**57.1**	**12.48**
C5	13.6	9.612		25.1	9.612
C6	11.7	10.68		22.2	1.053
C7	3.1	13.05		6.9	12.55
Confluence	**28.4**	**13.05**		**54.2**	**13.65**
Total	**57.1**	**12.48**		**110.6**	**12.48**

Rational Method Developed

Parcel 2, Area D=37.56 acres, (HSG use 50%A, 30%C and 20% D)

Area ID	Q10 (cfs)	TC (Min)		Q100 (cfs)	TC (Min)
D1	9.2	8.431		16.7	8.431
D2	7.8	9.73		14.7	9.54
D3	2.6	12.34		5.6	11.8
Confluence	**19.6**	**12.34**		**37.0**	**12.34**
D4	13.0	8.394		23.6	8.394
D5	15.1	9.47		28.0	9.32
D6	15.3	11.04		29.4	10.65
Confluence	**43.4**	**11.04**		**80.95**	**11.04**
Total	**62.4**	**11.044**		**116.8**	**11.04**

Summary

The largest volume difference of predevelopment vs post development volume is the Q10, 24 hour, of 817,939 cubic feet as can been seen in the first Unit Hydrograph table above and that is the minimum retention required for this project The Town of Apple Valley requires not to exceed 90% of the pre-development volume, for the Q 100, 24 hour storm event, and 95% of the pre-developed volume in the Q10, 24-hour storm event, however, in this case, the Q10 post vs pre development volume is larger and will be the design volume mitigation used in this report.

The site will use four underground Stormtech infiltration systems to capture the DCV and mitigate Hydromodification caused by the development ranging in size from 230,364 cubic feet to 180,500 cubic feet for a total of 817,999 cubic feet of storage and infiltration. Basin routing, infiltration and storage also mitigate Qpeak to below its existing Qpeak as seen in unit hydrograph table alove, as well as, the time of concentration (TC). This will also comply with the proposed mitigation in the Project's WQMP.

2.3. Drainage Maps

See Appendix B for the pre and post drainage maps.

Section 3 Proposed Drainage Design Concept:

3.1. Town of Apple Valley Drainage management guidelines.
The City's guidelines are to analyze the 10 year and 100 year storm events for 1 hour (rational method) and 24-hour durations (unit hydrograph). Then demonstrate the project will not exceed 90% of the pre-development runoff for the 100-year storm event and 5% of the 10-year storm event.. See section 2.2 Table of Results, and the following summary.

3.2. Stormwater Storage Provisions
The Project site proposes to use one proprietary Stormtech underground infiltration/retention systems. The site proposes the following as to stormwater storage/retention.

Drainage Area	Required DCV* (CF)	Minimum detention/infiltration (CF)	Provided detention/infiltration system
DA-1 (A)	108,150	226,051	227,392
DA-2 (B)	109,133	228,960	230,634
DA-3 (C)	87,635	183,902	185,343
DA-4 (D)	85,336	179,086	180,500
Total	**390,254**	**817,939**	**817,999**

*Values from the WQMP report.

The total volume of retention and infiltration provided is 817,999 CF for the drainage areas, not including localized LID BMPS as can been seen in the Project's WQMP.

3.4 Drainage Structures

There will be onsite catch basins to collect the storm water and convey the storm flows to underground infiltration/and retention systems. Overflows will be conveyed to the proposed sump/flow distribution prior to discharging into the several CMP pipes under the Freeway.

Offsite flows are to be capture in streets and inlet structures and conveyed around the proposed buildings to the proposed sump/flow distribution areas fronting the site before discharging into the several CMP pipes under the freeway.

Section 4 - References:

Bonadiman Civil Design Software, Version 7.0 & 7.1 was used for the 10-year & 100-year Hydrological Analysis.

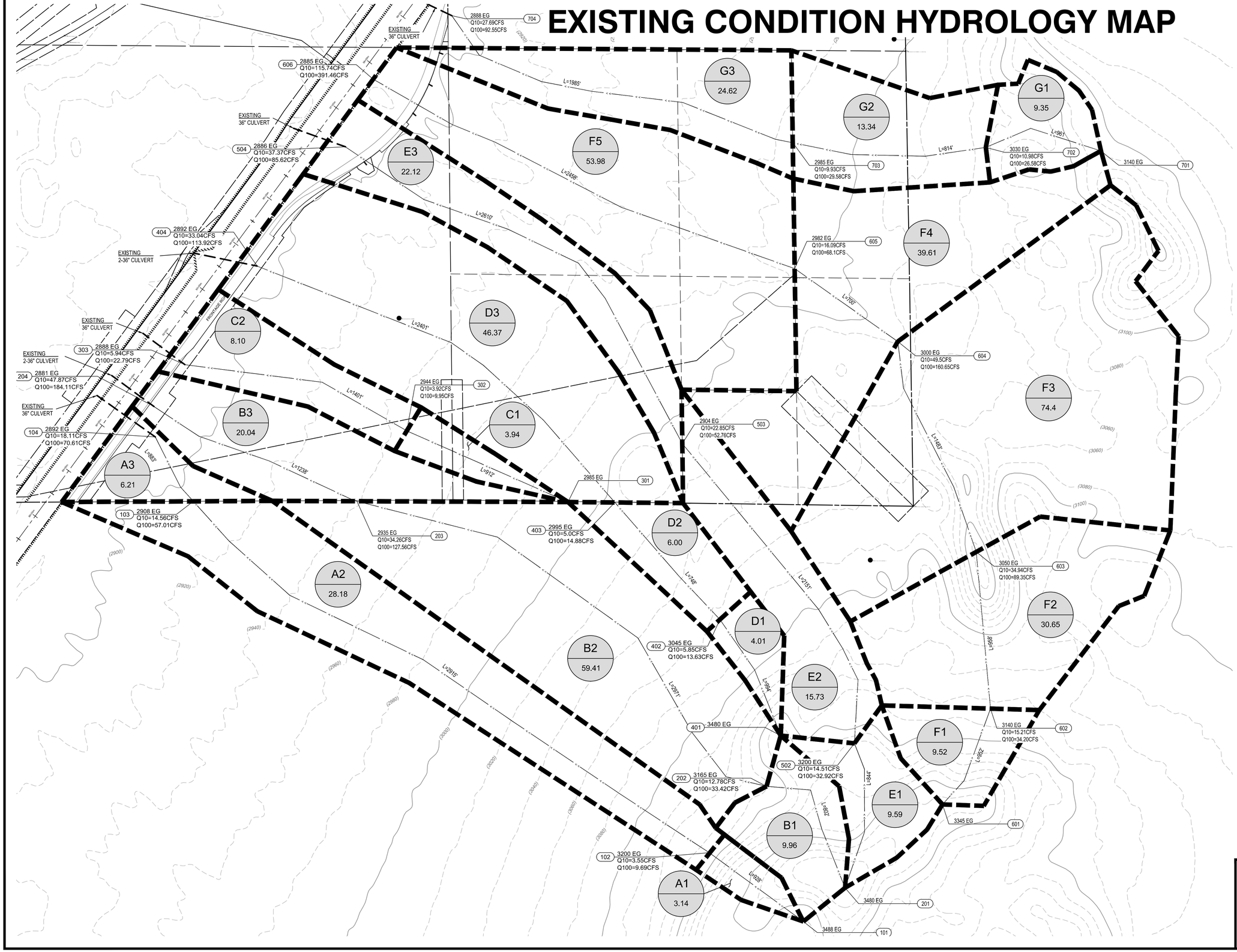
- 10-year AMC II Unit hydrograph Method (developed and undeveloped)
- 10-year AMC II Unit Hydrograph Method (developed and undeveloped)
- Soil Type A
- Mannings Values Used
- Existing Surface n=0.035
- Proposed Surface n=0.015
- Unit Hydrograph n=0.020
- Project is located in the Town of Apple Valley, CA

Drainage boundaries were derived using field topography, USGS Map for Apple Valley as shown on the hydrology map, provided in Appendix A of this report. See Appendix C for San Bernardino County Hydrology Manual and Town of Apple Valley technical references.

APPENDIX 'A'

- Hydrology Maps
  - Undeveloped Hydrology Map
  - Developed Hydrology Map

INLAND EMPIRE NORTH LOGISTICS CENTER
EXISTING CONDITION HYDROLOGY MAP



LEGEND:

- HYDROLOGY BOUNDARY
- FLOWLINE
- A / 7.96 — DRAINAGE AREA ID / TOTAL ACREAGE
- FLOW DIRECTION
- FS ELEVATION / INV ELEVATION (NODE #) — CONCENTRATION/NODE ID
- (XXXX) — EXISTING CONTOUR

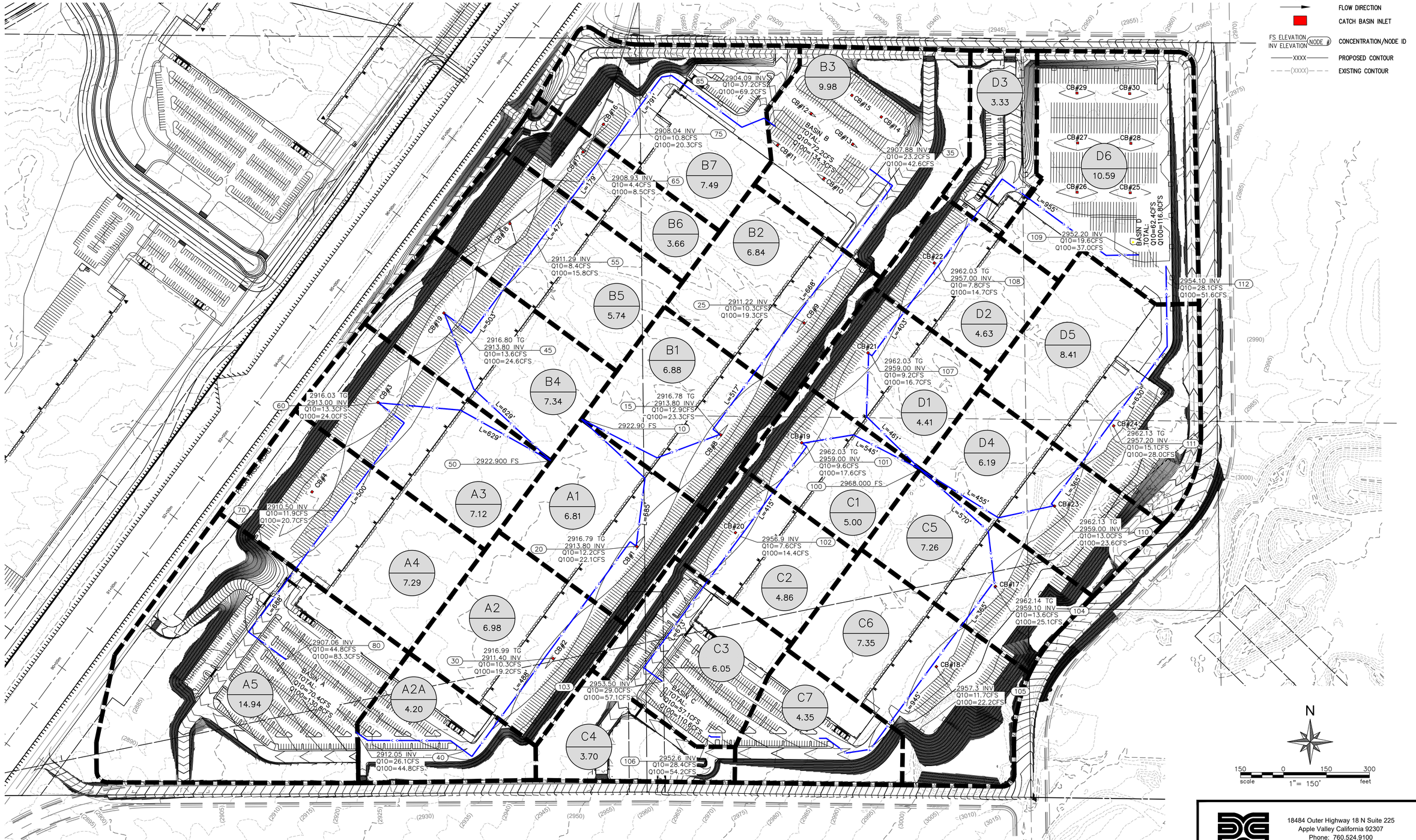
N

250 0 250 500
scale
1"= 250'
feet

18484 Outer Highway 18 N Suite 225
Apple Valley California 92307
Phone: 760.524.9100
DAVID EVANS AND ASSOCIATES INC.

Drawing Name: P:\FSF\W0000001\50DNHO\06\Reports\Hydrology\CAD\DRAINAGE EXHIBIT-EXISTING CONDITION.dwg
Last Opened: Aug 11, 2022 - 11:57am By: Jfa

INLAND EMPIRE NORTH LOGISTICS CENTER
DEVELOPED CONDITION HYDROLOGY MAP



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Drawing Name: P:\LVF\WO\00201\GRADING\EXHIBITS\Reports\Hydrology\CAD\DRAINAGE EXHIBIT-DEVELOPED CONDITION.dwg
Last Opened: Aug 10, 2022 - 2:28pm By: JTo

APPENDIX 'B'

Reference Documents

San Bernardino County Hydrology Manual Reference Material
- NOAA 14 Point Precipitation Estimates
- Hydrologic Soils Group Map
- Figure C-3Curve Numbers
- AMC Map
- Stormtech underground retention vault worksheet

Fema Firm Map 06071C5810H

NOAA Atlas 14, Volume 6, Version 2
Location name: Apple Valley, California, USA*
Latitude: 34.5758°, Longitude: -117.2656°
Elevation: 2953.66 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.093 (0.076-0.114)	0.128 (0.105-0.157)	0.178 (0.146-0.219)	0.221 (0.180-0.274)	0.284 (0.224-0.363)	0.335 (0.259-0.438)	0.391 (0.295-0.524)	0.451 (0.331-0.622)	0.539 (0.380-0.774)	0.612 (0.417-0.909)
10-min	0.133 (0.110-0.163)	0.184 (0.151-0.225)	0.255 (0.209-0.313)	0.316 (0.258-0.392)	0.406 (0.320-0.521)	0.480 (0.371-0.628)	0.560 (0.422-0.750)	0.647 (0.475-0.891)	0.773 (0.544-1.11)	0.878 (0.597-1.30)
15-min	0.161 (0.132-0.197)	0.222 (0.183-0.272)	0.308 (0.253-0.379)	0.383 (0.312-0.475)	0.491 (0.387-0.630)	0.581 (0.449-0.760)	0.677 (0.511-0.907)	0.783 (0.574-1.08)	0.935 (0.658-1.34)	1.06 (0.722-1.58)
30-min	0.215 (0.177-0.263)	0.297 (0.245-0.364)	0.412 (0.339-0.507)	0.512 (0.417-0.635)	0.658 (0.519-0.843)	0.778 (0.601-1.02)	0.907 (0.684-1.22)	1.05 (0.768-1.44)	1.25 (0.881-1.80)	1.42 (0.967-2.11)
60-min	0.256 (0.211-0.313)	0.353 (0.291-0.433)	0.490 (0.403-0.603)	0.609 (0.496-0.755)	0.782 (0.617-1.00)	0.925 (0.714-1.21)	1.08 (0.813-1.45)	1.25 (0.914-1.72)	1.49 (1.05-2.14)	1.69 (1.15-2.51)
2-hr	0.359 (0.296-0.440)	0.483 (0.398-0.593)	0.655 (0.538-0.805)	0.802 (0.653-0.994)	1.01 (0.799-1.30)	1.19 (0.915-1.55)	1.37 (1.03-1.83)	1.57 (1.15-2.15)	1.85 (1.30-2.65)	2.08 (1.41-3.08)
3-hr	0.430 (0.354-0.527)	0.573 (0.472-0.702)	0.769 (0.632-0.946)	0.936 (0.763-1.16)	1.18 (0.926-1.51)	1.37 (1.06-1.79)	1.57 (1.19-2.11)	1.79 (1.31-2.46)	2.10 (1.48-3.01)	2.35 (1.60-3.49)
6-hr	0.583 (0.480-0.714)	0.771 (0.635-0.946)	1.03 (0.844-1.26)	1.24 (1.01-1.54)	1.55 (1.22-1.98)	1.79 (1.38-2.34)	2.04 (1.54-2.74)	2.31 (1.69-3.18)	2.68 (1.89-3.85)	2.98 (2.03-4.43)
12-hr	0.747 (0.616-0.916)	0.997 (0.821-1.22)	1.33 (1.09-1.64)	1.61 (1.31-1.99)	1.99 (1.57-2.55)	2.29 (1.77-3.00)	2.60 (1.96-3.48)	2.92 (2.14-4.03)	3.37 (2.37-4.84)	3.72 (2.53-5.53)
24-hr	0.968 (0.858-1.11)	1.31 (1.16-1.51)	1.76 (1.55-2.03)	2.13 (1.86-2.48)	2.63 (2.23-3.17)	3.02 (2.51-3.72)	3.42 (2.77-4.31)	3.84 (3.02-4.97)	4.40 (3.33-5.94)	4.84 (3.54-6.77)
2-day	1.13 (1.00-1.30)	1.55 (1.37-1.79)	2.11 (1.86-2.44)	2.57 (2.25-2.99)	3.19 (2.71-3.84)	3.68 (3.05-4.52)	4.17 (3.38-5.26)	4.69 (3.69-6.07)	5.39 (4.07-7.28)	5.94 (4.34-8.30)
3-day	1.23 (1.09-1.42)	1.71 (1.51-1.96)	2.33 (2.06-2.70)	2.85 (2.50-3.32)	3.56 (3.02-4.28)	4.11 (3.41-5.05)	4.67 (3.78-5.88)	5.25 (4.14-6.80)	6.05 (4.57-8.17)	6.68 (4.88-9.33)
4-day	1.31 (1.16-1.50)	1.82 (1.61-2.09)	2.49 (2.20-2.87)	3.04 (2.66-3.54)	3.79 (3.22-4.57)	4.38 (3.63-5.38)	4.97 (4.03-6.26)	5.59 (4.40-7.24)	6.44 (4.86-8.69)	7.10 (5.18-9.91)
7-day	1.42 (1.26-1.63)	1.95 (1.73-2.25)	2.66 (2.35-3.07)	3.23 (2.83-3.76)	4.01 (3.40-4.83)	4.62 (3.83-5.68)	5.23 (4.24-6.59)	5.87 (4.63-7.60)	6.74 (5.09-9.09)	7.41 (5.41-10.4)
10-day	1.50 (1.33-1.72)	2.05 (1.82-2.36)	2.78 (2.46-3.21)	3.38 (2.96-3.93)	4.19 (3.55-5.04)	4.82 (4.00-5.92)	5.45 (4.42-6.87)	6.11 (4.81-7.91)	7.00 (5.29-9.45)	7.69 (5.62-10.7)
20-day	1.71 (1.51-1.96)	2.36 (2.09-2.71)	3.22 (2.84-3.72)	3.93 (3.44-4.57)	4.90 (4.15-5.90)	5.66 (4.69-6.95)	6.43 (5.21-8.10)	7.23 (5.69-9.36)	8.32 (6.29-11.2)	9.17 (6.69-12.8)
30-day	1.92 (1.70-2.21)	2.67 (2.37-3.08)	3.68 (3.25-4.25)	4.53 (3.97-5.27)	5.70 (4.84-6.87)	6.63 (5.50-8.15)	7.58 (6.14-9.55)	8.58 (6.76-11.1)	9.95 (7.52-13.4)	11.0 (8.06-15.4)
45-day	2.24 (1.99-2.58)	3.14 (2.78-3.62)	4.38 (3.87-5.06)	5.43 (4.76-6.33)	6.93 (5.88-8.35)	8.14 (6.75-10.0)	9.40 (7.62-11.8)	10.7 (8.46-13.9)	12.6 (9.54-17.0)	14.1 (10.3-19.7)
60-day	2.43 (2.16-2.80)	3.42 (3.03-3.94)	4.80 (4.24-5.55)	6.00 (5.26-6.99)	7.75 (6.57-9.32)	9.17 (7.61-11.3)	10.7 (8.67-13.5)	12.3 (9.72-16.0)	14.7 (11.1-19.8)	16.6 (12.1-23.2)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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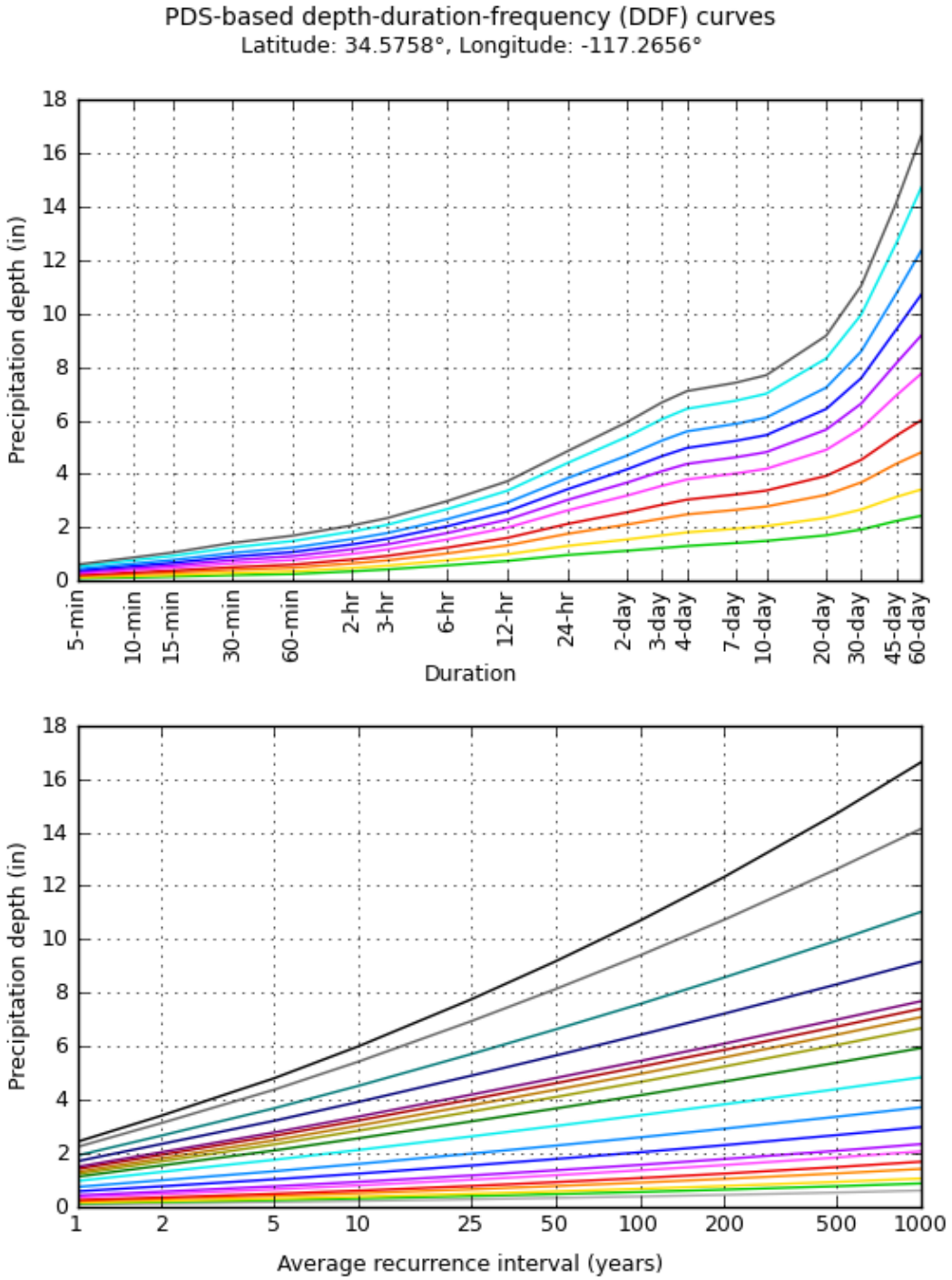
PF graphical



NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Tue Jul 26 18:32:14 2022

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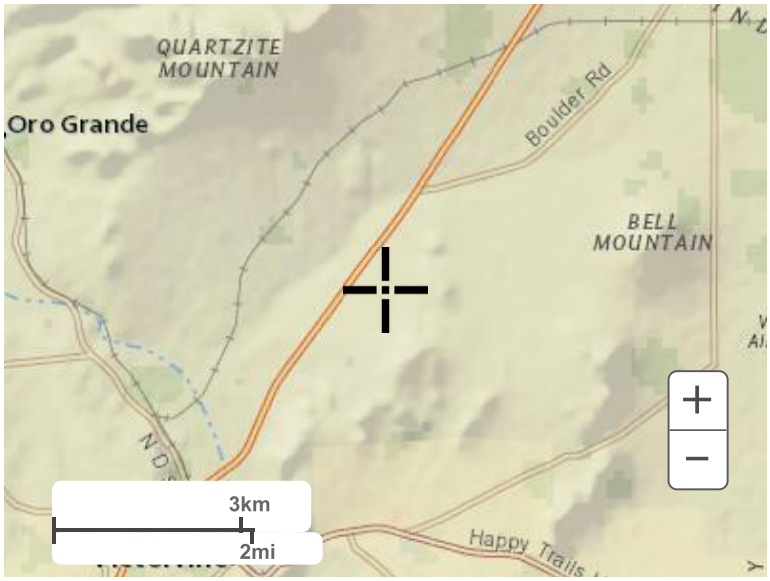
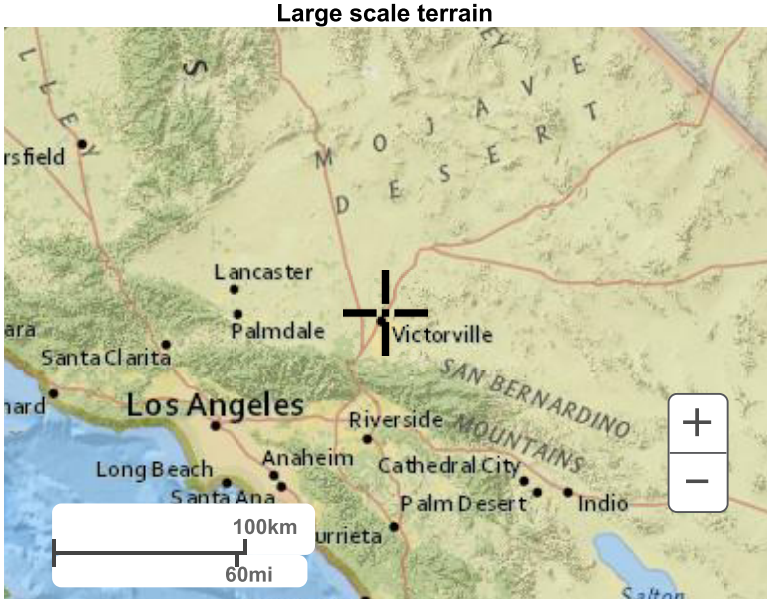
Maps & aerials

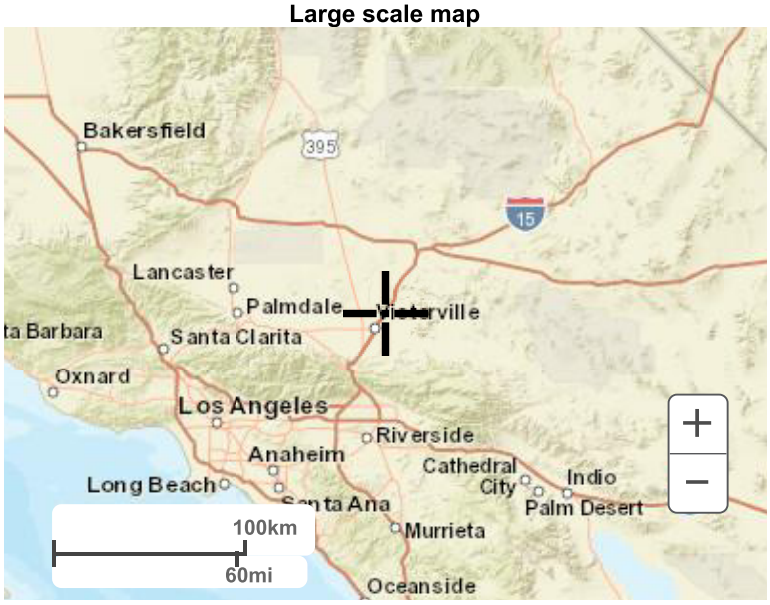
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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Questions?: HDSC.Questions@noaa.gov

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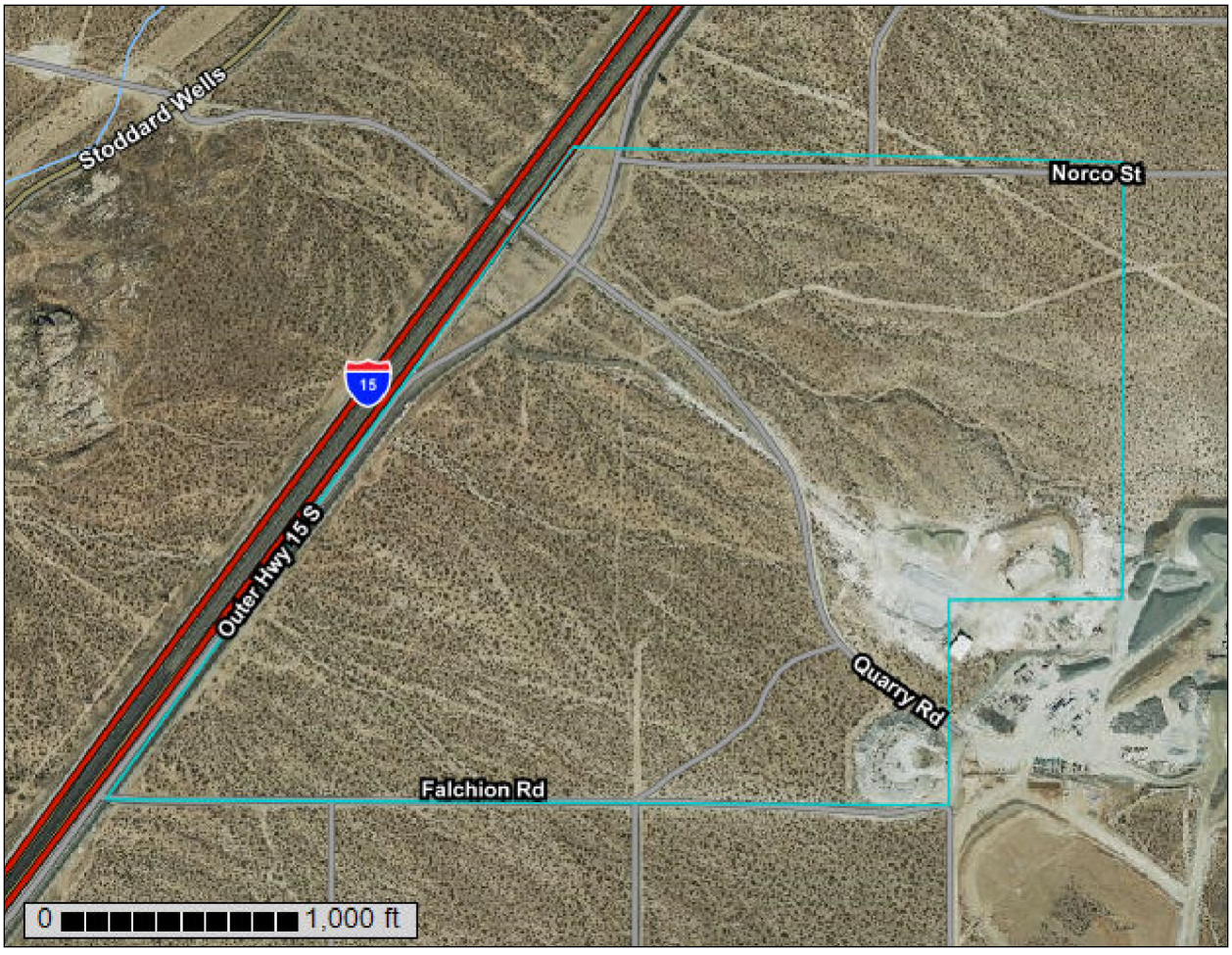
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Bernardino County, California, Mojave River Area



July 15, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

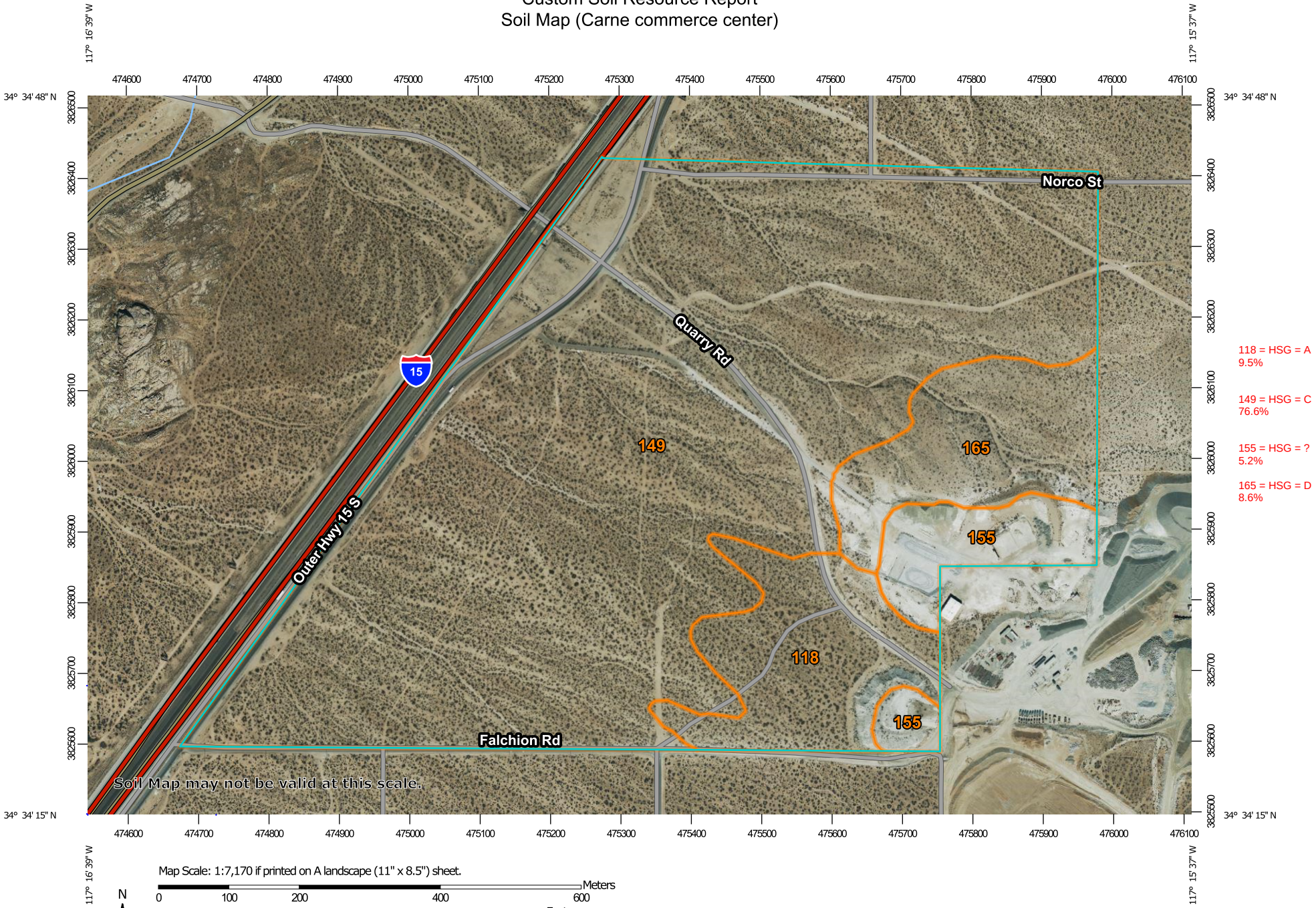
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Carne commerce center)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 13, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 27, 2021—May 24, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Carne commerce center)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
118	CAJON-ARIZO COMPLEX, 2 TO 15 PERCENT SLOPES*	18.4	9.5%	HSG = A
149	MIRAGE-JOSHUA COMPLEX, 2 TO 5 PERCENT SLOPES*	147.5	76.6%	HSG = C
155	PITS	10.1	5.2%	HSG = ?
165	TRIGGER-SPARKHULE-ROCK OUTCROP ASSOCIATION, STEEP*	16.6	8.6%	HSG = D
Totals for Area of Interest		**192.5**	**100.0%**	

Map Unit Descriptions (Carne commerce center)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Bernardino County, California, Mojave River Area

118—CAJON-ARIZO COMPLEX, 2 TO 15 PERCENT SLOPES*

Map Unit Setting

National map unit symbol: hkrq
Elevation: 2,800 to 3,300 feet
Mean annual precipitation: 3 to 6 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 290 days
Farmland classification: Not prime farmland

Map Unit Composition

Cajon, gravelly surface, and similar soils: 55 percent
Arizo and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cajon, Gravelly Surface

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 6 inches: gravelly sand
H2 - 6 to 60 inches: gravelly sand

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R030XF028CA - COBBLY SANDY
Hydric soil rating: No

Description of Arizo

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 6 inches: gravelly loamy sand
H2 - 6 to 60 inches: extremely gravelly loamy coarse sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A
Ecological site: R030XF025CA - GRAVELLY COARSE LOAMY
Hydric soil rating: No

Minor Components

Helendale

Percent of map unit: 4 percent
Hydric soil rating: No

Bryman

Percent of map unit: 4 percent
Hydric soil rating: No

Joshua

Percent of map unit: 4 percent
Hydric soil rating: No

Cajon, clayey substratum

Percent of map unit: 3 percent

149—MIRAGE-JOSHUA COMPLEX, 2 TO 5 PERCENT SLOPES*

Map Unit Setting

National map unit symbol: hksq
Elevation: 2,600 to 3,400 feet

Mean annual precipitation: 3 to 5 inches
Mean annual air temperature: 63 to 66 degrees F
Frost-free period: 200 to 290 days
Farmland classification: Not prime farmland

Map Unit Composition

Mirage and similar soils: 50 percent
Joshua and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mirage

Setting

Landform: Fan remnants
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 5 inches: sandy loam
H2 - 5 to 21 inches: gravelly sandy clay loam
H3 - 21 to 39 inches: gravelly sandy loam
H4 - 39 to 60 inches: gravelly loamy sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Strongly saline (16.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R030XG024CA - DESERT PAVEMENT
Hydric soil rating: No

Description of Joshua

Setting

Landform: Fan remnants
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sources

Typical profile

H1 - 0 to 3 inches: loam
H2 - 3 to 20 inches: gravelly sandy clay loam
H3 - 20 to 55 inches: very gravelly loamy coarse sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R030XG024CA - DESERT PAVEMENT
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 10 percent
Hydric soil rating: No

Nebona

Percent of map unit: 5 percent
Hydric soil rating: No

Cuddeback

Percent of map unit: 5 percent
Hydric soil rating: No

155—PITS

Map Unit Composition

Pits: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits

Setting

Landform: Stream terraces, alluvial fans

Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Mountainflank, side slope, tread
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Arizo

Percent of map unit: 5 percent
Hydric soil rating: No

Cajon

Percent of map unit: 3 percent
Hydric soil rating: No

Yermo

Percent of map unit: 2 percent
Hydric soil rating: No

Riverwash

Percent of map unit: 2 percent
Landform: Channels
Hydric soil rating: Yes

Trigger

Percent of map unit: 1 percent
Hydric soil rating: No

Sparkhule

Percent of map unit: 1 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

165—TRIGGER-SPARKHULE-ROCK OUTCROP ASSOCIATION, STEEP*

Map Unit Setting

National map unit symbol: hkt7
Elevation: 650 to 4,500 feet
Mean annual precipitation: 3 to 5 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 290 days
Farmland classification: Not prime farmland

Map Unit Composition

Trigger and similar soils: 40 percent
Sparkhule and similar soils: 30 percent

Rock outcrop: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Trigger

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from calcareous conglomerate

Typical profile

H1 - 0 to 12 inches: gravelly sandy loam
H2 - 12 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 30 to 40 percent
Depth to restrictive feature: 10 to 18 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R030XF033CA - GRAVELLY LOAM
Hydric soil rating: No

Description of Sparkhule

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Colluvium derived from and/or residuum weathered from dacite

Typical profile

H1 - 0 to 2 inches: gravelly sandy loam
H2 - 2 to 18 inches: gravelly sandy clay loam
H3 - 18 to 28 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R030XF033CA - GRAVELLY LOAM
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Concave

Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 40 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

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Curve (1) Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparral, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparral, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	71	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent.)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	25	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL COVERS -					
Fallow (Land plowed but not tilled or seeded)		77	86	91	94

SAN BERNARDINO COUNTY

HYDROLOGY MANUAL

CURVE NUMBERS FOR PERVIOUS AREAS

Figure C-3 (1 of 2)

Figure ADD-1
Antecedent Moisture Condition (AMC)

5-day Rainfall - NOAA Atlas 14
(50% of Total Rainfall Prior to Peak)*

*1/2 (11-day - 1-day) =
1/2 (([10-day] + (1/10 ([20-day] - [10-day]))) - [1-day])

5 0 5 10 15
Miles

N
W E
S

Growing Season
- AMC I
- AMC II
- AMC III

Site

STATE HWY 127
I-15
US HWY 395
I-40
STATE HWY 247
STATE HWY 62

Baxter Valley
Ridgecrest
Boron
Barstow
Adelanto
George AFB
George AFB
Victorville
Apple Valley
Mountain View Acres
Hesperia
Wrightwood
Crestline
Lake Arrowhead
Running Springs
Big Bear City
Big Bear Lake
Twentynine Palms
Yucca Valley
Joshua Tree
Morongo Valley
Claremont
Needles
Parker Dam
Big River

Basin A

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	IENLC
Engineer:	N/A
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	226051 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(200 ft. x 330 ft.)

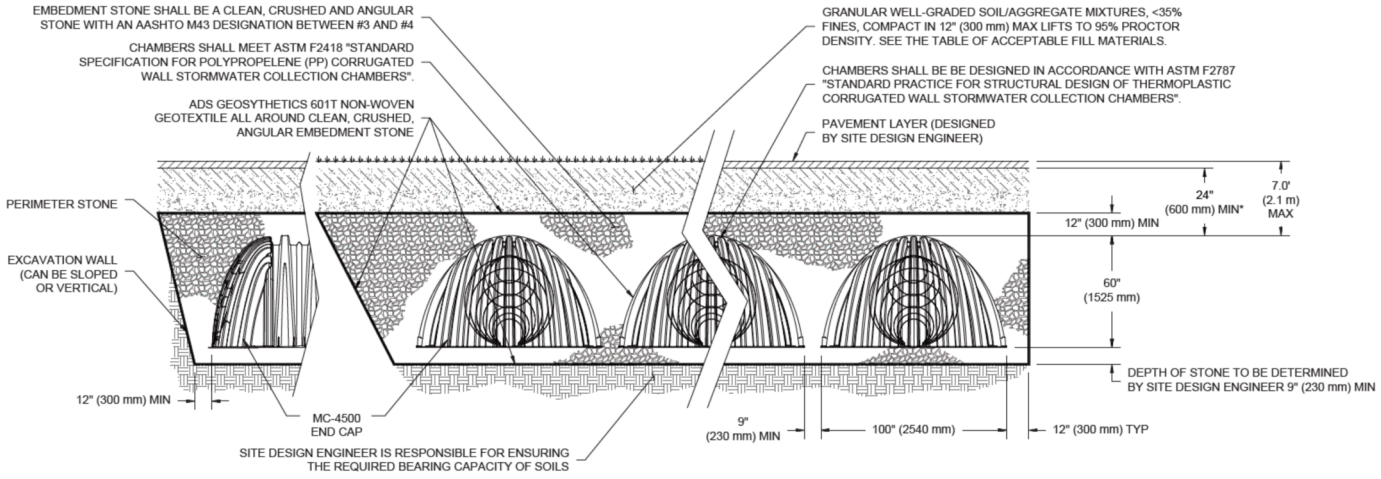
Results

System Volume and Bed Size

Installed Storage Volume:	227391.99 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	825
Number Of End Caps Required:	36
Chamber Rows:	18
Maximum Length:	315.17 ft.
Maximum Width:	165.35 ft.
Approx. Bed Size Required:	51654.92 square ft.

System Components

Amount Of Stone Required:	7486.34 cubic yards
Volume Of Excavation (Not Including Fill):	12913.73 cubic yards
Total Non-woven Geotextile Required:	14647.02 square yards
Woven Geotextile Required (excluding Isolator Row):	191.10 square yards
Woven Geotextile Required (Isolator Row):	720.26 square yards
Total Woven Geotextile Required:	911.36 square yards



*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

Basin B

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	IENLC
Engineer:	N/A
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	228960 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(200 ft. x 330 ft.)

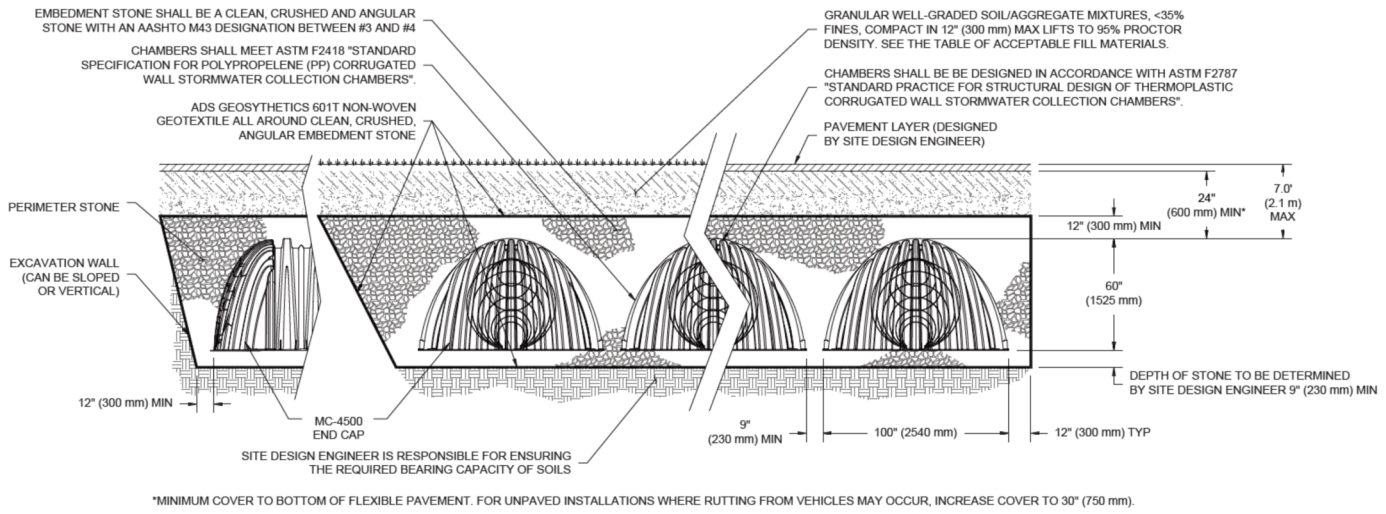
Results

System Volume and Bed Size

Installed Storage Volume:	230364.13 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	836
Number Of End Caps Required:	36
Chamber Rows:	18
Maximum Length:	321.76 ft.
Maximum Width:	165.35 ft.
Approx. Bed Size Required:	52325.74 square ft.

System Components

Amount Of Stone Required:	7582.38 cubic yards
Volume Of Excavation (Not Including Fill):	13081.43 cubic yards
Total Non-woven Geotextile Required:	14837.77 square yards
Woven Geotextile Required (excluding Isolator Row):	191.10 square yards
Woven Geotextile Required (Isolator Row):	735.64 square yards
Total Woven Geotextile Required:	926.74 square yards



*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

Basin C

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	IENLC
Engineer:	N/A
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	183902 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(250 ft. x 250 ft.)

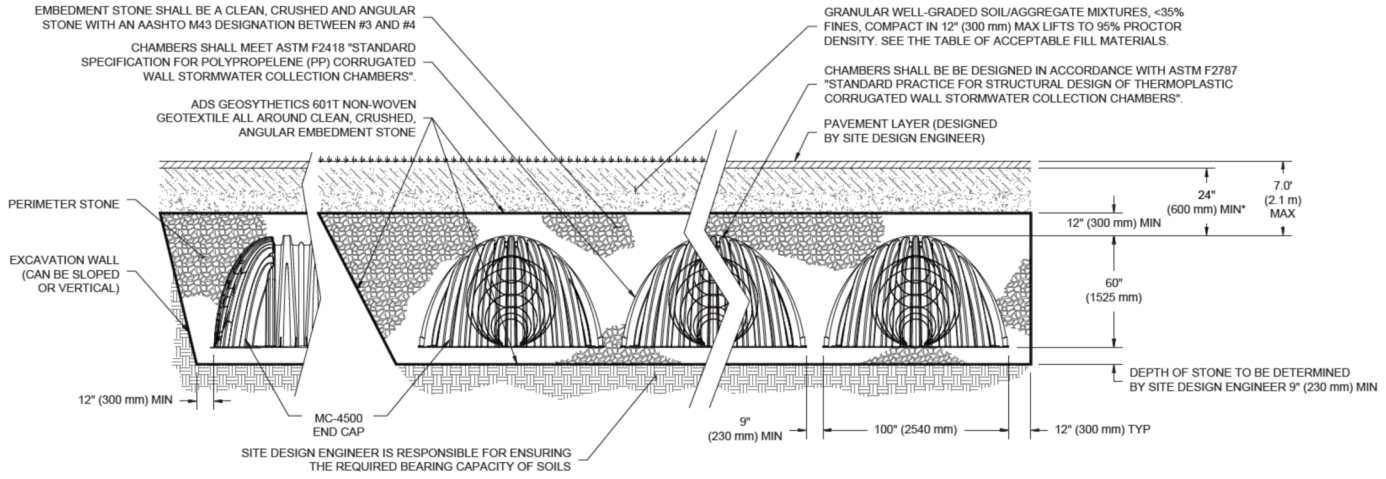
Results

System Volume and Bed Size

Installed Storage Volume:	185342.76 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	668
Number Of End Caps Required:	38
Chamber Rows:	19
Maximum Length:	249.25 ft.
Maximum Width:	174.43 ft.
Approx. Bed Size Required:	42200.53 square ft.

System Components

Amount Of Stone Required:	6142.64 cubic yards
Volume Of Excavation (Not Including Fill):	10550.13 cubic yards
Total Non-woven Geotextile Required:	12023.55 square yards
Woven Geotextile Required (excluding Isolator Row):	191.10 square yards
Woven Geotextile Required (Isolator Row):	566.46 square yards
Total Woven Geotextile Required:	757.56 square yards



*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

Basin D

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	
Engineer:	N/A
Project Location:	
Measurement Type:	Imperial
Required Storage Volume:	179086 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(175 ft. x 243 ft.)

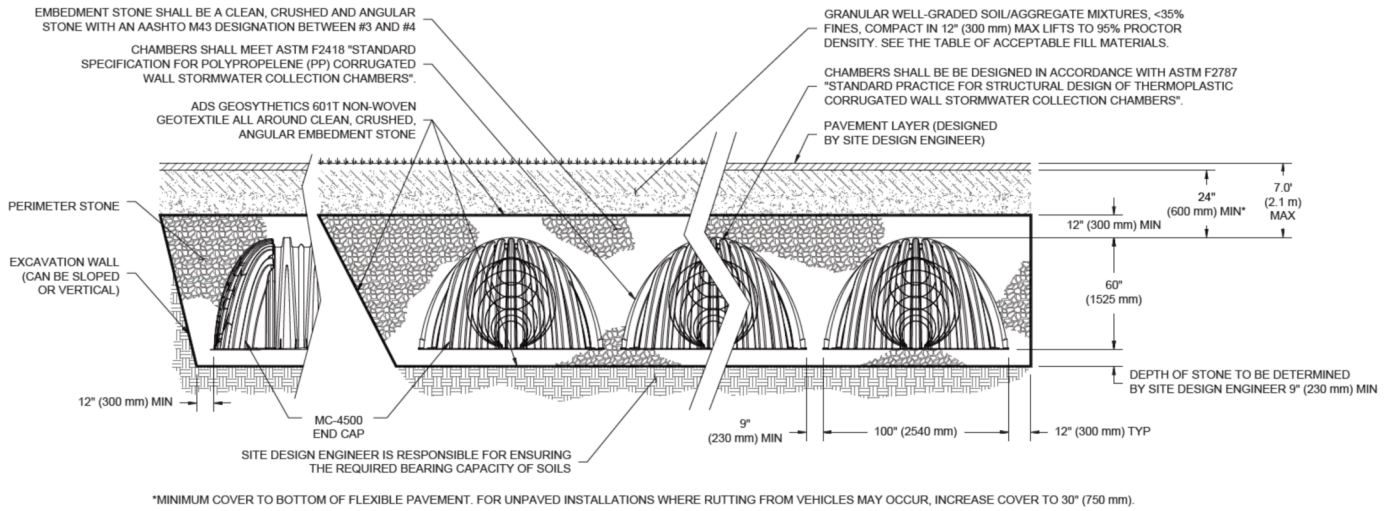
Results

System Volume and Bed Size

Installed Storage Volume:	180500.22 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	650
Number Of End Caps Required:	38
Chamber Rows:	19
Maximum Length:	242.66 ft.
Maximum Width:	174.43 ft.
Approx. Bed Size Required:	41110.60 square ft.

System Components

Amount Of Stone Required:	5988 cubic yards
Volume Of Excavation (Not Including Fill):	10278 cubic yards
Total Non-woven Geotextile Required:	11722 square yards
Woven Geotextile Required (excluding Isolator Row):	192 square yards
Woven Geotextile Required (Isolator Row):	552 square yards
Total Woven Geotextile Required:	743 square yards



*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

Appendix C

Rational Method Analysis

Onsite Predevelopment, 10 Year and 100 Year events
Onsite Developed, 10 Year and 100 Year events

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/13/22

IENLC
10-yr
Existing condition
Areas A-E

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.609 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 1

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Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Adjusted SCS curve number for AMC 1 = 47.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.840(In/Hr)
Initial subarea data:
Initial area flow distance = 928.000(Ft.)
Top (of initial area) elevation = 3480.000(Ft.)
Bottom (of initial area) elevation = 3200.000(Ft.)
Difference in elevation = 280.000(Ft.)
Slope = 0.30172 s(%)= 30.17
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.263 min.
Rainfall intensity = 2.096(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.539

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Subarea runoff =      3.550(CFS)
Total initial stream area =        3.140(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.840(In/Hr)


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Process from Point/Station      102.000 to Point/Station      103.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.378(Ft.), Average velocity =   4.420(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              1.20
        2             23.00              0.90
        3             36.00              0.00
        4             54.00              0.90
        5             80.00              1.20
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     10.873(CFS)
  '     '        flow top width =     13.018(Ft.)
  '     '    velocity=    4.420(Ft/s)
  '     '        area =      2.460(Sq.Ft)
  '     '        Froude number =     1.792

Upstream point elevation =  3200.000(Ft.)
Downstream point elevation =  2908.000(Ft.)
Flow length =  2915.000(Ft.)
Travel time  =   10.99 min.
Time of concentration =   21.25 min.
Depth of flow =   0.378(Ft.)
Average velocity =   4.420(Ft/s)
Total irregular channel flow =    10.873(CFS)
Irregular channel normal depth above invert elev. =   0.378(Ft.)
Average velocity of channel(s) =   4.420(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.200
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.800
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 82.20
Adjusted SCS curve number for AMC 1 = 66.08
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.592(In/Hr)
Rainfall intensity =      1.259(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
```

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rational method)(Q=KCIA) is C = 0.459
Subarea runoff =     14.555(CFS) for   28.180(Ac.)
Total runoff =     18.105(CFS)
Effective area this stream =       31.32(Ac.)
Total Study Area (Main Stream No. 1) =       31.32(Ac.)
Area averaged Fm value =    0.617(In/Hr)
Depth of flow =   0.458(Ft.), Average velocity =   5.021(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.561(Ft.), Average velocity =   3.349(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              1.20
        2             23.00              0.90
        3             36.00              0.00
        4             54.00              0.90
        5             80.00              1.20
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     18.133(CFS)
  '     '        flow top width =     19.315(Ft.)
  '     '    velocity=    3.349(Ft/s)
  '     '        area =      5.415(Sq.Ft)
  '     '        Froude number =     1.114

Upstream point elevation =  2908.000(Ft.)
Downstream point elevation =  2878.000(Ft.)
Flow length =   883.000(Ft.)
Travel time  =    4.39 min.
Time of concentration =   25.65 min.
Depth of flow =   0.561(Ft.)
Average velocity =   3.349(Ft/s)
Total irregular channel flow =    18.133(CFS)
Irregular channel normal depth above invert elev. =   0.561(Ft.)
Average velocity of channel(s) =   3.349(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
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```
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     17.063(CFS)
therefore the upstream flow rate of Q =     18.105(CFS) is being used
Rainfall intensity =      1.104(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.412
Subarea runoff =      0.000(CFS) for    6.210(Ac.)
Total runoff =     18.105(CFS)
Effective area this stream =       37.53(Ac.)
Total Study Area (Main Stream No. 1) =       37.53(Ac.)
Area averaged Fm value =    0.599(In/Hr)
Depth of flow =   0.560(Ft.), Average velocity =   3.347(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     37.530(Ac.)
Runoff from this stream =     18.105(CFS)
Time of concentration =   25.65 min.
Rainfall intensity =     1.104(In/Hr)
Area averaged loss rate (Fm) =    0.5988(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 1 = 47.40
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.840(In/Hr)
Initial subarea data:
Initial area flow distance =   802.000(Ft.)
Top (of initial area) elevation =  3480.000(Ft.)
Bottom (of initial area) elevation =  3165.000(Ft.)
Difference in elevation =   315.000(Ft.)
Slope =    0.39277  s(%)=      39.28
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.183 min.
Rainfall intensity =      2.266(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.566
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Subarea runoff =     12.782(CFS)
Total initial stream area =        9.960(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.840(In/Hr)


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Process from Point/Station      202.000 to Point/Station      203.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.593(Ft.), Average velocity =   5.244(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     29.943(CFS)
  '     '        flow top width =     19.265(Ft.)
  '     '    velocity=    5.244(Ft/s)
  '     '        area =      5.710(Sq.Ft)
  '     '        Froude number =     1.698

Upstream point elevation =  3165.000(Ft.)
Downstream point elevation =  2935.000(Ft.)
Flow length =  2971.000(Ft.)
Travel time  =    9.44 min.
Time of concentration =   18.63 min.
Depth of flow =   0.593(Ft.)
Average velocity =   5.244(Ft/s)
Total irregular channel flow =    29.943(CFS)
Irregular channel normal depth above invert elev. =   0.593(Ft.)
Average velocity of channel(s) =   5.244(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.200
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.800
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 82.20
Adjusted SCS curve number for AMC 1 = 66.08
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.592(In/Hr)
Rainfall intensity =      1.381(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.491
Subarea runoff =     34.260(CFS) for   59.410(Ac.)
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Total runoff =     47.042(CFS)
Effective area this stream =       69.37(Ac.)
Total Study Area (Main Stream No. 1) =      106.90(Ac.)
Area averaged Fm value =    0.628(In/Hr)
Depth of flow =   0.702(Ft.), Average velocity =   5.871(Ft/s)


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Process from Point/Station      203.000 to Point/Station      204.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.785(Ft.), Average velocity =   4.746(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     47.486(CFS)
  '     '        flow top width =     25.503(Ft.)
  '     '    velocity=    4.746(Ft/s)
  '     '        area =     10.006(Sq.Ft)
  '     '        Froude number =     1.335

Upstream point elevation =  2935.000(Ft.)
Downstream point elevation =  2881.000(Ft.)
Flow length =  1238.000(Ft.)
Travel time  =    4.35 min.
Time of concentration =   22.97 min.
Depth of flow =   0.785(Ft.)
Average velocity =   4.746(Ft/s)
Total irregular channel flow =    47.486(CFS)
Irregular channel normal depth above invert elev. =   0.785(Ft.)
Average velocity of channel(s) =   4.746(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.193(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.447
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Subarea runoff =      0.825(CFS) for   20.440(Ac.)
Total runoff =     47.867(CFS)
Effective area this stream =       89.81(Ac.)
Total Study Area (Main Stream No. 1) =      127.34(Ac.)
Area averaged Fm value =    0.600(In/Hr)
Depth of flow =   0.787(Ft.), Average velocity =   4.755(Ft/s)


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Process from Point/Station      203.000 to Point/Station      204.000
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     89.810(Ac.)
Runoff from this stream =     47.867(CFS)
Time of concentration =   22.97 min.
Rainfall intensity =     1.193(In/Hr)
Area averaged loss rate (Fm) =    0.6003(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Initial subarea data:
Initial area flow distance =   912.000(Ft.)
Top (of initial area) elevation =  2985.000(Ft.)
Bottom (of initial area) elevation =  2944.000(Ft.)
Difference in elevation =    41.000(Ft.)
Slope =    0.04496  s(%)=       4.50
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.914 min.
Rainfall intensity =      1.614(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.617
Subarea runoff =      3.923(CFS)
Total initial stream area =        3.940(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.507(In/Hr)


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Process from Point/Station      302.000 to Point/Station      303.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
____________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.342(Ft.), Average velocity =   2.612(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             30.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =      4.969(CFS)
  '     '        flow top width =     11.119(Ft.)
  '     '    velocity=    2.612(Ft/s)
  '     '        area =      1.902(Sq.Ft)
  '     '        Froude number =     1.113

Upstream point elevation =  2944.000(Ft.)
Downstream point elevation =  2888.000(Ft.)
Flow length =  1401.000(Ft.)
Travel time  =    8.94 min.
Time of concentration =   23.85 min.
Depth of flow =   0.342(Ft.)
Average velocity =   2.612(Ft/s)
Total irregular channel flow =     4.969(CFS)
Irregular channel normal depth above invert elev. =   0.342(Ft.)
Average velocity of channel(s) =   2.612(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.400
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.600
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.40
Adjusted SCS curve number for AMC 1 = 61.08
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.665(In/Hr)
Rainfall intensity =      1.162(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.425
Subarea runoff =      2.020(CFS) for    8.100(Ac.)
Total runoff =      5.942(CFS)
Effective area this stream =       12.04(Ac.)
Total Study Area (Main Stream No. 1) =      139.38(Ac.)
Area averaged Fm value =    0.613(In/Hr)
Depth of flow =   0.366(Ft.), Average velocity =   2.732(Ft/s)
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Process from Point/Station      302.000 to Point/Station      303.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 3
Stream flow area =     12.040(Ac.)
Runoff from this stream =      5.942(CFS)
Time of concentration =   23.85 min.
Rainfall intensity =     1.162(In/Hr)
Area averaged loss rate (Fm) =    0.6132(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


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Process from Point/Station      401.000 to Point/Station      402.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.800
Decimal fraction soil group D = 0.100
SCS curve number for soil(AMC 2)  = 84.40
Adjusted SCS curve number for AMC 1 = 69.16
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.545(In/Hr)
Initial subarea data:
Initial area flow distance =   994.000(Ft.)
Top (of initial area) elevation =  3480.000(Ft.)
Bottom (of initial area) elevation =  3045.000(Ft.)
Difference in elevation =   435.000(Ft.)
Slope =    0.43763  s(%)=      43.76
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.792 min.
Rainfall intensity =      2.166(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.673
Subarea runoff =      5.849(CFS)
Total initial stream area =        4.010(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.545(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      402.000 to Point/Station      403.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.378(Ft.), Average velocity =   3.610(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
```

```
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
-----------------------------------------------------------------
Sub-Channel flow  =      8.384(CFS)
  '     '        flow top width =     12.286(Ft.)
  '     '    velocity=    3.610(Ft/s)
  '     '        area =      2.322(Sq.Ft)
  '     '        Froude number =     1.463

Upstream point elevation =  3045.000(Ft.)
Downstream point elevation =  2995.000(Ft.)
Flow length =   748.000(Ft.)
Travel time  =    3.45 min.
Time of concentration =   13.25 min.
Depth of flow =   0.378(Ft.)
Average velocity =   3.610(Ft/s)
Total irregular channel flow =     8.384(CFS)
Irregular channel normal depth above invert elev. =   0.378(Ft.)
Average velocity of channel(s) =   3.610(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.900
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 84.10
Adjusted SCS curve number for AMC 1 = 68.74
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.552(In/Hr)
Rainfall intensity =      1.753(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.618
Subarea runoff =      4.998(CFS) for    6.000(Ac.)
Total runoff =     10.847(CFS)
Effective area this stream =       10.01(Ac.)
Total Study Area (Main Stream No. 1) =      149.39(Ac.)
Area averaged Fm value =    0.549(In/Hr)
Depth of flow =   0.416(Ft.), Average velocity =   3.850(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      403.000 to Point/Station      404.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.573(Ft.), Average velocity =   3.819(Ft/s)
        ******* Irregular Channel Data ***********
-----------------------------------------------------------------
```

```
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             35.00              0.00
        3             70.00              2.00
Manning's 'N' friction factor =   0.035
-----------------------------------------------------------------
Sub-Channel flow  =     21.975(CFS)
  '     '        flow top width =     20.069(Ft.)
  '     '    velocity=    3.819(Ft/s)
  '     '        area =      5.754(Sq.Ft)
  '     '        Froude number =     1.257

Upstream point elevation =  2995.000(Ft.)
Downstream point elevation =  2892.000(Ft.)
Flow length =  2401.000(Ft.)
Travel time  =   10.48 min.
Time of concentration =   23.72 min.
Depth of flow =   0.573(Ft.)
Average velocity =   3.819(Ft/s)
Total irregular channel flow =    21.975(CFS)
Irregular channel normal depth above invert elev. =   0.573(Ft.)
Average velocity of channel(s) =   3.819(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.166(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.503
Subarea runoff =     22.192(CFS) for   46.370(Ac.)
Total runoff =     33.040(CFS)
Effective area this stream =       56.38(Ac.)
Total Study Area (Main Stream No. 1) =      195.76(Ac.)
Area averaged Fm value =    0.515(In/Hr)
Depth of flow =   0.668(Ft.), Average velocity =   4.229(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      403.000 to Point/Station      404.000
**** CONFLUENCE OF MINOR STREAMS ****
_____________________________________________________________________
Along Main Stream number: 1 in normal stream number 4
Stream flow area =     56.380(Ac.)
Runoff from this stream =     33.040(CFS)
```

```
Time of concentration =   23.72 min.
Rainfall intensity =     1.166(In/Hr)
Area averaged loss rate (Fm) =    0.5149(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      502.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.900
Decimal fraction soil group D = 0.100
SCS curve number for soil(AMC 2)  = 86.30
Adjusted SCS curve number for AMC 1 = 72.08
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.500(In/Hr)
Initial subarea data:
Initial area flow distance =   844.000(Ft.)
Top (of initial area) elevation =  3480.000(Ft.)
Bottom (of initial area) elevation =  3200.000(Ft.)
Difference in elevation =   280.000(Ft.)
Slope =    0.33175  s(%)=      33.18
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.695 min.
Rainfall intensity =      2.181(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.694
Subarea runoff =     14.514(CFS)
Total initial stream area =        9.590(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.500(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      502.000 to Point/Station      503.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.450(Ft.), Average velocity =   5.820(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             25.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     19.166(CFS)
```

```
  '     '        flow top width =     14.630(Ft.)
  '     '    velocity=    5.820(Ft/s)
  '     '        area =      3.293(Sq.Ft)
  '     '        Froude number =     2.162

Upstream point elevation =  3200.000(Ft.)
Downstream point elevation =  2904.000(Ft.)
Flow length =  2151.000(Ft.)
Travel time  =    6.16 min.
Time of concentration =   15.85 min.
Depth of flow =   0.450(Ft.)
Average velocity =   5.820(Ft/s)
Total irregular channel flow =    19.166(CFS)
Irregular channel normal depth above invert elev. =   0.450(Ft.)
Average velocity of channel(s) =   5.820(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.546(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.606
Subarea runoff =      9.219(CFS) for   15.730(Ac.)
Total runoff =     23.733(CFS)
Effective area this stream =       25.32(Ac.)
Total Study Area (Main Stream No. 1) =      221.08(Ac.)
Area averaged Fm value =    0.505(In/Hr)
Depth of flow =   0.488(Ft.), Average velocity =   6.139(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      503.000 to Point/Station      504.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.855(Ft.), Average velocity =   1.999(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
```

```
Sub-Channel flow  =     23.773(CFS)
  '     '        flow top width =     27.804(Ft.)
  '     '    velocity=    1.999(Ft/s)
  '     '        area =     11.893(Sq.Ft)
  '     '        Froude number =     0.539

Upstream point elevation =  2904.000(Ft.)
Downstream point elevation =  2886.000(Ft.)
Flow length =  2610.000(Ft.)
Travel time  =   21.76 min.
Time of concentration =   37.62 min.
Depth of flow =   0.855(Ft.)
Average velocity =   1.999(Ft/s)
Total irregular channel flow =    23.773(CFS)
Irregular channel normal depth above invert elev. =   0.855(Ft.)
Average velocity of channel(s) =   1.999(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
The area added to the existing stream causes a
a lower flow rate of Q =     14.453(CFS)
therefore the upstream flow rate of Q =     23.733(CFS) is being used
Rainfall intensity =      0.844(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.361
Subarea runoff =      0.000(CFS) for   22.120(Ac.)
Total runoff =     23.733(CFS)
Effective area this stream =       47.44(Ac.)
Total Study Area (Main Stream No. 1) =      243.20(Ac.)
Area averaged Fm value =    0.506(In/Hr)
Depth of flow =   0.855(Ft.), Average velocity =   1.998(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      503.000 to Point/Station      504.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 5
Stream flow area =     47.440(Ac.)
Runoff from this stream =     23.733(CFS)
Time of concentration =   37.62 min.
Rainfall intensity =     0.844(In/Hr)
Area averaged loss rate (Fm) =    0.5059(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
```

Summary of stream data:

Stream No.	Flow rate (CFS)	Area (Ac.)	TC (min)	Fm (In/Hr)	Rainfall Intensity (In/Hr)
1	18.11	37.530	25.65	0.599	1.104
2	47.87	89.810	22.97	0.600	1.193
3	5.94	12.040	23.85	0.613	1.162
4	33.04	56.380	23.72	0.515	1.166
5	23.73	47.440	37.62	0.506	0.844

```
Qmax(1) =
           1.000 *    1.000 *    18.105) +
           0.851 *    1.000 *    47.867) +
           0.895 *    1.000 *     5.942) +
           0.905 *    1.000 *    33.040) +
           1.767 *    0.682 *    23.733) + =     122.621
Qmax(2) =
           1.175 *    0.896 *    18.105) +
           1.000 *    1.000 *    47.867) +
           1.056 *    0.963 *     5.942) +
           1.041 *    0.968 *    33.040) +
           2.028 *    0.611 *    23.733) + =     135.668
Qmax(3) =
           1.114 *    0.930 *    18.105) +
           0.948 *    1.000 *    47.867) +
           1.000 *    1.000 *     5.942) +
           0.993 *    1.000 *    33.040) +
           1.937 *    0.634 *    23.733) + =     132.029
Qmax(4) =
           1.123 *    0.925 *    18.105) +
           0.955 *    1.000 *    47.867) +
           1.008 *    0.995 *     5.942) +
           1.000 *    1.000 *    33.040) +
           1.950 *    0.631 *    23.733) + =     132.710
Qmax(5) =
           0.486 *    1.000 *    18.105) +
           0.412 *    1.000 *    47.867) +
           0.422 *    1.000 *     5.942) +
           0.506 *    1.000 *    33.040) +
           1.000 *    1.000 *    23.733) + =      71.493

Total of 5 streams to confluence:
Flow rates before confluence point:
      18.105      47.867       5.942      33.040      23.733
Maximum flow rates at confluence using above data:
      122.621      135.668      132.029      132.710       71.493
Area of streams before confluence:
       37.530       89.810       12.040       56.380       47.440
Effective area values after confluence:
```

```
      228.108      218.593      223.212      222.795      243.200
Results of confluence:
Total flow rate =    135.668(CFS)
Time of concentration =    22.974 min.
Effective stream area after confluence =    218.593(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.563(In/Hr)
Study area total (this main stream) =     243.20(Ac.)
End of computations, Total Study Area =          243.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  83.3
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 07/26/22

IENLC
10-yr
Existing condition
Areas F and G

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.609 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 1

++

Process from Point/Station 601.000 to Point/Station 602.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.507(In/Hr)
Initial subarea data:
Initial area flow distance = 683.000(Ft.)
Top (of initial area) elevation = 3345.000(Ft.)
Bottom (of initial area) elevation = 3140.000(Ft.)
Difference in elevation = 205.000(Ft.)
Slope = 0.30015 s(%)= 30.01
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.088 min.
Rainfall intensity = 2.282(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.700

```
Subarea runoff =     15.208(CFS)
Total initial stream area =        9.520(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.507(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      602.000 to Point/Station      603.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.591(Ft.), Average velocity =   5.765(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             25.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     32.717(CFS)
  '     '        flow top width =     19.206(Ft.)
  '     '    velocity=    5.765(Ft/s)
  '     '        area =      5.675(Sq.Ft)
  '     '        Froude number =     1.869

Upstream point elevation =  3140.000(Ft.)
Downstream point elevation =  3050.000(Ft.)
Flow length =   958.000(Ft.)
Travel time  =    2.77 min.
Time of concentration =   11.86 min.
Depth of flow =   0.591(Ft.)
Average velocity =   5.765(Ft/s)
Total irregular channel flow =    32.717(CFS)
Irregular channel normal depth above invert elev. =   0.591(Ft.)
Average velocity of channel(s) =   5.765(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.895(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.659
Subarea runoff =     34.944(CFS) for   30.650(Ac.)
```

```
Total runoff =     50.152(CFS)
Effective area this stream =       40.17(Ac.)
Total Study Area (Main Stream No. 1) =       40.17(Ac.)
Area averaged Fm value =    0.507(In/Hr)
Depth of flow =   0.694(Ft.), Average velocity =   6.415(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      603.000 to Point/Station      604.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.977(Ft.), Average velocity =   4.830(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             35.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     74.935(CFS)
  '     '        flow top width =     31.757(Ft.)
  '     '    velocity=    4.830(Ft/s)
  '     '        area =     15.515(Sq.Ft)
  '     '        Froude number =     1.218

Upstream point elevation =  3050.000(Ft.)
Downstream point elevation =  3000.000(Ft.)
Flow length =  1483.000(Ft.)
Travel time  =    5.12 min.
Time of concentration =   16.97 min.
Depth of flow =   0.977(Ft.)
Average velocity =   4.830(Ft/s)
Total irregular channel flow =    74.935(CFS)
Irregular channel normal depth above invert elev. =   0.977(Ft.)
Average velocity of channel(s) =   4.830(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.474(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.590
```

```
Subarea runoff =     49.499(CFS) for   74.400(Ac.)
Total runoff =     99.651(CFS)
Effective area this stream =      114.57(Ac.)
Total Study Area (Main Stream No. 1) =      114.57(Ac.)
Area averaged Fm value =    0.507(In/Hr)
Depth of flow =   1.087(Ft.), Average velocity =   5.187(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      604.000 to Point/Station      605.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.178(Ft.), Average velocity =   4.777(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =    107.736(CFS)
  '     '        flow top width =     38.286(Ft.)
  '     '    velocity=    4.777(Ft/s)
  '     '        area =     22.551(Sq.Ft)
  '     '        Froude number =     1.097

Upstream point elevation =  3000.000(Ft.)
Downstream point elevation =  2982.000(Ft.)
Flow length =   700.000(Ft.)
Travel time  =    2.44 min.
Time of concentration =   19.42 min.
Depth of flow =   1.178(Ft.)
Average velocity =   4.777(Ft/s)
Total irregular channel flow =   107.735(CFS)
Irregular channel normal depth above invert elev. =   1.178(Ft.)
Average velocity of channel(s) =   4.777(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.342(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
```

```
rational method)(Q=KCIA) is C = 0.560
Subarea runoff =     16.087(CFS) for   39.610(Ac.)
Total runoff =    115.738(CFS)
Effective area this stream =      154.18(Ac.)
Total Study Area (Main Stream No. 1) =      154.18(Ac.)
Area averaged Fm value =    0.507(In/Hr)
Depth of flow =   1.210(Ft.), Average velocity =   4.864(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      605.000 to Point/Station      606.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.117(Ft.), Average velocity =   5.712(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             35.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =    115.778(CFS)
  '     '        flow top width =     36.297(Ft.)
  '     '    velocity=    5.712(Ft/s)
  '     '        area =     20.269(Sq.Ft)
  '     '        Froude number =     1.347

Upstream point elevation =  2982.000(Ft.)
Downstream point elevation =  2885.000(Ft.)
Flow length =  2458.000(Ft.)
Travel time  =    7.17 min.
Time of concentration =   26.59 min.
Depth of flow =   1.117(Ft.)
Average velocity =   5.712(Ft/s)
Total irregular channel flow =   115.778(CFS)
Irregular channel normal depth above invert elev. =   1.117(Ft.)
Average velocity of channel(s) =   5.712(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
The area added to the existing stream causes a
```

```
a lower flow rate of Q =    106.619(CFS)
therefore the upstream flow rate of Q =    115.738(CFS) is being used
Rainfall intensity =      1.077(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.476
Subarea runoff =      0.000(CFS) for   53.980(Ac.)
Total runoff =    115.738(CFS)
Effective area this stream =      208.16(Ac.)
Total Study Area (Main Stream No. 1) =      208.16(Ac.)
Area averaged Fm value =    0.507(In/Hr)
Depth of flow =   1.117(Ft.), Average velocity =   5.712(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      605.000 to Point/Station      606.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    208.160(Ac.)
Runoff from this stream =    115.738(CFS)
Time of concentration =   26.59 min.
Rainfall intensity =     1.077(In/Hr)
Area averaged loss rate (Fm) =    0.5074(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      702.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Initial subarea data:
Initial area flow distance =   961.000(Ft.)
Top (of initial area) elevation =  3140.000(Ft.)
Bottom (of initial area) elevation =  3030.000(Ft.)
Difference in elevation =   110.000(Ft.)
Slope =    0.11446  s(%)=      11.45
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.633 min.
Rainfall intensity =      1.812(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.648
Subarea runoff =     10.982(CFS)
Total initial stream area =        9.350(Ac.)
```

```
Pervious area fraction = 1.000
Initial area Fm value =    0.507(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      702.000 to Point/Station      703.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.499(Ft.), Average velocity =   3.950(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     15.976(CFS)
  '     '        flow top width =     16.214(Ft.)
  '     '    velocity=    3.950(Ft/s)
  '     '        area =      4.044(Sq.Ft)
  '     '        Froude number =     1.394

Upstream point elevation =  3030.000(Ft.)
Downstream point elevation =  2985.000(Ft.)
Flow length =   814.000(Ft.)
Travel time  =    3.43 min.
Time of concentration =   16.07 min.
Depth of flow =   0.499(Ft.)
Average velocity =   3.950(Ft/s)
Total irregular channel flow =    15.976(CFS)
Irregular channel normal depth above invert elev. =   0.499(Ft.)
Average velocity of channel(s) =   3.950(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.532(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.602
Subarea runoff =      9.934(CFS) for   13.340(Ac.)
Total runoff =     20.915(CFS)
Effective area this stream =       22.69(Ac.)
```

```
Total Study Area (Main Stream No. 1) =      230.85(Ac.)
Area averaged Fm value =    0.507(In/Hr)
Depth of flow =   0.552(Ft.), Average velocity =   4.225(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      703.000 to Point/Station      704.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.598(Ft.), Average velocity =   4.191(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     24.350(CFS)
  '     '        flow top width =     19.434(Ft.)
  '     '    velocity=    4.191(Ft/s)
  '     '        area =      5.810(Sq.Ft)
  '     '        Froude number =     1.351

Upstream point elevation =  2985.000(Ft.)
Downstream point elevation =  2888.000(Ft.)
Flow length =  1985.000(Ft.)
Travel time  =    7.89 min.
Time of concentration =   23.96 min.
Depth of flow =   0.598(Ft.)
Average velocity =   4.191(Ft/s)
Total irregular channel flow =    24.350(CFS)
Irregular channel normal depth above invert elev. =   0.598(Ft.)
Average velocity of channel(s) =   4.191(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 1 = 71.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.507(In/Hr)
Rainfall intensity =      1.158(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.506
Subarea runoff =      6.779(CFS) for   24.620(Ac.)
Total runoff =     27.694(CFS)
```

```
Effective area this stream =       47.31(Ac.)
Total Study Area (Main Stream No. 1) =      255.47(Ac.)
Area averaged Fm value =    0.507(In/Hr)
Depth of flow =   0.628(Ft.), Average velocity =   4.328(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      703.000 to Point/Station      704.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     47.310(Ac.)
Runoff from this stream =     27.694(CFS)
Time of concentration =   23.96 min.
Rainfall intensity =     1.158(In/Hr)
Area averaged loss rate (Fm) =    0.5074(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    115.74   208.160     26.59    0.507      1.077
2     27.69    47.310     23.96    0.507      1.158
Qmax(1) =
           1.000 *    1.000 *   115.738) +
           0.875 *    1.000 *    27.694) + =     139.970
Qmax(2) =
           1.143 *    0.901 *   115.738) +
           1.000 *    1.000 *    27.694) + =     146.900

Total of 2 streams to confluence:
Flow rates before confluence point:
     115.738      27.694
Maximum flow rates at confluence using above data:
      139.970      146.900
Area of streams before confluence:
      208.160       47.310
Effective area values after confluence:
      255.470      234.906
Results of confluence:
Total flow rate =    146.900(CFS)
Time of concentration =    23.962 min.
Effective stream area after confluence =    234.906(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.507(In/Hr)
Study area total (this main stream) =     255.47(Ac.)
End of computations, Total Study Area =          255.47 (Ac.)
The following figures may
```

be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 86.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/13/22

IENLC
100-year
Existing condition
Areas A-E

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.080 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.290(In/Hr)
Initial subarea data:
Initial area flow distance = 928.000(Ft.)
Top (of initial area) elevation = 3480.000(Ft.)
Bottom (of initial area) elevation = 3200.000(Ft.)
Difference in elevation = 280.000(Ft.)
Slope = 0.30172 s(%)= 30.17
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.263 min.
Rainfall intensity = 3.717(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.830

```
Subarea runoff =      9.686(CFS)
Total initial stream area =        3.140(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.290(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.606(Ft.), Average velocity =   6.055(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              1.20
        2             23.00              0.90
        3             36.00              0.00
        4             54.00              0.90
        5             80.00              1.20
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     38.284(CFS)
  '     '        flow top width =     20.871(Ft.)
  '     '    velocity=    6.055(Ft/s)
  '     '        area =      6.323(Sq.Ft)
  '     '        Froude number =     1.938

Upstream point elevation =  3200.000(Ft.)
Downstream point elevation =  2908.000(Ft.)
Flow length =  2915.000(Ft.)
Travel time  =    8.02 min.
Time of concentration =   18.29 min.
Depth of flow =   0.606(Ft.)
Average velocity =   6.055(Ft/s)
Total irregular channel flow =    38.284(CFS)
Irregular channel normal depth above invert elev. =   0.606(Ft.)
Average velocity of channel(s) =   6.055(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.200
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.800
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 82.20
Adjusted SCS curve number for AMC 3 = 95.32
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.092(In/Hr)
Rainfall intensity =      2.481(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
```

```
rational method)(Q=KCIA) is C = 0.859
Subarea runoff =     57.099(CFS) for   28.180(Ac.)
Total runoff =     66.785(CFS)
Effective area this stream =       31.32(Ac.)
Total Study Area (Main Stream No. 1) =       31.32(Ac.)
Area averaged Fm value =    0.112(In/Hr)
Depth of flow =   0.747(Ft.), Average velocity =   6.958(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.969(Ft.), Average velocity =   4.173(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              1.20
        2             23.00              0.90
        3             36.00              0.00
        4             54.00              0.90
        5             80.00              1.20
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     68.729(CFS)
  '     '        flow top width =     42.234(Ft.)
  '     '    velocity=    4.173(Ft/s)
  '     '        area =     16.468(Sq.Ft)
  '     '        Froude number =     1.178

Upstream point elevation =  2908.000(Ft.)
Downstream point elevation =  2878.000(Ft.)
Flow length =   883.000(Ft.)
Travel time  =    3.53 min.
Time of concentration =   21.81 min.
Depth of flow =   0.969(Ft.)
Average velocity =   4.173(Ft/s)
Total irregular channel flow =    68.729(CFS)
Irregular channel normal depth above invert elev. =   0.969(Ft.)
Average velocity of channel(s) =   4.173(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
```

```
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.193(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.858
Subarea runoff =      3.826(CFS) for    6.210(Ac.)
Total runoff =     70.611(CFS)
Effective area this stream =       37.53(Ac.)
Total Study Area (Main Stream No. 1) =       37.53(Ac.)
Area averaged Fm value =    0.102(In/Hr)
Depth of flow =   0.984(Ft.), Average velocity =   4.125(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     37.530(Ac.)
Runoff from this stream =     70.611(CFS)
Time of concentration =   21.81 min.
Rainfall intensity =     2.193(In/Hr)
Area averaged loss rate (Fm) =    0.1024(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 1.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 67.00
Adjusted SCS curve number for AMC 3 = 84.60
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.290(In/Hr)
Initial subarea data:
Initial area flow distance =   802.000(Ft.)
Top (of initial area) elevation =  3480.000(Ft.)
Bottom (of initial area) elevation =  3165.000(Ft.)
Difference in elevation =   315.000(Ft.)
Slope =    0.39277  s(%)=      39.28
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.183 min.
Rainfall intensity =      4.018(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.835
Subarea runoff =     33.419(CFS)
Total initial stream area =        9.960(Ac.)
Pervious area fraction = 1.000
```

```
Initial area Fm value =    0.290(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      203.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.922(Ft.), Average velocity =   7.039(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     97.226(CFS)
  '     '        flow top width =     29.962(Ft.)
  '     '    velocity=    7.039(Ft/s)
  '     '        area =     13.812(Sq.Ft)
  '     '        Froude number =     1.827

Upstream point elevation =  3165.000(Ft.)
Downstream point elevation =  2935.000(Ft.)
Flow length =  2971.000(Ft.)
Travel time  =    7.03 min.
Time of concentration =   16.22 min.
Depth of flow =   0.922(Ft.)
Average velocity =   7.039(Ft/s)
Total irregular channel flow =    97.226(CFS)
Irregular channel normal depth above invert elev. =   0.922(Ft.)
Average velocity of channel(s) =   7.039(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.200
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.800
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 82.20
Adjusted SCS curve number for AMC 3 = 95.32
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.092(In/Hr)
Rainfall intensity =      2.699(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.860
Subarea runoff =    127.549(CFS) for   59.410(Ac.)
Total runoff =    160.969(CFS)
Effective area this stream =       69.37(Ac.)
Total Study Area (Main Stream No. 1) =      106.90(Ac.)
```

```
Area averaged Fm value =    0.120(In/Hr)
Depth of flow =   1.114(Ft.), Average velocity =   7.985(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      203.000 to Point/Station      204.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.273(Ft.), Average velocity =   6.552(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =    172.569(CFS)
  '     '        flow top width =     41.375(Ft.)
  '     '    velocity=    6.552(Ft/s)
  '     '        area =     26.336(Sq.Ft)
  '     '        Froude number =     1.447

Upstream point elevation =  2935.000(Ft.)
Downstream point elevation =  2881.000(Ft.)
Flow length =  1238.000(Ft.)
Travel time  =    3.15 min.
Time of concentration =   19.37 min.
Depth of flow =   1.273(Ft.)
Average velocity =   6.552(Ft/s)
Total irregular channel flow =   172.568(CFS)
Irregular channel normal depth above invert elev. =   1.273(Ft.)
Average velocity of channel(s) =   6.552(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.383(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.860
Subarea runoff =     23.145(CFS) for   20.440(Ac.)
Total runoff =    184.114(CFS)
Effective area this stream =       89.81(Ac.)
```

```
Total Study Area (Main Stream No. 1) =      127.34(Ac.)
Area averaged Fm value =    0.106(In/Hr)
Depth of flow =   1.304(Ft.), Average velocity =   6.659(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      203.000 to Point/Station      204.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     89.810(Ac.)
Runoff from this stream =    184.114(CFS)
Time of concentration =   19.37 min.
Rainfall intensity =     2.383(In/Hr)
Area averaged loss rate (Fm) =    0.1056(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Initial subarea data:
Initial area flow distance =   912.000(Ft.)
Top (of initial area) elevation =  2985.000(Ft.)
Bottom (of initial area) elevation =  2944.000(Ft.)
Difference in elevation =    41.000(Ft.)
Slope =    0.04496  s(%)=       4.50
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.914 min.
Rainfall intensity =      2.862(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.883
Subarea runoff =      9.951(CFS)
Total initial stream area =        3.940(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      303.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
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Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.535(Ft.), Average velocity =   3.521(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             30.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     16.405(CFS)
  '     '        flow top width =     17.402(Ft.)
  '     '    velocity=    3.521(Ft/s)
  '     '        area =      4.659(Sq.Ft)
  '     '        Froude number =     1.199

Upstream point elevation =  2944.000(Ft.)
Downstream point elevation =  2888.000(Ft.)
Flow length =  1401.000(Ft.)
Travel time  =    6.63 min.
Time of concentration =   21.54 min.
Depth of flow =   0.535(Ft.)
Average velocity =   3.521(Ft/s)
Total irregular channel flow =    16.405(CFS)
Irregular channel normal depth above invert elev. =   0.535(Ft.)
Average velocity of channel(s) =   3.521(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.400
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.600
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 78.40
Adjusted SCS curve number for AMC 3 = 93.04
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.135(In/Hr)
Rainfall intensity =      2.212(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.856
Subarea runoff =     12.834(CFS) for    8.100(Ac.)
Total runoff =     22.785(CFS)
Effective area this stream =       12.04(Ac.)
Total Study Area (Main Stream No. 1) =      139.38(Ac.)
Area averaged Fm value =    0.109(In/Hr)
Depth of flow =   0.606(Ft.), Average velocity =   3.823(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      303.000
**** CONFLUENCE OF MINOR STREAMS ****
```

```
Along Main Stream number: 1 in normal stream number 3
Stream flow area =     12.040(Ac.)
Runoff from this stream =     22.785(CFS)
Time of concentration =   21.54 min.
Rainfall intensity =     2.212(In/Hr)
Area averaged loss rate (Fm) =    0.1093(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      401.000 to Point/Station      402.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.800
Decimal fraction soil group D = 0.100
SCS curve number for soil(AMC 2)  = 84.40
Adjusted SCS curve number for AMC 3 = 96.64
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.066(In/Hr)
Initial subarea data:
Initial area flow distance =   994.000(Ft.)
Top (of initial area) elevation =  3480.000(Ft.)
Bottom (of initial area) elevation =  3045.000(Ft.)
Difference in elevation =   435.000(Ft.)
Slope =    0.43763  s(%)=      43.76
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.792 min.
Rainfall intensity =      3.842(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
Subarea runoff =     13.625(CFS)
Total initial stream area =        4.010(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.066(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      402.000 to Point/Station      403.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
------------------------------------------------------------------------
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.534(Ft.), Average velocity =   4.548(Ft/s)
        ******* Irregular Channel Data ***********
-----------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
```

```
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
-----------------------------------------------------------------
Sub-Channel flow  =     21.112(CFS)
  '     '        flow top width =     17.370(Ft.)
  '     '    velocity=    4.548(Ft/s)
  '     '        area =      4.642(Sq.Ft)
  '     '        Froude number =     1.550

Upstream point elevation =  3045.000(Ft.)
Downstream point elevation =  2995.000(Ft.)
Flow length =   748.000(Ft.)
Travel time  =    2.74 min.
Time of concentration =   12.53 min.
Depth of flow =   0.534(Ft.)
Average velocity =   4.548(Ft/s)
Total irregular channel flow =    21.112(CFS)
Irregular channel normal depth above invert elev. =   0.534(Ft.)
Average velocity of channel(s) =   4.548(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.100
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.900
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 84.10
Adjusted SCS curve number for AMC 3 = 96.46
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.070(In/Hr)
Rainfall intensity =      3.232(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.881
Subarea runoff =     14.876(CFS) for    6.000(Ac.)
Total runoff =     28.501(CFS)
Effective area this stream =       10.01(Ac.)
Total Study Area (Main Stream No. 1) =      149.39(Ac.)
Area averaged Fm value =    0.068(In/Hr)
Depth of flow =   0.598(Ft.), Average velocity =   4.902(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      403.000 to Point/Station      404.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.891(Ft.), Average velocity =   5.125(Ft/s)
        ******* Irregular Channel Data ***********
-----------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
```

```
        2             35.00              0.00
        3             70.00              2.00
Manning's 'N' friction factor =   0.035
-----------------------------------------------------------------
Sub-Channel flow  =     71.247(CFS)
  '     '        flow top width =     31.195(Ft.)
  '     '    velocity=    5.125(Ft/s)
  '     '        area =     13.902(Sq.Ft)
  '     '        Froude number =     1.353

Upstream point elevation =  2995.000(Ft.)
Downstream point elevation =  2892.000(Ft.)
Flow length =  2401.000(Ft.)
Travel time  =    7.81 min.
Time of concentration =   20.34 min.
Depth of flow =   0.891(Ft.)
Average velocity =   5.125(Ft/s)
Total irregular channel flow =    71.247(CFS)
Irregular channel normal depth above invert elev. =   0.891(Ft.)
Average velocity of channel(s) =   5.125(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.303(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.877
Subarea runoff =     85.420(CFS) for   46.370(Ac.)
Total runoff =    113.921(CFS)
Effective area this stream =       56.38(Ac.)
Total Study Area (Main Stream No. 1) =      195.76(Ac.)
Area averaged Fm value =    0.058(In/Hr)
Depth of flow =   1.063(Ft.), Average velocity =   5.763(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      403.000 to Point/Station      404.000
**** CONFLUENCE OF MINOR STREAMS ****
_________________________________________________________________________
Along Main Stream number: 1 in normal stream number 4
Stream flow area =     56.380(Ac.)
Runoff from this stream =    113.921(CFS)
Time of concentration =   20.34 min.
Rainfall intensity =     2.303(In/Hr)
Area averaged loss rate (Fm) =    0.0577(In/Hr)
```

```
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      502.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.900
Decimal fraction soil group D = 0.100
SCS curve number for soil(AMC 2)  = 86.30
Adjusted SCS curve number for AMC 3 = 97.26
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.054(In/Hr)
Initial subarea data:
Initial area flow distance =   844.000(Ft.)
Top (of initial area) elevation =  3480.000(Ft.)
Bottom (of initial area) elevation =  3200.000(Ft.)
Difference in elevation =   280.000(Ft.)
Slope =    0.33175  s(%)=      33.18
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.695 min.
Rainfall intensity =      3.869(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.887
Subarea runoff =     32.922(CFS)
Total initial stream area =        9.590(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.054(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      502.000 to Point/Station      503.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.640(Ft.), Average velocity =   7.360(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             25.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     49.013(CFS)
  '     '        flow top width =     20.805(Ft.)
  '     '    velocity=    7.360(Ft/s)
  '     '        area =      6.659(Sq.Ft)
```

```
  '     '        Froude number =     2.293

Upstream point elevation =  3200.000(Ft.)
Downstream point elevation =  2904.000(Ft.)
Flow length =  2151.000(Ft.)
Travel time  =    4.87 min.
Time of concentration =   14.57 min.
Depth of flow =   0.640(Ft.)
Average velocity =   7.360(Ft/s)
Total irregular channel flow =    49.013(CFS)
Irregular channel normal depth above invert elev. =   0.640(Ft.)
Average velocity of channel(s) =   7.360(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.909(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.883
Subarea runoff =     32.124(CFS) for   15.730(Ac.)
Total runoff =     65.046(CFS)
Effective area this stream =       25.32(Ac.)
Total Study Area (Main Stream No. 1) =      221.08(Ac.)
Area averaged Fm value =    0.055(In/Hr)
Depth of flow =   0.712(Ft.), Average velocity =   7.900(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      503.000 to Point/Station      504.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.267(Ft.), Average velocity =   2.597(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     67.730(CFS)
  '     '        flow top width =     41.173(Ft.)
  '     '    velocity=    2.597(Ft/s)
```

```
  '     '        area =     26.080(Sq.Ft)
  '     '        Froude number =     0.575

Upstream point elevation =  2904.000(Ft.)
Downstream point elevation =  2886.000(Ft.)
Flow length =  2610.000(Ft.)
Travel time  =   16.75 min.
Time of concentration =   31.32 min.
Depth of flow =   1.267(Ft.)
Average velocity =   2.597(Ft/s)
Total irregular channel flow =    67.730(CFS)
Irregular channel normal depth above invert elev. =   1.267(Ft.)
Average velocity of channel(s) =   2.597(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      1.703(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.871
Subarea runoff =      5.290(CFS) for   22.120(Ac.)
Total runoff =     70.336(CFS)
Effective area this stream =       47.44(Ac.)
Total Study Area (Main Stream No. 1) =      243.20(Ac.)
Area averaged Fm value =    0.055(In/Hr)
Depth of flow =   1.285(Ft.), Average velocity =   2.622(Ft/s)


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Process from Point/Station      503.000 to Point/Station      504.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 5
Stream flow area =     47.440(Ac.)
Runoff from this stream =     70.336(CFS)
Time of concentration =   31.32 min.
Rainfall intensity =     1.703(In/Hr)
Area averaged loss rate (Fm) =    0.0552(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)
```

```
1     70.61    37.530     21.81    0.102      2.193
2    184.11    89.810     19.37    0.106      2.383
3     22.79    12.040     21.54    0.109      2.212
4    113.92    56.380     20.34    0.058      2.303
5     70.34    47.440     31.32    0.055      1.703
Qmax(1) =
           1.000 *    1.000 *    70.611) +
           0.916 *    1.000 *   184.114) +
           0.991 *    1.000 *    22.785) +
           0.951 *    1.000 *   113.921) +
           1.298 *    0.697 *    70.336) + =     433.833
Qmax(2) =
           1.091 *    0.888 *    70.611) +
           1.000 *    1.000 *   184.114) +
           1.082 *    0.899 *    22.785) +
           1.036 *    0.952 *   113.921) +
           1.413 *    0.618 *    70.336) + =     448.493
Qmax(3) =
           1.009 *    0.988 *    70.611) +
           0.925 *    1.000 *   184.114) +
           1.000 *    1.000 *    22.785) +
           0.960 *    1.000 *   113.921) +
           1.309 *    0.688 *    70.336) + =     436.096
Qmax(4) =
           1.053 *    0.933 *    70.611) +
           0.965 *    1.000 *   184.114) +
           1.043 *    0.944 *    22.785) +
           1.000 *    1.000 *   113.921) +
           1.364 *    0.650 *    70.336) + =     445.608
Qmax(5) =
           0.765 *    1.000 *    70.611) +
           0.701 *    1.000 *   184.114) +
           0.758 *    1.000 *    22.785) +
           0.733 *    1.000 *   113.921) +
           1.000 *    1.000 *    70.336) + =     354.189

Total of 5 streams to confluence:
Flow rates before confluence point:
      70.611     184.114      22.785     113.921      70.336
Maximum flow rates at confluence using above data:
      433.833      448.493      436.096      445.608      354.189
Area of streams before confluence:
       37.530       89.810       12.040       56.380       47.440
Effective area values after confluence:
      228.804      216.968      227.937      223.372      243.200
Results of confluence:
Total flow rate =    448.493(CFS)
Time of concentration =    19.366 min.
Effective stream area after confluence =    216.968(Ac.)
Study area average Pervious fraction(Ap) =  1.000
```

Study area average soil loss rate(Fm) = 0.084(In/Hr)
Study area total (this main stream) = 243.20(Ac.)
End of computations, Total Study Area = 243.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 83.3

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 07/26/22

IENLC
100-yr
Existing condition
Areas F and G

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.080 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 601.000 to Point/Station 602.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.055(In/Hr)
Initial subarea data:
Initial area flow distance = 683.000(Ft.)
Top (of initial area) elevation = 3345.000(Ft.)
Bottom (of initial area) elevation = 3140.000(Ft.)
Difference in elevation = 205.000(Ft.)
Slope = 0.30015 s(%)= 30.01
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.088 min.
Rainfall intensity = 4.048(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.888

```
Subarea runoff =     34.206(CFS)
Total initial stream area =        9.520(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      602.000 to Point/Station      603.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.822(Ft.), Average velocity =   7.185(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             25.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     78.930(CFS)
  '     '        flow top width =     26.721(Ft.)
  '     '    velocity=    7.185(Ft/s)
  '     '        area =     10.985(Sq.Ft)
  '     '        Froude number =     1.975

Upstream point elevation =  3140.000(Ft.)
Downstream point elevation =  3050.000(Ft.)
Flow length =   958.000(Ft.)
Travel time  =    2.22 min.
Time of concentration =   11.31 min.
Depth of flow =   0.822(Ft.)
Average velocity =   7.185(Ft/s)
Total irregular channel flow =    78.930(CFS)
Irregular channel normal depth above invert elev. =   0.822(Ft.)
Average velocity of channel(s) =   7.185(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      3.473(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.886
Subarea runoff =     89.351(CFS) for   30.650(Ac.)
```

```
Total runoff =    123.557(CFS)
Effective area this stream =       40.17(Ac.)
Total Study Area (Main Stream No. 1) =       40.17(Ac.)
Area averaged Fm value =    0.055(In/Hr)
Depth of flow =   0.973(Ft.), Average velocity =   8.037(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      603.000 to Point/Station      604.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.422(Ft.), Average velocity =   6.203(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             35.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =    203.924(CFS)
  '     '        flow top width =     46.225(Ft.)
  '     '    velocity=    6.203(Ft/s)
  '     '        area =     32.873(Sq.Ft)
  '     '        Froude number =     1.296

Upstream point elevation =  3050.000(Ft.)
Downstream point elevation =  3000.000(Ft.)
Flow length =  1483.000(Ft.)
Travel time  =    3.98 min.
Time of concentration =   15.29 min.
Depth of flow =   1.422(Ft.)
Average velocity =   6.203(Ft/s)
Total irregular channel flow =   203.924(CFS)
Irregular channel normal depth above invert elev. =   1.422(Ft.)
Average velocity of channel(s) =   6.203(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.812(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.882
```

```
Subarea runoff =    160.646(CFS) for   74.400(Ac.)
Total runoff =    284.203(CFS)
Effective area this stream =      114.57(Ac.)
Total Study Area (Main Stream No. 1) =      114.57(Ac.)
Area averaged Fm value =    0.055(In/Hr)
Depth of flow =   1.611(Ft.), Average velocity =   6.740(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      604.000 to Point/Station      605.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.768(Ft.), Average velocity =   6.263(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =    318.284(CFS)
  '     '        flow top width =     57.473(Ft.)
  '     '    velocity=    6.263(Ft/s)
  '     '        area =     50.817(Sq.Ft)
  '     '        Froude number =     1.174

Upstream point elevation =  3000.000(Ft.)
Downstream point elevation =  2982.000(Ft.)
Flow length =   700.000(Ft.)
Travel time  =    1.86 min.
Time of concentration =   17.16 min.
Depth of flow =   1.768(Ft.)
Average velocity =   6.263(Ft/s)
Total irregular channel flow =   318.285(CFS)
Irregular channel normal depth above invert elev. =   1.768(Ft.)
Average velocity of channel(s) =   6.263(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.594(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
```

```
rational method)(Q=KCIA) is C = 0.881
Subarea runoff =     68.100(CFS) for   39.610(Ac.)
Total runoff =    352.302(CFS)
Effective area this stream =      154.18(Ac.)
Total Study Area (Main Stream No. 1) =      154.18(Ac.)
Area averaged Fm value =    0.055(In/Hr)
Depth of flow =   1.837(Ft.), Average velocity =   6.424(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      605.000 to Point/Station      606.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   1.730(Ft.), Average velocity =   7.647(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             35.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =    371.906(CFS)
  '     '        flow top width =     56.224(Ft.)
  '     '    velocity=    7.647(Ft/s)
  '     '        area =     48.633(Sq.Ft)
  '     '        Froude number =     1.449

Upstream point elevation =  2982.000(Ft.)
Downstream point elevation =  2885.000(Ft.)
Flow length =  2458.000(Ft.)
Travel time  =    5.36 min.
Time of concentration =   22.51 min.
Depth of flow =   1.730(Ft.)
Average velocity =   7.647(Ft/s)
Total irregular channel flow =   371.906(CFS)
Irregular channel normal depth above invert elev. =   1.730(Ft.)
Average velocity of channel(s) =   7.647(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.145(In/Hr) for a   100.0 year storm
```

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.877
Subarea runoff =     39.157(CFS) for   53.980(Ac.)
Total runoff =    391.459(CFS)
Effective area this stream =      208.16(Ac.)
Total Study Area (Main Stream No. 1) =      208.16(Ac.)
Area averaged Fm value =    0.055(In/Hr)
Depth of flow =   1.764(Ft.), Average velocity =   7.746(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      605.000 to Point/Station      606.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    208.160(Ac.)
Runoff from this stream =    391.459(CFS)
Time of concentration =   22.51 min.
Rainfall intensity =     2.145(In/Hr)
Area averaged loss rate (Fm) =    0.0554(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      702.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Initial subarea data:
Initial area flow distance =   961.000(Ft.)
Top (of initial area) elevation =  3140.000(Ft.)
Bottom (of initial area) elevation =  3030.000(Ft.)
Difference in elevation =   110.000(Ft.)
Slope =    0.11446  s(%)=      11.45
TC = k(0.525)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.633 min.
Rainfall intensity =      3.214(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
Subarea runoff =     26.581(CFS)
Total initial stream area =        9.350(Ac.)
Pervious area fraction = 1.000
Initial area Fm value =    0.055(In/Hr)
```

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      702.000 to Point/Station      703.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.713(Ft.), Average velocity =   5.012(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     41.410(CFS)
  '     '         flow top width =     23.174(Ft.)
  '     '    velocity=    5.012(Ft/s)
  '     '         area =      8.262(Sq.Ft)
  '     '         Froude number =     1.479

Upstream point elevation =  3030.000(Ft.)
Downstream point elevation =  2985.000(Ft.)
Flow length =   814.000(Ft.)
Travel time  =    2.71 min.
Time of concentration =   15.34 min.
Depth of flow =   0.713(Ft.)
Average velocity =   5.012(Ft/s)
Total irregular channel flow =    41.410(CFS)
Irregular channel normal depth above invert elev. =   0.713(Ft.)
Average velocity of channel(s) =   5.012(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.806(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.882
Subarea runoff =     29.584(CFS) for   13.340(Ac.)
Total runoff =     56.166(CFS)
Effective area this stream =       22.69(Ac.)
Total Study Area (Main Stream No. 1) =      230.85(Ac.)
Area averaged Fm value =    0.055(In/Hr)
Depth of flow =   0.799(Ft.), Average velocity =   5.409(Ft/s)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      703.000 to Point/Station      704.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      0.000(CFS)
Depth of flow =   0.909(Ft.), Average velocity =   5.540(Ft/s)
        ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              2.00
        2             23.00              0.00
        3             65.00              2.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     74.388(CFS)
  '     '        flow top width =     29.542(Ft.)
  '     '    velocity=    5.540(Ft/s)
  '     '        area =     13.426(Sq.Ft)
  '     '        Froude number =     1.448

Upstream point elevation =  2985.000(Ft.)
Downstream point elevation =  2888.000(Ft.)
Flow length =  1985.000(Ft.)
Travel time  =    5.97 min.
Time of concentration =   21.31 min.
Depth of flow =   0.909(Ft.)
Average velocity =   5.540(Ft/s)
Total irregular channel flow =    74.388(CFS)
Irregular channel normal depth above invert elev. =   0.909(Ft.)
Average velocity of channel(s) =   5.540(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 86.00
Adjusted SCS curve number for AMC 3 = 97.20
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.055(In/Hr)
Rainfall intensity =      2.229(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.878
Subarea runoff =     36.383(CFS) for   24.620(Ac.)
Total runoff =     92.549(CFS)
Effective area this stream =       47.31(Ac.)
Total Study Area (Main Stream No. 1) =      255.47(Ac.)
Area averaged Fm value =    0.055(In/Hr)
```

```
Depth of flow =   0.987(Ft.), Average velocity =   5.851(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      703.000 to Point/Station      704.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     47.310(Ac.)
Runoff from this stream =     92.549(CFS)
Time of concentration =   21.31 min.
Rainfall intensity =     2.229(In/Hr)
Area averaged loss rate (Fm) =    0.0554(In/Hr)
Area averaged Pervious ratio (Ap) = 1.0000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1    391.46   208.160     22.51    0.055      2.145
2     92.55    47.310     21.31    0.055      2.229
Qmax(1) =
           1.000 *    1.000 *   391.459) +
           0.961 *    1.000 *    92.549) + =     480.429
Qmax(2) =
           1.040 *    0.947 *   391.459) +
           1.000 *    1.000 *    92.549) + =     477.997

Total of 2 streams to confluence:
Flow rates before confluence point:
     391.459      92.549
Maximum flow rates at confluence using above data:
      480.429      477.997
Area of streams before confluence:
      208.160       47.310
Effective area values after confluence:
      255.470      244.348
Results of confluence:
Total flow rate =    480.429(CFS)
Time of concentration =    22.514 min.
Effective stream area after confluence =    255.470(Ac.)
Study area average Pervious fraction(Ap) =  1.000
Study area average soil loss rate(Fm) =    0.055(In/Hr)
Study area total (this main stream) =     255.47(Ac.)
End of computations, Total Study Area =          255.47 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.
```

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number = 86.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 07/29/22

IENLC
10-year
Developed condition
Area A

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.609 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

++

Process from Point/Station 10.000 to Point/Station 20.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.055(In/Hr)
Initial subarea data:
Initial area flow distance = 685.000(Ft.)
Top (of initial area) elevation = 2922.900(Ft.)
Bottom (of initial area) elevation = 2916.790(Ft.)
Difference in elevation = 6.110(Ft.)
Slope = 0.00892 s(%)= 0.89
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.643 min.
Rainfall intensity = 2.043(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.876
Subarea runoff = 12.189(CFS)

```
Total initial stream area =        6.810(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       20.000 to Point/Station       30.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2913.800(Ft.)
Downstream point/station elevation =  2911.400(Ft.)
Pipe length  =   488.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    12.189(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    12.189(CFS)
Normal flow depth in pipe =   15.77(In.)
Flow top width inside pipe =   22.78(In.)
Critical Depth =   15.06(In.)
Pipe flow velocity =      5.57(Ft/s)
Travel time through pipe =    1.46 min.
Time of concentration (TC) =    12.10 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       20.000 to Point/Station       30.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    12.10 min.
Rainfall intensity =      1.868(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.874
Subarea runoff =     10.310(CFS) for    6.980(Ac.)
Total runoff =     22.498(CFS)
Effective area this stream =       13.79(Ac.)
Total Study Area (Main Stream No. 1) =       13.79(Ac.)
Area averaged Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       30.000 to Point/Station       40.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2911.400(Ft.)
```

```
Downstream point/station elevation =  2907.000(Ft.)
Pipe length  =   878.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    22.498(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    22.498(CFS)
Normal flow depth in pipe =   19.83(In.)
Flow top width inside pipe =   28.40(In.)
Critical Depth =   19.36(In.)
Pipe flow velocity =      6.53(Ft/s)
Travel time through pipe =    2.24 min.
Time of concentration (TC) =    14.34 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       30.000 to Point/Station       40.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    14.34 min.
Rainfall intensity =      1.658(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.870
Subarea runoff =      3.565(CFS) for    4.270(Ac.)
Total runoff =     26.063(CFS)
Effective area this stream =       18.06(Ac.)
Total Study Area (Main Stream No. 1) =       18.06(Ac.)
Area averaged Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       30.000 to Point/Station       40.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     18.060(Ac.)
Runoff from this stream =     26.063(CFS)
Time of concentration =   14.34 min.
Rainfall intensity =     1.658(In/Hr)
Area averaged loss rate (Fm) =    0.0548(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       50.000 to Point/Station       60.000
```

```
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Initial subarea data:
Initial area flow distance =   648.000(Ft.)
Top (of initial area) elevation =  2922.900(Ft.)
Bottom (of initial area) elevation =  2916.030(Ft.)
Difference in elevation =     6.870(Ft.)
Slope =    0.01060  s(%)=       1.06
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.056 min.
Rainfall intensity =      2.126(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.877
Subarea runoff =     13.274(CFS)
Total initial stream area =        7.120(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       60.000 to Point/Station       70.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  2913.000(Ft.)
Downstream point/station elevation =  2910.500(Ft.)
Pipe length  =   500.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.274(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    13.274(CFS)
Normal flow depth in pipe =   16.69(In.)
Flow top width inside pipe =   22.09(In.)
Critical Depth =   15.73(In.)
Pipe flow velocity =      5.69(Ft/s)
Travel time through pipe =    1.46 min.
Time of concentration (TC) =    11.52 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       60.000 to Point/Station       70.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
```

```
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    11.52 min.
Rainfall intensity =      1.933(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.874
Subarea runoff =     11.089(CFS) for    7.290(Ac.)
Total runoff =     24.363(CFS)
Effective area this stream =       14.41(Ac.)
Total Study Area (Main Stream No. 1) =       32.47(Ac.)
Area averaged Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       70.000 to Point/Station       80.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2910.500(Ft.)
Downstream point/station elevation =  2907.060(Ft.)
Pipe length  =   688.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    24.363(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    24.363(CFS)
Normal flow depth in pipe =   21.05(In.)
Flow top width inside pipe =   27.45(In.)
Critical Depth =   20.18(In.)
Pipe flow velocity =      6.62(Ft/s)
Travel time through pipe =    1.73 min.
Time of concentration (TC) =    13.25 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       70.000 to Point/Station       80.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    13.25 min.
Rainfall intensity =      1.753(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.872
Subarea runoff =     20.489(CFS) for   14.940(Ac.)
Total runoff =     44.852(CFS)
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```
Effective area this stream =       29.35(Ac.)
Total Study Area (Main Stream No. 1) =       47.41(Ac.)
Area averaged Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       70.000 to Point/Station       80.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     29.350(Ac.)
Runoff from this stream =     44.852(CFS)
Time of concentration =   13.25 min.
Rainfall intensity =     1.753(In/Hr)
Area averaged loss rate (Fm) =    0.0548(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     26.06    18.060     14.34    0.055      1.658
2     44.85    29.350     13.25    0.055      1.753
Qmax(1) =
           1.000 *    1.000 *    26.063) +
           0.944 *    1.000 *    44.852) + =      68.418
Qmax(2) =
           1.059 *    0.924 *    26.063) +
           1.000 *    1.000 *    44.852) + =      70.350

Total of 2 streams to confluence:
Flow rates before confluence point:
      26.063      44.852
Maximum flow rates at confluence using above data:
       68.418       70.350
Area of streams before confluence:
       18.060       29.350
Effective area values after confluence:
       47.410       46.035
Results of confluence:
Total flow rate =     70.350(CFS)
Time of concentration =    13.252 min.
Effective stream area after confluence =     46.035(Ac.)
Study area average Pervious fraction(Ap) =  0.100
Study area average soil loss rate(Fm) =    0.055(In/Hr)
Study area total (this main stream) =      47.41(Ac.)
End of computations, Total Study Area =           47.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
```

Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number = 69.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/02/22

IEN
10-year Developed
Area B

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.609 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

++

Process from Point/Station 50.000 to Point/Station 15.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.055(In/Hr)
Initial subarea data:
Initial area flow distance = 613.000(Ft.)
Top (of initial area) elevation = 2922.900(Ft.)
Bottom (of initial area) elevation = 2916.800(Ft.)
Difference in elevation = 6.100(Ft.)
Slope = 0.00995 s(%)= 1.00
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.961 min.
Rainfall intensity = 2.141(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.877

```
Subarea runoff =     12.915(CFS)
Total initial stream area =        6.880(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       15.000 to Point/Station       25.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2913.800(Ft.)
Downstream point/station elevation =  2911.220(Ft.)
Pipe length  =   517.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    12.915(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    12.915(CFS)
Normal flow depth in pipe =   16.36(In.)
Flow top width inside pipe =   22.36(In.)
Critical Depth =   15.51(In.)
Pipe flow velocity =      5.66(Ft/s)
Travel time through pipe =    1.52 min.
Time of concentration (TC) =    11.48 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       15.000 to Point/Station       25.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    11.48 min.
Rainfall intensity =      1.938(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.875
Subarea runoff =     10.336(CFS) for    6.840(Ac.)
Total runoff =     23.251(CFS)
Effective area this stream =       13.72(Ac.)
Total Study Area (Main Stream No. 1) =       13.72(Ac.)
Area averaged Fm value =    0.055(In/Hr)


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Process from Point/Station       25.000 to Point/Station       35.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
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Upstream point/station elevation =  2911.220(Ft.)
Downstream point/station elevation =  2907.880(Ft.)
Pipe length  =   668.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    23.251(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    23.251(CFS)
Normal flow depth in pipe =   20.32(In.)
Flow top width inside pipe =   28.05(In.)
Critical Depth =   19.71(In.)
Pipe flow velocity =      6.57(Ft/s)
Travel time through pipe =    1.70 min.
Time of concentration (TC) =    13.18 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       25.000 to Point/Station       35.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    13.18 min.
Rainfall intensity =      1.760(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.872
Subarea runoff =     13.114(CFS) for    9.980(Ac.)
Total runoff =     36.365(CFS)
Effective area this stream =       23.70(Ac.)
Total Study Area (Main Stream No. 1) =       23.70(Ac.)
Area averaged Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       25.000 to Point/Station       35.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     23.700(Ac.)
Runoff from this stream =     36.365(CFS)
Time of concentration =   13.18 min.
Rainfall intensity =     1.760(In/Hr)
Area averaged loss rate (Fm) =    0.0548(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000


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Process from Point/Station       50.000 to Point/Station       45.000
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Initial subarea data:
Initial area flow distance =   629.000(Ft.)
Top (of initial area) elevation =  2922.900(Ft.)
Bottom (of initial area) elevation =  2916.800(Ft.)
Difference in elevation =     6.100(Ft.)
Slope =    0.00970  s(%)=       0.97
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.116 min.
Rainfall intensity =      2.118(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.877
Subarea runoff =     13.626(CFS)
Total initial stream area =        7.340(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.055(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       45.000 to Point/Station       55.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  2913.800(Ft.)
Downstream point/station elevation =  2911.290(Ft.)
Pipe length  =   503.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.626(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    13.626(CFS)
Normal flow depth in pipe =   17.04(In.)
Flow top width inside pipe =   21.78(In.)
Critical Depth =   15.96(In.)
Pipe flow velocity =      5.71(Ft/s)
Travel time through pipe =    1.47 min.
Time of concentration (TC) =    11.58 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       45.000 to Point/Station       55.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
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Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    11.58 min.
Rainfall intensity =      1.926(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.874
Subarea runoff =      8.401(CFS) for    5.740(Ac.)
Total runoff =     22.027(CFS)
Effective area this stream =       13.08(Ac.)
Total Study Area (Main Stream No. 1) =       36.78(Ac.)
Area averaged Fm value =    0.055(In/Hr)


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Process from Point/Station       55.000 to Point/Station       65.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2911.290(Ft.)
Downstream point/station elevation =  2908.930(Ft.)
Pipe length  =   472.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    22.027(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    22.027(CFS)
Normal flow depth in pipe =   19.55(In.)
Flow top width inside pipe =   28.59(In.)
Critical Depth =   19.15(In.)
Pipe flow velocity =      6.50(Ft/s)
Travel time through pipe =    1.21 min.
Time of concentration (TC) =    12.79 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       55.000 to Point/Station       65.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    12.79 min.
Rainfall intensity =      1.797(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.873
Subarea runoff =      4.355(CFS) for    3.750(Ac.)
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Total runoff =     26.382(CFS)
Effective area this stream =       16.83(Ac.)
Total Study Area (Main Stream No. 1) =       40.53(Ac.)
Area averaged Fm value =    0.055(In/Hr)


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Process from Point/Station       65.000 to Point/Station       75.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2908.930(Ft.)
Downstream point/station elevation =  2908.040(Ft.)
Pipe length  =   179.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    26.382(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    26.382(CFS)
Normal flow depth in pipe =   22.50(In.)
Flow top width inside pipe =   25.98(In.)
Critical Depth =   21.02(In.)
Pipe flow velocity =      6.68(Ft/s)
Travel time through pipe =    0.45 min.
Time of concentration (TC) =    13.24 min.


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Process from Point/Station       65.000 to Point/Station       75.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.055(In/Hr)
Time of concentration =    13.24 min.
Rainfall intensity =      1.754(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.872
Subarea runoff =     10.807(CFS) for    7.490(Ac.)
Total runoff =     37.189(CFS)
Effective area this stream =       24.32(Ac.)
Total Study Area (Main Stream No. 1) =       48.02(Ac.)
Area averaged Fm value =    0.055(In/Hr)


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Process from Point/Station       75.000 to Point/Station       85.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
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Upstream point/station elevation =  2908.040(Ft.)
Downstream point/station elevation =  2904.090(Ft.)
Pipe length  =   791.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    37.189(CFS)
Nearest computed pipe diameter  =     33.00(In.)
Calculated individual pipe flow  =    37.189(CFS)
Normal flow depth in pipe =   26.91(In.)
Flow top width inside pipe =   25.61(In.)
Critical Depth =   24.36(In.)
Pipe flow velocity =      7.17(Ft/s)
Travel time through pipe =    1.84 min.
Time of concentration (TC) =    15.08 min.


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Process from Point/Station       75.000 to Point/Station       85.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     24.320(Ac.)
Runoff from this stream =     37.189(CFS)
Time of concentration =   15.08 min.
Rainfall intensity =     1.601(In/Hr)
Area averaged loss rate (Fm) =    0.0548(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     36.36    23.700     13.18    0.055      1.760
2     37.19    24.320     15.08    0.055      1.601
Qmax(1) =
           1.000 *    1.000 *    36.365) +
           1.102 *    0.874 *    37.189) + =      72.195
Qmax(2) =
           0.907 *    1.000 *    36.365) +
           1.000 *    1.000 *    37.189) + =      70.177

Total of 2 streams to confluence:
Flow rates before confluence point:
      36.365      37.189
Maximum flow rates at confluence using above data:
       72.195       70.177
Area of streams before confluence:
       23.700       24.320
Effective area values after confluence:
       44.955       48.020
Results of confluence:
```

Total flow rate = 72.195(CFS)
Time of concentration = 13.178 min.
Effective stream area after confluence = 44.955(Ac.)
Study area average Pervious fraction(Ap) = 0.100
Study area average soil loss rate(Fm) = 0.055(In/Hr)
Study area total (this main stream) = 48.02(Ac.)
End of computations, Total Study Area = 48.02 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number = 69.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/02/22

IEN
10-year Developed
Area C

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.601 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

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Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2) = 48.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.083(In/Hr)
Initial subarea data:
Initial area flow distance = 546.000(Ft.)
Top (of initial area) elevation = 2968.000(Ft.)
Bottom (of initial area) elevation = 2962.030(Ft.)
Difference in elevation = 5.970(Ft.)
Slope = 0.01093 s(%)= 1.09
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.332 min.
Rainfall intensity = 2.211(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.866

```
Subarea runoff =      9.575(CFS)
Total initial stream area =        5.000(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.083(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2959.000(Ft.)
Downstream point/station elevation =  2956.900(Ft.)
Pipe length  =   415.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     9.575(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =     9.575(CFS)
Normal flow depth in pipe =   14.86(In.)
Flow top width inside pipe =   19.10(In.)
Critical Depth =   13.81(In.)
Pipe flow velocity =      5.26(Ft/s)
Travel time through pipe =    1.32 min.
Time of concentration (TC) =    10.65 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.083(In/Hr)
Time of concentration =    10.65 min.
Rainfall intensity =      2.016(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.863
Subarea runoff =      7.577(CFS) for    4.860(Ac.)
Total runoff =     17.151(CFS)
Effective area this stream =        9.86(Ac.)
Total Study Area (Main Stream No. 1) =        9.86(Ac.)
Area averaged Fm value =    0.083(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
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```
Upstream point/station elevation =  2956.900(Ft.)
Downstream point/station elevation =  2953.500(Ft.)
Pipe length  =   673.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    17.151(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    17.151(CFS)
Normal flow depth in pipe =   17.93(In.)
Flow top width inside pipe =   25.51(In.)
Critical Depth =   17.36(In.)
Pipe flow velocity =      6.12(Ft/s)
Travel time through pipe =    1.83 min.
Time of concentration (TC) =    12.48 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.083(In/Hr)
Time of concentration =    12.48 min.
Rainfall intensity =      1.804(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.858
Subarea runoff =      7.487(CFS) for    6.050(Ac.)
Total runoff =     24.638(CFS)
Effective area this stream =       15.91(Ac.)
Total Study Area (Main Stream No. 1) =       15.91(Ac.)
Area averaged Fm value =    0.083(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 69.00
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.493(In/Hr)
Time of concentration =    12.48 min.
Rainfall intensity =      1.804(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.820
Subarea runoff =      4.365(CFS) for    3.700(Ac.)
Total runoff =     29.004(CFS)
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Effective area this stream =       19.61(Ac.)
Total Study Area (Main Stream No. 1) =       19.61(Ac.)
Area averaged Fm value =    0.161(In/Hr)


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Process from Point/Station      102.000 to Point/Station      103.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     19.610(Ac.)
Runoff from this stream =     29.004(CFS)
Time of concentration =   12.48 min.
Rainfall intensity =     1.804(In/Hr)
Area averaged loss rate (Fm) =    0.1606(In/Hr)
Area averaged Pervious ratio (Ap) = 0.2509


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      104.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.083(In/Hr)
Initial subarea data:
Initial area flow distance =   570.000(Ft.)
Top (of initial area) elevation =  2968.000(Ft.)
Bottom (of initial area) elevation =  2962.140(Ft.)
Difference in elevation =     5.860(Ft.)
Slope =    0.01028  s(%)=       1.03
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.612 min.
Rainfall intensity =      2.166(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.865
Subarea runoff =     13.607(CFS)
Total initial stream area =        7.260(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.083(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2959.100(Ft.)
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Downstream point/station elevation =  2957.300(Ft.)
Pipe length  =   365.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.607(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    13.607(CFS)
Normal flow depth in pipe =   17.11(In.)
Flow top width inside pipe =   21.72(In.)
Critical Depth =   15.94(In.)
Pipe flow velocity =      5.68(Ft/s)
Travel time through pipe =    1.07 min.
Time of concentration (TC) =    10.68 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      105.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.083(In/Hr)
Time of concentration =    10.68 min.
Rainfall intensity =      2.011(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.863
Subarea runoff =     11.747(CFS) for    7.350(Ac.)
Total runoff =     25.353(CFS)
Effective area this stream =       14.61(Ac.)
Total Study Area (Main Stream No. 1) =       34.22(Ac.)
Area averaged Fm value =    0.083(In/Hr)


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Process from Point/Station      105.000 to Point/Station      106.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2957.300(Ft.)
Downstream point/station elevation =  2952.600(Ft.)
Pipe length  =   945.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    25.353(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    25.353(CFS)
Normal flow depth in pipe =   21.77(In.)
Flow top width inside pipe =   26.77(In.)
Critical Depth =   20.60(In.)
Pipe flow velocity =      6.65(Ft/s)
Travel time through pipe =    2.37 min.
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Time of concentration (TC) =    13.05 min.


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Process from Point/Station      105.000 to Point/Station      106.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.083(In/Hr)
Time of concentration =    13.05 min.
Rainfall intensity =      1.748(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.857
Subarea runoff =      3.057(CFS) for    4.350(Ac.)
Total runoff =     28.410(CFS)
Effective area this stream =       18.96(Ac.)
Total Study Area (Main Stream No. 1) =       38.57(Ac.)
Area averaged Fm value =    0.083(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      106.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     18.960(Ac.)
Runoff from this stream =     28.410(CFS)
Time of concentration =   13.05 min.
Rainfall intensity =     1.748(In/Hr)
Area averaged loss rate (Fm) =    0.0833(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     29.00    19.610     12.48    0.161      1.804
2     28.41    18.960     13.05    0.083      1.748
Qmax(1) =
           1.000 *    1.000 *    29.004) +
           1.033 *    0.956 *    28.410) + =      57.077
Qmax(2) =
           0.966 *    1.000 *    29.004) +
           1.000 *    1.000 *    28.410) + =      56.430
```

```
Total of 2 streams to confluence:
Flow rates before confluence point:
      29.004      28.410
Maximum flow rates at confluence using above data:
       57.077       56.430
Area of streams before confluence:
       19.610       18.960
Effective area values after confluence:
       37.738       38.570
Results of confluence:
Total flow rate =     57.077(CFS)
Time of concentration =    12.480 min.
Effective stream area after confluence =     37.738(Ac.)
Study area average Pervious fraction(Ap) =  0.177
Study area average soil loss rate(Fm) =    0.123(In/Hr)
Study area total (this main stream) =      38.57(Ac.)
End of computations, Total Study Area =           38.57 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.177
Area averaged SCS curve number =  50.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/02/22

IEN
10-year Developed
Area D

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.609 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

++

Process from Point/Station 100.000 to Point/Station 107.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2) = 51.70
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.079(In/Hr)
Initial subarea data:
Initial area flow distance = 461.000(Ft.)
Top (of initial area) elevation = 2968.000(Ft.)
Bottom (of initial area) elevation = 2962.030(Ft.)
Difference in elevation = 5.970(Ft.)
Slope = 0.01295 s(%)= 1.30
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.431 min.
Rainfall intensity = 2.405(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.870

```
Subarea runoff =      9.234(CFS)
Total initial stream area =        4.410(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.079(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      108.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2959.000(Ft.)
Downstream point/station elevation =  2957.000(Ft.)
Pipe length  =   403.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     9.234(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =     9.234(CFS)
Normal flow depth in pipe =   14.57(In.)
Flow top width inside pipe =   19.36(In.)
Critical Depth =   13.57(In.)
Pipe flow velocity =      5.19(Ft/s)
Travel time through pipe =    1.30 min.
Time of concentration (TC) =     9.73 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      108.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 51.70
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Time of concentration =     9.73 min.
Rainfall intensity =      2.176(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.867
Subarea runoff =      7.832(CFS) for    4.630(Ac.)
Total runoff =     17.066(CFS)
Effective area this stream =        9.04(Ac.)
Total Study Area (Main Stream No. 1) =        9.04(Ac.)
Area averaged Fm value =    0.079(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      108.000 to Point/Station      109.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
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Upstream point/station elevation =  2957.000(Ft.)
Downstream point/station elevation =  2952.230(Ft.)
Pipe length  =   955.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    17.066(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    17.066(CFS)
Normal flow depth in pipe =   17.93(In.)
Flow top width inside pipe =   25.51(In.)
Critical Depth =   17.32(In.)
Pipe flow velocity =      6.09(Ft/s)
Travel time through pipe =    2.61 min.
Time of concentration (TC) =    12.34 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      108.000 to Point/Station      109.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 51.70
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Time of concentration =    12.34 min.
Rainfall intensity =      1.842(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.861
Subarea runoff =      2.566(CFS) for    3.330(Ac.)
Total runoff =     19.632(CFS)
Effective area this stream =       12.37(Ac.)
Total Study Area (Main Stream No. 1) =       12.37(Ac.)
Area averaged Fm value =    0.079(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      108.000 to Point/Station      109.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     12.370(Ac.)
Runoff from this stream =     19.632(CFS)
Time of concentration =   12.34 min.
Rainfall intensity =     1.842(In/Hr)
Area averaged loss rate (Fm) =    0.0789(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000


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Process from Point/Station      100.000 to Point/Station      110.000
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 51.70
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Initial subarea data:
Initial area flow distance =   455.000(Ft.)
Top (of initial area) elevation =  2968.000(Ft.)
Bottom (of initial area) elevation =  2962.130(Ft.)
Difference in elevation =     5.870(Ft.)
Slope =    0.01290  s(%)=       1.29
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.394 min.
Rainfall intensity =      2.413(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.871
Subarea runoff =     13.003(CFS)
Total initial stream area =        6.190(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.079(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      110.000 to Point/Station      111.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  2959.000(Ft.)
Downstream point/station elevation =  2957.200(Ft.)
Pipe length  =   365.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.003(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    13.003(CFS)
Normal flow depth in pipe =   16.52(In.)
Flow top width inside pipe =   22.23(In.)
Critical Depth =   15.58(In.)
Pipe flow velocity =      5.64(Ft/s)
Travel time through pipe =    1.08 min.
Time of concentration (TC) =     9.47 min.


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Process from Point/Station      110.000 to Point/Station      111.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
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Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 51.70
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Time of concentration =     9.47 min.
Rainfall intensity =      2.217(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.868
Subarea runoff =     15.095(CFS) for    8.410(Ac.)
Total runoff =     28.098(CFS)
Effective area this stream =       14.60(Ac.)
Total Study Area (Main Stream No. 1) =       26.97(Ac.)
Area averaged Fm value =    0.079(In/Hr)


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Process from Point/Station      111.000 to Point/Station      112.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2957.200(Ft.)
Downstream point/station elevation =  2954.100(Ft.)
Pipe length  =   630.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    28.098(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    28.098(CFS)
Normal flow depth in pipe =   24.00(In.)
Flow top width inside pipe =   24.00(In.)
Critical Depth =   21.68(In.)
Pipe flow velocity =      6.68(Ft/s)
Travel time through pipe =    1.57 min.
Time of concentration (TC) =    11.04 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      111.000 to Point/Station      112.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 51.70
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.079(In/Hr)
Time of concentration =    11.04 min.
Rainfall intensity =      1.991(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.864
Subarea runoff =     15.259(CFS) for   10.590(Ac.)
```

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Total runoff =     43.357(CFS)
Effective area this stream =       25.19(Ac.)
Total Study Area (Main Stream No. 1) =       37.56(Ac.)
Area averaged Fm value =    0.079(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      111.000 to Point/Station      112.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     25.190(Ac.)
Runoff from this stream =     43.357(CFS)
Time of concentration =   11.04 min.
Rainfall intensity =     1.991(In/Hr)
Area averaged loss rate (Fm) =    0.0789(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     19.63    12.370     12.34    0.079      1.842
2     43.36    25.190     11.04    0.079      1.991
Qmax(1) =
           1.000 *    1.000 *    19.632) +
           0.922 *    1.000 *    43.357) + =      59.612
Qmax(2) =
           1.084 *    0.895 *    19.632) +
           1.000 *    1.000 *    43.357) + =      62.409

Total of 2 streams to confluence:
Flow rates before confluence point:
      19.632      43.357
Maximum flow rates at confluence using above data:
       59.612       62.409
Area of streams before confluence:
       12.370       25.190
Effective area values after confluence:
       37.560       36.259
Results of confluence:
Total flow rate =     62.409(CFS)
Time of concentration =    11.044 min.
Effective stream area after confluence =     36.259(Ac.)
Study area average Pervious fraction(Ap) =  0.100
Study area average soil loss rate(Fm) =    0.079(In/Hr)
Study area total (this main stream) =      37.56(Ac.)
End of computations, Total Study Area =           37.56 (Ac.)
The following figures may
```

be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number = 51.7

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 07/29/22

IENLC
100-year
Developed condition
Area A

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.080 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 10.000 to Point/Station 20.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.026(In/Hr)
Initial subarea data:
Initial area flow distance = 685.000(Ft.)
Top (of initial area) elevation = 2922.900(Ft.)
Bottom (of initial area) elevation = 2916.790(Ft.)
Difference in elevation = 6.110(Ft.)
Slope = 0.00892 s(%)= 0.89
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.643 min.
Rainfall intensity = 3.624(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.894

```
Subarea runoff =     22.050(CFS)
Total initial stream area =        6.810(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       20.000 to Point/Station       30.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2913.800(Ft.)
Downstream point/station elevation =  2911.400(Ft.)
Pipe length  =   488.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    22.050(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    22.050(CFS)
Normal flow depth in pipe =   19.69(In.)
Flow top width inside pipe =   28.50(In.)
Critical Depth =   19.15(In.)
Pipe flow velocity =      6.46(Ft/s)
Travel time through pipe =    1.26 min.
Time of concentration (TC) =    11.90 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       20.000 to Point/Station       30.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Time of concentration =    11.90 min.
Rainfall intensity =      3.351(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.893
Subarea runoff =     19.215(CFS) for    6.980(Ac.)
Total runoff =     41.265(CFS)
Effective area this stream =       13.79(Ac.)
Total Study Area (Main Stream No. 1) =       13.79(Ac.)
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       30.000 to Point/Station       40.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
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```
Upstream point/station elevation =  2911.400(Ft.)
Downstream point/station elevation =  2907.000(Ft.)
Pipe length  =   878.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    41.265(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =    41.265(CFS)
Normal flow depth in pipe =   26.06(In.)
Flow top width inside pipe =   32.19(In.)
Critical Depth =   25.12(In.)
Pipe flow velocity =      7.53(Ft/s)
Travel time through pipe =    1.94 min.
Time of concentration (TC) =    13.85 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       30.000 to Point/Station       40.000
**** SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Time of concentration =    13.85 min.
Rainfall intensity =      3.014(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.892
Subarea runoff =      7.306(CFS) for    4.270(Ac.)
Total runoff =     48.571(CFS)
Effective area this stream =       18.06(Ac.)
Total Study Area (Main Stream No. 1) =       18.06(Ac.)
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       30.000 to Point/Station       40.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     18.060(Ac.)
Runoff from this stream =     48.571(CFS)
Time of concentration =   13.85 min.
Rainfall intensity =     3.014(In/Hr)
Area averaged loss rate (Fm) =    0.0262(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       50.000 to Point/Station       60.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Initial subarea data:
Initial area flow distance =   648.000(Ft.)
Top (of initial area) elevation =  2922.900(Ft.)
Bottom (of initial area) elevation =  2916.030(Ft.)
Difference in elevation =     6.870(Ft.)
Slope =    0.01060  s(%)=       1.06
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.056 min.
Rainfall intensity =      3.771(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.894
Subarea runoff =     23.996(CFS)
Total initial stream area =        7.120(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       60.000 to Point/Station       70.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2913.000(Ft.)
Downstream point/station elevation =  2910.500(Ft.)
Pipe length  =   500.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    23.996(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    23.996(CFS)
Normal flow depth in pipe =   20.81(In.)
Flow top width inside pipe =   27.66(In.)
Critical Depth =   20.02(In.)
Pipe flow velocity =      6.60(Ft/s)
Travel time through pipe =    1.26 min.
Time of concentration (TC) =    11.32 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       60.000 to Point/Station       70.000
**** SUBAREA FLOW ADDITION ****
```

```
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Time of concentration =    11.32 min.
Rainfall intensity =      3.471(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.893
Subarea runoff =     20.684(CFS) for    7.290(Ac.)
Total runoff =     44.680(CFS)
Effective area this stream =       14.41(Ac.)
Total Study Area (Main Stream No. 1) =       32.47(Ac.)
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       70.000 to Point/Station       80.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  2910.500(Ft.)
Downstream point/station elevation =  2907.060(Ft.)
Pipe length  =   688.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    44.680(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =    44.680(CFS)
Normal flow depth in pipe =   27.94(In.)
Flow top width inside pipe =   30.02(In.)
Critical Depth =   26.13(In.)
Pipe flow velocity =      7.59(Ft/s)
Travel time through pipe =    1.51 min.
Time of concentration (TC) =    12.83 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       70.000 to Point/Station       80.000
**** SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
```

```
Time of concentration =    12.83 min.
Rainfall intensity =      3.180(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.893
Subarea runoff =     38.625(CFS) for   14.940(Ac.)
Total runoff =     83.304(CFS)
Effective area this stream =       29.35(Ac.)
Total Study Area (Main Stream No. 1) =       47.41(Ac.)
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       70.000 to Point/Station       80.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     29.350(Ac.)
Runoff from this stream =     83.304(CFS)
Time of concentration =   12.83 min.
Rainfall intensity =     3.180(In/Hr)
Area averaged loss rate (Fm) =    0.0262(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     48.57    18.060     13.85    0.026      3.014
2     83.30    29.350     12.83    0.026      3.180
Qmax(1) =
           1.000 *    1.000 *    48.571) +
           0.948 *    1.000 *    83.304) + =     127.506
Qmax(2) =
           1.055 *    0.927 *    48.571) +
           1.000 *    1.000 *    83.304) + =     130.798

Total of 2 streams to confluence:
Flow rates before confluence point:
      48.571      83.304
Maximum flow rates at confluence using above data:
      127.506      130.798
Area of streams before confluence:
       18.060       29.350
Effective area values after confluence:
       47.410       46.083
Results of confluence:
Total flow rate =    130.798(CFS)
Time of concentration =    12.829 min.
Effective stream area after confluence =     46.083(Ac.)
```

Study area average Pervious fraction(Ap) = 0.100
Study area average soil loss rate(Fm) = 0.026(In/Hr)
Study area total (this main stream) = 47.41(Ac.)
End of computations, Total Study Area = 47.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number = 69.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/02/22

IEN
100-year Developed
Area B

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.080 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 50.000 to Point/Station 15.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.026(In/Hr)
Initial subarea data:
Initial area flow distance = 613.000(Ft.)
Top (of initial area) elevation = 2922.900(Ft.)
Bottom (of initial area) elevation = 2916.800(Ft.)
Difference in elevation = 6.100(Ft.)
Slope = 0.00995 s(%)= 1.00
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.961 min.
Rainfall intensity = 3.796(In/Hr) for a 100.0 year storm

```
Effective runoff coefficient used for area (Q=KCIA) is C = 0.894
Subarea runoff =     23.343(CFS)
Total initial stream area =        6.880(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       15.000 to Point/Station       25.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2913.800(Ft.)
Downstream point/station elevation =  2911.220(Ft.)
Pipe length  =   517.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    23.343(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    23.343(CFS)
Normal flow depth in pipe =   20.39(In.)
Flow top width inside pipe =   28.00(In.)
Critical Depth =   19.73(In.)
Pipe flow velocity =      6.57(Ft/s)
Travel time through pipe =    1.31 min.
Time of concentration (TC) =    11.27 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       15.000 to Point/Station       25.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Time of concentration =    11.27 min.
Rainfall intensity =      3.481(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.893
Subarea runoff =     19.317(CFS) for    6.840(Ac.)
Total runoff =     42.660(CFS)
Effective area this stream =       13.72(Ac.)
Total Study Area (Main Stream No. 1) =       13.72(Ac.)
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       25.000 to Point/Station       35.000
```

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 2911.220(Ft.)
Downstream point/station elevation = 2907.880(Ft.)
Pipe length = 668.00(Ft.) Manning's N = 0.013
No. of pipes = 1 Required pipe flow = 42.660(CFS)
Nearest computed pipe diameter = 36.00(In.)
Calculated individual pipe flow = 42.660(CFS)
Normal flow depth in pipe = 26.81(In.)
Flow top width inside pipe = 31.39(In.)
Critical Depth = 25.51(In.)
Pipe flow velocity = 7.56(Ft/s)
Travel time through pipe = 1.47 min.
Time of concentration (TC) = 12.75 min.

++

Process from Point/Station 25.000 to Point/Station 35.000
**** SUBAREA FLOW ADDITION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2) = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.026(In/Hr)
Time of concentration = 12.75 min.
Rainfall intensity = 3.194(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.893
Subarea runoff = 24.913(CFS) for 9.980(Ac.)
Total runoff = 67.573(CFS)
Effective area this stream = 23.70(Ac.)
Total Study Area (Main Stream No. 1) = 23.70(Ac.)
Area averaged Fm value = 0.026(In/Hr)

++

Process from Point/Station 25.000 to Point/Station 35.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1
Stream flow area = 23.700(Ac.)
Runoff from this stream = 67.573(CFS)
Time of concentration = 12.75 min.
Rainfall intensity = 3.194(In/Hr)
Area averaged loss rate (Fm) = 0.0262(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       50.000 to Point/Station       45.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Initial subarea data:
Initial area flow distance =   629.000(Ft.)
Top (of initial area) elevation =  2922.900(Ft.)
Bottom (of initial area) elevation =  2916.800(Ft.)
Difference in elevation =     6.100(Ft.)
Slope =    0.00970  s(%)=       0.97
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.116 min.
Rainfall intensity =      3.755(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.894
Subarea runoff =     24.634(CFS)
Total initial stream area =        7.340(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       45.000 to Point/Station       55.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  2913.800(Ft.)
Downstream point/station elevation =  2911.290(Ft.)
Pipe length  =   503.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    24.634(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    24.634(CFS)
Normal flow depth in pipe =   21.23(In.)
Flow top width inside pipe =   27.29(In.)
Critical Depth =   20.27(In.)
Pipe flow velocity =      6.63(Ft/s)
Travel time through pipe =    1.27 min.
Time of concentration (TC) =    11.38 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       45.000 to Point/Station       55.000
```

```
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Time of concentration =    11.38 min.
Rainfall intensity =      3.458(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.893
Subarea runoff =     15.763(CFS) for    5.740(Ac.)
Total runoff =     40.397(CFS)
Effective area this stream =       13.08(Ac.)
Total Study Area (Main Stream No. 1) =       36.78(Ac.)
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       55.000 to Point/Station       65.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________________
Upstream point/station elevation =  2911.290(Ft.)
Downstream point/station elevation =  2908.930(Ft.)
Pipe length  =   472.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    40.397(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =    40.397(CFS)
Normal flow depth in pipe =   25.64(In.)
Flow top width inside pipe =   32.60(In.)
Critical Depth =   24.83(In.)
Pipe flow velocity =      7.50(Ft/s)
Travel time through pipe =    1.05 min.
Time of concentration (TC) =    12.43 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       55.000 to Point/Station       65.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
```

```
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Time of concentration =    12.43 min.
Rainfall intensity =      3.251(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.893
Subarea runoff =      8.447(CFS) for    3.750(Ac.)
Total runoff =     48.844(CFS)
Effective area this stream =       16.83(Ac.)
Total Study Area (Main Stream No. 1) =       40.53(Ac.)
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       65.000 to Point/Station       75.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2908.930(Ft.)
Downstream point/station elevation =  2908.040(Ft.)
Pipe length  =   179.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    48.844(CFS)
Nearest computed pipe diameter  =     39.00(In.)
Calculated individual pipe flow  =    48.844(CFS)
Normal flow depth in pipe =   27.33(In.)
Flow top width inside pipe =   35.72(In.)
Critical Depth =   26.78(In.)
Pipe flow velocity =      7.86(Ft/s)
Travel time through pipe =    0.38 min.
Time of concentration (TC) =    12.81 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       65.000 to Point/Station       75.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.026(In/Hr)
Time of concentration =    12.81 min.
Rainfall intensity =      3.183(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.893
Subarea runoff =     20.255(CFS) for    7.490(Ac.)
Total runoff =     69.099(CFS)
Effective area this stream =       24.32(Ac.)
Total Study Area (Main Stream No. 1) =       48.02(Ac.)
```

```
Area averaged Fm value =    0.026(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       75.000 to Point/Station       85.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2908.040(Ft.)
Downstream point/station elevation =  2904.090(Ft.)
Pipe length  =   791.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    69.099(CFS)
Nearest computed pipe diameter  =     42.00(In.)
Calculated individual pipe flow  =    69.099(CFS)
Normal flow depth in pipe =   33.38(In.)
Flow top width inside pipe =   33.93(In.)
Critical Depth =   31.27(In.)
Pipe flow velocity =      8.42(Ft/s)
Travel time through pipe =    1.57 min.
Time of concentration (TC) =    14.38 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       75.000 to Point/Station       85.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     24.320(Ac.)
Runoff from this stream =     69.099(CFS)
Time of concentration =   14.38 min.
Rainfall intensity =     2.936(In/Hr)
Area averaged loss rate (Fm) =    0.0262(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     67.57    23.700     12.75    0.026      3.194
2     69.10    24.320     14.38    0.026      2.936
Qmax(1) =
           1.000 *    1.000 *    67.573) +
           1.089 *    0.887 *    69.099) + =     134.272
Qmax(2) =
           0.919 *    1.000 *    67.573) +
           1.000 *    1.000 *    69.099) + =     131.171

Total of 2 streams to confluence:
Flow rates before confluence point:
      67.573      69.099
```

```
Maximum flow rates at confluence using above data:
      134.272      131.171
Area of streams before confluence:
       23.700       24.320
Effective area values after confluence:
       45.264       48.020
Results of confluence:
Total flow rate =    134.272(CFS)
Time of concentration =    12.747 min.
Effective stream area after confluence =     45.264(Ac.)
Study area average Pervious fraction(Ap) =  0.100
Study area average soil loss rate(Fm) =    0.026(In/Hr)
Study area total (this main stream) =      48.02(Ac.)
End of computations, Total Study Area =           48.02 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number =  69.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/02/22

IEN
100-year Developed
Area C

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.080 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2) = 48.00
Adjusted SCS curve number for AMC 3 = 68.00
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.056(In/Hr)
Initial subarea data:
Initial area flow distance = 546.000(Ft.)
Top (of initial area) elevation = 2968.000(Ft.)
Bottom (of initial area) elevation = 2962.030(Ft.)
Difference in elevation = 5.970(Ft.)
Slope = 0.01093 s(%)= 1.09
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.332 min.
Rainfall intensity = 3.973(In/Hr) for a 100.0 year storm

```
Effective runoff coefficient used for area (Q=KCIA) is C = 0.887
Subarea runoff =     17.626(CFS)
Total initial stream area =        5.000(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.056(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2959.000(Ft.)
Downstream point/station elevation =  2956.900(Ft.)
Pipe length  =   415.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    17.626(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    17.626(CFS)
Normal flow depth in pipe =   18.28(In.)
Flow top width inside pipe =   25.25(In.)
Critical Depth =   17.61(In.)
Pipe flow velocity =      6.16(Ft/s)
Travel time through pipe =    1.12 min.
Time of concentration (TC) =    10.46 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Adjusted SCS curve number for AMC 3 = 68.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.056(In/Hr)
Time of concentration =    10.46 min.
Rainfall intensity =      3.669(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.886
Subarea runoff =     14.436(CFS) for    4.860(Ac.)
Total runoff =     32.061(CFS)
Effective area this stream =        9.86(Ac.)
Total Study Area (Main Stream No. 1) =        9.86(Ac.)
Area averaged Fm value =    0.056(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
```

```
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  2956.900(Ft.)
Downstream point/station elevation =  2953.500(Ft.)
Pipe length  =   673.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    32.061(CFS)
Nearest computed pipe diameter  =     33.00(In.)
Calculated individual pipe flow  =    32.061(CFS)
Normal flow depth in pipe =   23.44(In.)
Flow top width inside pipe =   29.94(In.)
Critical Depth =   22.61(In.)
Pipe flow velocity =      7.11(Ft/s)
Travel time through pipe =    1.58 min.
Time of concentration (TC) =    12.03 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Adjusted SCS curve number for AMC 3 = 68.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.056(In/Hr)
Time of concentration =    12.03 min.
Rainfall intensity =      3.325(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.885
Subarea runoff =     14.749(CFS) for    6.050(Ac.)
Total runoff =     46.810(CFS)
Effective area this stream =       15.91(Ac.)
Total Study Area (Main Stream No. 1) =       15.91(Ac.)
Area averaged Fm value =    0.056(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 69.00
Adjusted SCS curve number for AMC 3 = 86.20
Pervious ratio(Ap) = 0.9000     Max loss rate(Fm)=     0.235(In/Hr)
Time of concentration =    12.03 min.
Rainfall intensity =      3.325(In/Hr) for a   100.0 year storm
```

```
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.876
Subarea runoff =     10.290(CFS) for    3.700(Ac.)
Total runoff =     57.100(CFS)
Effective area this stream =       19.61(Ac.)
Total Study Area (Main Stream No. 1) =       19.61(Ac.)
Area averaged Fm value =    0.090(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     19.610(Ac.)
Runoff from this stream =     57.100(CFS)
Time of concentration =   12.03 min.
Rainfall intensity =     3.325(In/Hr)
Area averaged loss rate (Fm) =    0.0901(In/Hr)
Area averaged Pervious ratio (Ap) = 0.2509


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      104.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Adjusted SCS curve number for AMC 3 = 68.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.056(In/Hr)
Initial subarea data:
Initial area flow distance =   570.000(Ft.)
Top (of initial area) elevation =  2968.000(Ft.)
Bottom (of initial area) elevation =  2962.140(Ft.)
Difference in elevation =     5.860(Ft.)
Slope =    0.01028  s(%)=       1.03
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.612 min.
Rainfall intensity =      3.892(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.887
Subarea runoff =     25.061(CFS)
Total initial stream area =        7.260(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.056(In/Hr)
```

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  2959.100(Ft.)
Downstream point/station elevation =  2957.300(Ft.)
Pipe length  =   365.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    25.061(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    25.061(CFS)
Normal flow depth in pipe =   21.66(In.)
Flow top width inside pipe =   26.88(In.)
Critical Depth =   20.46(In.)
Pipe flow velocity =      6.61(Ft/s)
Travel time through pipe =    0.92 min.
Time of concentration (TC) =    10.53 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      105.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Adjusted SCS curve number for AMC 3 = 68.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.056(In/Hr)
Time of concentration =    10.53 min.
Rainfall intensity =      3.651(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.886
Subarea runoff =     22.200(CFS) for    7.350(Ac.)
Total runoff =     47.261(CFS)
Effective area this stream =       14.61(Ac.)
Total Study Area (Main Stream No. 1) =       34.22(Ac.)
Area averaged Fm value =    0.056(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      106.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  2957.300(Ft.)
Downstream point/station elevation =  2952.600(Ft.)
Pipe length  =   945.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    47.261(CFS)
Nearest computed pipe diameter  =     39.00(In.)
```

```
Calculated individual pipe flow  =    47.261(CFS)
Normal flow depth in pipe =   26.67(In.)
Flow top width inside pipe =   36.27(In.)
Critical Depth =   26.29(In.)
Pipe flow velocity =      7.82(Ft/s)
Travel time through pipe =    2.01 min.
Time of concentration (TC) =    12.55 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      106.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.600
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.200
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 48.00
Adjusted SCS curve number for AMC 3 = 68.00
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.056(In/Hr)
Time of concentration =    12.55 min.
Rainfall intensity =      3.230(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.884
Subarea runoff =      6.889(CFS) for    4.350(Ac.)
Total runoff =     54.150(CFS)
Effective area this stream =       18.96(Ac.)
Total Study Area (Main Stream No. 1) =       38.57(Ac.)
Area averaged Fm value =    0.056(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      106.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     18.960(Ac.)
Runoff from this stream =     54.150(CFS)
Time of concentration =   12.55 min.
Rainfall intensity =     3.230(In/Hr)
Area averaged loss rate (Fm) =    0.0563(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     57.10    19.610     12.03    0.090      3.325
```

```
2     54.15    18.960     12.55    0.056      3.230
Qmax(1) =
           1.000 *    1.000 *    57.100) +
           1.030 *    0.959 *    54.150) + =     110.604
Qmax(2) =
           0.970 *    1.000 *    57.100) +
           1.000 *    1.000 *    54.150) + =     109.561

Total of 2 streams to confluence:
Flow rates before confluence point:
      57.100      54.150
Maximum flow rates at confluence using above data:
      110.604      109.561
Area of streams before confluence:
       19.610       18.960
Effective area values after confluence:
       37.795       38.570
Results of confluence:
Total flow rate =    110.604(CFS)
Time of concentration =    12.034 min.
Effective stream area after confluence =     37.795(Ac.)
Study area average Pervious fraction(Ap) =  0.177
Study area average soil loss rate(Fm) =    0.073(In/Hr)
Study area total (this main stream) =      38.57(Ac.)
End of computations, Total Study Area =           38.57 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.177
Area averaged SCS curve number =  50.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2014 Version 9.0
Rational Hydrology Study Date: 08/02/22

IEN
10-year Developed
Area D

Program License Serial Number 6385

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.080 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

++

Process from Point/Station 100.000 to Point/Station 107.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2) = 51.70
Adjusted SCS curve number for AMC 3 = 71.70
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.051(In/Hr)
Initial subarea data:
Initial area flow distance = 461.000(Ft.)
Top (of initial area) elevation = 2968.000(Ft.)
Bottom (of initial area) elevation = 2962.030(Ft.)
Difference in elevation = 5.970(Ft.)
Slope = 0.01295 s(%)= 1.30
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.431 min.
Rainfall intensity = 4.266(In/Hr) for a 100.0 year storm

```
Effective runoff coefficient used for area (Q=KCIA) is C = 0.889
Subarea runoff =     16.730(CFS)
Total initial stream area =        4.410(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.051(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      108.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2959.000(Ft.)
Downstream point/station elevation =  2957.000(Ft.)
Pipe length  =   403.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    16.730(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    16.730(CFS)
Normal flow depth in pipe =   17.72(In.)
Flow top width inside pipe =   25.65(In.)
Critical Depth =   17.13(In.)
Pipe flow velocity =      6.05(Ft/s)
Travel time through pipe =    1.11 min.
Time of concentration (TC) =     9.54 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      108.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 51.70
Adjusted SCS curve number for AMC 3 = 71.70
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.051(In/Hr)
Time of concentration =     9.54 min.
Rainfall intensity =      3.912(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.888
Subarea runoff =     14.685(CFS) for    4.630(Ac.)
Total runoff =     31.415(CFS)
Effective area this stream =        9.04(Ac.)
Total Study Area (Main Stream No. 1) =        9.04(Ac.)
Area averaged Fm value =    0.051(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      108.000 to Point/Station      109.000
```

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 2957.000(Ft.)
Downstream point/station elevation = 2952.230(Ft.)
Pipe length = 955.00(Ft.) Manning's N = 0.013
No. of pipes = 1 Required pipe flow = 31.415(CFS)
Nearest computed pipe diameter = 33.00(In.)
Calculated individual pipe flow = 31.415(CFS)
Normal flow depth in pipe = 23.16(In.)
Flow top width inside pipe = 30.20(In.)
Critical Depth = 22.38(In.)
Pipe flow velocity = 7.05(Ft/s)
Travel time through pipe = 2.26 min.
Time of concentration (TC) = 11.80 min.

++

Process from Point/Station 108.000 to Point/Station 109.000
**** SUBAREA FLOW ADDITION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2) = 51.70
Adjusted SCS curve number for AMC 3 = 71.70
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.051(In/Hr)
Time of concentration = 11.80 min.
Rainfall intensity = 3.372(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.886
Subarea runoff = 5.556(CFS) for 3.330(Ac.)
Total runoff = 36.972(CFS)
Effective area this stream = 12.37(Ac.)
Total Study Area (Main Stream No. 1) = 12.37(Ac.)
Area averaged Fm value = 0.051(In/Hr)

++

Process from Point/Station 108.000 to Point/Station 109.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1
Stream flow area = 12.370(Ac.)
Runoff from this stream = 36.972(CFS)
Time of concentration = 11.80 min.
Rainfall intensity = 3.372(In/Hr)
Area averaged loss rate (Fm) = 0.0506(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      110.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2)  = 51.70
Adjusted SCS curve number for AMC 3 = 71.70
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.051(In/Hr)
Initial subarea data:
Initial area flow distance =   455.000(Ft.)
Top (of initial area) elevation =  2968.000(Ft.)
Bottom (of initial area) elevation =  2962.130(Ft.)
Difference in elevation =     5.870(Ft.)
Slope =    0.01290  s(%)=       1.29
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.394 min.
Rainfall intensity =      4.279(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.889
Subarea runoff =     23.558(CFS)
Total initial stream area =        6.190(Ac.)
Pervious area fraction = 0.100
Initial area Fm value =    0.051(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      110.000 to Point/Station      111.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  2959.000(Ft.)
Downstream point/station elevation =  2957.200(Ft.)
Pipe length  =   365.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    23.558(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    23.558(CFS)
Normal flow depth in pipe =   20.63(In.)
Flow top width inside pipe =   27.81(In.)
Critical Depth =   19.83(In.)
Pipe flow velocity =      6.54(Ft/s)
Travel time through pipe =    0.93 min.
Time of concentration (TC) =     9.32 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      110.000 to Point/Station      111.000
```

**** SUBAREA FLOW ADDITION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2) = 51.70
Adjusted SCS curve number for AMC 3 = 71.70
Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.051(In/Hr)
Time of concentration = 9.32 min.
Rainfall intensity = 3.976(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified rational method)(Q=KCIA) is C = 0.889
Subarea runoff = 28.021(CFS) for 8.410(Ac.)
Total runoff = 51.578(CFS)
Effective area this stream = 14.60(Ac.)
Total Study Area (Main Stream No. 1) = 26.97(Ac.)
Area averaged Fm value = 0.051(In/Hr)

++
Process from Point/Station 111.000 to Point/Station 112.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 2957.200(Ft.)
Downstream point/station elevation = 2954.100(Ft.)
Pipe length = 630.00(Ft.) Manning's N = 0.013
No. of pipes = 1 Required pipe flow = 51.578(CFS)
Nearest computed pipe diameter = 39.00(In.)
Calculated individual pipe flow = 51.578(CFS)
Normal flow depth in pipe = 28.69(In.)
Flow top width inside pipe = 34.40(In.)
Critical Depth = 27.51(In.)
Pipe flow velocity = 7.89(Ft/s)
Travel time through pipe = 1.33 min.
Time of concentration (TC) = 10.65 min.

++
Process from Point/Station 111.000 to Point/Station 112.000
**** SUBAREA FLOW ADDITION ****

COMMERCIAL subarea type
Decimal fraction soil group A = 0.500
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.200
SCS curve number for soil(AMC 2) = 51.70
Adjusted SCS curve number for AMC 3 = 71.70

```
Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=     0.051(In/Hr)
Time of concentration =    10.65 min.
Rainfall intensity =      3.621(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.887
Subarea runoff =     29.375(CFS) for   10.590(Ac.)
Total runoff =     80.954(CFS)
Effective area this stream =       25.19(Ac.)
Total Study Area (Main Stream No. 1) =       37.56(Ac.)
Area averaged Fm value =    0.051(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      111.000 to Point/Station      112.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =     25.190(Ac.)
Runoff from this stream =     80.954(CFS)
Time of concentration =   10.65 min.
Rainfall intensity =     3.621(In/Hr)
Area averaged loss rate (Fm) =    0.0506(In/Hr)
Area averaged Pervious ratio (Ap) = 0.1000
Summary of stream data:

Stream Flow rate    Area    TC     Fm       Rainfall Intensity
 No.    (CFS)   (Ac.)       (min) (In/Hr)     (In/Hr)


1     36.97    12.370     11.80    0.051      3.372
2     80.95    25.190     10.65    0.051      3.621
Qmax(1) =
           1.000 *    1.000 *    36.972) +
           0.930 *    1.000 *    80.954) + =     112.260
Qmax(2) =
           1.075 *    0.903 *    36.972) +
           1.000 *    1.000 *    80.954) + =     116.847

Total of 2 streams to confluence:
Flow rates before confluence point:
      36.972      80.954
Maximum flow rates at confluence using above data:
      112.260      116.847
Area of streams before confluence:
       12.370       25.190
Effective area values after confluence:
       37.560       36.359
Results of confluence:
Total flow rate =    116.847(CFS)
Time of concentration =    10.654 min.
```

Effective stream area after confluence = 36.359(Ac.)
Study area average Pervious fraction(Ap) = 0.100
Study area average soil loss rate(Fm) = 0.051(In/Hr)
Study area total (this main stream) = 37.56(Ac.)
End of computations, Total Study Area = 37.56 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged SCS curve number = 51.7

APPENDIX 'D'

Unit Hydrograph Method Analysis

Entire site, existing and developed Unit Hydrograph
- 10-year existing
- 100-year existing
- 10-year developed
- 100-year developed

Developed Unit Hydrograph by Area
- 10-year developed Areas A-D
- 100-year developed Areas A-D

Unit Hydrograph Analysis

Unit Hydrograph

Area ID	TC (hour)	Qp10 (cfs)	Volume10 (Ac ft)	Qp100 (cfs)	Volume100 (Ac ft)
Area A	0.12	252.9	6.8491	553.8	32.1453
Developed					
Area A-D		299.2	25.6714*	542.47	45.0234*
Difference		**46.3**	**18.7773** (817,939 CF)**	**11.3**	**12.8691* (560,578 CF)**

* Tentative values for Developed for initial design consideration and to compare with Developed, 10year below. This initial value uses only HSG C, whereas the areas in the table below used HSG A, C, and D which are estimated off the USDA soils information for the site.

**10-year volume difference is larger than 100-year, therefore 10-year prevails as to volume mitigation.

Unit Hydrograph by Area

Developed, 10-year

Area ID	TC (hour)	Qp (cfs)	Qp (cfs) after basin routing	Volume (Ac ft)	Volume (CF)
Area A	0.22087	62.17	20.2	6.9477	302,642
Area B	0.2196	62.89	20.1	7.0372	306,540
Area C	0.208	49.79	13.2	5.6539	246,280
Area D	0.184	54.05	10.2	5.5083	239,942
Total		**228.9**	**67.7**	**25.1522**	**1,095,404**

Take difference in 10-year volume=817,939 cf divided by site acreage = 171.56 ac= 4,768 cf/acre.

Area	Acreage	Minimum Volume by acre (cf)
A	47.41	226,051
B	48.02	228,960
C	38.57	183,902
D	37.56	179,086
Total	**171.56**	**817,999 > 817,939 provided ok**

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/07/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IENLC
10-year existing
on-site

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
171.56	1	0.61
Rainfall data for year 10		
171.56	6	1.24
Rainfall data for year 10		
171.56	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	171.56	1.000	0.548	1.000	0.548

Area-averaged adjusted loss rate Fm (In/Hr) = 0.548

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
171.56	1.000	69.0	69.0	4.49	0.124

Area-averaged catchment yield fraction, Y = 0.124
Area-averaged low loss fraction, Yb = 0.876
User entry of time of concentration = 0.120 (hours)
++
Watershed area = 171.56(Ac.)
Catchment Lag time = 0.096 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 87.1688
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.548(In/Hr)
Average low loss rate fraction (Yb) = 0.876 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 171.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.992 Adjusted rainfall = 0.287(In)
30-minute factor = 0.992 Adjusted rainfall = 0.491(In)
1-hour factor = 0.992 Adjusted rainfall = 0.604(In)
3-hour factor = 0.999 Adjusted rainfall = 0.941(In)
6-hour factor = 0.999 Adjusted rainfall = 1.239(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
++
Interval 'S' Graph Unit Hydrograph

Number	Mean values	((CFS))
	(K = 2074.80 (CFS))	
1	13.019	270.127
2	61.403	1003.856
3	80.329	392.689
4	88.806	175.876
5	93.470	96.766
6	96.332	59.379
7	97.934	33.240
8	98.945	20.986
9	100.000	10.493

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2867	0.2867
2	0.3529	0.0663
3	0.3986	0.0456
4	0.4345	0.0359
5	0.4646	0.0301
6	0.4907	0.0261
7	0.5139	0.0232
8	0.5349	0.0210
9	0.5542	0.0192
10	0.5719	0.0178
11	0.5885	0.0166
12	0.6041	0.0156
13	0.6239	0.0198
14	0.6428	0.0189
15	0.6610	0.0181
16	0.6784	0.0174
17	0.6952	0.0168
18	0.7114	0.0162
19	0.7271	0.0157
20	0.7423	0.0152
21	0.7570	0.0147
22	0.7714	0.0143
23	0.7853	0.0140
24	0.7989	0.0136
25	0.8122	0.0133
26	0.8251	0.0129
27	0.8378	0.0127
28	0.8502	0.0124
29	0.8623	0.0121
30	0.8742	0.0119
31	0.8858	0.0116
32	0.8972	0.0114
33	0.9084	0.0112
34	0.9194	0.0110

35	0.9302	0.0108
36	0.9408	0.0106
37	0.9511	0.0103
38	0.9613	0.0101
39	0.9713	0.0100
40	0.9811	0.0098
41	0.9908	0.0097
42	1.0003	0.0095
43	1.0097	0.0094
44	1.0190	0.0093
45	1.0281	0.0091
46	1.0371	0.0090
47	1.0460	0.0089
48	1.0548	0.0088
49	1.0635	0.0087
50	1.0721	0.0086
51	1.0806	0.0085
52	1.0889	0.0084
53	1.0972	0.0083
54	1.1054	0.0082
55	1.1135	0.0081
56	1.1215	0.0080
57	1.1294	0.0079
58	1.1373	0.0078
59	1.1450	0.0078
60	1.1527	0.0077
61	1.1603	0.0076
62	1.1678	0.0075
63	1.1753	0.0075
64	1.1826	0.0074
65	1.1900	0.0073
66	1.1972	0.0072
67	1.2044	0.0072
68	1.2115	0.0071
69	1.2185	0.0071
70	1.2255	0.0070
71	1.2325	0.0069
72	1.2393	0.0069
73	1.2460	0.0067
74	1.2527	0.0066
75	1.2592	0.0066
76	1.2658	0.0065
77	1.2723	0.0065
78	1.2787	0.0064
79	1.2851	0.0064
80	1.2914	0.0063
81	1.2977	0.0063
82	1.3039	0.0062
83	1.3101	0.0062
84	1.3162	0.0061

85	1.3223	0.0061
86	1.3284	0.0061
87	1.3344	0.0060
88	1.3404	0.0060
89	1.3463	0.0059
90	1.3522	0.0059
91	1.3580	0.0058
92	1.3638	0.0058
93	1.3696	0.0058
94	1.3753	0.0057
95	1.3810	0.0057
96	1.3867	0.0057
97	1.3923	0.0056
98	1.3979	0.0056
99	1.4034	0.0056
100	1.4090	0.0055
101	1.4144	0.0055
102	1.4199	0.0055
103	1.4253	0.0054
104	1.4307	0.0054
105	1.4361	0.0054
106	1.4414	0.0053
107	1.4467	0.0053
108	1.4519	0.0053
109	1.4572	0.0052
110	1.4624	0.0052
111	1.4676	0.0052
112	1.4727	0.0051
113	1.4778	0.0051
114	1.4829	0.0051
115	1.4880	0.0051
116	1.4930	0.0050
117	1.4980	0.0050
118	1.5030	0.0050
119	1.5080	0.0050
120	1.5129	0.0049
121	1.5178	0.0049
122	1.5227	0.0049
123	1.5276	0.0049
124	1.5324	0.0048
125	1.5372	0.0048
126	1.5420	0.0048
127	1.5468	0.0048
128	1.5515	0.0047
129	1.5563	0.0047
130	1.5610	0.0047
131	1.5656	0.0047
132	1.5703	0.0047
133	1.5749	0.0046
134	1.5795	0.0046

135	1.5841	0.0046
136	1.5887	0.0046
137	1.5933	0.0046
138	1.5978	0.0045
139	1.6023	0.0045
140	1.6068	0.0045
141	1.6113	0.0045
142	1.6157	0.0045
143	1.6202	0.0044
144	1.6246	0.0044
145	1.6290	0.0044
146	1.6333	0.0044
147	1.6377	0.0044
148	1.6420	0.0043
149	1.6464	0.0043
150	1.6507	0.0043
151	1.6550	0.0043
152	1.6592	0.0043
153	1.6635	0.0043
154	1.6677	0.0042
155	1.6719	0.0042
156	1.6761	0.0042
157	1.6803	0.0042
158	1.6845	0.0042
159	1.6887	0.0042
160	1.6928	0.0041
161	1.6969	0.0041
162	1.7010	0.0041
163	1.7051	0.0041
164	1.7092	0.0041
165	1.7133	0.0041
166	1.7173	0.0040
167	1.7213	0.0040
168	1.7254	0.0040
169	1.7294	0.0040
170	1.7334	0.0040
171	1.7373	0.0040
172	1.7413	0.0040
173	1.7452	0.0039
174	1.7492	0.0039
175	1.7531	0.0039
176	1.7570	0.0039
177	1.7609	0.0039
178	1.7648	0.0039
179	1.7686	0.0039
180	1.7725	0.0039
181	1.7763	0.0038
182	1.7801	0.0038
183	1.7840	0.0038
184	1.7878	0.0038

185	1.7915	0.0038
186	1.7953	0.0038
187	1.7991	0.0038
188	1.8028	0.0038
189	1.8066	0.0037
190	1.8103	0.0037
191	1.8140	0.0037
192	1.8177	0.0037
193	1.8214	0.0037
194	1.8251	0.0037
195	1.8287	0.0037
196	1.8324	0.0037
197	1.8361	0.0036
198	1.8397	0.0036
199	1.8433	0.0036
200	1.8469	0.0036
201	1.8505	0.0036
202	1.8541	0.0036
203	1.8577	0.0036
204	1.8613	0.0036
205	1.8648	0.0036
206	1.8684	0.0035
207	1.8719	0.0035
208	1.8754	0.0035
209	1.8789	0.0035
210	1.8824	0.0035
211	1.8859	0.0035
212	1.8894	0.0035
213	1.8929	0.0035
214	1.8964	0.0035
215	1.8998	0.0035
216	1.9033	0.0034
217	1.9067	0.0034
218	1.9101	0.0034
219	1.9135	0.0034
220	1.9170	0.0034
221	1.9203	0.0034
222	1.9237	0.0034
223	1.9271	0.0034
224	1.9305	0.0034
225	1.9338	0.0034
226	1.9372	0.0034
227	1.9405	0.0033
228	1.9439	0.0033
229	1.9472	0.0033
230	1.9505	0.0033
231	1.9538	0.0033
232	1.9571	0.0033
233	1.9604	0.0033
234	1.9637	0.0033

235	1.9670	0.0033
236	1.9702	0.0033
237	1.9735	0.0033
238	1.9767	0.0032
239	1.9800	0.0032
240	1.9832	0.0032
241	1.9864	0.0032
242	1.9896	0.0032
243	1.9928	0.0032
244	1.9960	0.0032
245	1.9992	0.0032
246	2.0024	0.0032
247	2.0056	0.0032
248	2.0088	0.0032
249	2.0119	0.0032
250	2.0151	0.0032
251	2.0182	0.0031
252	2.0213	0.0031
253	2.0245	0.0031
254	2.0276	0.0031
255	2.0307	0.0031
256	2.0338	0.0031
257	2.0369	0.0031
258	2.0400	0.0031
259	2.0431	0.0031
260	2.0462	0.0031
261	2.0492	0.0031
262	2.0523	0.0031
263	2.0554	0.0031
264	2.0584	0.0030
265	2.0614	0.0030
266	2.0645	0.0030
267	2.0675	0.0030
268	2.0705	0.0030
269	2.0735	0.0030
270	2.0765	0.0030
271	2.0795	0.0030
272	2.0825	0.0030
273	2.0855	0.0030
274	2.0885	0.0030
275	2.0915	0.0030
276	2.0944	0.0030
277	2.0974	0.0030
278	2.1004	0.0030
279	2.1033	0.0029
280	2.1062	0.0029
281	2.1092	0.0029
282	2.1121	0.0029
283	2.1150	0.0029
284	2.1179	0.0029

285	2.1209	0.0029
286	2.1238	0.0029
287	2.1267	0.0029
288	2.1295	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0025	0.0004
2	0.0029	0.0025	0.0004
3	0.0029	0.0025	0.0004
4	0.0029	0.0026	0.0004
5	0.0029	0.0026	0.0004
6	0.0029	0.0026	0.0004
7	0.0029	0.0026	0.0004
8	0.0030	0.0026	0.0004
9	0.0030	0.0026	0.0004
10	0.0030	0.0026	0.0004
11	0.0030	0.0026	0.0004
12	0.0030	0.0026	0.0004
13	0.0030	0.0026	0.0004
14	0.0030	0.0026	0.0004
15	0.0030	0.0027	0.0004
16	0.0030	0.0027	0.0004
17	0.0030	0.0027	0.0004
18	0.0031	0.0027	0.0004
19	0.0031	0.0027	0.0004
20	0.0031	0.0027	0.0004
21	0.0031	0.0027	0.0004
22	0.0031	0.0027	0.0004
23	0.0031	0.0027	0.0004
24	0.0031	0.0027	0.0004
25	0.0031	0.0027	0.0004
26	0.0031	0.0028	0.0004
27	0.0032	0.0028	0.0004
28	0.0032	0.0028	0.0004
29	0.0032	0.0028	0.0004
30	0.0032	0.0028	0.0004
31	0.0032	0.0028	0.0004
32	0.0032	0.0028	0.0004
33	0.0032	0.0028	0.0004
34	0.0032	0.0028	0.0004
35	0.0033	0.0029	0.0004
36	0.0033	0.0029	0.0004
37	0.0033	0.0029	0.0004
38	0.0033	0.0029	0.0004
39	0.0033	0.0029	0.0004
40	0.0033	0.0029	0.0004
41	0.0033	0.0029	0.0004

42	0.0033	0.0029	0.0004
43	0.0034	0.0029	0.0004
44	0.0034	0.0030	0.0004
45	0.0034	0.0030	0.0004
46	0.0034	0.0030	0.0004
47	0.0034	0.0030	0.0004
48	0.0034	0.0030	0.0004
49	0.0034	0.0030	0.0004
50	0.0035	0.0030	0.0004
51	0.0035	0.0030	0.0004
52	0.0035	0.0031	0.0004
53	0.0035	0.0031	0.0004
54	0.0035	0.0031	0.0004
55	0.0035	0.0031	0.0004
56	0.0035	0.0031	0.0004
57	0.0036	0.0031	0.0004
58	0.0036	0.0031	0.0004
59	0.0036	0.0032	0.0004
60	0.0036	0.0032	0.0004
61	0.0036	0.0032	0.0005
62	0.0036	0.0032	0.0005
63	0.0037	0.0032	0.0005
64	0.0037	0.0032	0.0005
65	0.0037	0.0032	0.0005
66	0.0037	0.0033	0.0005
67	0.0037	0.0033	0.0005
68	0.0038	0.0033	0.0005
69	0.0038	0.0033	0.0005
70	0.0038	0.0033	0.0005
71	0.0038	0.0033	0.0005
72	0.0038	0.0033	0.0005
73	0.0039	0.0034	0.0005
74	0.0039	0.0034	0.0005
75	0.0039	0.0034	0.0005
76	0.0039	0.0034	0.0005
77	0.0039	0.0034	0.0005
78	0.0039	0.0035	0.0005
79	0.0040	0.0035	0.0005
80	0.0040	0.0035	0.0005
81	0.0040	0.0035	0.0005
82	0.0040	0.0035	0.0005
83	0.0041	0.0036	0.0005
84	0.0041	0.0036	0.0005
85	0.0041	0.0036	0.0005
86	0.0041	0.0036	0.0005
87	0.0042	0.0036	0.0005
88	0.0042	0.0037	0.0005
89	0.0042	0.0037	0.0005
90	0.0042	0.0037	0.0005
91	0.0043	0.0037	0.0005

92	0.0043	0.0037	0.0005
93	0.0043	0.0038	0.0005
94	0.0043	0.0038	0.0005
95	0.0044	0.0038	0.0005
96	0.0044	0.0038	0.0005
97	0.0044	0.0039	0.0005
98	0.0044	0.0039	0.0006
99	0.0045	0.0039	0.0006
100	0.0045	0.0039	0.0006
101	0.0045	0.0040	0.0006
102	0.0046	0.0040	0.0006
103	0.0046	0.0040	0.0006
104	0.0046	0.0040	0.0006
105	0.0047	0.0041	0.0006
106	0.0047	0.0041	0.0006
107	0.0047	0.0041	0.0006
108	0.0047	0.0042	0.0006
109	0.0048	0.0042	0.0006
110	0.0048	0.0042	0.0006
111	0.0049	0.0043	0.0006
112	0.0049	0.0043	0.0006
113	0.0049	0.0043	0.0006
114	0.0050	0.0043	0.0006
115	0.0050	0.0044	0.0006
116	0.0050	0.0044	0.0006
117	0.0051	0.0045	0.0006
118	0.0051	0.0045	0.0006
119	0.0052	0.0045	0.0006
120	0.0052	0.0046	0.0006
121	0.0053	0.0046	0.0007
122	0.0053	0.0046	0.0007
123	0.0054	0.0047	0.0007
124	0.0054	0.0047	0.0007
125	0.0055	0.0048	0.0007
126	0.0055	0.0048	0.0007
127	0.0056	0.0049	0.0007
128	0.0056	0.0049	0.0007
129	0.0057	0.0050	0.0007
130	0.0057	0.0050	0.0007
131	0.0058	0.0051	0.0007
132	0.0058	0.0051	0.0007
133	0.0059	0.0052	0.0007
134	0.0059	0.0052	0.0007
135	0.0060	0.0053	0.0007
136	0.0061	0.0053	0.0008
137	0.0061	0.0054	0.0008
138	0.0062	0.0054	0.0008
139	0.0063	0.0055	0.0008
140	0.0063	0.0055	0.0008
141	0.0064	0.0056	0.0008

142	0.0065	0.0057	0.0008
143	0.0066	0.0058	0.0008
144	0.0066	0.0058	0.0008
145	0.0069	0.0060	0.0009
146	0.0069	0.0061	0.0009
147	0.0071	0.0062	0.0009
148	0.0071	0.0062	0.0009
149	0.0072	0.0063	0.0009
150	0.0073	0.0064	0.0009
151	0.0075	0.0065	0.0009
152	0.0075	0.0066	0.0009
153	0.0077	0.0067	0.0010
154	0.0078	0.0068	0.0010
155	0.0079	0.0069	0.0010
156	0.0080	0.0070	0.0010
157	0.0082	0.0072	0.0010
158	0.0083	0.0072	0.0010
159	0.0085	0.0074	0.0011
160	0.0086	0.0075	0.0011
161	0.0088	0.0077	0.0011
162	0.0089	0.0078	0.0011
163	0.0091	0.0080	0.0011
164	0.0093	0.0081	0.0012
165	0.0095	0.0084	0.0012
166	0.0097	0.0085	0.0012
167	0.0100	0.0087	0.0012
168	0.0101	0.0089	0.0013
169	0.0106	0.0093	0.0013
170	0.0108	0.0095	0.0013
171	0.0112	0.0098	0.0014
172	0.0114	0.0100	0.0014
173	0.0119	0.0104	0.0015
174	0.0121	0.0106	0.0015
175	0.0127	0.0111	0.0016
176	0.0129	0.0113	0.0016
177	0.0136	0.0119	0.0017
178	0.0140	0.0122	0.0017
179	0.0147	0.0129	0.0018
180	0.0152	0.0133	0.0019
181	0.0162	0.0142	0.0020
182	0.0168	0.0147	0.0021
183	0.0181	0.0159	0.0023
184	0.0189	0.0166	0.0024
185	0.0156	0.0136	0.0019
186	0.0166	0.0145	0.0021
187	0.0192	0.0168	0.0024
188	0.0210	0.0184	0.0026
189	0.0261	0.0229	0.0032
190	0.0301	0.0263	0.0037
191	0.0456	0.0400	0.0057

192	0.0663	0.0457	0.0206
193	0.2867	0.0457	0.2410
194	0.0359	0.0315	0.0045
195	0.0232	0.0203	0.0029
196	0.0178	0.0156	0.0022
197	0.0198	0.0174	0.0025
198	0.0174	0.0153	0.0022
199	0.0157	0.0137	0.0020
200	0.0143	0.0126	0.0018
201	0.0133	0.0116	0.0016
202	0.0124	0.0108	0.0015
203	0.0116	0.0102	0.0014
204	0.0110	0.0096	0.0014
205	0.0103	0.0090	0.0013
206	0.0098	0.0086	0.0012
207	0.0094	0.0082	0.0012
208	0.0090	0.0079	0.0011
209	0.0087	0.0076	0.0011
210	0.0084	0.0073	0.0010
211	0.0081	0.0071	0.0010
212	0.0078	0.0069	0.0010
213	0.0076	0.0067	0.0009
214	0.0074	0.0065	0.0009
215	0.0072	0.0063	0.0009
216	0.0070	0.0061	0.0009
217	0.0067	0.0059	0.0008
218	0.0065	0.0057	0.0008
219	0.0064	0.0056	0.0008
220	0.0062	0.0055	0.0008
221	0.0061	0.0053	0.0008
222	0.0060	0.0052	0.0007
223	0.0058	0.0051	0.0007
224	0.0057	0.0050	0.0007
225	0.0056	0.0049	0.0007
226	0.0055	0.0048	0.0007
227	0.0054	0.0047	0.0007
228	0.0053	0.0047	0.0007
229	0.0052	0.0046	0.0007
230	0.0051	0.0045	0.0006
231	0.0051	0.0044	0.0006
232	0.0050	0.0044	0.0006
233	0.0049	0.0043	0.0006
234	0.0048	0.0042	0.0006
235	0.0048	0.0042	0.0006
236	0.0047	0.0041	0.0006
237	0.0046	0.0041	0.0006
238	0.0046	0.0040	0.0006
239	0.0045	0.0040	0.0006
240	0.0045	0.0039	0.0006
241	0.0044	0.0038	0.0005

242	0.0043	0.0038	0.0005
243	0.0043	0.0038	0.0005
244	0.0042	0.0037	0.0005
245	0.0042	0.0037	0.0005
246	0.0041	0.0036	0.0005
247	0.0041	0.0036	0.0005
248	0.0040	0.0035	0.0005
249	0.0040	0.0035	0.0005
250	0.0040	0.0035	0.0005
251	0.0039	0.0034	0.0005
252	0.0039	0.0034	0.0005
253	0.0038	0.0034	0.0005
254	0.0038	0.0033	0.0005
255	0.0038	0.0033	0.0005
256	0.0037	0.0033	0.0005
257	0.0037	0.0032	0.0005
258	0.0037	0.0032	0.0005
259	0.0036	0.0032	0.0005
260	0.0036	0.0031	0.0004
261	0.0036	0.0031	0.0004
262	0.0035	0.0031	0.0004
263	0.0035	0.0031	0.0004
264	0.0035	0.0030	0.0004
265	0.0034	0.0030	0.0004
266	0.0034	0.0030	0.0004
267	0.0034	0.0030	0.0004
268	0.0034	0.0029	0.0004
269	0.0033	0.0029	0.0004
270	0.0033	0.0029	0.0004
271	0.0033	0.0029	0.0004
272	0.0032	0.0028	0.0004
273	0.0032	0.0028	0.0004
274	0.0032	0.0028	0.0004
275	0.0032	0.0028	0.0004
276	0.0032	0.0028	0.0004
277	0.0031	0.0027	0.0004
278	0.0031	0.0027	0.0004
279	0.0031	0.0027	0.0004
280	0.0031	0.0027	0.0004
281	0.0030	0.0027	0.0004
282	0.0030	0.0026	0.0004
283	0.0030	0.0026	0.0004
284	0.0030	0.0026	0.0004
285	0.0030	0.0026	0.0004
286	0.0029	0.0026	0.0004
287	0.0029	0.0026	0.0004
288	0.0029	0.0025	0.0004

Total soil rain loss = 1.65(In)

Total effective rainfall = 0.48(In)
Peak flow rate in flood hydrograph = 252.93(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

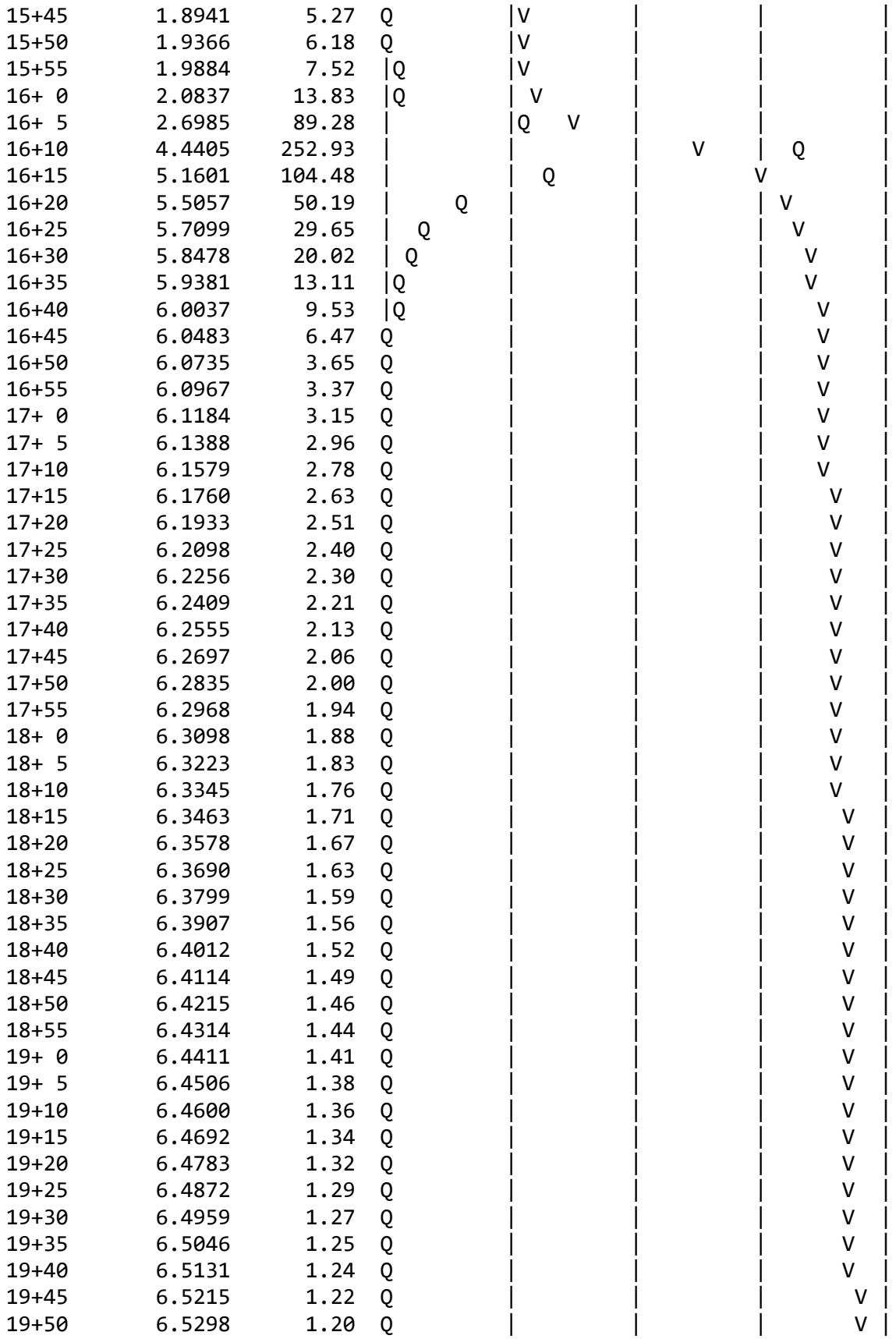
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0007	0.10	Q				
0+10	0.0038	0.46	Q				
0+15	0.0080	0.60	Q				
0+20	0.0125	0.67	Q				
0+25	0.0174	0.70	Q				
0+30	0.0224	0.73	Q				
0+35	0.0275	0.74	Q				
0+40	0.0327	0.75	Q				
0+45	0.0379	0.76	Q				
0+50	0.0431	0.76	Q				
0+55	0.0483	0.76	Q				
1+ 0	0.0536	0.76	Q				
1+ 5	0.0589	0.77	Q				
1+10	0.0642	0.77	Q				
1+15	0.0695	0.77	Q				
1+20	0.0748	0.77	Q				
1+25	0.0802	0.78	Q				
1+30	0.0856	0.78	Q				
1+35	0.0910	0.78	Q				
1+40	0.0964	0.79	Q				
1+45	0.1018	0.79	Q				
1+50	0.1072	0.79	Q				
1+55	0.1127	0.79	Q				
2+ 0	0.1182	0.80	Q				
2+ 5	0.1237	0.80	Q				
2+10	0.1292	0.80	Q				
2+15	0.1348	0.81	Q				
2+20	0.1403	0.81	Q				
2+25	0.1459	0.81	Q				
2+30	0.1515	0.81	Q				
2+35	0.1572	0.82	Q				
2+40	0.1628	0.82	Q				
2+45	0.1685	0.82	Q				
2+50	0.1742	0.83	QV				
2+55	0.1799	0.83	QV				
3+ 0	0.1856	0.83	QV				
3+ 5	0.1914	0.84	QV				
3+10	0.1972	0.84	QV				

3+15	0.2030	0.84	QV	|	|	|	|
3+20	0.2088	0.85	QV	|	|	|	|
3+25	0.2147	0.85	QV	|	|	|	|
3+30	0.2205	0.85	QV	|	|	|	|
3+35	0.2264	0.86	QV	|	|	|	|
3+40	0.2323	0.86	QV	|	|	|	|
3+45	0.2383	0.86	QV	|	|	|	|
3+50	0.2443	0.87	QV	|	|	|	|
3+55	0.2503	0.87	QV	|	|	|	|
4+ 0	0.2563	0.87	QV	|	|	|	|
4+ 5	0.2623	0.88	QV	|	|	|	|
4+10	0.2684	0.88	QV	|	|	|	|
4+15	0.2745	0.88	QV	|	|	|	|
4+20	0.2806	0.89	QV	|	|	|	|
4+25	0.2867	0.89	QV	|	|	|	|
4+30	0.2929	0.90	QV	|	|	|	|
4+35	0.2991	0.90	QV	|	|	|	|
4+40	0.3053	0.90	QV	|	|	|	|
4+45	0.3116	0.91	QV	|	|	|	|
4+50	0.3179	0.91	QV	|	|	|	|
4+55	0.3242	0.92	QV	|	|	|	|
5+ 0	0.3305	0.92	QV	|	|	|	|
5+ 5	0.3369	0.92	QV	|	|	|	|
5+10	0.3433	0.93	Q V	|	|	|	|
5+15	0.3497	0.93	Q V	|	|	|	|
5+20	0.3562	0.94	Q V	|	|	|	|
5+25	0.3627	0.94	Q V	|	|	|	|
5+30	0.3692	0.95	Q V	|	|	|	|
5+35	0.3757	0.95	Q V	|	|	|	|
5+40	0.3823	0.96	Q V	|	|	|	|
5+45	0.3889	0.96	Q V	|	|	|	|
5+50	0.3956	0.97	Q V	|	|	|	|
5+55	0.4023	0.97	Q V	|	|	|	|
6+ 0	0.4090	0.97	Q V	|	|	|	|
6+ 5	0.4157	0.98	Q V	|	|	|	|
6+10	0.4225	0.98	Q V	|	|	|	|
6+15	0.4293	0.99	Q V	|	|	|	|
6+20	0.4362	0.99	Q V	|	|	|	|
6+25	0.4431	1.00	Q V	|	|	|	|
6+30	0.4500	1.01	Q V	|	|	|	|
6+35	0.4569	1.01	Q V	|	|	|	|
6+40	0.4639	1.02	Q V	|	|	|	|
6+45	0.4710	1.02	Q V	|	|	|	|
6+50	0.4780	1.03	Q V	|	|	|	|
6+55	0.4851	1.03	Q V	|	|	|	|
7+ 0	0.4923	1.04	Q V	|	|	|	|
7+ 5	0.4995	1.04	Q V	|	|	|	|
7+10	0.5067	1.05	Q V	|	|	|	|
7+15	0.5140	1.06	Q V	|	|	|	|
7+20	0.5213	1.06	Q V	|	|	|	|

7+25	0.5286	1.07	Q	V				
7+30	0.5360	1.07	Q	V				
7+35	0.5435	1.08	Q	V				
7+40	0.5509	1.09	Q	V				
7+45	0.5585	1.09	Q	V				
7+50	0.5660	1.10	Q	V				
7+55	0.5737	1.11	Q	V				
8+ 0	0.5813	1.11	Q	V				
8+ 5	0.5890	1.12	Q	V				
8+10	0.5968	1.13	Q	V				
8+15	0.6046	1.13	Q	V				
8+20	0.6125	1.14	Q	V				
8+25	0.6204	1.15	Q	V				
8+30	0.6284	1.16	Q	V				
8+35	0.6364	1.16	Q	V				
8+40	0.6445	1.17	Q	V				
8+45	0.6526	1.18	Q	V				
8+50	0.6608	1.19	Q	V				
8+55	0.6690	1.20	Q	V				
9+ 0	0.6773	1.21	Q	V				
9+ 5	0.6857	1.21	Q	V				
9+10	0.6941	1.22	Q	V				
9+15	0.7026	1.23	Q	V				
9+20	0.7111	1.24	Q	V				
9+25	0.7197	1.25	Q	V				
9+30	0.7284	1.26	Q	V				
9+35	0.7371	1.27	Q	V				
9+40	0.7459	1.28	Q	V				
9+45	0.7548	1.29	Q	V				
9+50	0.7637	1.30	Q	V				
9+55	0.7728	1.31	Q	V				
10+ 0	0.7818	1.32	Q	V				
10+ 5	0.7910	1.33	Q	V				
10+10	0.8003	1.34	Q	V				
10+15	0.8096	1.35	Q	V				
10+20	0.8190	1.37	Q	V				
10+25	0.8285	1.38	Q	V				
10+30	0.8380	1.39	Q	V				
10+35	0.8477	1.40	Q	V				
10+40	0.8574	1.42	Q	V				
10+45	0.8672	1.43	Q	V				
10+50	0.8772	1.44	Q	V				
10+55	0.8872	1.45	Q	V				
11+ 0	0.8973	1.47	Q	V				
11+ 5	0.9075	1.48	Q	V				
11+10	0.9179	1.50	Q	V				
11+15	0.9283	1.51	Q	V				
11+20	0.9388	1.53	Q	V				
11+25	0.9495	1.55	Q	V				
11+30	0.9602	1.56	Q	V				

11+35	0.9711	1.58	Q	V	|	|	|	|
11+40	0.9821	1.60	Q	V	|	|	|	|
11+45	0.9932	1.61	Q	V	|	|	|	|
11+50	1.0045	1.63	Q	V	|	|	|	|
11+55	1.0159	1.65	Q	V	|	|	|	|
12+ 0	1.0274	1.67	Q	V	|	|	|	|
12+ 5	1.0391	1.70	Q	V	|	|	|	|
12+10	1.0510	1.74	Q	V	|	|	|	|
12+15	1.0632	1.76	Q	V	|	|	|	|
12+20	1.0755	1.79	Q	V	|	|	|	|
12+25	1.0880	1.81	Q	V	|	|	|	|
12+30	1.1006	1.84	Q	V	|	|	|	|
12+35	1.1134	1.86	Q	V	|	|	|	|
12+40	1.1265	1.89	Q	V	|	|	|	|
12+45	1.1397	1.92	Q	V	|	|	|	|
12+50	1.1531	1.95	Q	V	|	|	|	|
12+55	1.1667	1.98	Q	V	|	|	|	|
13+ 0	1.1805	2.01	Q	V	|	|	|	|
13+ 5	1.1946	2.04	Q	V	|	|	|	|
13+10	1.2089	2.07	Q	V	|	|	|	|
13+15	1.2234	2.11	Q	V	|	|	|	|
13+20	1.2381	2.15	Q	V	|	|	|	|
13+25	1.2532	2.18	Q	V	|	|	|	|
13+30	1.2685	2.23	Q	V	|	|	|	|
13+35	1.2841	2.26	Q	V	|	|	|	|
13+40	1.3000	2.31	Q	V	|	|	|	|
13+45	1.3162	2.36	Q	V	|	|	|	|
13+50	1.3328	2.41	Q	V	|	|	|	|
13+55	1.3498	2.46	Q	V	|	|	|	|
14+ 0	1.3671	2.52	Q	V	|	|	|	|
14+ 5	1.3848	2.58	Q	V	|	|	|	|
14+10	1.4032	2.66	Q	V	|	|	|	|
14+15	1.4220	2.73	Q	V	|	|	|	|
14+20	1.4414	2.82	Q	V	|	|	|	|
14+25	1.4613	2.89	Q	V	|	|	|	|
14+30	1.4818	2.98	Q	V	|	|	|	|
14+35	1.5030	3.07	Q	V	|	|	|	|
14+40	1.5248	3.17	Q	V	|	|	|	|
14+45	1.5473	3.27	Q	V	|	|	|	|
14+50	1.5707	3.40	Q	V	|	|	|	|
14+55	1.5950	3.52	Q	V	|	|	|	|
15+ 0	1.6203	3.68	Q	V	|	|	|	|
15+ 5	1.6467	3.83	Q	V	|	|	|	|
15+10	1.6744	4.02	Q	V	|	|	|	|
15+15	1.7034	4.22	Q	V	|	|	|	|
15+20	1.7342	4.48	Q	V	|	|	|	|
15+25	1.7657	4.56	Q	V	|	|	|	|
15+30	1.7950	4.26	Q	V	|	|	|	|
15+35	1.8250	4.36	Q	V	|	|	|	|
15+40	1.8578	4.75	Q	V	|	|	|	|


15+45 1.8941 5.27
15+50 1.9366 6.18
15+55 1.9884 7.52
16+ 0 2.0837 13.83
16+ 5 2.6985 89.28
16+10 4.4405 252.93
16+15 5.1601 104.48
16+20 5.5057 50.19
16+25 5.7099 29.65
16+30 5.8478 20.02
16+35 5.9381 13.11
16+40 6.0037 9.53
16+45 6.0483 6.47
16+50 6.0735 3.65
16+55 6.0967 3.37
17+ 0 6.1184 3.15
17+ 5 6.1388 2.96
17+10 6.1579 2.78
17+15 6.1760 2.63
17+20 6.1933 2.51
17+25 6.2098 2.40
17+30 6.2256 2.30
17+35 6.2409 2.21
17+40 6.2555 2.13
17+45 6.2697 2.06
17+50 6.2835 2.00
17+55 6.2968 1.94
18+ 0 6.3098 1.88
18+ 5 6.3223 1.83
18+10 6.3345 1.76
18+15 6.3463 1.71
18+20 6.3578 1.67
18+25 6.3690 1.63
18+30 6.3799 1.59
18+35 6.3907 1.56
18+40 6.4012 1.52
18+45 6.4114 1.49
18+50 6.4215 1.46
18+55 6.4314 1.44
19+ 0 6.4411 1.41
19+ 5 6.4506 1.38
19+10 6.4600 1.36
19+15 6.4692 1.34
19+20 6.4783 1.32
19+25 6.4872 1.29
19+30 6.4959 1.27
19+35 6.5046 1.25
19+40 6.5131 1.24
19+45 6.5215 1.22
19+50 6.5298 1.20

19+55	6.5379	1.18	Q	|	|	|	V |
20+ 0	6.5460	1.17	Q	|	|	|	V |
20+ 5	6.5539	1.15	Q	|	|	|	V |
20+10	6.5618	1.14	Q	|	|	|	V |
20+15	6.5695	1.12	Q	|	|	|	V |
20+20	6.5771	1.11	Q	|	|	|	V |
20+25	6.5847	1.10	Q	|	|	|	V |
20+30	6.5922	1.08	Q	|	|	|	V |
20+35	6.5995	1.07	Q	|	|	|	V |
20+40	6.6068	1.06	Q	|	|	|	V |
20+45	6.6140	1.05	Q	|	|	|	V |
20+50	6.6212	1.04	Q	|	|	|	V |
20+55	6.6282	1.02	Q	|	|	|	V |
21+ 0	6.6352	1.01	Q	|	|	|	V |
21+ 5	6.6421	1.00	Q	|	|	|	V |
21+10	6.6489	0.99	Q	|	|	|	V |
21+15	6.6557	0.98	Q	|	|	|	V |
21+20	6.6624	0.97	Q	|	|	|	V |
21+25	6.6690	0.96	Q	|	|	|	V |
21+30	6.6756	0.95	Q	|	|	|	V |
21+35	6.6821	0.94	Q	|	|	|	V |
21+40	6.6885	0.94	Q	|	|	|	V|
21+45	6.6949	0.93	Q	|	|	|	V|
21+50	6.7012	0.92	Q	|	|	|	V|
21+55	6.7075	0.91	Q	|	|	|	V|
22+ 0	6.7137	0.90	Q	|	|	|	V|
22+ 5	6.7199	0.89	Q	|	|	|	V|
22+10	6.7260	0.89	Q	|	|	|	V|
22+15	6.7321	0.88	Q	|	|	|	V|
22+20	6.7381	0.87	Q	|	|	|	V|
22+25	6.7440	0.86	Q	|	|	|	V|
22+30	6.7499	0.86	Q	|	|	|	V|
22+35	6.7558	0.85	Q	|	|	|	V|
22+40	6.7616	0.84	Q	|	|	|	V|
22+45	6.7674	0.84	Q	|	|	|	V|
22+50	6.7731	0.83	Q	|	|	|	V|
22+55	6.7788	0.83	Q	|	|	|	V|
23+ 0	6.7844	0.82	Q	|	|	|	V|
23+ 5	6.7900	0.81	Q	|	|	|	V|
23+10	6.7956	0.81	Q	|	|	|	V|
23+15	6.8011	0.80	Q	|	|	|	V|
23+20	6.8066	0.80	Q	|	|	|	V|
23+25	6.8120	0.79	Q	|	|	|	V|
23+30	6.8174	0.78	Q	|	|	|	V|
23+35	6.8228	0.78	Q	|	|	|	V|
23+40	6.8281	0.77	Q	|	|	|	V|
23+45	6.8334	0.77	Q	|	|	|	V|
23+50	6.8386	0.76	Q	|	|	|	V|
23+55	6.8439	0.76	Q	|	|	|	V|
24+ 0	6.8491	0.75	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/07/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IENLC
100-yr existing condition

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
171.56	1	1.08
Rainfall data for year 100		
171.56	6	2.04
Rainfall data for year 100		
171.56	24	3.42

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	86.2	171.56	1.000	0.262	1.000	0.262

Area-averaged adjusted loss rate Fm (In/Hr) = 0.262

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
171.56	1.000	69.0	86.2	1.60	0.598

Area-averaged catchment yield fraction, Y = 0.598
Area-averaged low loss fraction, Yb = 0.402
User entry of time of concentration = 0.120 (hours)
++
Watershed area = 171.56(Ac.)
Catchment Lag time = 0.096 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 87.1688
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.262(In/Hr)
Average low loss rate fraction (Yb) = 0.402 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.512(In)
Computed peak 30-minute rainfall = 0.877(In)
Specified peak 1-hour rainfall = 1.080(In)
Computed peak 3-hour rainfall = 1.595(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 3.420(In)

Rainfall depth area reduction factors:
Using a total area of 171.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.992 Adjusted rainfall = 0.508(In)
30-minute factor = 0.992 Adjusted rainfall = 0.870(In)
1-hour factor = 0.992 Adjusted rainfall = 1.071(In)
3-hour factor = 0.999 Adjusted rainfall = 1.593(In)
6-hour factor = 0.999 Adjusted rainfall = 2.039(In)
24-hour factor = 1.000 Adjusted rainfall = 3.419(In)

U n i t H y d r o g r a p h
++
Interval 'S' Graph Unit Hydrograph

Number	Mean values	((CFS))
	(K = 2074.80 (CFS))	
1	13.019	270.127
2	61.403	1003.856
3	80.329	392.689
4	88.806	175.876
5	93.470	96.766
6	96.332	59.379
7	97.934	33.240
8	98.945	20.986
9	100.000	10.493

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5083	0.5083
2	0.6259	0.1175
3	0.7068	0.0810
4	0.7705	0.0637
5	0.8239	0.0533
6	0.8702	0.0463
7	0.9114	0.0412
8	0.9486	0.0372
9	0.9827	0.0341
10	1.0143	0.0316
11	1.0437	0.0294
12	1.0713	0.0276
13	1.1028	0.0314
14	1.1327	0.0299
15	1.1613	0.0286
16	1.1887	0.0274
17	1.2150	0.0263
18	1.2404	0.0254
19	1.2648	0.0245
20	1.2885	0.0237
21	1.3114	0.0229
22	1.3337	0.0222
23	1.3553	0.0216
24	1.3763	0.0210
25	1.3967	0.0205
26	1.4167	0.0199
27	1.4361	0.0195
28	1.4551	0.0190
29	1.4737	0.0186
30	1.4918	0.0182
31	1.5096	0.0178
32	1.5270	0.0174
33	1.5441	0.0171
34	1.5609	0.0167

35	1.5773	0.0164
36	1.5934	0.0161
37	1.6090	0.0156
38	1.6244	0.0153
39	1.6395	0.0151
40	1.6543	0.0148
41	1.6689	0.0146
42	1.6832	0.0144
43	1.6974	0.0141
44	1.7113	0.0139
45	1.7251	0.0137
46	1.7386	0.0135
47	1.7519	0.0133
48	1.7651	0.0132
49	1.7781	0.0130
50	1.7909	0.0128
51	1.8036	0.0127
52	1.8161	0.0125
53	1.8284	0.0123
54	1.8406	0.0122
55	1.8527	0.0121
56	1.8646	0.0119
57	1.8764	0.0118
58	1.8880	0.0116
59	1.8995	0.0115
60	1.9109	0.0114
61	1.9222	0.0113
62	1.9333	0.0111
63	1.9443	0.0110
64	1.9553	0.0109
65	1.9661	0.0108
66	1.9768	0.0107
67	1.9874	0.0106
68	1.9979	0.0105
69	2.0083	0.0104
70	2.0186	0.0103
71	2.0288	0.0102
72	2.0389	0.0101
73	2.0494	0.0105
74	2.0598	0.0104
75	2.0702	0.0103
76	2.0804	0.0103
77	2.0906	0.0102
78	2.1007	0.0101
79	2.1107	0.0100
80	2.1206	0.0099
81	2.1305	0.0098
82	2.1402	0.0098
83	2.1499	0.0097
84	2.1596	0.0096

85	2.1691	0.0096
86	2.1786	0.0095
87	2.1880	0.0094
88	2.1974	0.0093
89	2.2066	0.0093
90	2.2158	0.0092
91	2.2250	0.0092
92	2.2341	0.0091
93	2.2431	0.0090
94	2.2521	0.0090
95	2.2610	0.0089
96	2.2698	0.0088
97	2.2786	0.0088
98	2.2873	0.0087
99	2.2960	0.0087
100	2.3046	0.0086
101	2.3132	0.0086
102	2.3217	0.0085
103	2.3302	0.0085
104	2.3386	0.0084
105	2.3470	0.0084
106	2.3553	0.0083
107	2.3635	0.0083
108	2.3718	0.0082
109	2.3799	0.0082
110	2.3880	0.0081
111	2.3961	0.0081
112	2.4041	0.0080
113	2.4121	0.0080
114	2.4201	0.0079
115	2.4280	0.0079
116	2.4358	0.0079
117	2.4436	0.0078
118	2.4514	0.0078
119	2.4591	0.0077
120	2.4668	0.0077
121	2.4745	0.0076
122	2.4821	0.0076
123	2.4896	0.0076
124	2.4972	0.0075
125	2.5046	0.0075
126	2.5121	0.0075
127	2.5195	0.0074
128	2.5269	0.0074
129	2.5342	0.0073
130	2.5416	0.0073
131	2.5488	0.0073
132	2.5561	0.0072
133	2.5633	0.0072
134	2.5704	0.0072

135	2.5776	0.0071
136	2.5847	0.0071
137	2.5918	0.0071
138	2.5988	0.0070
139	2.6058	0.0070
140	2.6128	0.0070
141	2.6197	0.0069
142	2.6266	0.0069
143	2.6335	0.0069
144	2.6404	0.0069
145	2.6472	0.0068
146	2.6540	0.0068
147	2.6608	0.0068
148	2.6675	0.0067
149	2.6742	0.0067
150	2.6809	0.0067
151	2.6875	0.0067
152	2.6942	0.0066
153	2.7007	0.0066
154	2.7073	0.0066
155	2.7139	0.0065
156	2.7204	0.0065
157	2.7269	0.0065
158	2.7333	0.0065
159	2.7398	0.0064
160	2.7462	0.0064
161	2.7526	0.0064
162	2.7589	0.0064
163	2.7653	0.0063
164	2.7716	0.0063
165	2.7779	0.0063
166	2.7842	0.0063
167	2.7904	0.0062
168	2.7966	0.0062
169	2.8028	0.0062
170	2.8090	0.0062
171	2.8151	0.0062
172	2.8213	0.0061
173	2.8274	0.0061
174	2.8335	0.0061
175	2.8395	0.0061
176	2.8456	0.0060
177	2.8516	0.0060
178	2.8576	0.0060
179	2.8636	0.0060
180	2.8695	0.0060
181	2.8754	0.0059
182	2.8814	0.0059
183	2.8873	0.0059
184	2.8931	0.0059

185	2.8990	0.0059
186	2.9048	0.0058
187	2.9106	0.0058
188	2.9164	0.0058
189	2.9222	0.0058
190	2.9280	0.0058
191	2.9337	0.0057
192	2.9394	0.0057
193	2.9451	0.0057
194	2.9508	0.0057
195	2.9565	0.0057
196	2.9621	0.0056
197	2.9677	0.0056
198	2.9733	0.0056
199	2.9789	0.0056
200	2.9845	0.0056
201	2.9901	0.0056
202	2.9956	0.0055
203	3.0011	0.0055
204	3.0066	0.0055
205	3.0121	0.0055
206	3.0176	0.0055
207	3.0230	0.0055
208	3.0285	0.0054
209	3.0339	0.0054
210	3.0393	0.0054
211	3.0447	0.0054
212	3.0501	0.0054
213	3.0554	0.0054
214	3.0608	0.0053
215	3.0661	0.0053
216	3.0714	0.0053
217	3.0767	0.0053
218	3.0820	0.0053
219	3.0872	0.0053
220	3.0925	0.0052
221	3.0977	0.0052
222	3.1030	0.0052
223	3.1082	0.0052
224	3.1134	0.0052
225	3.1185	0.0052
226	3.1237	0.0052
227	3.1288	0.0051
228	3.1340	0.0051
229	3.1391	0.0051
230	3.1442	0.0051
231	3.1493	0.0051
232	3.1544	0.0051
233	3.1594	0.0051
234	3.1645	0.0051

235	3.1695	0.0050
236	3.1745	0.0050
237	3.1795	0.0050
238	3.1845	0.0050
239	3.1895	0.0050
240	3.1945	0.0050
241	3.1995	0.0050
242	3.2044	0.0049
243	3.2093	0.0049
244	3.2143	0.0049
245	3.2192	0.0049
246	3.2241	0.0049
247	3.2289	0.0049
248	3.2338	0.0049
249	3.2387	0.0049
250	3.2435	0.0048
251	3.2483	0.0048
252	3.2532	0.0048
253	3.2580	0.0048
254	3.2628	0.0048
255	3.2675	0.0048
256	3.2723	0.0048
257	3.2771	0.0048
258	3.2818	0.0047
259	3.2866	0.0047
260	3.2913	0.0047
261	3.2960	0.0047
262	3.3007	0.0047
263	3.3054	0.0047
264	3.3101	0.0047
265	3.3148	0.0047
266	3.3194	0.0047
267	3.3241	0.0046
268	3.3287	0.0046
269	3.3333	0.0046
270	3.3379	0.0046
271	3.3426	0.0046
272	3.3471	0.0046
273	3.3517	0.0046
274	3.3563	0.0046
275	3.3609	0.0046
276	3.3654	0.0046
277	3.3700	0.0045
278	3.3745	0.0045
279	3.3790	0.0045
280	3.3835	0.0045
281	3.3880	0.0045
282	3.3925	0.0045
283	3.3970	0.0045
284	3.4015	0.0045

285	3.4059	0.0045
286	3.4104	0.0045
287	3.4148	0.0044
288	3.4193	0.0044

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0044	0.0018	0.0026
2	0.0044	0.0018	0.0027
3	0.0045	0.0018	0.0027
4	0.0045	0.0018	0.0027
5	0.0045	0.0018	0.0027
6	0.0045	0.0018	0.0027
7	0.0045	0.0018	0.0027
8	0.0045	0.0018	0.0027
9	0.0046	0.0018	0.0027
10	0.0046	0.0018	0.0027
11	0.0046	0.0018	0.0027
12	0.0046	0.0018	0.0027
13	0.0046	0.0019	0.0028
14	0.0046	0.0019	0.0028
15	0.0046	0.0019	0.0028
16	0.0047	0.0019	0.0028
17	0.0047	0.0019	0.0028
18	0.0047	0.0019	0.0028
19	0.0047	0.0019	0.0028
20	0.0047	0.0019	0.0028
21	0.0047	0.0019	0.0028
22	0.0048	0.0019	0.0028
23	0.0048	0.0019	0.0029
24	0.0048	0.0019	0.0029
25	0.0048	0.0019	0.0029
26	0.0048	0.0019	0.0029
27	0.0049	0.0020	0.0029
28	0.0049	0.0020	0.0029
29	0.0049	0.0020	0.0029
30	0.0049	0.0020	0.0029
31	0.0049	0.0020	0.0029
32	0.0049	0.0020	0.0030
33	0.0050	0.0020	0.0030
34	0.0050	0.0020	0.0030
35	0.0050	0.0020	0.0030
36	0.0050	0.0020	0.0030
37	0.0051	0.0020	0.0030
38	0.0051	0.0020	0.0030
39	0.0051	0.0020	0.0030
40	0.0051	0.0021	0.0031
41	0.0051	0.0021	0.0031

42	0.0051	0.0021	0.0031
43	0.0052	0.0021	0.0031
44	0.0052	0.0021	0.0031
45	0.0052	0.0021	0.0031
46	0.0052	0.0021	0.0031
47	0.0053	0.0021	0.0031
48	0.0053	0.0021	0.0032
49	0.0053	0.0021	0.0032
50	0.0053	0.0021	0.0032
51	0.0054	0.0022	0.0032
52	0.0054	0.0022	0.0032
53	0.0054	0.0022	0.0032
54	0.0054	0.0022	0.0032
55	0.0055	0.0022	0.0033
56	0.0055	0.0022	0.0033
57	0.0055	0.0022	0.0033
58	0.0055	0.0022	0.0033
59	0.0056	0.0022	0.0033
60	0.0056	0.0022	0.0033
61	0.0056	0.0023	0.0034
62	0.0056	0.0023	0.0034
63	0.0057	0.0023	0.0034
64	0.0057	0.0023	0.0034
65	0.0057	0.0023	0.0034
66	0.0057	0.0023	0.0034
67	0.0058	0.0023	0.0035
68	0.0058	0.0023	0.0035
69	0.0058	0.0023	0.0035
70	0.0059	0.0024	0.0035
71	0.0059	0.0024	0.0035
72	0.0059	0.0024	0.0035
73	0.0060	0.0024	0.0036
74	0.0060	0.0024	0.0036
75	0.0060	0.0024	0.0036
76	0.0060	0.0024	0.0036
77	0.0061	0.0024	0.0036
78	0.0061	0.0025	0.0036
79	0.0062	0.0025	0.0037
80	0.0062	0.0025	0.0037
81	0.0062	0.0025	0.0037
82	0.0062	0.0025	0.0037
83	0.0063	0.0025	0.0038
84	0.0063	0.0025	0.0038
85	0.0064	0.0026	0.0038
86	0.0064	0.0026	0.0038
87	0.0064	0.0026	0.0038
88	0.0065	0.0026	0.0039
89	0.0065	0.0026	0.0039
90	0.0065	0.0026	0.0039
91	0.0066	0.0027	0.0039

92	0.0066	0.0027	0.0040
93	0.0067	0.0027	0.0040
94	0.0067	0.0027	0.0040
95	0.0068	0.0027	0.0040
96	0.0068	0.0027	0.0041
97	0.0069	0.0028	0.0041
98	0.0069	0.0028	0.0041
99	0.0069	0.0028	0.0042
100	0.0070	0.0028	0.0042
101	0.0070	0.0028	0.0042
102	0.0071	0.0028	0.0042
103	0.0071	0.0029	0.0043
104	0.0072	0.0029	0.0043
105	0.0072	0.0029	0.0043
106	0.0073	0.0029	0.0043
107	0.0073	0.0030	0.0044
108	0.0074	0.0030	0.0044
109	0.0075	0.0030	0.0045
110	0.0075	0.0030	0.0045
111	0.0076	0.0030	0.0045
112	0.0076	0.0031	0.0045
113	0.0077	0.0031	0.0046
114	0.0077	0.0031	0.0046
115	0.0078	0.0031	0.0047
116	0.0079	0.0032	0.0047
117	0.0079	0.0032	0.0047
118	0.0080	0.0032	0.0048
119	0.0081	0.0032	0.0048
120	0.0081	0.0033	0.0049
121	0.0082	0.0033	0.0049
122	0.0083	0.0033	0.0049
123	0.0084	0.0034	0.0050
124	0.0084	0.0034	0.0050
125	0.0085	0.0034	0.0051
126	0.0086	0.0034	0.0051
127	0.0087	0.0035	0.0052
128	0.0087	0.0035	0.0052
129	0.0088	0.0036	0.0053
130	0.0089	0.0036	0.0053
131	0.0090	0.0036	0.0054
132	0.0091	0.0037	0.0054
133	0.0092	0.0037	0.0055
134	0.0093	0.0037	0.0055
135	0.0094	0.0038	0.0056
136	0.0095	0.0038	0.0057
137	0.0096	0.0039	0.0058
138	0.0097	0.0039	0.0058
139	0.0098	0.0040	0.0059
140	0.0099	0.0040	0.0059
141	0.0101	0.0041	0.0060

142	0.0102	0.0041	0.0061
143	0.0103	0.0042	0.0062
144	0.0104	0.0042	0.0062
145	0.0101	0.0041	0.0060
146	0.0102	0.0041	0.0061
147	0.0104	0.0042	0.0062
148	0.0105	0.0042	0.0063
149	0.0107	0.0043	0.0064
150	0.0108	0.0043	0.0065
151	0.0110	0.0044	0.0066
152	0.0111	0.0045	0.0067
153	0.0114	0.0046	0.0068
154	0.0115	0.0046	0.0069
155	0.0118	0.0047	0.0070
156	0.0119	0.0048	0.0071
157	0.0122	0.0049	0.0073
158	0.0123	0.0050	0.0074
159	0.0127	0.0051	0.0076
160	0.0128	0.0052	0.0077
161	0.0132	0.0053	0.0079
162	0.0133	0.0054	0.0080
163	0.0137	0.0055	0.0082
164	0.0139	0.0056	0.0083
165	0.0144	0.0058	0.0086
166	0.0146	0.0059	0.0087
167	0.0151	0.0061	0.0090
168	0.0153	0.0062	0.0092
169	0.0161	0.0065	0.0096
170	0.0164	0.0066	0.0098
171	0.0171	0.0069	0.0102
172	0.0174	0.0070	0.0104
173	0.0182	0.0073	0.0109
174	0.0186	0.0075	0.0111
175	0.0195	0.0078	0.0116
176	0.0199	0.0080	0.0119
177	0.0210	0.0085	0.0126
178	0.0216	0.0087	0.0129
179	0.0229	0.0092	0.0137
180	0.0237	0.0095	0.0141
181	0.0254	0.0102	0.0152
182	0.0263	0.0106	0.0157
183	0.0286	0.0115	0.0171
184	0.0299	0.0120	0.0179
185	0.0276	0.0111	0.0165
186	0.0294	0.0118	0.0176
187	0.0341	0.0137	0.0204
188	0.0372	0.0150	0.0223
189	0.0463	0.0186	0.0277
190	0.0533	0.0215	0.0319
191	0.0810	0.0218	0.0592

192	0.1175	0.0218	0.0957
193	0.5083	0.0218	0.4866
194	0.0637	0.0218	0.0419
195	0.0412	0.0166	0.0246
196	0.0316	0.0127	0.0189
197	0.0314	0.0126	0.0188
198	0.0274	0.0110	0.0164
199	0.0245	0.0098	0.0146
200	0.0222	0.0089	0.0133
201	0.0205	0.0082	0.0122
202	0.0190	0.0076	0.0114
203	0.0178	0.0072	0.0106
204	0.0167	0.0067	0.0100
205	0.0156	0.0063	0.0093
206	0.0148	0.0060	0.0089
207	0.0141	0.0057	0.0085
208	0.0135	0.0054	0.0081
209	0.0130	0.0052	0.0078
210	0.0125	0.0050	0.0075
211	0.0121	0.0048	0.0072
212	0.0116	0.0047	0.0070
213	0.0113	0.0045	0.0067
214	0.0109	0.0044	0.0065
215	0.0106	0.0043	0.0063
216	0.0103	0.0041	0.0062
217	0.0105	0.0042	0.0063
218	0.0103	0.0041	0.0061
219	0.0100	0.0040	0.0060
220	0.0098	0.0039	0.0058
221	0.0096	0.0038	0.0057
222	0.0093	0.0038	0.0056
223	0.0092	0.0037	0.0055
224	0.0090	0.0036	0.0054
225	0.0088	0.0035	0.0053
226	0.0086	0.0035	0.0052
227	0.0085	0.0034	0.0051
228	0.0083	0.0033	0.0050
229	0.0082	0.0033	0.0049
230	0.0080	0.0032	0.0048
231	0.0079	0.0032	0.0047
232	0.0078	0.0031	0.0046
233	0.0076	0.0031	0.0046
234	0.0075	0.0030	0.0045
235	0.0074	0.0030	0.0044
236	0.0073	0.0029	0.0044
237	0.0072	0.0029	0.0043
238	0.0071	0.0029	0.0042
239	0.0070	0.0028	0.0042
240	0.0069	0.0028	0.0041
241	0.0068	0.0027	0.0041

242	0.0067	0.0027	0.0040
243	0.0067	0.0027	0.0040
244	0.0066	0.0026	0.0039
245	0.0065	0.0026	0.0039
246	0.0064	0.0026	0.0038
247	0.0063	0.0026	0.0038
248	0.0063	0.0025	0.0037
249	0.0062	0.0025	0.0037
250	0.0061	0.0025	0.0037
251	0.0061	0.0024	0.0036
252	0.0060	0.0024	0.0036
253	0.0059	0.0024	0.0035
254	0.0059	0.0024	0.0035
255	0.0058	0.0023	0.0035
256	0.0058	0.0023	0.0034
257	0.0057	0.0023	0.0034
258	0.0056	0.0023	0.0034
259	0.0056	0.0022	0.0033
260	0.0055	0.0022	0.0033
261	0.0055	0.0022	0.0033
262	0.0054	0.0022	0.0033
263	0.0054	0.0022	0.0032
264	0.0053	0.0021	0.0032
265	0.0053	0.0021	0.0032
266	0.0052	0.0021	0.0031
267	0.0052	0.0021	0.0031
268	0.0052	0.0021	0.0031
269	0.0051	0.0021	0.0031
270	0.0051	0.0020	0.0030
271	0.0050	0.0020	0.0030
272	0.0050	0.0020	0.0030
273	0.0050	0.0020	0.0030
274	0.0049	0.0020	0.0029
275	0.0049	0.0020	0.0029
276	0.0048	0.0019	0.0029
277	0.0048	0.0019	0.0029
278	0.0048	0.0019	0.0029
279	0.0047	0.0019	0.0028
280	0.0047	0.0019	0.0028
281	0.0047	0.0019	0.0028
282	0.0046	0.0019	0.0028
283	0.0046	0.0019	0.0028
284	0.0046	0.0018	0.0027
285	0.0045	0.0018	0.0027
286	0.0045	0.0018	0.0027
287	0.0045	0.0018	0.0027
288	0.0045	0.0018	0.0027

Total soil rain loss = 1.15(In)

Total effective rainfall = 2.27(In)
Peak flow rate in flood hydrograph = 553.83(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	150.0	300.0	450.0	600.0
0+ 5	0.0049	0.72	Q				
0+10	0.0282	3.38	Q				
0+15	0.0587	4.43	Q				
0+20	0.0925	4.91	Q				
0+25	0.1281	5.18	Q				
0+30	0.1650	5.35	Q				
0+35	0.2026	5.46	Q				
0+40	0.2407	5.53	Q				
0+45	0.2792	5.58	Q				
0+50	0.3177	5.60	Q				
0+55	0.3564	5.62	Q				
1+ 0	0.3952	5.64	Q				
1+ 5	0.4342	5.66	Q				
1+10	0.4733	5.68	Q				
1+15	0.5125	5.70	Q				
1+20	0.5519	5.72	Q				
1+25	0.5914	5.74	Q				
1+30	0.6311	5.76	Q				
1+35	0.6708	5.78	Q				
1+40	0.7108	5.80	Q				
1+45	0.7508	5.82	Q				
1+50	0.7911	5.84	Q				
1+55	0.8314	5.86	QV				
2+ 0	0.8720	5.88	QV				
2+ 5	0.9126	5.90	QV				
2+10	0.9534	5.93	QV				
2+15	0.9944	5.95	QV				
2+20	1.0355	5.97	QV				
2+25	1.0768	5.99	QV				
2+30	1.1183	6.02	QV				
2+35	1.1599	6.04	QV				
2+40	1.2016	6.06	QV				
2+45	1.2435	6.09	QV				
2+50	1.2856	6.11	QV				
2+55	1.3279	6.13	QV				
3+ 0	1.3703	6.16	QV				
3+ 5	1.4129	6.18	QV				
3+10	1.4556	6.21	QV				

3+15	1.4985	6.23	QV	|	|	|	|
3+20	1.5417	6.26	QV	|	|	|	|
3+25	1.5849	6.28	QV	|	|	|	|
3+30	1.6284	6.31	Q V	|	|	|	|
3+35	1.6720	6.33	Q V	|	|	|	|
3+40	1.7158	6.36	Q V	|	|	|	|
3+45	1.7598	6.39	Q V	|	|	|	|
3+50	1.8040	6.42	Q V	|	|	|	|
3+55	1.8484	6.44	Q V	|	|	|	|
4+ 0	1.8930	6.47	Q V	|	|	|	|
4+ 5	1.9377	6.50	Q V	|	|	|	|
4+10	1.9827	6.53	Q V	|	|	|	|
4+15	2.0278	6.55	Q V	|	|	|	|
4+20	2.0731	6.58	Q V	|	|	|	|
4+25	2.1187	6.61	Q V	|	|	|	|
4+30	2.1644	6.64	Q V	|	|	|	|
4+35	2.2104	6.67	Q V	|	|	|	|
4+40	2.2566	6.70	Q V	|	|	|	|
4+45	2.3029	6.73	Q V	|	|	|	|
4+50	2.3495	6.76	Q V	|	|	|	|
4+55	2.3963	6.79	Q V	|	|	|	|
5+ 0	2.4433	6.83	Q V	|	|	|	|
5+ 5	2.4905	6.86	Q V	|	|	|	|
5+10	2.5380	6.89	Q V	|	|	|	|
5+15	2.5857	6.92	Q V	|	|	|	|
5+20	2.6336	6.96	Q V	|	|	|	|
5+25	2.6818	6.99	Q V	|	|	|	|
5+30	2.7301	7.03	Q V	|	|	|	|
5+35	2.7788	7.06	Q V	|	|	|	|
5+40	2.8276	7.10	Q V	|	|	|	|
5+45	2.8767	7.13	Q V	|	|	|	|
5+50	2.9261	7.17	Q V	|	|	|	|
5+55	2.9757	7.20	Q V	|	|	|	|
6+ 0	3.0255	7.24	Q V	|	|	|	|
6+ 5	3.0756	7.27	Q V	|	|	|	|
6+10	3.1260	7.32	Q V	|	|	|	|
6+15	3.1766	7.35	Q V	|	|	|	|
6+20	3.2276	7.39	Q V	|	|	|	|
6+25	3.2787	7.43	Q V	|	|	|	|
6+30	3.3302	7.47	Q V	|	|	|	|
6+35	3.3819	7.51	Q V	|	|	|	|
6+40	3.4339	7.55	Q V	|	|	|	|
6+45	3.4862	7.59	Q V	|	|	|	|
6+50	3.5388	7.64	Q V	|	|	|	|
6+55	3.5917	7.68	Q V	|	|	|	|
7+ 0	3.6449	7.72	Q V	|	|	|	|
7+ 5	3.6984	7.76	Q V	|	|	|	|
7+10	3.7522	7.81	Q V	|	|	|	|
7+15	3.8063	7.86	Q V	|	|	|	|
7+20	3.8607	7.90	Q V	|	|	|	|

7+25	3.9154	7.95	Q	V	|	|	|	|
7+30	3.9705	8.00	Q	V	|	|	|	|
7+35	4.0259	8.04	Q	V	|	|	|	|
7+40	4.0817	8.10	Q	V	|	|	|	|
7+45	4.1378	8.14	Q	V	|	|	|	|
7+50	4.1942	8.20	Q	V	|	|	|	|
7+55	4.2510	8.25	Q	V	|	|	|	|
8+ 0	4.3082	8.30	Q	V	|	|	|	|
8+ 5	4.3657	8.35	Q	V	|	|	|	|
8+10	4.4236	8.41	Q	V	|	|	|	|
8+15	4.4819	8.46	Q	V	|	|	|	|
8+20	4.5406	8.52	Q	V	|	|	|	|
8+25	4.5996	8.57	Q	V	|	|	|	|
8+30	4.6591	8.64	Q	V	|	|	|	|
8+35	4.7190	8.69	Q	V	|	|	|	|
8+40	4.7793	8.76	Q	V	|	|	|	|
8+45	4.8399	8.81	Q	V	|	|	|	|
8+50	4.9011	8.88	Q	V	|	|	|	|
8+55	4.9626	8.94	Q	V	|	|	|	|
9+ 0	5.0247	9.01	Q	V	|	|	|	|
9+ 5	5.0871	9.07	Q	V	|	|	|	|
9+10	5.1501	9.14	Q	V	|	|	|	|
9+15	5.2135	9.20	Q	V	|	|	|	|
9+20	5.2774	9.28	Q	V	|	|	|	|
9+25	5.3417	9.34	Q	V	|	|	|	|
9+30	5.4066	9.42	Q	V	|	|	|	|
9+35	5.4720	9.49	Q	V	|	|	|	|
9+40	5.5379	9.57	Q	V	|	|	|	|
9+45	5.6043	9.64	Q	V	|	|	|	|
9+50	5.6713	9.73	Q	V	|	|	|	|
9+55	5.7389	9.80	Q	V	|	|	|	|
10+ 0	5.8070	9.89	Q	V	|	|	|	|
10+ 5	5.8757	9.97	Q	V	|	|	|	|
10+10	5.9450	10.06	Q	V	|	|	|	|
10+15	6.0148	10.14	Q	V	|	|	|	|
10+20	6.0854	10.24	Q	V	|	|	|	|
10+25	6.1565	10.33	Q	V	|	|	|	|
10+30	6.2283	10.43	Q	V	|	|	|	|
10+35	6.3007	10.52	Q	V	|	|	|	|
10+40	6.3739	10.62	Q	V	|	|	|	|
10+45	6.4477	10.72	Q	V	|	|	|	|
10+50	6.5223	10.83	Q	V	|	|	|	|
10+55	6.5975	10.93	Q	V	|	|	|	|
11+ 0	6.6736	11.05	Q	V	|	|	|	|
11+ 5	6.7504	11.15	Q	V	|	|	|	|
11+10	6.8280	11.27	Q	V	|	|	|	|
11+15	6.9064	11.38	Q	V	|	|	|	|
11+20	6.9857	11.51	Q	V	|	|	|	|
11+25	7.0658	11.63	Q	V	|	|	|	|
11+30	7.1469	11.77	Q	V	|	|	|	|

11+35	7.2288	11.89	Q	V	|	|	|
11+40	7.3117	12.04	Q	V	|	|	|
11+45	7.3955	12.17	Q	V	|	|	|
11+50	7.4804	12.32	Q	V	|	|	|
11+55	7.5662	12.46	Q	V	|	|	|
12+ 0	7.6532	12.63	Q	V	|	|	|
12+ 5	7.7406	12.70	Q	V	|	|	|
12+10	7.8272	12.58	Q	V	|	|	|
12+15	7.9142	12.62	Q	V	|	|	|
12+20	8.0020	12.76	Q	V	|	|	|
12+25	8.0908	12.89	Q	V		|	|
12+30	8.1809	13.08	Q	V		|	|
12+35	8.2721	13.24	Q	V		|	|
12+40	8.3647	13.45	Q	V		|	|
12+45	8.4587	13.64	Q	V		|	|
12+50	8.5543	13.88	Q	V		|	|
12+55	8.6513	14.09	Q	V		|	|
13+ 0	8.7500	14.34	Q	V		|	|
13+ 5	8.8503	14.57	Q	V		|	|
13+10	8.9525	14.84	Q	|	V	|	|
13+15	9.0565	15.09	|	Q	|	V	|	|
13+20	9.1625	15.39	|	Q	|	V	|	|
13+25	9.2704	15.67	|	Q	|	V	|	|
13+30	9.3805	16.00	|	Q	|	V	|	|
13+35	9.4928	16.30	|	Q	|	V	|	|
13+40	9.6076	16.67	|	Q	|	V	|	|
13+45	9.7247	17.01	|	Q	|	V	|	|
13+50	9.8447	17.42	|	Q	|	V	|	|
13+55	9.9673	17.80	|	Q	|	V	|	|
14+ 0	10.0930	18.26	|	Q	|	V	|	|
14+ 5	10.2220	18.73	|	Q	|	V	|	|
14+10	10.3556	19.41	|	Q	|	V	|	|
14+15	10.4931	19.95	|	Q	|	V	|	|
14+20	10.6349	20.59	|	Q	|	V	|	|
14+25	10.7807	21.17	|	Q	|	V	|	|
14+30	10.9314	21.89	|	Q	|	V	|	|
14+35	11.0868	22.56	|	Q	|	V	|	|
14+40	11.2479	23.40	|	Q	|	V	|	|
14+45	11.4145	24.19	|	Q	|	V	|	|
14+50	11.5880	25.20	|	Q	|	V	|	|
14+55	11.7682	26.15	|	Q	|	V	|	|
15+ 0	11.9569	27.40	|	Q	|	V	|	|
15+ 5	12.1538	28.60	|	Q	|	V	|	|
15+10	12.3617	30.18	|	Q	|	V	|	|
15+15	12.5802	31.74	|	Q	|	V	|	|
15+20	12.8132	33.83	|	Q	|	V	|	|
15+25	13.0547	35.06	|	Q	|	V	|	|
15+30	13.2934	34.66	|	Q	|	V	|	|
15+35	13.5435	36.32	|	Q	|	V	|	|
15+40	13.8192	40.03	|	Q	|	V	|	|

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15+45      14.1267     44.64  | Q       |      V  |         |          |
15+50      14.4885     52.53  |  Q      |      V  |         |          |
15+55      14.9492     66.90  |   Q     |       V |         |          |
16+ 0      15.6869    107.11  |      Q  |        V|         |          |
16+ 5      17.4883    261.57  |         |      Q  |V        |          |
16+10      21.3025    553.83  |         |         |     V   |     Q    |
16+15      23.1334    265.85  |         |      Q  |       V |          |
16+20      24.1423    146.49  |         |Q        |         |V         |
16+25      24.8086     96.74  |     Q   |         |         | V        |
16+30      25.3095     72.73  |   Q     |         |         |V         |
16+35      25.6866     54.76  |  Q      |         |         |V         |
16+40      25.9890     43.91  | Q       |         |         | V        |
16+45      26.2301     35.01  | Q       |         |         | V        |
16+50      26.4189     27.41  |Q        |         |         | V        |
16+55      26.5916     25.07  |Q        |         |         |  V       |
17+ 0      26.7519     23.27  |Q        |         |         |  V       |
17+ 5      26.9016     21.74  |Q        |         |         |  V       |
17+10      27.0414     20.30  |Q        |         |         |  V       |
17+15      27.1733     19.15  |Q        |         |         |  V       |
17+20      27.2984     18.17  |Q        |         |         |  V       |
17+25      27.4177     17.32  |Q        |         |         |   V      |
17+30      27.5317     16.56  |Q        |         |         |   V      |
17+35      27.6412     15.89  |Q        |         |         |   V      |
17+40      27.7465     15.29  |Q        |         |         |   V      |
17+45      27.8480     14.74  Q         |         |         |   V      |
17+50      27.9461     14.25  Q         |         |         |   V      |
17+55      28.0411     13.79  Q         |         |         |   V      |
18+ 0      28.1332     13.37  Q         |         |         |   V      |
18+ 5      28.2231     13.06  Q         |         |         |    V     |
18+10      28.3126     12.99  Q         |         |         |    V     |
18+15      28.4005     12.76  Q         |         |         |    V     |
18+20      28.4865     12.49  Q         |         |         |    V     |
18+25      28.5707     12.22  Q         |         |         |    V     |
18+30      28.6530     11.96  Q         |         |         |    V     |
18+35      28.7336     11.70  Q         |         |         |    V     |
18+40      28.8125     11.46  Q         |         |         |    V     |
18+45      28.8898     11.22  Q         |         |         |    V     |
18+50      28.9655     11.00  Q         |         |         |    V     |
18+55      29.0398     10.78  Q         |         |         |     V    |
19+ 0      29.1126     10.58  Q         |         |         |     V    |
19+ 5      29.1841     10.38  Q         |         |         |     V    |
19+10      29.2544     10.20  Q         |         |         |     V    |
19+15      29.3234     10.02  Q         |         |         |     V    |
19+20      29.3913      9.85  Q         |         |         |     V    |
19+25      29.4580      9.69  Q         |         |         |     V    |
19+30      29.5237      9.54  Q         |         |         |     V    |
19+35      29.5883      9.39  Q         |         |         |     V    |
19+40      29.6520      9.24  Q         |         |         |     V    |
19+45      29.7147      9.11  Q         |         |         |     V    |
19+50      29.7765      8.98  Q         |         |         |     V    |
```

19+55	29.8375	8.85	Q	|	|	|	V |
20+ 0	29.8976	8.73	Q	|	|	|	V |
20+ 5	29.9569	8.61	Q	|	|	|	V |
20+10	30.0153	8.49	Q	|	|	|	V |
20+15	30.0731	8.38	Q	|	|	|	V |
20+20	30.1301	8.28	Q	|	|	|	V |
20+25	30.1864	8.17	Q	|	|	|	V |
20+30	30.2420	8.07	Q	|	|	|	V |
20+35	30.2969	7.98	Q	|	|	|	V |
20+40	30.3512	7.88	Q	|	|	|	V |
20+45	30.4048	7.79	Q	|	|	|	V |
20+50	30.4579	7.70	Q	|	|	|	V |
20+55	30.5103	7.62	Q	|	|	|	V |
21+ 0	30.5622	7.53	Q	|	|	|	V |
21+ 5	30.6135	7.45	Q	|	|	|	V |
21+10	30.6643	7.37	Q	|	|	|	V |
21+15	30.7145	7.30	Q	|	|	|	V |
21+20	30.7643	7.22	Q	|	|	|	V |
21+25	30.8135	7.15	Q	|	|	|	V |
21+30	30.8623	7.08	Q	|	|	|	V |
21+35	30.9105	7.01	Q	|	|	|	V |
21+40	30.9583	6.94	Q	|	|	|	V |
21+45	31.0057	6.88	Q	|	|	|	V |
21+50	31.0526	6.81	Q	|	|	|	V |
21+55	31.0991	6.75	Q	|	|	|	V |
22+ 0	31.1452	6.69	Q	|	|	|	V |
22+ 5	31.1908	6.63	Q	|	|	|	V |
22+10	31.2361	6.57	Q	|	|	|	V |
22+15	31.2809	6.51	Q	|	|	|	V |
22+20	31.3254	6.46	Q	|	|	|	V |
22+25	31.3695	6.40	Q	|	|	|	V |
22+30	31.4132	6.35	Q	|	|	|	V|
22+35	31.4566	6.30	Q	|	|	|	V|
22+40	31.4996	6.25	Q	|	|	|	V|
22+45	31.5423	6.20	Q	|	|	|	V|
22+50	31.5846	6.15	Q	|	|	|	V|
22+55	31.6266	6.10	Q	|	|	|	V|
23+ 0	31.6683	6.05	Q	|	|	|	V|
23+ 5	31.7097	6.01	Q	|	|	|	V|
23+10	31.7507	5.96	Q	|	|	|	V|
23+15	31.7915	5.92	Q	|	|	|	V|
23+20	31.8319	5.87	Q	|	|	|	V|
23+25	31.8721	5.83	Q	|	|	|	V|
23+30	31.9119	5.79	Q	|	|	|	V|
23+35	31.9515	5.75	Q	|	|	|	V|
23+40	31.9908	5.71	Q	|	|	|	V|
23+45	32.0298	5.67	Q	|	|	|	V|
23+50	32.0686	5.63	Q	|	|	|	V|
23+55	32.1071	5.59	Q	|	|	|	V|
24+ 0	32.1453	5.55	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/07/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IENLC
10-year
developed condition
onsite

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
171.56	1	0.61
Rainfall data for year 10		
171.56	6	1.24
Rainfall data for year 10		
171.56	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	171.56	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
17.16	0.100	69.0	69.0	4.49	0.124
154.40	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
Direct entry of lag time by user
++
Watershed area = 171.56(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.7350
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 171.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.992 Adjusted rainfall = 0.287(In)
30-minute factor = 0.992 Adjusted rainfall = 0.491(In)
1-hour factor = 0.992 Adjusted rainfall = 0.604(In)
3-hour factor = 0.999 Adjusted rainfall = 0.941(In)
6-hour factor = 0.999 Adjusted rainfall = 1.239(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 2074.80 (CFS))	
1	7.744	160.671
2	50.264	882.215
3	73.446	480.976
4	83.543	209.492
5	89.449	122.532
6	93.132	76.411
7	95.628	51.795
8	97.303	34.745
9	98.238	19.416
10	99.050	16.835
11	99.701	13.513
12	100.000	6.202

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2867	0.2867
2	0.3529	0.0663
3	0.3986	0.0456
4	0.4345	0.0359
5	0.4646	0.0301
6	0.4907	0.0261
7	0.5139	0.0232
8	0.5349	0.0210
9	0.5542	0.0192
10	0.5719	0.0178
11	0.5885	0.0166
12	0.6041	0.0156
13	0.6239	0.0198
14	0.6428	0.0189
15	0.6610	0.0181
16	0.6784	0.0174
17	0.6952	0.0168
18	0.7114	0.0162
19	0.7271	0.0157
20	0.7423	0.0152
21	0.7570	0.0147
22	0.7714	0.0143
23	0.7853	0.0140
24	0.7989	0.0136
25	0.8122	0.0133
26	0.8251	0.0129
27	0.8378	0.0127
28	0.8502	0.0124
29	0.8623	0.0121
30	0.8742	0.0119

31	0.8858	0.0116
32	0.8972	0.0114
33	0.9084	0.0112
34	0.9194	0.0110
35	0.9302	0.0108
36	0.9408	0.0106
37	0.9511	0.0103
38	0.9613	0.0101
39	0.9713	0.0100
40	0.9811	0.0098
41	0.9908	0.0097
42	1.0003	0.0095
43	1.0097	0.0094
44	1.0190	0.0093
45	1.0281	0.0091
46	1.0371	0.0090
47	1.0460	0.0089
48	1.0548	0.0088
49	1.0635	0.0087
50	1.0721	0.0086
51	1.0806	0.0085
52	1.0889	0.0084
53	1.0972	0.0083
54	1.1054	0.0082
55	1.1135	0.0081
56	1.1215	0.0080
57	1.1294	0.0079
58	1.1373	0.0078
59	1.1450	0.0078
60	1.1527	0.0077
61	1.1603	0.0076
62	1.1678	0.0075
63	1.1753	0.0075
64	1.1826	0.0074
65	1.1900	0.0073
66	1.1972	0.0072
67	1.2044	0.0072
68	1.2115	0.0071
69	1.2185	0.0071
70	1.2255	0.0070
71	1.2325	0.0069
72	1.2393	0.0069
73	1.2460	0.0067
74	1.2527	0.0066
75	1.2592	0.0066
76	1.2658	0.0065
77	1.2723	0.0065
78	1.2787	0.0064
79	1.2851	0.0064
80	1.2914	0.0063

81	1.2977	0.0063
82	1.3039	0.0062
83	1.3101	0.0062
84	1.3162	0.0061
85	1.3223	0.0061
86	1.3284	0.0061
87	1.3344	0.0060
88	1.3404	0.0060
89	1.3463	0.0059
90	1.3522	0.0059
91	1.3580	0.0058
92	1.3638	0.0058
93	1.3696	0.0058
94	1.3753	0.0057
95	1.3810	0.0057
96	1.3867	0.0057
97	1.3923	0.0056
98	1.3979	0.0056
99	1.4034	0.0056
100	1.4090	0.0055
101	1.4144	0.0055
102	1.4199	0.0055
103	1.4253	0.0054
104	1.4307	0.0054
105	1.4361	0.0054
106	1.4414	0.0053
107	1.4467	0.0053
108	1.4519	0.0053
109	1.4572	0.0052
110	1.4624	0.0052
111	1.4676	0.0052
112	1.4727	0.0051
113	1.4778	0.0051
114	1.4829	0.0051
115	1.4880	0.0051
116	1.4930	0.0050
117	1.4980	0.0050
118	1.5030	0.0050
119	1.5080	0.0050
120	1.5129	0.0049
121	1.5178	0.0049
122	1.5227	0.0049
123	1.5276	0.0049
124	1.5324	0.0048
125	1.5372	0.0048
126	1.5420	0.0048
127	1.5468	0.0048
128	1.5515	0.0047
129	1.5563	0.0047
130	1.5610	0.0047

131	1.5656	0.0047
132	1.5703	0.0047
133	1.5749	0.0046
134	1.5795	0.0046
135	1.5841	0.0046
136	1.5887	0.0046
137	1.5933	0.0046
138	1.5978	0.0045
139	1.6023	0.0045
140	1.6068	0.0045
141	1.6113	0.0045
142	1.6157	0.0045
143	1.6202	0.0044
144	1.6246	0.0044
145	1.6290	0.0044
146	1.6333	0.0044
147	1.6377	0.0044
148	1.6420	0.0043
149	1.6464	0.0043
150	1.6507	0.0043
151	1.6550	0.0043
152	1.6592	0.0043
153	1.6635	0.0043
154	1.6677	0.0042
155	1.6719	0.0042
156	1.6761	0.0042
157	1.6803	0.0042
158	1.6845	0.0042
159	1.6887	0.0042
160	1.6928	0.0041
161	1.6969	0.0041
162	1.7010	0.0041
163	1.7051	0.0041
164	1.7092	0.0041
165	1.7133	0.0041
166	1.7173	0.0040
167	1.7213	0.0040
168	1.7254	0.0040
169	1.7294	0.0040
170	1.7334	0.0040
171	1.7373	0.0040
172	1.7413	0.0040
173	1.7452	0.0039
174	1.7492	0.0039
175	1.7531	0.0039
176	1.7570	0.0039
177	1.7609	0.0039
178	1.7648	0.0039
179	1.7686	0.0039
180	1.7725	0.0039

181	1.7763	0.0038
182	1.7801	0.0038
183	1.7840	0.0038
184	1.7878	0.0038
185	1.7915	0.0038
186	1.7953	0.0038
187	1.7991	0.0038
188	1.8028	0.0038
189	1.8066	0.0037
190	1.8103	0.0037
191	1.8140	0.0037
192	1.8177	0.0037
193	1.8214	0.0037
194	1.8251	0.0037
195	1.8287	0.0037
196	1.8324	0.0037
197	1.8361	0.0036
198	1.8397	0.0036
199	1.8433	0.0036
200	1.8469	0.0036
201	1.8505	0.0036
202	1.8541	0.0036
203	1.8577	0.0036
204	1.8613	0.0036
205	1.8648	0.0036
206	1.8684	0.0035
207	1.8719	0.0035
208	1.8754	0.0035
209	1.8789	0.0035
210	1.8824	0.0035
211	1.8859	0.0035
212	1.8894	0.0035
213	1.8929	0.0035
214	1.8964	0.0035
215	1.8998	0.0035
216	1.9033	0.0034
217	1.9067	0.0034
218	1.9101	0.0034
219	1.9135	0.0034
220	1.9170	0.0034
221	1.9203	0.0034
222	1.9237	0.0034
223	1.9271	0.0034
224	1.9305	0.0034
225	1.9338	0.0034
226	1.9372	0.0034
227	1.9405	0.0033
228	1.9439	0.0033
229	1.9472	0.0033
230	1.9505	0.0033

231	1.9538	0.0033
232	1.9571	0.0033
233	1.9604	0.0033
234	1.9637	0.0033
235	1.9670	0.0033
236	1.9702	0.0033
237	1.9735	0.0033
238	1.9767	0.0032
239	1.9800	0.0032
240	1.9832	0.0032
241	1.9864	0.0032
242	1.9896	0.0032
243	1.9928	0.0032
244	1.9960	0.0032
245	1.9992	0.0032
246	2.0024	0.0032
247	2.0056	0.0032
248	2.0088	0.0032
249	2.0119	0.0032
250	2.0151	0.0032
251	2.0182	0.0031
252	2.0213	0.0031
253	2.0245	0.0031
254	2.0276	0.0031
255	2.0307	0.0031
256	2.0338	0.0031
257	2.0369	0.0031
258	2.0400	0.0031
259	2.0431	0.0031
260	2.0462	0.0031
261	2.0492	0.0031
262	2.0523	0.0031
263	2.0554	0.0031
264	2.0584	0.0030
265	2.0614	0.0030
266	2.0645	0.0030
267	2.0675	0.0030
268	2.0705	0.0030
269	2.0735	0.0030
270	2.0765	0.0030
271	2.0795	0.0030
272	2.0825	0.0030
273	2.0855	0.0030
274	2.0885	0.0030
275	2.0915	0.0030
276	2.0944	0.0030
277	2.0974	0.0030
278	2.1004	0.0030
279	2.1033	0.0029
280	2.1062	0.0029

281	2.1092	0.0029
282	2.1121	0.0029
283	2.1150	0.0029
284	2.1179	0.0029
285	2.1209	0.0029
286	2.1238	0.0029
287	2.1267	0.0029
288	2.1295	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026
33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027

38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0038	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033
83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034

88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0038
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047
133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050

138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0071	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0075	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0078	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0106	0.0019	0.0087
170	0.0108	0.0020	0.0088
171	0.0112	0.0021	0.0091
172	0.0114	0.0021	0.0093
173	0.0119	0.0022	0.0097
174	0.0121	0.0022	0.0099
175	0.0127	0.0023	0.0103
176	0.0129	0.0024	0.0106
177	0.0136	0.0025	0.0111
178	0.0140	0.0026	0.0114
179	0.0147	0.0027	0.0120
180	0.0152	0.0028	0.0124
181	0.0162	0.0030	0.0132
182	0.0168	0.0031	0.0137
183	0.0181	0.0033	0.0148
184	0.0189	0.0035	0.0155
185	0.0156	0.0029	0.0127
186	0.0166	0.0030	0.0135
187	0.0192	0.0035	0.0157

188	0.0210	0.0039	0.0172
189	0.0261	0.0046	0.0216
190	0.0301	0.0046	0.0255
191	0.0456	0.0046	0.0411
192	0.0663	0.0046	0.0617
193	0.2867	0.0046	0.2821
194	0.0359	0.0046	0.0314
195	0.0232	0.0043	0.0190
196	0.0178	0.0033	0.0145
197	0.0198	0.0036	0.0162
198	0.0174	0.0032	0.0142
199	0.0157	0.0029	0.0128
200	0.0143	0.0026	0.0117
201	0.0133	0.0024	0.0108
202	0.0124	0.0023	0.0101
203	0.0116	0.0021	0.0095
204	0.0110	0.0020	0.0090
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041
233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038

238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025
283	0.0030	0.0006	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024

288 0.0029 0.0005 0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 299.16(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

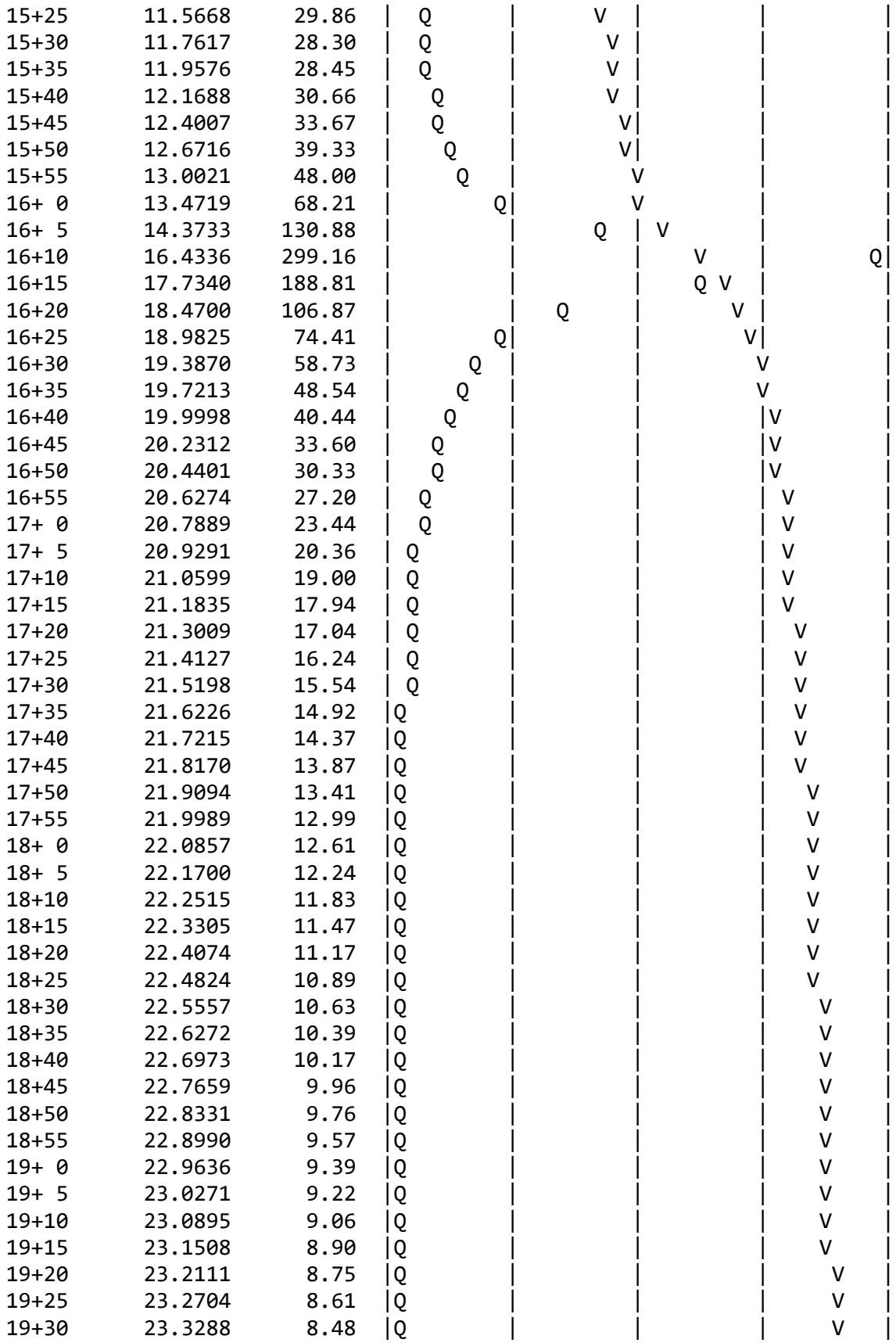
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0026	0.38	Q				
0+10	0.0196	2.46	Q				
0+15	0.0444	3.60	Q				
0+20	0.0727	4.11	Q				
0+25	0.1031	4.41	Q				
0+30	0.1348	4.61	Q				
0+35	0.1675	4.74	Q				
0+40	0.2008	4.84	Q				
0+45	0.2346	4.90	Q				
0+50	0.2687	4.96	Q				
0+55	0.3032	5.01	Q				
1+ 0	0.3379	5.04	Q				
1+ 5	0.3727	5.05	Q				
1+10	0.4077	5.07	Q				
1+15	0.4427	5.09	Q				
1+20	0.4779	5.11	Q				
1+25	0.5132	5.12	Q				
1+30	0.5486	5.14	Q				
1+35	0.5841	5.16	Q				
1+40	0.6198	5.18	Q				
1+45	0.6556	5.20	QV				
1+50	0.6915	5.21	QV				
1+55	0.7275	5.23	QV				
2+ 0	0.7637	5.25	QV				
2+ 5	0.8000	5.27	QV				
2+10	0.8364	5.29	QV				
2+15	0.8730	5.31	QV				
2+20	0.9097	5.33	QV				
2+25	0.9465	5.35	QV				
2+30	0.9835	5.37	QV				
2+35	1.0206	5.39	QV				
2+40	1.0578	5.41	QV				
2+45	1.0952	5.43	QV				
2+50	1.1327	5.45	QV				

2+55	1.1703	5.47	QV	|	|	|	|
3+ 0	1.2082	5.49	QV	|	|	|	|
3+ 5	1.2461	5.51	QV	|	|	|	|
3+10	1.2842	5.53	QV	|	|	|	|
3+15	1.3225	5.55	Q V	|	|	|	|
3+20	1.3609	5.58	Q V	|	|	|	|
3+25	1.3994	5.60	Q V	|	|	|	|
3+30	1.4381	5.62	Q V	|	|	|	|
3+35	1.4770	5.64	Q V	|	|	|	|
3+40	1.5160	5.67	Q V	|	|	|	|
3+45	1.5551	5.69	Q V	|	|	|	|
3+50	1.5945	5.71	Q V	|	|	|	|
3+55	1.6340	5.73	Q V	|	|	|	|
4+ 0	1.6736	5.76	Q V	|	|	|	|
4+ 5	1.7135	5.78	Q V	|	|	|	|
4+10	1.7535	5.81	Q V	|	|	|	|
4+15	1.7936	5.83	Q V	|	|	|	|
4+20	1.8340	5.86	Q V	|	|	|	|
4+25	1.8745	5.88	Q V	|	|	|	|
4+30	1.9151	5.91	Q V	|	|	|	|
4+35	1.9560	5.93	Q V	|	|	|	|
4+40	1.9970	5.96	Q V	|	|	|	|
4+45	2.0382	5.98	Q V	|	|	|	|
4+50	2.0796	6.01	Q V	|	|	|	|
4+55	2.1212	6.04	Q V	|	|	|	|
5+ 0	2.1630	6.07	Q V	|	|	|	|
5+ 5	2.2050	6.09	Q V	|	|	|	|
5+10	2.2471	6.12	Q V	|	|	|	|
5+15	2.2895	6.15	Q V	|	|	|	|
5+20	2.3320	6.18	Q V	|	|	|	|
5+25	2.3748	6.21	Q V	|	|	|	|
5+30	2.4177	6.24	Q V	|	|	|	|
5+35	2.4609	6.26	Q V	|	|	|	|
5+40	2.5042	6.30	Q V	|	|	|	|
5+45	2.5478	6.33	Q V	|	|	|	|
5+50	2.5916	6.36	Q V	|	|	|	|
5+55	2.6356	6.39	Q V	|	|	|	|
6+ 0	2.6798	6.42	Q V	|	|	|	|
6+ 5	2.7242	6.45	Q V	|	|	|	|
6+10	2.7689	6.49	Q V	|	|	|	|
6+15	2.8138	6.52	Q V	|	|	|	|
6+20	2.8589	6.55	Q V	|	|	|	|
6+25	2.9042	6.58	Q V	|	|	|	|
6+30	2.9498	6.62	Q V	|	|	|	|
6+35	2.9956	6.65	Q V	|	|	|	|
6+40	3.0417	6.69	Q V	|	|	|	|
6+45	3.0880	6.72	Q V	|	|	|	|
6+50	3.1346	6.76	Q V	|	|	|	|
6+55	3.1814	6.80	Q V	|	|	|	|
7+ 0	3.2285	6.84	Q V	|	|	|	|

7+ 5	3.2758	6.87	Q	V	|	|	|	|
7+10	3.3234	6.91	Q	V	|	|	|	|
7+15	3.3712	6.95	Q	V	|	|	|	|
7+20	3.4194	6.99	Q	V	|	|	|	|
7+25	3.4678	7.03	Q	V	|	|	|	|
7+30	3.5165	7.07	Q	V	|	|	|	|
7+35	3.5655	7.11	Q	V	|	|	|	|
7+40	3.6147	7.16	Q	V	|	|	|	|
7+45	3.6643	7.20	Q	V	|	|	|	|
7+50	3.7142	7.24	Q	V	|	|	|	|
7+55	3.7643	7.28	Q	V	|	|	|	|
8+ 0	3.8148	7.33	Q	V	|	|	|	|
8+ 5	3.8656	7.37	Q	V	|	|	|	|
8+10	3.9167	7.42	Q	V	|	|	|	|
8+15	3.9681	7.47	Q	V	|	|	|	|
8+20	4.0199	7.52	|Q	V	|	|	|	|
8+25	4.0720	7.56	|Q	V	|	|	|	|
8+30	4.1244	7.62	|Q	V	|	|	|	|
8+35	4.1772	7.66	|Q	V	|	|	|	|
8+40	4.2303	7.72	|Q	V	|	|	|	|
8+45	4.2838	7.77	|Q	V	|	|	|	|
8+50	4.3377	7.82	|Q	V	|	|	|	|
8+55	4.3919	7.87	|Q	V	|	|	|	|
9+ 0	4.4465	7.93	|Q	V	|	|	|	|
9+ 5	4.5015	7.98	|Q	V	|	|	|	|
9+10	4.5569	8.05	|Q	V	|	|	|	|
9+15	4.6127	8.10	|Q	V	|	|	|	|
9+20	4.6689	8.16	|Q	V	|	|	|	|
9+25	4.7256	8.22	|Q	V	|	|	|	|
9+30	4.7826	8.29	|Q	V	|	|	|	|
9+35	4.8401	8.34	|Q	V	|	|	|	|
9+40	4.8980	8.41	|Q	V	|	|	|	|
9+45	4.9564	8.47	|Q	V	|	|	|	|
9+50	5.0152	8.55	|Q	V	|	|	|	|
9+55	5.0745	8.61	|Q	V	|	|	|	|
10+ 0	5.1343	8.68	|Q	V	|	|	|	|
10+ 5	5.1946	8.75	|Q	V	|	|	|	|
10+10	5.2554	8.83	|Q	V	|	|	|	|
10+15	5.3167	8.90	|Q	V	|	|	|	|
10+20	5.3785	8.98	|Q	V	|	|	|	|
10+25	5.4409	9.05	|Q	V	|	|	|	|
10+30	5.5038	9.14	|Q	V	|	|	|	|
10+35	5.5673	9.21	|Q	V	|	|	|	|
10+40	5.6314	9.30	|Q	V	|	|	|	|
10+45	5.6960	9.38	|Q	V	|	|	|	|
10+50	5.7613	9.48	|Q	V	|	|	|	|
10+55	5.8271	9.56	|Q	V	|	|	|	|
11+ 0	5.8936	9.66	|Q	V	|	|	|	|
11+ 5	5.9608	9.75	|Q	V	|	|	|	|
11+10	6.0286	9.85	|Q	V	|	|	|	|

11+15	6.0971	9.95	Q	V			
11+20	6.1664	10.06	Q	V			
11+25	6.2363	10.15	Q	V			
11+30	6.3070	10.27	Q	V			
11+35	6.3785	10.37	Q	V			
11+40	6.4508	10.50	Q	V			
11+45	6.5238	10.61	Q	V			
11+50	6.5978	10.74	Q	V			
11+55	6.6725	10.85	Q	V			
12+ 0	6.7482	10.99	Q	V			
12+ 5	6.8249	11.13	Q	V			
12+10	6.9032	11.37	Q	V			
12+15	6.9828	11.55	Q	V			
12+20	7.0635	11.73	Q	V			
12+25	7.1454	11.88	Q	V			
12+30	7.2284	12.06	Q	V			
12+35	7.3126	12.22	Q	V			
12+40	7.3981	12.41	Q	V			
12+45	7.4847	12.58	Q	V			
12+50	7.5726	12.77	Q	V			
12+55	7.6619	12.95	Q	V			
13+ 0	7.7526	13.17	Q	V			
13+ 5	7.8446	13.36	Q	V			
13+10	7.9382	13.60	Q	V			
13+15	8.0333	13.81	Q	V			
13+20	8.1302	14.06	Q	V			
13+25	8.2286	14.29	Q	V			
13+30	8.3290	14.57	Q	V			
13+35	8.4311	14.83	Q	V			
13+40	8.5353	15.14	Q	V			
13+45	8.6415	15.42	Q	V			
13+50	8.7501	15.76	Q	V			
13+55	8.8608	16.08	Q	V			
14+ 0	8.9742	16.46	Q	V			
14+ 5	9.0901	16.84	Q	V			
14+10	9.2098	17.38	Q	V			
14+15	9.3327	17.84	Q	V			
14+20	9.4592	18.37	Q	V			
14+25	9.5890	18.85	Q	V			
14+30	9.7228	19.43	Q	V			
14+35	9.8604	19.98	Q	V			
14+40	10.0027	20.66	Q	V			
14+45	10.1494	21.30	Q	V			
14+50	10.3017	22.11	Q	V			
14+55	10.4593	22.89	Q	V			
15+ 0	10.6237	23.87	Q	V			
15+ 5	10.7947	24.83	Q	V			
15+10	10.9742	26.06	Q	V			
15+15	11.1621	27.29	Q	V			
15+20	11.3612	28.91	Q	V			



19+35	23.3863	8.35	|Q	|	|	|	V |
19+40	23.4429	8.22	|Q	|	|	|	V |
19+45	23.4987	8.10	|Q	|	|	|	V |
19+50	23.5537	7.99	|Q	|	|	|	V |
19+55	23.6079	7.87	|Q	|	|	|	V |
20+ 0	23.6614	7.77	|Q	|	|	|	V |
20+ 5	23.7142	7.66	|Q	|	|	|	V |
20+10	23.7663	7.56	|Q	|	|	|	V |
20+15	23.8177	7.47	Q	|	|	|	V |
20+20	23.8685	7.37	Q	|	|	|	V |
20+25	23.9186	7.28	Q	|	|	|	V |
20+30	23.9682	7.20	Q	|	|	|	V |
20+35	24.0171	7.11	Q	|	|	|	V |
20+40	24.0655	7.03	Q	|	|	|	V |
20+45	24.1134	6.95	Q	|	|	|	V |
20+50	24.1607	6.87	Q	|	|	|	V |
20+55	24.2075	6.80	Q	|	|	|	V |
21+ 0	24.2538	6.72	Q	|	|	|	V |
21+ 5	24.2996	6.65	Q	|	|	|	V |
21+10	24.3450	6.58	Q	|	|	|	V |
21+15	24.3898	6.52	Q	|	|	|	V |
21+20	24.4343	6.45	Q	|	|	|	V |
21+25	24.4783	6.39	Q	|	|	|	V |
21+30	24.5218	6.32	Q	|	|	|	V |
21+35	24.5650	6.26	Q	|	|	|	V |
21+40	24.6077	6.21	Q	|	|	|	V |
21+45	24.6500	6.15	Q	|	|	|	V |
21+50	24.6920	6.09	Q	|	|	|	V |
21+55	24.7336	6.04	Q	|	|	|	V |
22+ 0	24.7748	5.98	Q	|	|	|	V |
22+ 5	24.8156	5.93	Q	|	|	|	V |
22+10	24.8561	5.88	Q	|	|	|	V |
22+15	24.8963	5.83	Q	|	|	|	V |
22+20	24.9361	5.78	Q	|	|	|	V |
22+25	24.9756	5.73	Q	|	|	|	V |
22+30	25.0147	5.69	Q	|	|	|	V |
22+35	25.0536	5.64	Q	|	|	|	V |
22+40	25.0921	5.60	Q	|	|	|	V |
22+45	25.1303	5.55	Q	|	|	|	V|
22+50	25.1683	5.51	Q	|	|	|	V|
22+55	25.2059	5.47	Q	|	|	|	V|
23+ 0	25.2433	5.43	Q	|	|	|	V|
23+ 5	25.2804	5.39	Q	|	|	|	V|
23+10	25.3172	5.35	Q	|	|	|	V|
23+15	25.3538	5.31	Q	|	|	|	V|
23+20	25.3900	5.27	Q	|	|	|	V|
23+25	25.4261	5.23	Q	|	|	|	V|
23+30	25.4618	5.19	Q	|	|	|	V|
23+35	25.4974	5.16	Q	|	|	|	V|
23+40	25.5327	5.12	Q	|	|	|	V|

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   23+45      25.5677      5.09  Q        |         |         |        V|
   23+50      25.6025      5.05  Q        |         |         |        V|
   23+55      25.6371      5.02  Q        |         |         |        V|
   24+ 0      25.6714      4.99  Q        |         |         |        V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

Study date 08/07/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IENLC
100-year
developed condition
onsite

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
171.56	1	1.08
Rainfall data for year 100		
171.56	6	2.04
Rainfall data for year 100		
171.56	24	3.42

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	86.2	171.56	1.000	0.262	0.100	0.026

Area-averaged adjusted loss rate Fm (In/Hr) = 0.026

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
17.16	0.100	69.0	86.2	1.60	0.598
154.40	0.900	98.0	98.0	0.20	0.932

Area-averaged catchment yield fraction, Y = 0.898
Area-averaged low loss fraction, Yb = 0.102
Direct entry of lag time by user
++
Watershed area = 171.56(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.7350
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.026(In/Hr)
Average low loss rate fraction (Yb) = 0.102 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.512(In)
Computed peak 30-minute rainfall = 0.877(In)
Specified peak 1-hour rainfall = 1.080(In)
Computed peak 3-hour rainfall = 1.595(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 3.420(In)

Rainfall depth area reduction factors:
Using a total area of 171.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.992 Adjusted rainfall = 0.508(In)
30-minute factor = 0.992 Adjusted rainfall = 0.870(In)
1-hour factor = 0.992 Adjusted rainfall = 1.071(In)
3-hour factor = 0.999 Adjusted rainfall = 1.593(In)
6-hour factor = 0.999 Adjusted rainfall = 2.039(In)
24-hour factor = 1.000 Adjusted rainfall = 3.419(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 2074.80 (CFS))	
1	7.744	160.671
2	50.264	882.215
3	73.446	480.976
4	83.543	209.492
5	89.449	122.532
6	93.132	76.411
7	95.628	51.795
8	97.303	34.745
9	98.238	19.416
10	99.050	16.835
11	99.701	13.513
12	100.000	6.202

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5083	0.5083
2	0.6259	0.1175
3	0.7068	0.0810
4	0.7705	0.0637
5	0.8239	0.0533
6	0.8702	0.0463
7	0.9114	0.0412
8	0.9486	0.0372
9	0.9827	0.0341
10	1.0143	0.0316
11	1.0437	0.0294
12	1.0713	0.0276
13	1.1028	0.0314
14	1.1327	0.0299
15	1.1613	0.0286
16	1.1887	0.0274
17	1.2150	0.0263
18	1.2404	0.0254
19	1.2648	0.0245
20	1.2885	0.0237
21	1.3114	0.0229
22	1.3337	0.0222
23	1.3553	0.0216
24	1.3763	0.0210
25	1.3967	0.0205
26	1.4167	0.0199
27	1.4361	0.0195
28	1.4551	0.0190
29	1.4737	0.0186
30	1.4918	0.0182

31	1.5096	0.0178
32	1.5270	0.0174
33	1.5441	0.0171
34	1.5609	0.0167
35	1.5773	0.0164
36	1.5934	0.0161
37	1.6090	0.0156
38	1.6244	0.0153
39	1.6395	0.0151
40	1.6543	0.0148
41	1.6689	0.0146
42	1.6832	0.0144
43	1.6974	0.0141
44	1.7113	0.0139
45	1.7251	0.0137
46	1.7386	0.0135
47	1.7519	0.0133
48	1.7651	0.0132
49	1.7781	0.0130
50	1.7909	0.0128
51	1.8036	0.0127
52	1.8161	0.0125
53	1.8284	0.0123
54	1.8406	0.0122
55	1.8527	0.0121
56	1.8646	0.0119
57	1.8764	0.0118
58	1.8880	0.0116
59	1.8995	0.0115
60	1.9109	0.0114
61	1.9222	0.0113
62	1.9333	0.0111
63	1.9443	0.0110
64	1.9553	0.0109
65	1.9661	0.0108
66	1.9768	0.0107
67	1.9874	0.0106
68	1.9979	0.0105
69	2.0083	0.0104
70	2.0186	0.0103
71	2.0288	0.0102
72	2.0389	0.0101
73	2.0494	0.0105
74	2.0598	0.0104
75	2.0702	0.0103
76	2.0804	0.0103
77	2.0906	0.0102
78	2.1007	0.0101
79	2.1107	0.0100
80	2.1206	0.0099

81	2.1305	0.0098
82	2.1402	0.0098
83	2.1499	0.0097
84	2.1596	0.0096
85	2.1691	0.0096
86	2.1786	0.0095
87	2.1880	0.0094
88	2.1974	0.0093
89	2.2066	0.0093
90	2.2158	0.0092
91	2.2250	0.0092
92	2.2341	0.0091
93	2.2431	0.0090
94	2.2521	0.0090
95	2.2610	0.0089
96	2.2698	0.0088
97	2.2786	0.0088
98	2.2873	0.0087
99	2.2960	0.0087
100	2.3046	0.0086
101	2.3132	0.0086
102	2.3217	0.0085
103	2.3302	0.0085
104	2.3386	0.0084
105	2.3470	0.0084
106	2.3553	0.0083
107	2.3635	0.0083
108	2.3718	0.0082
109	2.3799	0.0082
110	2.3880	0.0081
111	2.3961	0.0081
112	2.4041	0.0080
113	2.4121	0.0080
114	2.4201	0.0079
115	2.4280	0.0079
116	2.4358	0.0079
117	2.4436	0.0078
118	2.4514	0.0078
119	2.4591	0.0077
120	2.4668	0.0077
121	2.4745	0.0076
122	2.4821	0.0076
123	2.4896	0.0076
124	2.4972	0.0075
125	2.5046	0.0075
126	2.5121	0.0075
127	2.5195	0.0074
128	2.5269	0.0074
129	2.5342	0.0073
130	2.5416	0.0073

131	2.5488	0.0073
132	2.5561	0.0072
133	2.5633	0.0072
134	2.5704	0.0072
135	2.5776	0.0071
136	2.5847	0.0071
137	2.5918	0.0071
138	2.5988	0.0070
139	2.6058	0.0070
140	2.6128	0.0070
141	2.6197	0.0069
142	2.6266	0.0069
143	2.6335	0.0069
144	2.6404	0.0069
145	2.6472	0.0068
146	2.6540	0.0068
147	2.6608	0.0068
148	2.6675	0.0067
149	2.6742	0.0067
150	2.6809	0.0067
151	2.6875	0.0067
152	2.6942	0.0066
153	2.7007	0.0066
154	2.7073	0.0066
155	2.7139	0.0065
156	2.7204	0.0065
157	2.7269	0.0065
158	2.7333	0.0065
159	2.7398	0.0064
160	2.7462	0.0064
161	2.7526	0.0064
162	2.7589	0.0064
163	2.7653	0.0063
164	2.7716	0.0063
165	2.7779	0.0063
166	2.7842	0.0063
167	2.7904	0.0062
168	2.7966	0.0062
169	2.8028	0.0062
170	2.8090	0.0062
171	2.8151	0.0062
172	2.8213	0.0061
173	2.8274	0.0061
174	2.8335	0.0061
175	2.8395	0.0061
176	2.8456	0.0060
177	2.8516	0.0060
178	2.8576	0.0060
179	2.8636	0.0060
180	2.8695	0.0060

181	2.8754	0.0059
182	2.8814	0.0059
183	2.8873	0.0059
184	2.8931	0.0059
185	2.8990	0.0059
186	2.9048	0.0058
187	2.9106	0.0058
188	2.9164	0.0058
189	2.9222	0.0058
190	2.9280	0.0058
191	2.9337	0.0057
192	2.9394	0.0057
193	2.9451	0.0057
194	2.9508	0.0057
195	2.9565	0.0057
196	2.9621	0.0056
197	2.9677	0.0056
198	2.9733	0.0056
199	2.9789	0.0056
200	2.9845	0.0056
201	2.9901	0.0056
202	2.9956	0.0055
203	3.0011	0.0055
204	3.0066	0.0055
205	3.0121	0.0055
206	3.0176	0.0055
207	3.0230	0.0055
208	3.0285	0.0054
209	3.0339	0.0054
210	3.0393	0.0054
211	3.0447	0.0054
212	3.0501	0.0054
213	3.0554	0.0054
214	3.0608	0.0053
215	3.0661	0.0053
216	3.0714	0.0053
217	3.0767	0.0053
218	3.0820	0.0053
219	3.0872	0.0053
220	3.0925	0.0052
221	3.0977	0.0052
222	3.1030	0.0052
223	3.1082	0.0052
224	3.1134	0.0052
225	3.1185	0.0052
226	3.1237	0.0052
227	3.1288	0.0051
228	3.1340	0.0051
229	3.1391	0.0051
230	3.1442	0.0051

231	3.1493	0.0051
232	3.1544	0.0051
233	3.1594	0.0051
234	3.1645	0.0051
235	3.1695	0.0050
236	3.1745	0.0050
237	3.1795	0.0050
238	3.1845	0.0050
239	3.1895	0.0050
240	3.1945	0.0050
241	3.1995	0.0050
242	3.2044	0.0049
243	3.2093	0.0049
244	3.2143	0.0049
245	3.2192	0.0049
246	3.2241	0.0049
247	3.2289	0.0049
248	3.2338	0.0049
249	3.2387	0.0049
250	3.2435	0.0048
251	3.2483	0.0048
252	3.2532	0.0048
253	3.2580	0.0048
254	3.2628	0.0048
255	3.2675	0.0048
256	3.2723	0.0048
257	3.2771	0.0048
258	3.2818	0.0047
259	3.2866	0.0047
260	3.2913	0.0047
261	3.2960	0.0047
262	3.3007	0.0047
263	3.3054	0.0047
264	3.3101	0.0047
265	3.3148	0.0047
266	3.3194	0.0047
267	3.3241	0.0046
268	3.3287	0.0046
269	3.3333	0.0046
270	3.3379	0.0046
271	3.3426	0.0046
272	3.3471	0.0046
273	3.3517	0.0046
274	3.3563	0.0046
275	3.3609	0.0046
276	3.3654	0.0046
277	3.3700	0.0045
278	3.3745	0.0045
279	3.3790	0.0045
280	3.3835	0.0045

281	3.3880	0.0045
282	3.3925	0.0045
283	3.3970	0.0045
284	3.4015	0.0045
285	3.4059	0.0045
286	3.4104	0.0045
287	3.4148	0.0044
288	3.4193	0.0044

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0044	0.0005	0.0040
2	0.0044	0.0005	0.0040
3	0.0045	0.0005	0.0040
4	0.0045	0.0005	0.0040
5	0.0045	0.0005	0.0040
6	0.0045	0.0005	0.0040
7	0.0045	0.0005	0.0041
8	0.0045	0.0005	0.0041
9	0.0046	0.0005	0.0041
10	0.0046	0.0005	0.0041
11	0.0046	0.0005	0.0041
12	0.0046	0.0005	0.0041
13	0.0046	0.0005	0.0041
14	0.0046	0.0005	0.0042
15	0.0046	0.0005	0.0042
16	0.0047	0.0005	0.0042
17	0.0047	0.0005	0.0042
18	0.0047	0.0005	0.0042
19	0.0047	0.0005	0.0042
20	0.0047	0.0005	0.0042
21	0.0047	0.0005	0.0043
22	0.0048	0.0005	0.0043
23	0.0048	0.0005	0.0043
24	0.0048	0.0005	0.0043
25	0.0048	0.0005	0.0043
26	0.0048	0.0005	0.0043
27	0.0049	0.0005	0.0044
28	0.0049	0.0005	0.0044
29	0.0049	0.0005	0.0044
30	0.0049	0.0005	0.0044
31	0.0049	0.0005	0.0044
32	0.0049	0.0005	0.0044
33	0.0050	0.0005	0.0045
34	0.0050	0.0005	0.0045
35	0.0050	0.0005	0.0045
36	0.0050	0.0005	0.0045
37	0.0051	0.0005	0.0045

38	0.0051	0.0005	0.0045
39	0.0051	0.0005	0.0046
40	0.0051	0.0005	0.0046
41	0.0051	0.0005	0.0046
42	0.0051	0.0005	0.0046
43	0.0052	0.0005	0.0047
44	0.0052	0.0005	0.0047
45	0.0052	0.0005	0.0047
46	0.0052	0.0005	0.0047
47	0.0053	0.0005	0.0047
48	0.0053	0.0005	0.0047
49	0.0053	0.0005	0.0048
50	0.0053	0.0005	0.0048
51	0.0054	0.0005	0.0048
52	0.0054	0.0005	0.0048
53	0.0054	0.0005	0.0049
54	0.0054	0.0006	0.0049
55	0.0055	0.0006	0.0049
56	0.0055	0.0006	0.0049
57	0.0055	0.0006	0.0049
58	0.0055	0.0006	0.0050
59	0.0056	0.0006	0.0050
60	0.0056	0.0006	0.0050
61	0.0056	0.0006	0.0050
62	0.0056	0.0006	0.0051
63	0.0057	0.0006	0.0051
64	0.0057	0.0006	0.0051
65	0.0057	0.0006	0.0051
66	0.0057	0.0006	0.0052
67	0.0058	0.0006	0.0052
68	0.0058	0.0006	0.0052
69	0.0058	0.0006	0.0052
70	0.0059	0.0006	0.0053
71	0.0059	0.0006	0.0053
72	0.0059	0.0006	0.0053
73	0.0060	0.0006	0.0054
74	0.0060	0.0006	0.0054
75	0.0060	0.0006	0.0054
76	0.0060	0.0006	0.0054
77	0.0061	0.0006	0.0055
78	0.0061	0.0006	0.0055
79	0.0062	0.0006	0.0055
80	0.0062	0.0006	0.0055
81	0.0062	0.0006	0.0056
82	0.0062	0.0006	0.0056
83	0.0063	0.0006	0.0057
84	0.0063	0.0006	0.0057
85	0.0064	0.0006	0.0057
86	0.0064	0.0006	0.0057
87	0.0064	0.0007	0.0058

88	0.0065	0.0007	0.0058
89	0.0065	0.0007	0.0059
90	0.0065	0.0007	0.0059
91	0.0066	0.0007	0.0059
92	0.0066	0.0007	0.0060
93	0.0067	0.0007	0.0060
94	0.0067	0.0007	0.0060
95	0.0068	0.0007	0.0061
96	0.0068	0.0007	0.0061
97	0.0069	0.0007	0.0062
98	0.0069	0.0007	0.0062
99	0.0069	0.0007	0.0062
100	0.0070	0.0007	0.0063
101	0.0070	0.0007	0.0063
102	0.0071	0.0007	0.0064
103	0.0071	0.0007	0.0064
104	0.0072	0.0007	0.0064
105	0.0072	0.0007	0.0065
106	0.0073	0.0007	0.0065
107	0.0073	0.0007	0.0066
108	0.0074	0.0008	0.0066
109	0.0075	0.0008	0.0067
110	0.0075	0.0008	0.0067
111	0.0076	0.0008	0.0068
112	0.0076	0.0008	0.0068
113	0.0077	0.0008	0.0069
114	0.0077	0.0008	0.0069
115	0.0078	0.0008	0.0070
116	0.0079	0.0008	0.0071
117	0.0079	0.0008	0.0071
118	0.0080	0.0008	0.0072
119	0.0081	0.0008	0.0073
120	0.0081	0.0008	0.0073
121	0.0082	0.0008	0.0074
122	0.0083	0.0008	0.0074
123	0.0084	0.0008	0.0075
124	0.0084	0.0009	0.0076
125	0.0085	0.0009	0.0076
126	0.0086	0.0009	0.0077
127	0.0087	0.0009	0.0078
128	0.0087	0.0009	0.0078
129	0.0088	0.0009	0.0079
130	0.0089	0.0009	0.0080
131	0.0090	0.0009	0.0081
132	0.0091	0.0009	0.0082
133	0.0092	0.0009	0.0083
134	0.0093	0.0009	0.0083
135	0.0094	0.0010	0.0085
136	0.0095	0.0010	0.0085
137	0.0096	0.0010	0.0086

138	0.0097	0.0010	0.0087
139	0.0098	0.0010	0.0088
140	0.0099	0.0010	0.0089
141	0.0101	0.0010	0.0091
142	0.0102	0.0010	0.0091
143	0.0103	0.0011	0.0093
144	0.0104	0.0011	0.0094
145	0.0101	0.0010	0.0091
146	0.0102	0.0010	0.0092
147	0.0104	0.0011	0.0093
148	0.0105	0.0011	0.0094
149	0.0107	0.0011	0.0096
150	0.0108	0.0011	0.0097
151	0.0110	0.0011	0.0099
152	0.0111	0.0011	0.0100
153	0.0114	0.0012	0.0102
154	0.0115	0.0012	0.0103
155	0.0118	0.0012	0.0106
156	0.0119	0.0012	0.0107
157	0.0122	0.0012	0.0110
158	0.0123	0.0013	0.0111
159	0.0127	0.0013	0.0114
160	0.0128	0.0013	0.0115
161	0.0132	0.0013	0.0118
162	0.0133	0.0014	0.0120
163	0.0137	0.0014	0.0123
164	0.0139	0.0014	0.0125
165	0.0144	0.0015	0.0129
166	0.0146	0.0015	0.0131
167	0.0151	0.0015	0.0135
168	0.0153	0.0016	0.0138
169	0.0161	0.0016	0.0145
170	0.0164	0.0017	0.0148
171	0.0171	0.0017	0.0153
172	0.0174	0.0018	0.0156
173	0.0182	0.0018	0.0163
174	0.0186	0.0019	0.0167
175	0.0195	0.0020	0.0175
176	0.0199	0.0020	0.0179
177	0.0210	0.0021	0.0189
178	0.0216	0.0022	0.0194
179	0.0229	0.0022	0.0207
180	0.0237	0.0022	0.0215
181	0.0254	0.0022	0.0232
182	0.0263	0.0022	0.0241
183	0.0286	0.0022	0.0264
184	0.0299	0.0022	0.0278
185	0.0276	0.0022	0.0254
186	0.0294	0.0022	0.0272
187	0.0341	0.0022	0.0319

188	0.0372	0.0022	0.0351
189	0.0463	0.0022	0.0441
190	0.0533	0.0022	0.0512
191	0.0810	0.0022	0.0788
192	0.1175	0.0022	0.1153
193	0.5083	0.0022	0.5062
194	0.0637	0.0022	0.0615
195	0.0412	0.0022	0.0390
196	0.0316	0.0022	0.0294
197	0.0314	0.0022	0.0293
198	0.0274	0.0022	0.0252
199	0.0245	0.0022	0.0223
200	0.0222	0.0022	0.0201
201	0.0205	0.0021	0.0184
202	0.0190	0.0019	0.0171
203	0.0178	0.0018	0.0160
204	0.0167	0.0017	0.0150
205	0.0156	0.0016	0.0140
206	0.0148	0.0015	0.0133
207	0.0141	0.0014	0.0127
208	0.0135	0.0014	0.0122
209	0.0130	0.0013	0.0117
210	0.0125	0.0013	0.0112
211	0.0121	0.0012	0.0108
212	0.0116	0.0012	0.0105
213	0.0113	0.0011	0.0101
214	0.0109	0.0011	0.0098
215	0.0106	0.0011	0.0095
216	0.0103	0.0010	0.0093
217	0.0105	0.0011	0.0094
218	0.0103	0.0010	0.0092
219	0.0100	0.0010	0.0090
220	0.0098	0.0010	0.0088
221	0.0096	0.0010	0.0086
222	0.0093	0.0009	0.0084
223	0.0092	0.0009	0.0082
224	0.0090	0.0009	0.0081
225	0.0088	0.0009	0.0079
226	0.0086	0.0009	0.0077
227	0.0085	0.0009	0.0076
228	0.0083	0.0008	0.0075
229	0.0082	0.0008	0.0073
230	0.0080	0.0008	0.0072
231	0.0079	0.0008	0.0071
232	0.0078	0.0008	0.0070
233	0.0076	0.0008	0.0069
234	0.0075	0.0008	0.0068
235	0.0074	0.0008	0.0067
236	0.0073	0.0007	0.0066
237	0.0072	0.0007	0.0065

238	0.0071	0.0007	0.0064
239	0.0070	0.0007	0.0063
240	0.0069	0.0007	0.0062
241	0.0068	0.0007	0.0061
242	0.0067	0.0007	0.0061
243	0.0067	0.0007	0.0060
244	0.0066	0.0007	0.0059
245	0.0065	0.0007	0.0058
246	0.0064	0.0007	0.0058
247	0.0063	0.0006	0.0057
248	0.0063	0.0006	0.0056
249	0.0062	0.0006	0.0056
250	0.0061	0.0006	0.0055
251	0.0061	0.0006	0.0054
252	0.0060	0.0006	0.0054
253	0.0059	0.0006	0.0053
254	0.0059	0.0006	0.0053
255	0.0058	0.0006	0.0052
256	0.0058	0.0006	0.0052
257	0.0057	0.0006	0.0051
258	0.0056	0.0006	0.0051
259	0.0056	0.0006	0.0050
260	0.0055	0.0006	0.0050
261	0.0055	0.0006	0.0049
262	0.0054	0.0006	0.0049
263	0.0054	0.0005	0.0048
264	0.0053	0.0005	0.0048
265	0.0053	0.0005	0.0048
266	0.0052	0.0005	0.0047
267	0.0052	0.0005	0.0047
268	0.0052	0.0005	0.0046
269	0.0051	0.0005	0.0046
270	0.0051	0.0005	0.0046
271	0.0050	0.0005	0.0045
272	0.0050	0.0005	0.0045
273	0.0050	0.0005	0.0045
274	0.0049	0.0005	0.0044
275	0.0049	0.0005	0.0044
276	0.0048	0.0005	0.0044
277	0.0048	0.0005	0.0043
278	0.0048	0.0005	0.0043
279	0.0047	0.0005	0.0043
280	0.0047	0.0005	0.0042
281	0.0047	0.0005	0.0042
282	0.0046	0.0005	0.0042
283	0.0046	0.0005	0.0041
284	0.0046	0.0005	0.0041
285	0.0045	0.0005	0.0041
286	0.0045	0.0005	0.0041
287	0.0045	0.0005	0.0040

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      288              0.0045           0.0005              0.0040
      ------------------------------------------------------------------------
      ------------------------------------------------------------------------
      Total soil rain loss =      0.26(In)
      Total effective rainfall =      3.16(In)
      Peak flow rate in flood hydrograph =    542.47(CFS)
      ------------------------------------------------------------------------
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
      ------------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

      ------------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0      150.0     300.0     450.0     600.0
----------------------------------------------------------------------------
  0+ 5       0.0044      0.64  Q         |         |         |         |
  0+10       0.0330      4.15  Q         |         |         |         |
  0+15       0.0749      6.08  Q         |         |         |         |
  0+20       0.1227      6.94  Q         |         |         |         |
  0+25       0.1739      7.44  Q         |         |         |         |
  0+30       0.2275      7.77  Q         |         |         |         |
  0+35       0.2826      8.01  Q         |         |         |         |
  0+40       0.3389      8.17  Q         |         |         |         |
  0+45       0.3959      8.28  Q         |         |         |         |
  0+50       0.4535      8.37  Q         |         |         |         |
  0+55       0.5118      8.45  Q         |         |         |         |
  1+ 0       0.5704      8.51  Q         |         |         |         |
  1+ 5       0.6291      8.54  Q         |         |         |         |
  1+10       0.6881      8.57  Q         |         |         |         |
  1+15       0.7473      8.59  Q         |         |         |         |
  1+20       0.8067      8.63  Q         |         |         |         |
  1+25       0.8664      8.66  Q         |         |         |         |
  1+30       0.9262      8.69  Q         |         |         |         |
  1+35       0.9862      8.72  Q         |         |         |         |
  1+40       1.0465      8.75  Q         |         |         |         |
  1+45       1.1069      8.78  Q         |         |         |         |
  1+50       1.1676      8.81  QV        |         |         |         |
  1+55       1.2286      8.84  QV        |         |         |         |
  2+ 0       1.2897      8.88  QV        |         |         |         |
  2+ 5       1.3510      8.91  QV        |         |         |         |
  2+10       1.4126      8.94  QV        |         |         |         |
  2+15       1.4745      8.97  QV        |         |         |         |
  2+20       1.5365      9.01  QV        |         |         |         |
  2+25       1.5988      9.04  QV        |         |         |         |
  2+30       1.6613      9.08  QV        |         |         |         |
  2+35       1.7241      9.11  QV        |         |         |         |
  2+40       1.7871      9.15  QV        |         |         |         |
  2+45       1.8503      9.18  QV        |         |         |         |
  2+50       1.9138      9.22  QV        |         |         |         |
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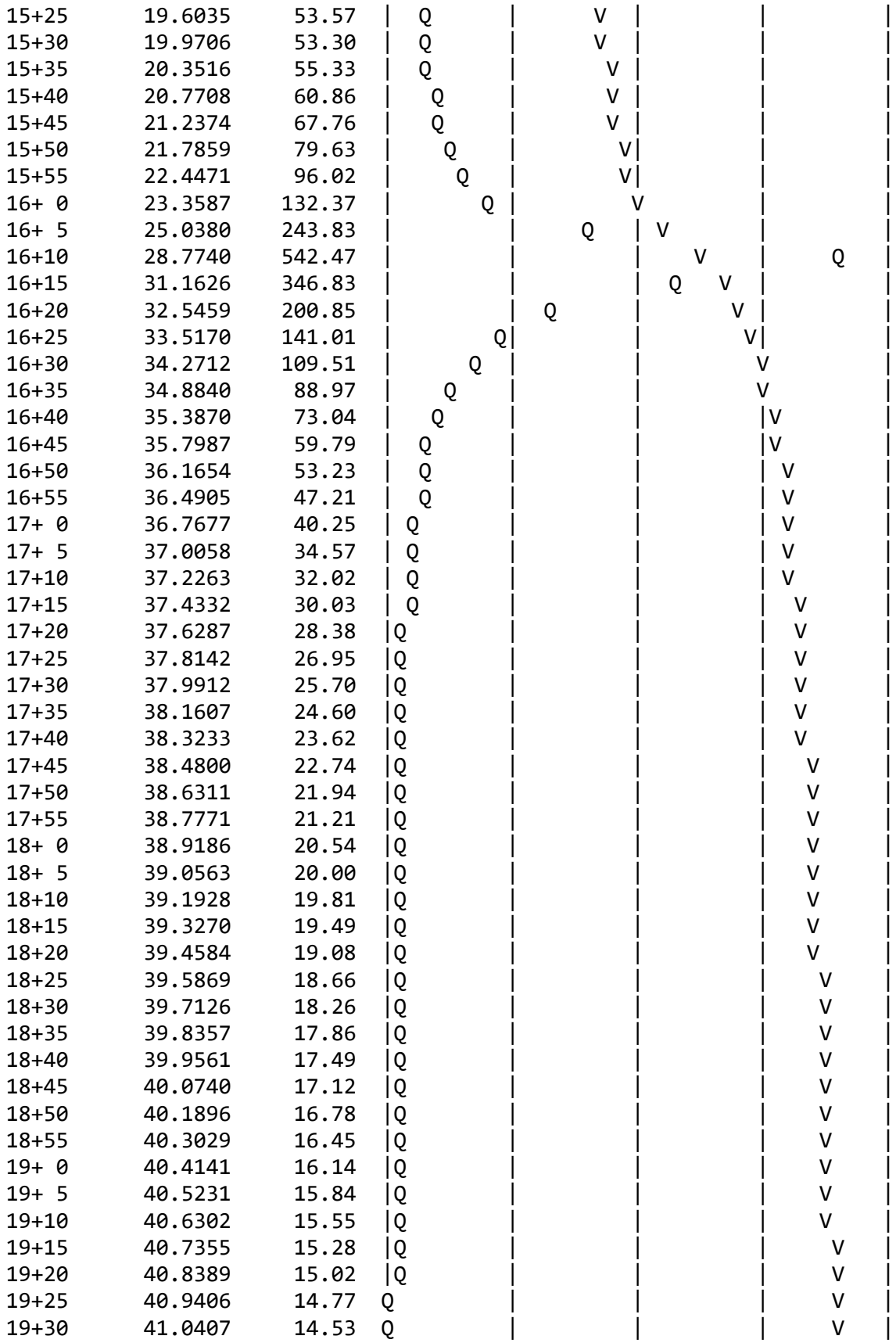
2+55	1.9775	9.25	QV	|	|	|	|
3+ 0	2.0415	9.29	QV	|	|	|	|
3+ 5	2.1058	9.33	QV	|	|	|	|
3+10	2.1703	9.37	QV	|	|	|	|
3+15	2.2350	9.40	QV	|	|	|	|
3+20	2.3001	9.44	Q V	|	|	|	|
3+25	2.3654	9.48	Q V	|	|	|	|
3+30	2.4309	9.52	Q V	|	|	|	|
3+35	2.4967	9.56	Q V	|	|	|	|
3+40	2.5628	9.60	Q V	|	|	|	|
3+45	2.6292	9.64	Q V	|	|	|	|
3+50	2.6959	9.68	Q V	|	|	|	|
3+55	2.7628	9.72	Q V	|	|	|	|
4+ 0	2.8300	9.76	Q V	|	|	|	|
4+ 5	2.8975	9.80	Q V	|	|	|	|
4+10	2.9653	9.85	Q V	|	|	|	|
4+15	3.0334	9.89	Q V	|	|	|	|
4+20	3.1018	9.93	Q V	|	|	|	|
4+25	3.1705	9.97	Q V	|	|	|	|
4+30	3.2395	10.02	Q V	|	|	|	|
4+35	3.3088	10.06	Q V	|	|	|	|
4+40	3.3784	10.11	Q V	|	|	|	|
4+45	3.4484	10.15	Q V	|	|	|	|
4+50	3.5186	10.20	Q V	|	|	|	|
4+55	3.5892	10.25	Q V	|	|	|	|
5+ 0	3.6601	10.30	Q V	|	|	|	|
5+ 5	3.7314	10.34	Q V	|	|	|	|
5+10	3.8030	10.39	Q V	|	|	|	|
5+15	3.8749	10.44	Q V	|	|	|	|
5+20	3.9471	10.49	Q V	|	|	|	|
5+25	4.0197	10.54	Q V	|	|	|	|
5+30	4.0927	10.60	Q V	|	|	|	|
5+35	4.1660	10.64	Q V	|	|	|	|
5+40	4.2397	10.70	Q V	|	|	|	|
5+45	4.3137	10.75	Q V	|	|	|	|
5+50	4.3882	10.81	Q V	|	|	|	|
5+55	4.4629	10.86	Q V	|	|	|	|
6+ 0	4.5381	10.92	Q V	|	|	|	|
6+ 5	4.6137	10.97	Q V	|	|	|	|
6+10	4.6896	11.03	Q V	|	|	|	|
6+15	4.7660	11.08	Q V	|	|	|	|
6+20	4.8427	11.15	Q V	|	|	|	|
6+25	4.9199	11.20	Q V	|	|	|	|
6+30	4.9975	11.27	Q V	|	|	|	|
6+35	5.0754	11.32	Q V	|	|	|	|
6+40	5.1539	11.39	Q V	|	|	|	|
6+45	5.2327	11.45	Q V	|	|	|	|
6+50	5.3120	11.51	Q V	|	|	|	|
6+55	5.3917	11.57	Q V	|	|	|	|
7+ 0	5.4719	11.64	Q V	|	|	|	|

7+ 5	5.5525	11.71	Q	V	|	|	|	|
7+10	5.6336	11.78	Q	V	|	|	|	|
7+15	5.7152	11.84	Q	V	|	|	|	|
7+20	5.7973	11.92	Q	V	|	|	|	|
7+25	5.8798	11.98	Q	V	|	|	|	|
7+30	5.9628	12.06	Q	V	|	|	|	|
7+35	6.0463	12.13	Q	V	|	|	|	|
7+40	6.1304	12.20	Q	V	|	|	|	|
7+45	6.2149	12.27	Q	V	|	|	|	|
7+50	6.3000	12.35	Q	V	|	|	|	|
7+55	6.3856	12.43	Q	V	|	|	|	|
8+ 0	6.4717	12.51	Q	V	|	|	|	|
8+ 5	6.5584	12.59	Q	V	|	|	|	|
8+10	6.6457	12.67	Q	V	|	|	|	|
8+15	6.7335	12.75	Q	V	|	|	|	|
8+20	6.8219	12.84	Q	V	|	|	|	|
8+25	6.9109	12.92	Q	V	|	|	|	|
8+30	7.0005	13.01	Q	V	|	|	|	|
8+35	7.0907	13.09	Q	V	|	|	|	|
8+40	7.1815	13.19	Q	V	|	|	|	|
8+45	7.2730	13.28	Q	V	|	|	|	|
8+50	7.3651	13.38	Q	V	|	|	|	|
8+55	7.4578	13.47	Q	V	|	|	|	|
9+ 0	7.5513	13.57	Q	V	|	|	|	|
9+ 5	7.6454	13.66	Q	V	|	|	|	|
9+10	7.7402	13.77	Q	V	|	|	|	|
9+15	7.8357	13.86	Q	V	|	|	|	|
9+20	7.9319	13.98	Q	V	|	|	|	|
9+25	8.0288	14.08	Q	V	|	|	|	|
9+30	8.1266	14.19	Q	V	|	|	|	|
9+35	8.2250	14.30	Q	V	|	|	|	|
9+40	8.3243	14.42	Q	V	|	|	|	|
9+45	8.4243	14.52	Q	V	|	|	|	|
9+50	8.5252	14.65	Q	V	|	|	|	|
9+55	8.6269	14.76	Q	V	|	|	|	|
10+ 0	8.7295	14.89	Q	V	|	|	|	|
10+ 5	8.8329	15.01	|Q	V	|	|	|	|
10+10	8.9372	15.15	|Q	V	|	|	|	|
10+15	9.0424	15.27	|Q	V	|	|	|	|
10+20	9.1486	15.42	|Q	V	|	|	|	|
10+25	9.2556	15.55	|Q	V	|	|	|	|
10+30	9.3637	15.70	|Q	V	|	|	|	|
10+35	9.4728	15.83	|Q	V	|	|	|	|
10+40	9.5829	15.99	|Q	V	|	|	|	|
10+45	9.6940	16.13	|Q	V	|	|	|	|
10+50	9.8062	16.30	|Q	V	|	|	|	|
10+55	9.9194	16.45	|Q	V	|	|	|	|
11+ 0	10.0339	16.62	|Q	V	|	|	|	|
11+ 5	10.1494	16.78	|Q	V	|	|	|	|
11+10	10.2662	16.96	|Q	V	|	|	|	|

11+15	10.3842	17.13	Q	V			
11+20	10.5035	17.32	Q	V			
11+25	10.6239	17.49	Q	V			
11+30	10.7458	17.70	Q	V			
11+35	10.8690	17.88	Q	V			
11+40	10.9937	18.10	Q	V			
11+45	11.1197	18.30	Q	V			
11+50	11.2473	18.53	Q	V			
11+55	11.3763	18.74	Q	V			
12+ 0	11.5070	18.98	Q	V			
12+ 5	11.6388	19.13	Q	V			
12+10	11.7697	19.01	Q	V			
12+15	11.9008	19.03	Q	V			
12+20	12.0331	19.21	Q	V			
12+25	12.1667	19.41	Q	V			
12+30	12.3022	19.67	Q	V			
12+35	12.4394	19.92	Q	V			
12+40	12.5786	20.22	Q	V			
12+45	12.7198	20.50	Q	V			
12+50	12.8633	20.83	Q	V			
12+55	13.0089	21.14	Q	V			
13+ 0	13.1570	21.51	Q	V			
13+ 5	13.3075	21.85	Q	V			
13+10	13.4608	22.26	Q	V			
13+15	13.6167	22.63	Q	V			
13+20	13.7756	23.07	Q	V			
13+25	13.9374	23.48	Q	V			
13+30	14.1025	23.97	Q	V			
13+35	14.2707	24.42	Q	V			
13+40	14.4426	24.97	Q	V			
13+45	14.6180	25.47	Q	V			
13+50	14.7976	26.07	Q	V			
13+55	14.9810	26.63	Q	V			
14+ 0	15.1691	27.31	Q	V			
14+ 5	15.3618	27.98	Q	V			
14+10	15.5612	28.95	Q	V			
14+15	15.7664	29.79	Q	V			
14+20	15.9780	30.72	Q	V			
14+25	16.1955	31.59	Q	V			
14+30	16.4203	32.64	Q	V			
14+35	16.6519	33.63	Q	V			
14+40	16.8919	34.85	Q	V			
14+45	17.1399	36.01	Q	V			
14+50	17.3981	37.48	Q	V			
14+55	17.6661	38.92	Q	V			
15+ 0	17.9475	40.85	Q	V			
15+ 5	18.2420	42.77	Q	V			
15+10	18.5538	45.27	Q	V			
15+15	18.8827	47.76	Q	V			
15+20	19.2345	51.08	Q	V			



19+35	41.1391	14.30	Q	|	|	|	V |
19+40	41.2361	14.08	Q	|	|	|	V |
19+45	41.3316	13.87	Q	|	|	|	V |
19+50	41.4257	13.66	Q	|	|	|	V |
19+55	41.5184	13.47	Q	|	|	|	V |
20+ 0	41.6099	13.28	Q	|	|	|	V |
20+ 5	41.7001	13.10	Q	|	|	|	V |
20+10	41.7891	12.92	Q	|	|	|	V |
20+15	41.8769	12.75	Q	|	|	|	V |
20+20	41.9636	12.59	Q	|	|	|	V |
20+25	42.0492	12.43	Q	|	|	|	V |
20+30	42.1337	12.27	Q	|	|	|	V |
20+35	42.2172	12.13	Q	|	|	|	V |
20+40	42.2997	11.98	Q	|	|	|	V |
20+45	42.3813	11.84	Q	|	|	|	V |
20+50	42.4619	11.71	Q	|	|	|	V |
20+55	42.5416	11.57	Q	|	|	|	V |
21+ 0	42.6204	11.45	Q	|	|	|	V |
21+ 5	42.6984	11.32	Q	|	|	|	V |
21+10	42.7755	11.20	Q	|	|	|	V |
21+15	42.8519	11.08	Q	|	|	|	V |
21+20	42.9274	10.97	Q	|	|	|	V |
21+25	43.0022	10.86	Q	|	|	|	V |
21+30	43.0762	10.75	Q	|	|	|	V |
21+35	43.1495	10.64	Q	|	|	|	V |
21+40	43.2221	10.54	Q	|	|	|	V |
21+45	43.2940	10.44	Q	|	|	|	V |
21+50	43.3652	10.34	Q	|	|	|	V |
21+55	43.4358	10.25	Q	|	|	|	V |
22+ 0	43.5057	10.15	Q	|	|	|	V |
22+ 5	43.5750	10.06	Q	|	|	|	V |
22+10	43.6437	9.97	Q	|	|	|	V |
22+15	43.7117	9.88	Q	|	|	|	V |
22+20	43.7792	9.80	Q	|	|	|	V |
22+25	43.8461	9.72	Q	|	|	|	V |
22+30	43.9125	9.63	Q	|	|	|	V |
22+35	43.9783	9.56	Q	|	|	|	V |
22+40	44.0436	9.48	Q	|	|	|	V|
22+45	44.1083	9.40	Q	|	|	|	V|
22+50	44.1726	9.33	Q	|	|	|	V|
22+55	44.2363	9.25	Q	|	|	|	V|
23+ 0	44.2995	9.18	Q	|	|	|	V|
23+ 5	44.3622	9.11	Q	|	|	|	V|
23+10	44.4245	9.04	Q	|	|	|	V|
23+15	44.4863	8.97	Q	|	|	|	V|
23+20	44.5477	8.91	Q	|	|	|	V|
23+25	44.6086	8.84	Q	|	|	|	V|
23+30	44.6690	8.78	Q	|	|	|	V|
23+35	44.7290	8.72	Q	|	|	|	V|
23+40	44.7886	8.65	Q	|	|	|	V|

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   23+45      44.8478      8.59  Q         |         |         |         V|
   23+50      44.9066      8.53  Q         |         |         |         V|
   23+55      44.9650      8.48  Q         |         |         |         V|
   24+ 0      45.0230      8.42  Q         |         |         |         V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

Study date 08/06/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area A
10-year Developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
47.41	1	0.61
Rainfall data for year 10		
47.41	6	1.24
Rainfall data for year 10		
47.41	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	47.41	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
4.74	0.100	69.0	69.0	4.49	0.124
42.67	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.221 (hours)
++
Watershed area = 47.41(Ac.)
Catchment Lag time = 0.177 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 47.1620
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 47.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 573.36 (CFS))	
1	3.598	20.628
2	27.153	135.056
3	57.843	175.965
4	71.760	79.798
5	79.835	46.300
6	85.165	30.559
7	89.031	22.163
8	91.745	15.561
9	93.875	12.216
10	95.494	9.280
11	96.745	7.176
12	97.641	5.135
13	98.199	3.199
14	98.740	3.104
15	99.303	3.226
16	99.694	2.242
17	100.000	1.756

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2883	0.2883
2	0.3550	0.0666
3	0.4009	0.0459
4	0.4370	0.0361
5	0.4673	0.0303
6	0.4936	0.0263
7	0.5169	0.0234
8	0.5381	0.0211
9	0.5574	0.0194
10	0.5753	0.0179
11	0.5920	0.0167
12	0.6076	0.0157
13	0.6273	0.0197
14	0.6462	0.0188
15	0.6642	0.0180
16	0.6815	0.0173
17	0.6981	0.0167
18	0.7142	0.0161
19	0.7298	0.0156
20	0.7449	0.0151
21	0.7595	0.0146
22	0.7737	0.0142
23	0.7875	0.0138
24	0.8010	0.0135
25	0.8142	0.0131

26	0.8270	0.0128
27	0.8395	0.0125
28	0.8518	0.0123
29	0.8638	0.0120
30	0.8755	0.0118
31	0.8871	0.0115
32	0.8984	0.0113
33	0.9094	0.0111
34	0.9203	0.0109
35	0.9310	0.0107
36	0.9415	0.0105
37	0.9518	0.0103
38	0.9620	0.0101
39	0.9719	0.0100
40	0.9818	0.0098
41	0.9914	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0196	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0641	0.0087
50	1.0727	0.0086
51	1.0812	0.0085
52	1.0895	0.0084
53	1.0978	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1378	0.0078
59	1.1456	0.0077
60	1.1532	0.0077
61	1.1608	0.0076
62	1.1684	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1977	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2190	0.0070
70	1.2260	0.0070
71	1.2330	0.0069
72	1.2398	0.0069
73	1.2465	0.0067
74	1.2531	0.0066
75	1.2597	0.0066

76	1.2663	0.0065
77	1.2727	0.0065
78	1.2792	0.0064
79	1.2855	0.0064
80	1.2919	0.0063
81	1.2981	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3408	0.0060
89	1.3468	0.0059
90	1.3526	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3872	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4094	0.0055
101	1.4149	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4365	0.0054
106	1.4419	0.0053
107	1.4471	0.0053
108	1.4524	0.0053
109	1.4576	0.0052
110	1.4629	0.0052
111	1.4680	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5085	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5280	0.0049
124	1.5329	0.0048
125	1.5377	0.0048

126	1.5425	0.0048
127	1.5472	0.0048
128	1.5520	0.0047
129	1.5567	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5707	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5982	0.0045
139	1.6027	0.0045
140	1.6072	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6381	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6639	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6849	0.0042
159	1.6891	0.0042
160	1.6932	0.0041
161	1.6974	0.0041
162	1.7015	0.0041
163	1.7056	0.0041
164	1.7096	0.0041
165	1.7137	0.0041
166	1.7177	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7377	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039

176	1.7574	0.0039
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179	1.7690	0.0039
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182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7920	0.0038
186	1.7957	0.0038
187	1.7995	0.0038
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194	1.8255	0.0037
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196	1.8328	0.0037
197	1.8365	0.0036
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204	1.8617	0.0036
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206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
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211	1.8863	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
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224	1.9309	0.0034
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227	1.9409	0.0033
228	1.9443	0.0033
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232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
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237	1.9739	0.0033
238	1.9771	0.0032
239	1.9803	0.0032
240	1.9836	0.0032
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245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
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252	2.0217	0.0031
253	2.0248	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0434	0.0031
260	2.0465	0.0031
261	2.0496	0.0031
262	2.0527	0.0031
263	2.0557	0.0031
264	2.0588	0.0030
265	2.0618	0.0030
266	2.0648	0.0030
267	2.0679	0.0030
268	2.0709	0.0030
269	2.0739	0.0030
270	2.0769	0.0030
271	2.0799	0.0030
272	2.0829	0.0030
273	2.0859	0.0030
274	2.0888	0.0030
275	2.0918	0.0030

276	2.0948	0.0030
277	2.0977	0.0030
278	2.1007	0.0030
279	2.1036	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1124	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026

33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033

83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047

133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0091
172	0.0113	0.0021	0.0092
173	0.0118	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0030	0.0131
182	0.0167	0.0031	0.0136

183	0.0180	0.0033	0.0147
184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128
186	0.0167	0.0031	0.0136
187	0.0194	0.0035	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0413
192	0.0666	0.0046	0.0621
193	0.2883	0.0046	0.2838
194	0.0361	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0123	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041

233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025

283	0.0030	0.0005	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 63.66(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

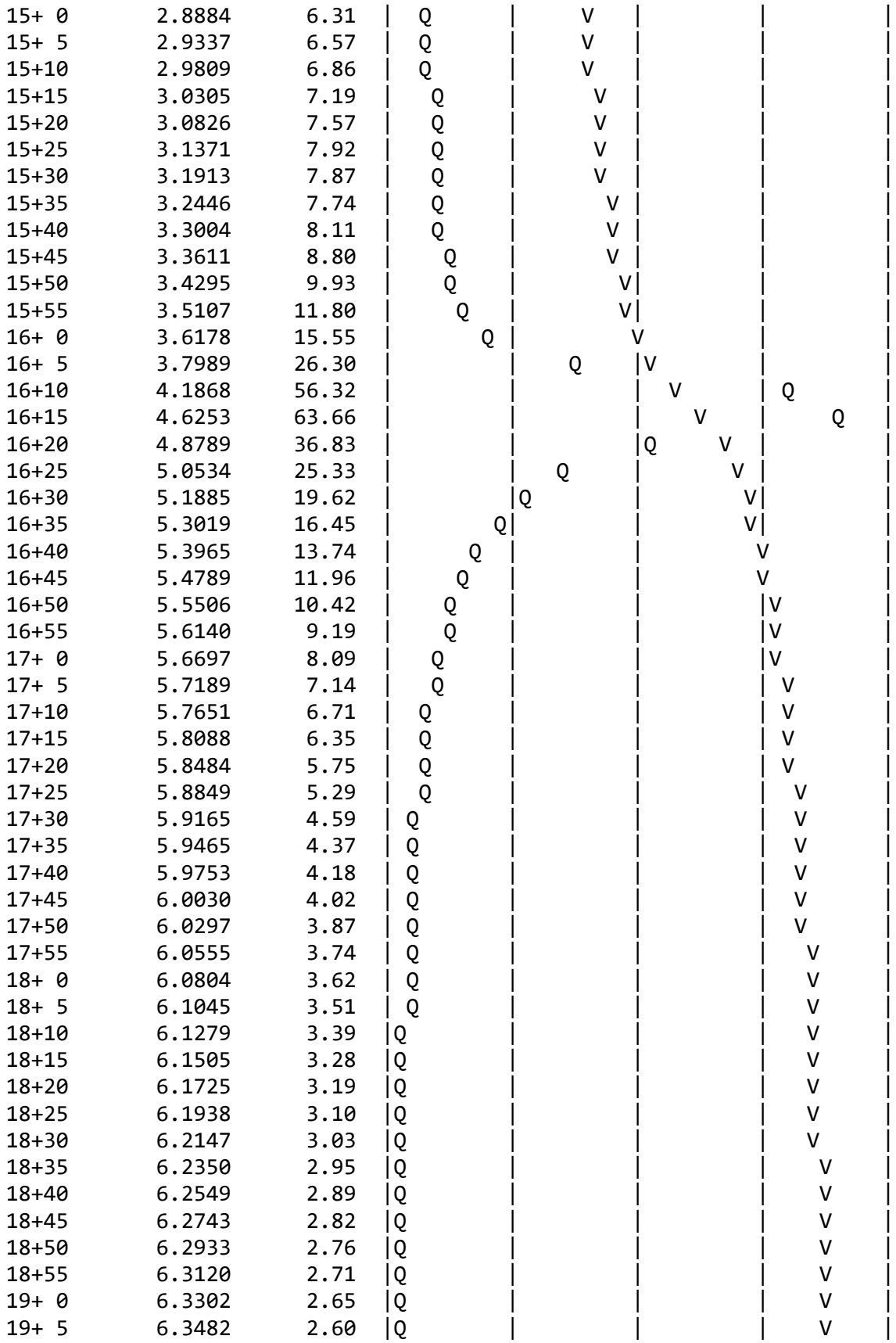
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	17.5	35.0	52.5	70.0
0+ 5	0.0003	0.05	Q				
0+10	0.0029	0.37	Q				
0+15	0.0083	0.78	Q				
0+20	0.0150	0.97	Q				
0+25	0.0225	1.09	Q				
0+30	0.0305	1.16	Q				
0+35	0.0389	1.22	Q				
0+40	0.0475	1.26	Q				
0+45	0.0564	1.29	Q				
0+50	0.0655	1.32	Q				
0+55	0.0747	1.34	Q				
1+ 0	0.0841	1.36	Q				
1+ 5	0.0935	1.37	Q				
1+10	0.1030	1.38	Q				
1+15	0.1126	1.39	Q				
1+20	0.1222	1.40	Q				
1+25	0.1319	1.41	Q				
1+30	0.1417	1.42	Q				
1+35	0.1515	1.42	Q				
1+40	0.1613	1.43	Q				
1+45	0.1711	1.43	Q				
1+50	0.1810	1.44	QV				
1+55	0.1909	1.44	QV				
2+ 0	0.2009	1.45	QV				
2+ 5	0.2109	1.45	QV				
2+10	0.2209	1.46	QV				
2+15	0.2310	1.46	QV				
2+20	0.2411	1.47	QV				
2+25	0.2512	1.47	QV				

2+30	0.2614	1.48	QV	|	|	|	|
2+35	0.2716	1.48	QV	|	|	|	|
2+40	0.2819	1.49	QV	|	|	|	|
2+45	0.2921	1.49	QV	|	|	|	|
2+50	0.3025	1.50	QV	|	|	|	|
2+55	0.3128	1.51	QV	|	|	|	|
3+ 0	0.3232	1.51	QV	|	|	|	|
3+ 5	0.3337	1.52	QV	|	|	|	|
3+10	0.3442	1.52	QV	|	|	|	|
3+15	0.3547	1.53	QV	|	|	|	|
3+20	0.3653	1.53	Q V	|	|	|	|
3+25	0.3759	1.54	Q V	|	|	|	|
3+30	0.3865	1.55	Q V	|	|	|	|
3+35	0.3972	1.55	Q V	|	|	|	|
3+40	0.4080	1.56	Q V	|	|	|	|
3+45	0.4187	1.57	Q V	|	|	|	|
3+50	0.4296	1.57	Q V	|	|	|	|
3+55	0.4404	1.58	Q V	|	|	|	|
4+ 0	0.4513	1.58	Q V	|	|	|	|
4+ 5	0.4623	1.59	Q V	|	|	|	|
4+10	0.4733	1.60	Q V	|	|	|	|
4+15	0.4843	1.60	Q V	|	|	|	|
4+20	0.4954	1.61	Q V	|	|	|	|
4+25	0.5066	1.62	Q V	|	|	|	|
4+30	0.5178	1.62	Q V	|	|	|	|
4+35	0.5290	1.63	Q V	|	|	|	|
4+40	0.5403	1.64	Q V	|	|	|	|
4+45	0.5516	1.65	Q V	|	|	|	|
4+50	0.5630	1.65	Q V	|	|	|	|
4+55	0.5745	1.66	Q V	|	|	|	|
5+ 0	0.5860	1.67	Q V	|	|	|	|
5+ 5	0.5975	1.68	Q V	|	|	|	|
5+10	0.6091	1.68	Q V	|	|	|	|
5+15	0.6207	1.69	Q V	|	|	|	|
5+20	0.6324	1.70	Q V	|	|	|	|
5+25	0.6442	1.71	Q V	|	|	|	|
5+30	0.6560	1.71	Q V	|	|	|	|
5+35	0.6679	1.72	Q V	|	|	|	|
5+40	0.6798	1.73	Q V	|	|	|	|
5+45	0.6918	1.74	Q V	|	|	|	|
5+50	0.7038	1.75	Q V	|	|	|	|
5+55	0.7159	1.76	|Q V	|	|	|	|
6+ 0	0.7281	1.77	|Q V	|	|	|	|
6+ 5	0.7403	1.77	|Q V	|	|	|	|
6+10	0.7526	1.78	|Q V	|	|	|	|
6+15	0.7649	1.79	|Q V	|	|	|	|
6+20	0.7773	1.80	|Q V	|	|	|	|
6+25	0.7898	1.81	|Q V	|	|	|	|
6+30	0.8023	1.82	|Q V	|	|	|	|
6+35	0.8149	1.83	|Q V	|	|	|	|

6+40	0.8276	1.84	|Q V	|	|	|	|
6+45	0.8403	1.85	|Q V	|	|	|	|
6+50	0.8531	1.86	|Q V	|	|	|	|
6+55	0.8659	1.87	|Q V	|	|	|	|
7+ 0	0.8789	1.88	|Q V	|	|	|	|
7+ 5	0.8919	1.89	|Q V	|	|	|	|
7+10	0.9050	1.90	|Q V	|	|	|	|
7+15	0.9181	1.91	|Q V	|	|	|	|
7+20	0.9313	1.92	|Q V	|	|	|	|
7+25	0.9446	1.93	|Q V	|	|	|	|
7+30	0.9580	1.94	|Q V	|	|	|	|
7+35	0.9715	1.95	|Q V	|	|	|	|
7+40	0.9850	1.97	|Q V	|	|	|	|
7+45	0.9986	1.98	|Q V	|	|	|	|
7+50	1.0123	1.99	|Q V	|	|	|	|
7+55	1.0261	2.00	|Q V	|	|	|	|
8+ 0	1.0400	2.01	|Q V	|	|	|	|
8+ 5	1.0539	2.03	|Q V	|	|	|	|
8+10	1.0679	2.04	|Q V	|	|	|	|
8+15	1.0821	2.05	|Q V	|	|	|	|
8+20	1.0963	2.06	|Q V	|	|	|	|
8+25	1.1106	2.08	|Q V	|	|	|	|
8+30	1.1250	2.09	|Q V	|	|	|	|
8+35	1.1395	2.10	|Q V	|	|	|	|
8+40	1.1540	2.12	|Q V	|	|	|	|
8+45	1.1687	2.13	|Q V	|	|	|	|
8+50	1.1835	2.15	|Q V	|	|	|	|
8+55	1.1984	2.16	|Q V	|	|	|	|
9+ 0	1.2134	2.18	|Q V	|	|	|	|
9+ 5	1.2285	2.19	|Q V	|	|	|	|
9+10	1.2437	2.21	|Q V	|	|	|	|
9+15	1.2590	2.22	|Q V	|	|	|	|
9+20	1.2744	2.24	|Q V	|	|	|	|
9+25	1.2899	2.26	|Q V	|	|	|	|
9+30	1.3056	2.27	|Q V	|	|	|	|
9+35	1.3214	2.29	|Q V	|	|	|	|
9+40	1.3372	2.31	|Q V	|	|	|	|
9+45	1.3532	2.32	|Q V	|	|	|	|
9+50	1.3694	2.34	|Q V	|	|	|	|
9+55	1.3856	2.36	|Q V	|	|	|	|
10+ 0	1.4020	2.38	|Q V	|	|	|	|
10+ 5	1.4186	2.40	|Q V	|	|	|	|
10+10	1.4352	2.42	|Q V	|	|	|	|
10+15	1.4520	2.44	|Q V	|	|	|	|
10+20	1.4690	2.46	|Q V	|	|	|	|
10+25	1.4860	2.48	|Q V	|	|	|	|
10+30	1.5033	2.50	|Q V	|	|	|	|
10+35	1.5207	2.52	|Q V	|	|	|	|
10+40	1.5382	2.55	|Q V	|	|	|	|
10+45	1.5559	2.57	|Q V	|	|	|	|

10+50	1.5738	2.59	Q	V			
10+55	1.5918	2.62	Q	V			
11+ 0	1.6100	2.64	Q	V			
11+ 5	1.6284	2.67	Q	V			
11+10	1.6470	2.70	Q	V			
11+15	1.6657	2.72	Q	V			
11+20	1.6847	2.75	Q	V			
11+25	1.7038	2.78	Q	V			
11+30	1.7231	2.81	Q	V			
11+35	1.7427	2.84	Q	V			
11+40	1.7624	2.87	Q	V			
11+45	1.7824	2.90	Q	V			
11+50	1.8026	2.93	Q	V			
11+55	1.8231	2.97	Q	V			
12+ 0	1.8437	3.00	Q	V			
12+ 5	1.8647	3.04	Q	V			
12+10	1.8859	3.09	Q	V			
12+15	1.9076	3.14	Q	V			
12+20	1.9296	3.19	Q	V			
12+25	1.9519	3.24	Q	V			
12+30	1.9745	3.28	Q	V			
12+35	1.9974	3.33	Q	V			
12+40	2.0207	3.38	Q	V			
12+45	2.0443	3.43	Q	V			
12+50	2.0682	3.47	Q	V			
12+55	2.0925	3.53	Q	V			
13+ 0	2.1171	3.58	Q	V			
13+ 5	2.1422	3.64	Q	V			
13+10	2.1676	3.69	Q	V			
13+15	2.1935	3.76	Q	V			
13+20	2.2198	3.82	Q	V			
13+25	2.2466	3.89	Q	V			
13+30	2.2738	3.95	Q	V			
13+35	2.3015	4.03	Q	V			
13+40	2.3298	4.10	Q	V			
13+45	2.3586	4.18	Q	V			
13+50	2.3880	4.27	Q	V			
13+55	2.4180	4.36	Q	V			
14+ 0	2.4487	4.45	Q	V			
14+ 5	2.4800	4.55	Q	V			
14+10	2.5121	4.66	Q	V			
14+15	2.5451	4.78	Q	V			
14+20	2.5788	4.91	Q	V			
14+25	2.6135	5.04	Q	V			
14+30	2.6492	5.18	Q	V			
14+35	2.6859	5.33	Q	V			
14+40	2.7237	5.49	Q	V			
14+45	2.7628	5.67	Q	V			
14+50	2.8032	5.86	Q	V			
14+55	2.8450	6.08	Q	V			



```
19+10       6.3657      2.55  |Q        |         |         |    V    |
19+15       6.3830      2.51  |Q        |         |         |    V    |
19+20       6.4000      2.47  |Q        |         |         |    V    |
19+25       6.4167      2.42  |Q        |         |         |     V   |
19+30       6.4331      2.38  |Q        |         |         |     V   |
19+35       6.4493      2.35  |Q        |         |         |     V   |
19+40       6.4652      2.31  |Q        |         |         |     V   |
19+45       6.4809      2.28  |Q        |         |         |     V   |
19+50       6.4963      2.24  |Q        |         |         |     V   |
19+55       6.5115      2.21  |Q        |         |         |     V   |
20+ 0       6.5265      2.18  |Q        |         |         |     V   |
20+ 5       6.5413      2.15  |Q        |         |         |     V   |
20+10       6.5559      2.12  |Q        |         |         |     V   |
20+15       6.5703      2.09  |Q        |         |         |     V   |
20+20       6.5846      2.07  |Q        |         |         |      V  |
20+25       6.5986      2.04  |Q        |         |         |      V  |
20+30       6.6125      2.01  |Q        |         |         |      V  |
20+35       6.6262      1.99  |Q        |         |         |      V  |
20+40       6.6397      1.97  |Q        |         |         |      V  |
20+45       6.6531      1.94  |Q        |         |         |      V  |
20+50       6.6664      1.92  |Q        |         |         |      V  |
20+55       6.6794      1.90  |Q        |         |         |      V  |
21+ 0       6.6924      1.88  |Q        |         |         |      V  |
21+ 5       6.7052      1.86  |Q        |         |         |      V  |
21+10       6.7179      1.84  |Q        |         |         |      V  |
21+15       6.7304      1.82  |Q        |         |         |      V  |
21+20       6.7428      1.80  |Q        |         |         |      V  |
21+25       6.7551      1.78  |Q        |         |         |      V  |
21+30       6.7673      1.77  |Q        |         |         |       V |
21+35       6.7793      1.75  Q         |         |         |       V |
21+40       6.7912      1.73  Q         |         |         |       V |
21+45       6.8030      1.72  Q         |         |         |       V |
21+50       6.8147      1.70  Q         |         |         |       V |
21+55       6.8263      1.68  Q         |         |         |       V |
22+ 0       6.8378      1.67  Q         |         |         |       V |
22+ 5       6.8492      1.65  Q         |         |         |       V |
22+10       6.8605      1.64  Q         |         |         |       V |
22+15       6.8717      1.63  Q         |         |         |       V |
22+20       6.8828      1.61  Q         |         |         |       V |
22+25       6.8938      1.60  Q         |         |         |       V |
22+30       6.9047      1.58  Q         |         |         |       V |
22+35       6.9156      1.57  Q         |         |         |       V |
22+40       6.9263      1.56  Q         |         |         |       V |
22+45       6.9370      1.55  Q         |         |         |       V |
22+50       6.9475      1.53  Q         |         |         |        V|
22+55       6.9580      1.52  Q         |         |         |        V|
23+ 0       6.9684      1.51  Q         |         |         |        V|
23+ 5       6.9787      1.50  Q         |         |         |        V|
23+10       6.9890      1.49  Q         |         |         |        V|
23+15       6.9992      1.48  Q         |         |         |        V|
```

```
   23+20       7.0093      1.47  Q         |          |          |         V|
   23+25       7.0193      1.46  Q         |          |          |         V|
   23+30       7.0293      1.45  Q         |          |          |         V|
   23+35       7.0392      1.44  Q         |          |          |         V|
   23+40       7.0490      1.43  Q         |          |          |         V|
   23+45       7.0587      1.42  Q         |          |          |         V|
   23+50       7.0684      1.41  Q         |          |          |         V|
   23+55       7.0780      1.40  Q         |          |          |         V|
   24+ 0       7.0876      1.39  Q         |          |          |         V|
-----------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0

Study date 08/06/22

++

San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area B
10-year developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
48.02	1	0.61
Rainfall data for year 10		
48.02	6	1.24
Rainfall data for year 10		
48.02	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	48.02	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
4.80	0.100	69.0	69.0	4.49	0.124
43.22	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.220 (hours)
++
Watershed area = 48.02(Ac.)
Catchment Lag time = 0.176 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 47.4347
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 48.02(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 580.74 (CFS))	
1	3.632	21.094
2	27.477	138.475
3	58.120	177.956
4	71.962	80.389
5	79.999	46.673
6	85.309	30.840
7	89.148	22.291
8	91.848	15.686
9	93.964	12.287
10	95.571	9.334
11	96.810	7.191
12	97.688	5.100
13	98.235	3.179
14	98.784	3.190
15	99.346	3.259
16	99.720	2.176
17	100.000	1.625

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2883	0.2883
2	0.3550	0.0666
3	0.4009	0.0459
4	0.4370	0.0361
5	0.4673	0.0303
6	0.4935	0.0263
7	0.5169	0.0234
8	0.5380	0.0211
9	0.5574	0.0194
10	0.5753	0.0179
11	0.5920	0.0167
12	0.6076	0.0157
13	0.6273	0.0197
14	0.6461	0.0188
15	0.6642	0.0180
16	0.6815	0.0173
17	0.6981	0.0167
18	0.7142	0.0161
19	0.7298	0.0156
20	0.7449	0.0151
21	0.7595	0.0146
22	0.7737	0.0142
23	0.7875	0.0138
24	0.8010	0.0135
25	0.8142	0.0131

26	0.8270	0.0128
27	0.8395	0.0125
28	0.8518	0.0123
29	0.8638	0.0120
30	0.8755	0.0118
31	0.8871	0.0115
32	0.8983	0.0113
33	0.9094	0.0111
34	0.9203	0.0109
35	0.9310	0.0107
36	0.9415	0.0105
37	0.9518	0.0103
38	0.9620	0.0101
39	0.9719	0.0100
40	0.9818	0.0098
41	0.9914	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0196	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0641	0.0087
50	1.0727	0.0086
51	1.0812	0.0085
52	1.0895	0.0084
53	1.0978	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1378	0.0078
59	1.1456	0.0077
60	1.1532	0.0077
61	1.1608	0.0076
62	1.1683	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1977	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2190	0.0070
70	1.2260	0.0070
71	1.2329	0.0069
72	1.2398	0.0069
73	1.2465	0.0067
74	1.2531	0.0066
75	1.2597	0.0066

76	1.2663	0.0065
77	1.2727	0.0065
78	1.2792	0.0064
79	1.2855	0.0064
80	1.2919	0.0063
81	1.2981	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3408	0.0060
89	1.3468	0.0059
90	1.3526	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3871	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4094	0.0055
101	1.4149	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4365	0.0054
106	1.4419	0.0053
107	1.4471	0.0053
108	1.4524	0.0053
109	1.4576	0.0052
110	1.4628	0.0052
111	1.4680	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5084	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5280	0.0049
124	1.5329	0.0048
125	1.5377	0.0048

126	1.5425	0.0048
127	1.5472	0.0048
128	1.5520	0.0047
129	1.5567	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5707	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5982	0.0045
139	1.6027	0.0045
140	1.6072	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6381	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6639	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6849	0.0042
159	1.6891	0.0042
160	1.6932	0.0041
161	1.6973	0.0041
162	1.7015	0.0041
163	1.7055	0.0041
164	1.7096	0.0041
165	1.7137	0.0041
166	1.7177	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7377	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039

176	1.7574	0.0039
177	1.7613	0.0039
178	1.7652	0.0039
179	1.7690	0.0039
180	1.7729	0.0039
181	1.7767	0.0038
182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7919	0.0038
186	1.7957	0.0038
187	1.7995	0.0038
188	1.8032	0.0037
189	1.8070	0.0037
190	1.8107	0.0037
191	1.8144	0.0037
192	1.8181	0.0037
193	1.8218	0.0037
194	1.8255	0.0037
195	1.8292	0.0037
196	1.8328	0.0037
197	1.8365	0.0036
198	1.8401	0.0036
199	1.8437	0.0036
200	1.8473	0.0036
201	1.8509	0.0036
202	1.8545	0.0036
203	1.8581	0.0036
204	1.8617	0.0036
205	1.8652	0.0036
206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
209	1.8793	0.0035
210	1.8828	0.0035
211	1.8863	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
219	1.9139	0.0034
220	1.9173	0.0034
221	1.9207	0.0034
222	1.9241	0.0034
223	1.9275	0.0034
224	1.9309	0.0034
225	1.9342	0.0034

226	1.9376	0.0034
227	1.9409	0.0033
228	1.9443	0.0033
229	1.9476	0.0033
230	1.9509	0.0033
231	1.9542	0.0033
232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
235	1.9673	0.0033
236	1.9706	0.0033
237	1.9739	0.0033
238	1.9771	0.0032
239	1.9803	0.0032
240	1.9836	0.0032
241	1.9868	0.0032
242	1.9900	0.0032
243	1.9932	0.0032
244	1.9964	0.0032
245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
250	2.0154	0.0032
251	2.0186	0.0031
252	2.0217	0.0031
253	2.0248	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0434	0.0031
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261	2.0496	0.0031
262	2.0526	0.0031
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270	2.0769	0.0030
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275	2.0918	0.0030

276	2.0948	0.0030
277	2.0977	0.0030
278	2.1007	0.0030
279	2.1036	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1124	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026

33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033

83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047

133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0091
172	0.0113	0.0021	0.0092
173	0.0118	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0030	0.0131
182	0.0167	0.0031	0.0136

183	0.0180	0.0033	0.0147
184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128
186	0.0167	0.0031	0.0136
187	0.0194	0.0035	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0413
192	0.0666	0.0046	0.0621
193	0.2883	0.0046	0.2838
194	0.0361	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0123	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041

233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025

283	0.0030	0.0005	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 64.41(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	17.5	35.0	52.5	70.0
0+ 5	0.0003	0.05	Q				
0+10	0.0029	0.38	Q				
0+15	0.0084	0.80	Q				
0+20	0.0152	0.99	Q				
0+25	0.0228	1.10	Q				
0+30	0.0310	1.18	Q				
0+35	0.0395	1.24	Q				
0+40	0.0483	1.28	Q				
0+45	0.0573	1.31	Q				
0+50	0.0665	1.34	Q				
0+55	0.0758	1.36	Q				
1+ 0	0.0853	1.37	Q				
1+ 5	0.0948	1.39	Q				
1+10	0.1045	1.40	Q				
1+15	0.1142	1.41	Q				
1+20	0.1240	1.42	Q				
1+25	0.1338	1.43	Q				
1+30	0.1437	1.43	Q				
1+35	0.1536	1.44	Q				
1+40	0.1635	1.44	Q				
1+45	0.1735	1.45	Q				
1+50	0.1835	1.45	QV				
1+55	0.1936	1.46	QV				
2+ 0	0.2037	1.46	QV				
2+ 5	0.2138	1.47	QV				
2+10	0.2239	1.47	QV				
2+15	0.2341	1.48	QV				
2+20	0.2444	1.49	QV				
2+25	0.2546	1.49	QV				

2+30	0.2649	1.50	QV	|	|	|	|
2+35	0.2753	1.50	QV	|	|	|	|
2+40	0.2857	1.51	QV	|	|	|	|
2+45	0.2961	1.51	QV	|	|	|	|
2+50	0.3065	1.52	QV	|	|	|	|
2+55	0.3170	1.52	QV	|	|	|	|
3+ 0	0.3276	1.53	QV	|	|	|	|
3+ 5	0.3382	1.54	QV	|	|	|	|
3+10	0.3488	1.54	QV	|	|	|	|
3+15	0.3595	1.55	QV	|	|	|	|
3+20	0.3702	1.55	Q V	|	|	|	|
3+25	0.3809	1.56	Q V	|	|	|	|
3+30	0.3917	1.57	Q V	|	|	|	|
3+35	0.4025	1.57	Q V	|	|	|	|
3+40	0.4134	1.58	Q V	|	|	|	|
3+45	0.4243	1.59	Q V	|	|	|	|
3+50	0.4353	1.59	Q V	|	|	|	|
3+55	0.4463	1.60	Q V	|	|	|	|
4+ 0	0.4573	1.60	Q V	|	|	|	|
4+ 5	0.4684	1.61	Q V	|	|	|	|
4+10	0.4796	1.62	Q V	|	|	|	|
4+15	0.4908	1.63	Q V	|	|	|	|
4+20	0.5020	1.63	Q V	|	|	|	|
4+25	0.5133	1.64	Q V	|	|	|	|
4+30	0.5246	1.65	Q V	|	|	|	|
4+35	0.5360	1.65	Q V	|	|	|	|
4+40	0.5475	1.66	Q V	|	|	|	|
4+45	0.5589	1.67	Q V	|	|	|	|
4+50	0.5705	1.67	Q V	|	|	|	|
4+55	0.5821	1.68	Q V	|	|	|	|
5+ 0	0.5937	1.69	Q V	|	|	|	|
5+ 5	0.6054	1.70	Q V	|	|	|	|
5+10	0.6171	1.71	Q V	|	|	|	|
5+15	0.6289	1.71	Q V	|	|	|	|
5+20	0.6408	1.72	Q V	|	|	|	|
5+25	0.6527	1.73	Q V	|	|	|	|
5+30	0.6647	1.74	Q V	|	|	|	|
5+35	0.6767	1.75	Q V	|	|	|	|
5+40	0.6888	1.75	|Q V	|	|	|	|
5+45	0.7009	1.76	|Q V	|	|	|	|
5+50	0.7131	1.77	|Q V	|	|	|	|
5+55	0.7253	1.78	|Q V	|	|	|	|
6+ 0	0.7377	1.79	|Q V	|	|	|	|
6+ 5	0.7500	1.80	|Q V	|	|	|	|
6+10	0.7625	1.81	|Q V	|	|	|	|
6+15	0.7750	1.81	|Q V	|	|	|	|
6+20	0.7875	1.82	|Q V	|	|	|	|
6+25	0.8002	1.83	|Q V	|	|	|	|
6+30	0.8129	1.84	|Q V	|	|	|	|
6+35	0.8256	1.85	|Q V	|	|	|	|

6+40	0.8384	1.86	|Q V	|	|	|	|
6+45	0.8513	1.87	|Q V	|	|	|	|
6+50	0.8643	1.88	|Q V	|	|	|	|
6+55	0.8773	1.89	|Q V	|	|	|	|
7+ 0	0.8904	1.90	|Q V	|	|	|	|
7+ 5	0.9036	1.91	|Q V	|	|	|	|
7+10	0.9168	1.92	|Q V	|	|	|	|
7+15	0.9302	1.93	|Q V	|	|	|	|
7+20	0.9436	1.95	|Q V	|	|	|	|
7+25	0.9570	1.96	|Q V	|	|	|	|
7+30	0.9706	1.97	|Q V	|	|	|	|
7+35	0.9842	1.98	|Q V	|	|	|	|
7+40	0.9979	1.99	|Q V	|	|	|	|
7+45	1.0117	2.00	|Q V	|	|	|	|
7+50	1.0256	2.01	|Q V	|	|	|	|
7+55	1.0395	2.03	|Q V	|	|	|	|
8+ 0	1.0536	2.04	|Q V	|	|	|	|
8+ 5	1.0677	2.05	|Q V	|	|	|	|
8+10	1.0819	2.06	|Q V	|	|	|	|
8+15	1.0962	2.08	|Q V	|	|	|	|
8+20	1.1106	2.09	|Q V	|	|	|	|
8+25	1.1251	2.10	|Q V	|	|	|	|
8+30	1.1397	2.12	|Q V	|	|	|	|
8+35	1.1544	2.13	|Q V	|	|	|	|
8+40	1.1692	2.15	|Q V	|	|	|	|
8+45	1.1840	2.16	|Q V	|	|	|	|
8+50	1.1990	2.17	|Q V	|	|	|	|
8+55	1.2141	2.19	|Q V	|	|	|	|
9+ 0	1.2293	2.20	|Q V	|	|	|	|
9+ 5	1.2446	2.22	|Q V	|	|	|	|
9+10	1.2600	2.24	|Q V	|	|	|	|
9+15	1.2755	2.25	|Q V	|	|	|	|
9+20	1.2911	2.27	|Q V	|	|	|	|
9+25	1.3068	2.28	|Q V	|	|	|	|
9+30	1.3227	2.30	|Q V	|	|	|	|
9+35	1.3386	2.32	|Q V	|	|	|	|
9+40	1.3547	2.34	|Q V	|	|	|	|
9+45	1.3709	2.35	|Q V	|	|	|	|
9+50	1.3873	2.37	|Q V	|	|	|	|
9+55	1.4038	2.39	|Q V	|	|	|	|
10+ 0	1.4204	2.41	|Q V	|	|	|	|
10+ 5	1.4371	2.43	|Q V	|	|	|	|
10+10	1.4540	2.45	|Q V	|	|	|	|
10+15	1.4710	2.47	|Q V	|	|	|	|
10+20	1.4882	2.49	|Q V	|	|	|	|
10+25	1.5055	2.51	|Q V	|	|	|	|
10+30	1.5229	2.54	|Q V	|	|	|	|
10+35	1.5406	2.56	|Q V	|	|	|	|
10+40	1.5583	2.58	|Q V	|	|	|	|
10+45	1.5763	2.60	|Q V	|	|	|	|

10+50	1.5944	2.63	Q	V			
10+55	1.6126	2.65	Q	V			
11+ 0	1.6311	2.68	Q	V			
11+ 5	1.6497	2.70	Q	V			
11+10	1.6685	2.73	Q	V			
11+15	1.6875	2.76	Q	V			
11+20	1.7067	2.79	Q	V			
11+25	1.7261	2.81	Q	V			
11+30	1.7457	2.84	Q	V			
11+35	1.7655	2.87	Q	V			
11+40	1.7855	2.91	Q	V			
11+45	1.8057	2.94	Q	V			
11+50	1.8262	2.97	Q	V			
11+55	1.8469	3.01	Q	V			
12+ 0	1.8678	3.04	Q	V			
12+ 5	1.8890	3.08	Q	V			
12+10	1.9106	3.13	Q	V			
12+15	1.9325	3.19	Q	V			
12+20	1.9548	3.23	Q	V			
12+25	1.9774	3.28	Q	V			
12+30	2.0003	3.33	Q	V			
12+35	2.0235	3.37	Q	V			
12+40	2.0471	3.42	Q	V			
12+45	2.0710	3.47	Q	V			
12+50	2.0952	3.52	Q	V			
12+55	2.1198	3.57	Q	V			
13+ 0	2.1448	3.63	Q	V			
13+ 5	2.1702	3.68	Q	V			
13+10	2.1960	3.74	Q	V			
13+15	2.2222	3.81	Q	V			
13+20	2.2488	3.87	Q	V			
13+25	2.2759	3.94	Q	V			
13+30	2.3035	4.01	Q	V			
13+35	2.3316	4.08	Q	V			
13+40	2.3603	4.16	Q	V			
13+45	2.3895	4.24	Q	V			
13+50	2.4192	4.32	Q	V			
13+55	2.4496	4.41	Q	V			
14+ 0	2.4807	4.51	Q	V			
14+ 5	2.5125	4.61	Q	V			
14+10	2.5450	4.72	Q	V			
14+15	2.5784	4.85	Q	V			
14+20	2.6126	4.97	Q	V			
14+25	2.6478	5.11	Q	V			
14+30	2.6839	5.25	Q	V			
14+35	2.7211	5.40	Q	V			
14+40	2.7594	5.57	Q	V			
14+45	2.7990	5.75	Q	V			
14+50	2.8399	5.94	Q	V			
14+55	2.8823	6.16	Q	V			

15+ 0	2.9264	6.39	Q	V			
15+ 5	2.9722	6.66	Q	V			
15+10	3.0201	6.95	Q	V			
15+15	3.0703	7.29	Q	V			
15+20	3.1231	7.67	Q	V			
15+25	3.1784	8.02	Q	V			
15+30	3.2333	7.97	Q	V			
15+35	3.2873	7.84	Q	V			
15+40	3.3439	8.22	Q	V			
15+45	3.4054	8.93	Q	V			
15+50	3.4747	10.07	Q	V			
15+55	3.5572	11.98	Q	V			
16+ 0	3.6660	15.79	Q	V			
16+ 5	3.8503	26.75	Q	V			
16+10	4.2461	57.47	Q	V			
16+15	4.6897	64.41	Q	V			
16+20	4.9457	37.18	Q	V			
16+25	5.1219	25.58	Q	V			
16+30	5.2584	19.83	Q	V			
16+35	5.3728	16.61	Q	V			
16+40	5.4685	13.89	Q	V			
16+45	5.5516	12.07	Q	V			
16+50	5.6241	10.52	Q	V			
16+55	5.6880	9.28	Q	V			
17+ 0	5.7442	8.16	Q	V			
17+ 5	5.7938	7.21	Q	V			
17+10	5.8406	6.79	Q	V			
17+15	5.8848	6.42	Q	V			
17+20	5.9247	5.79	Q	V			
17+25	5.9612	5.31	Q	V			
17+30	5.9932	4.64	Q	V			
17+35	6.0236	4.42	Q	V			
17+40	6.0528	4.23	Q	V			
17+45	6.0808	4.07	Q	V			
17+50	6.1078	3.92	Q	V			
17+55	6.1339	3.79	Q	V			
18+ 0	6.1591	3.66	Q	V			
18+ 5	6.1835	3.55	Q	V			
18+10	6.2072	3.43	Q	V			
18+15	6.2301	3.32	Q	V			
18+20	6.2523	3.23	Q	V			
18+25	6.2739	3.14	Q	V			
18+30	6.2950	3.06	Q	V			
18+35	6.3156	2.99	Q	V			
18+40	6.3357	2.92	Q	V			
18+45	6.3554	2.86	Q	V			
18+50	6.3746	2.80	Q	V			
18+55	6.3935	2.74	Q	V			
19+ 0	6.4120	2.69	Q	V			
19+ 5	6.4302	2.63	Q	V			

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19+10       6.4480      2.59  |Q        |         |         |    V    |
19+15       6.4655      2.54  |Q        |         |         |    V    |
19+20       6.4827      2.50  |Q        |         |         |    V    |
19+25       6.4996      2.45  |Q        |         |         |     V   |
19+30       6.5162      2.41  |Q        |         |         |     V   |
19+35       6.5325      2.38  |Q        |         |         |     V   |
19+40       6.5487      2.34  |Q        |         |         |     V   |
19+45       6.5645      2.30  |Q        |         |         |     V   |
19+50       6.5802      2.27  |Q        |         |         |     V   |
19+55       6.5956      2.24  |Q        |         |         |     V   |
20+ 0       6.6108      2.21  |Q        |         |         |     V   |
20+ 5       6.6258      2.18  |Q        |         |         |     V   |
20+10       6.6405      2.15  |Q        |         |         |     V   |
20+15       6.6551      2.12  |Q        |         |         |     V   |
20+20       6.6695      2.09  |Q        |         |         |      V  |
20+25       6.6838      2.07  |Q        |         |         |      V  |
20+30       6.6978      2.04  |Q        |         |         |      V  |
20+35       6.7117      2.02  |Q        |         |         |      V  |
20+40       6.7254      1.99  |Q        |         |         |      V  |
20+45       6.7390      1.97  |Q        |         |         |      V  |
20+50       6.7524      1.95  |Q        |         |         |      V  |
20+55       6.7656      1.92  |Q        |         |         |      V  |
21+ 0       6.7787      1.90  |Q        |         |         |      V  |
21+ 5       6.7917      1.88  |Q        |         |         |      V  |
21+10       6.8045      1.86  |Q        |         |         |      V  |
21+15       6.8172      1.84  |Q        |         |         |      V  |
21+20       6.8298      1.82  |Q        |         |         |      V  |
21+25       6.8422      1.81  |Q        |         |         |      V  |
21+30       6.8545      1.79  |Q        |         |         |       V |
21+35       6.8667      1.77  |Q        |         |         |       V |
21+40       6.8788      1.75  |Q        |         |         |       V |
21+45       6.8908      1.74  Q         |         |         |       V |
21+50       6.9026      1.72  Q         |         |         |       V |
21+55       6.9144      1.71  Q         |         |         |       V |
22+ 0       6.9260      1.69  Q         |         |         |       V |
22+ 5       6.9375      1.68  Q         |         |         |       V |
22+10       6.9490      1.66  Q         |         |         |       V |
22+15       6.9603      1.65  Q         |         |         |       V |
22+20       6.9716      1.63  Q         |         |         |       V |
22+25       6.9827      1.62  Q         |         |         |       V |
22+30       6.9938      1.61  Q         |         |         |       V |
22+35       7.0047      1.59  Q         |         |         |       V |
22+40       7.0156      1.58  Q         |         |         |       V |
22+45       7.0264      1.57  Q         |         |         |       V |
22+50       7.0371      1.55  Q         |         |         |        V|
22+55       7.0477      1.54  Q         |         |         |        V|
23+ 0       7.0583      1.53  Q         |         |         |        V|
23+ 5       7.0687      1.52  Q         |         |         |        V|
23+10       7.0791      1.51  Q         |         |         |        V|
23+15       7.0894      1.50  Q         |         |         |        V|
```

```
   23+20       7.0996      1.49  Q         |         |         |         V|
   23+25       7.1098      1.47  Q         |         |         |         V|
   23+30       7.1199      1.46  Q         |         |         |         V|
   23+35       7.1299      1.45  Q         |         |         |         V|
   23+40       7.1398      1.44  Q         |         |         |         V|
   23+45       7.1497      1.43  Q         |         |         |         V|
   23+50       7.1595      1.42  Q         |         |         |         V|
   23+55       7.1693      1.41  Q         |         |         |         V|
   24+ 0       7.1789      1.41  Q         |         |         |         V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/06/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area C
10-year Developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
38.57	1	0.61
Rainfall data for year 10		
38.57	6	1.24
Rainfall data for year 10		
38.57	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	38.57	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
3.86	0.100	69.0	69.0	4.49	0.124
34.71	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.208 (hours)
++
Watershed area = 38.57(Ac.)
Catchment Lag time = 0.166 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 50.0801
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 38.57(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 466.46 (CFS))	
1	3.973	18.532
2	30.607	124.236
3	60.634	140.065
4	73.829	61.548
5	81.493	35.748
6	86.639	24.002
7	90.205	16.637
8	92.803	12.116
9	94.773	9.192
10	96.270	6.981
11	97.365	5.109
12	98.059	3.238
13	98.612	2.579
14	99.213	2.803
15	99.664	2.102
16	100.000	1.570

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2885	0.2885
2	0.3551	0.0667
3	0.4011	0.0459
4	0.4372	0.0362
5	0.4675	0.0303
6	0.4938	0.0263
7	0.5171	0.0234
8	0.5383	0.0211
9	0.5576	0.0194
10	0.5755	0.0179
11	0.5922	0.0167
12	0.6079	0.0157
13	0.6276	0.0197
14	0.6464	0.0188
15	0.6644	0.0180
16	0.6817	0.0173
17	0.6984	0.0167
18	0.7144	0.0161
19	0.7300	0.0156
20	0.7451	0.0151
21	0.7597	0.0146
22	0.7739	0.0142
23	0.7877	0.0138
24	0.8012	0.0135
25	0.8143	0.0131
26	0.8271	0.0128

27	0.8397	0.0125
28	0.8519	0.0123
29	0.8639	0.0120
30	0.8756	0.0117
31	0.8871	0.0115
32	0.8984	0.0113
33	0.9095	0.0111
34	0.9204	0.0109
35	0.9311	0.0107
36	0.9416	0.0105
37	0.9519	0.0103
38	0.9620	0.0101
39	0.9720	0.0100
40	0.9818	0.0098
41	0.9915	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0197	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0642	0.0087
50	1.0728	0.0086
51	1.0812	0.0085
52	1.0896	0.0084
53	1.0979	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1379	0.0078
59	1.1456	0.0077
60	1.1533	0.0077
61	1.1609	0.0076
62	1.1684	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1978	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2191	0.0070
70	1.2261	0.0070
71	1.2330	0.0069
72	1.2399	0.0069
73	1.2465	0.0067
74	1.2532	0.0066
75	1.2598	0.0066
76	1.2663	0.0065

77	1.2728	0.0065
78	1.2792	0.0064
79	1.2856	0.0064
80	1.2919	0.0063
81	1.2982	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3409	0.0060
89	1.3468	0.0059
90	1.3527	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3872	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4095	0.0055
101	1.4149	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4366	0.0054
106	1.4419	0.0053
107	1.4472	0.0053
108	1.4524	0.0053
109	1.4577	0.0052
110	1.4629	0.0052
111	1.4681	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5085	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5281	0.0049
124	1.5329	0.0048
125	1.5377	0.0048
126	1.5425	0.0048

127	1.5473	0.0048
128	1.5520	0.0047
129	1.5567	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5708	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5983	0.0045
139	1.6028	0.0045
140	1.6073	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6382	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6640	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6850	0.0042
159	1.6891	0.0042
160	1.6933	0.0041
161	1.6974	0.0041
162	1.7015	0.0041
163	1.7056	0.0041
164	1.7097	0.0041
165	1.7137	0.0041
166	1.7178	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7378	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039
176	1.7574	0.0039

177	1.7613	0.0039
178	1.7652	0.0039
179	1.7691	0.0039
180	1.7729	0.0039
181	1.7768	0.0038
182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7920	0.0038
186	1.7958	0.0038
187	1.7995	0.0038
188	1.8033	0.0037
189	1.8070	0.0037
190	1.8107	0.0037
191	1.8144	0.0037
192	1.8181	0.0037
193	1.8218	0.0037
194	1.8255	0.0037
195	1.8292	0.0037
196	1.8328	0.0037
197	1.8365	0.0036
198	1.8401	0.0036
199	1.8437	0.0036
200	1.8473	0.0036
201	1.8509	0.0036
202	1.8545	0.0036
203	1.8581	0.0036
204	1.8617	0.0036
205	1.8652	0.0036
206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
209	1.8794	0.0035
210	1.8829	0.0035
211	1.8864	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
219	1.9140	0.0034
220	1.9174	0.0034
221	1.9208	0.0034
222	1.9241	0.0034
223	1.9275	0.0034
224	1.9309	0.0034
225	1.9343	0.0034
226	1.9376	0.0034

227	1.9409	0.0033
228	1.9443	0.0033
229	1.9476	0.0033
230	1.9509	0.0033
231	1.9542	0.0033
232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
235	1.9674	0.0033
236	1.9706	0.0033
237	1.9739	0.0033
238	1.9771	0.0032
239	1.9804	0.0032
240	1.9836	0.0032
241	1.9868	0.0032
242	1.9900	0.0032
243	1.9932	0.0032
244	1.9964	0.0032
245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
250	2.0155	0.0032
251	2.0186	0.0031
252	2.0217	0.0031
253	2.0249	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0435	0.0031
260	2.0465	0.0031
261	2.0496	0.0031
262	2.0527	0.0031
263	2.0557	0.0031
264	2.0588	0.0030
265	2.0618	0.0030
266	2.0649	0.0030
267	2.0679	0.0030
268	2.0709	0.0030
269	2.0739	0.0030
270	2.0769	0.0030
271	2.0799	0.0030
272	2.0829	0.0030
273	2.0859	0.0030
274	2.0889	0.0030
275	2.0918	0.0030
276	2.0948	0.0030

277	2.0978	0.0030
278	2.1007	0.0030
279	2.1037	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1125	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026
33	0.0032	0.0006	0.0026

34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033
83	0.0041	0.0007	0.0033

84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047
133	0.0059	0.0011	0.0048

134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0090
172	0.0113	0.0021	0.0092
173	0.0117	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0029	0.0131
182	0.0167	0.0031	0.0136
183	0.0180	0.0033	0.0147

184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128
186	0.0167	0.0031	0.0136
187	0.0194	0.0035	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0414
192	0.0667	0.0046	0.0621
193	0.2885	0.0046	0.2839
194	0.0362	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0123	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041
233	0.0049	0.0009	0.0040

234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025
283	0.0030	0.0005	0.0024

284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 51.01(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	15.0	30.0	45.0	60.0
0+ 5	0.0003	0.04	Q	|	|	|	|
0+10	0.0026	0.34	Q	|	|	|	|
0+15	0.0072	0.67	Q	|	|	|	|
0+20	0.0128	0.82	Q	|	|	|	|
0+25	0.0191	0.90	Q	|	|	|	|
0+30	0.0257	0.96	Q	|	|	|	|
0+35	0.0326	1.00	Q	|	|	|	|
0+40	0.0397	1.04	Q	|	|	|	|
0+45	0.0470	1.06	Q	|	|	|	|
0+50	0.0545	1.08	Q	|	|	|	|
0+55	0.0620	1.10	Q	|	|	|	|
1+ 0	0.0697	1.11	Q	|	|	|	|
1+ 5	0.0774	1.12	Q	|	|	|	|
1+10	0.0851	1.13	Q	|	|	|	|
1+15	0.0930	1.14	Q	|	|	|	|
1+20	0.1009	1.14	Q	|	|	|	|
1+25	0.1088	1.15	Q	|	|	|	|
1+30	0.1167	1.15	Q	|	|	|	|
1+35	0.1247	1.16	Q	|	|	|	|
1+40	0.1327	1.16	Q	|	|	|	|
1+45	0.1407	1.16	Q	|	|	|	|
1+50	0.1487	1.17	QV	|	|	|	|
1+55	0.1568	1.17	QV	|	|	|	|
2+ 0	0.1649	1.18	QV	|	|	|	|
2+ 5	0.1730	1.18	QV	|	|	|	|
2+10	0.1812	1.19	QV	|	|	|	|
2+15	0.1894	1.19	QV	|	|	|	|
2+20	0.1976	1.19	QV	|	|	|	|
2+25	0.2059	1.20	QV	|	|	|	|
2+30	0.2142	1.20	QV	|	|	|	|

2+35	0.2225	1.21	QV	|	|	|	|
2+40	0.2308	1.21	QV	|	|	|	|
2+45	0.2392	1.22	QV	|	|	|	|
2+50	0.2476	1.22	QV	|	|	|	|
2+55	0.2560	1.23	QV	|	|	|	|
3+ 0	0.2645	1.23	QV	|	|	|	|
3+ 5	0.2730	1.23	QV	|	|	|	|
3+10	0.2815	1.24	QV	|	|	|	|
3+15	0.2901	1.24	Q V	|	|	|	|
3+20	0.2987	1.25	Q V	|	|	|	|
3+25	0.3074	1.25	Q V	|	|	|	|
3+30	0.3160	1.26	Q V	|	|	|	|
3+35	0.3247	1.26	Q V	|	|	|	|
3+40	0.3335	1.27	Q V	|	|	|	|
3+45	0.3422	1.27	Q V	|	|	|	|
3+50	0.3511	1.28	Q V	|	|	|	|
3+55	0.3599	1.28	Q V	|	|	|	|
4+ 0	0.3688	1.29	Q V	|	|	|	|
4+ 5	0.3777	1.30	Q V	|	|	|	|
4+10	0.3867	1.30	Q V	|	|	|	|
4+15	0.3957	1.31	Q V	|	|	|	|
4+20	0.4047	1.31	Q V	|	|	|	|
4+25	0.4138	1.32	Q V	|	|	|	|
4+30	0.4229	1.32	Q V	|	|	|	|
4+35	0.4320	1.33	Q V	|	|	|	|
4+40	0.4412	1.33	Q V	|	|	|	|
4+45	0.4505	1.34	Q V	|	|	|	|
4+50	0.4597	1.35	Q V	|	|	|	|
4+55	0.4690	1.35	Q V	|	|	|	|
5+ 0	0.4784	1.36	Q V	|	|	|	|
5+ 5	0.4878	1.36	Q V	|	|	|	|
5+10	0.4972	1.37	Q V	|	|	|	|
5+15	0.5067	1.38	Q V	|	|	|	|
5+20	0.5162	1.38	Q V	|	|	|	|
5+25	0.5258	1.39	Q V	|	|	|	|
5+30	0.5354	1.40	Q V	|	|	|	|
5+35	0.5451	1.40	Q V	|	|	|	|
5+40	0.5548	1.41	Q V	|	|	|	|
5+45	0.5646	1.42	Q V	|	|	|	|
5+50	0.5744	1.42	Q V	|	|	|	|
5+55	0.5842	1.43	Q V	|	|	|	|
6+ 0	0.5941	1.44	Q V	|	|	|	|
6+ 5	0.6040	1.44	Q V	|	|	|	|
6+10	0.6140	1.45	Q V	|	|	|	|
6+15	0.6241	1.46	Q V	|	|	|	|
6+20	0.6342	1.47	Q V	|	|	|	|
6+25	0.6443	1.47	Q V	|	|	|	|
6+30	0.6545	1.48	Q V	|	|	|	|
6+35	0.6648	1.49	Q V	|	|	|	|
6+40	0.6751	1.50	Q V	|	|	|	|

6+45	0.6855	1.50	|Q V	|	|	|	|
6+50	0.6959	1.51	|Q V	|	|	|	|
6+55	0.7064	1.52	|Q V	|	|	|	|
7+ 0	0.7169	1.53	|Q V	|	|	|	|
7+ 5	0.7275	1.54	|Q V	|	|	|	|
7+10	0.7381	1.55	|Q V	|	|	|	|
7+15	0.7489	1.56	|Q V	|	|	|	|
7+20	0.7596	1.56	|Q V	|	|	|	|
7+25	0.7705	1.57	|Q V	|	|	|	|
7+30	0.7814	1.58	|Q V	|	|	|	|
7+35	0.7923	1.59	|Q V	|	|	|	|
7+40	0.8033	1.60	|Q V	|	|	|	|
7+45	0.8144	1.61	|Q V	|	|	|	|
7+50	0.8256	1.62	|Q V	|	|	|	|
7+55	0.8368	1.63	|Q V	|	|	|	|
8+ 0	0.8481	1.64	|Q V	|	|	|	|
8+ 5	0.8594	1.65	|Q V	|	|	|	|
8+10	0.8709	1.66	|Q V	|	|	|	|
8+15	0.8824	1.67	|Q V	|	|	|	|
8+20	0.8939	1.68	|Q V	|	|	|	|
8+25	0.9056	1.69	|Q V	|	|	|	|
8+30	0.9173	1.70	|Q V	|	|	|	|
8+35	0.9291	1.71	|Q V	|	|	|	|
8+40	0.9410	1.73	|Q V	|	|	|	|
8+45	0.9530	1.74	|Q V	|	|	|	|
8+50	0.9650	1.75	|Q V	|	|	|	|
8+55	0.9771	1.76	|Q V	|	|	|	|
9+ 0	0.9893	1.77	|Q V	|	|	|	|
9+ 5	1.0016	1.78	|Q V	|	|	|	|
9+10	1.0140	1.80	|Q V	|	|	|	|
9+15	1.0265	1.81	|Q V	|	|	|	|
9+20	1.0390	1.82	|Q V	|	|	|	|
9+25	1.0517	1.84	|Q V	|	|	|	|
9+30	1.0644	1.85	|Q V	|	|	|	|
9+35	1.0773	1.86	|Q V	|	|	|	|
9+40	1.0902	1.88	|Q V	|	|	|	|
9+45	1.1033	1.89	|Q V	|	|	|	|
9+50	1.1164	1.91	|Q V	|	|	|	|
9+55	1.1297	1.92	|Q V	|	|	|	|
10+ 0	1.1430	1.94	|Q V	|	|	|	|
10+ 5	1.1565	1.95	|Q V	|	|	|	|
10+10	1.1700	1.97	|Q V	|	|	|	|
10+15	1.1837	1.99	|Q V	|	|	|	|
10+20	1.1975	2.00	|Q V	|	|	|	|
10+25	1.2115	2.02	|Q V	|	|	|	|
10+30	1.2255	2.04	|Q V	|	|	|	|
10+35	1.2397	2.06	|Q V	|	|	|	|
10+40	1.2540	2.08	|Q V	|	|	|	|
10+45	1.2684	2.09	|Q V	|	|	|	|
10+50	1.2829	2.11	|Q V	|	|	|	|

10+55	1.2976	2.13	Q V				
11+ 0	1.3125	2.15	Q V				
11+ 5	1.3275	2.18	Q V				
11+10	1.3426	2.20	Q V				
11+15	1.3579	2.22	Q V				
11+20	1.3733	2.24	Q V				
11+25	1.3889	2.26	Q V				
11+30	1.4047	2.29	Q V				
11+35	1.4206	2.31	Q V				
11+40	1.4367	2.34	Q V				
11+45	1.4530	2.36	Q V				
11+50	1.4694	2.39	Q V				
11+55	1.4861	2.42	Q V				
12+ 0	1.5030	2.45	Q V				
12+ 5	1.5200	2.48	Q V				
12+10	1.5374	2.52	Q V				
12+15	1.5550	2.56	Q V				
12+20	1.5730	2.60	Q V				
12+25	1.5912	2.64	Q V				
12+30	1.6096	2.68	Q V				
12+35	1.6283	2.71	Q V				
12+40	1.6473	2.75	Q V				
12+45	1.6665	2.79	Q V				
12+50	1.6860	2.83	Q V				
12+55	1.7058	2.88	Q V				
13+ 0	1.7259	2.92	Q V				
13+ 5	1.7464	2.97	Q V				
13+10	1.7671	3.01	Q V				
13+15	1.7882	3.06	Q V				
13+20	1.8097	3.12	Q V				
13+25	1.8315	3.17	Q V				
13+30	1.8537	3.23	Q V				
13+35	1.8764	3.29	Q V				
13+40	1.8994	3.35	Q V				
13+45	1.9229	3.41	Q V				
13+50	1.9469	3.48	Q V				
13+55	1.9714	3.56	Q V				
14+ 0	1.9965	3.63	Q V				
14+ 5	2.0221	3.72	Q V				
14+10	2.0483	3.81	Q V				
14+15	2.0752	3.90	Q V				
14+20	2.1028	4.01	Q V				
14+25	2.1311	4.11	Q V				
14+30	2.1602	4.23	Q V				
14+35	2.1902	4.35	Q V				
14+40	2.2211	4.49	Q V				
14+45	2.2530	4.63	Q V				
14+50	2.2860	4.79	Q V				
14+55	2.3202	4.97	Q V				
15+ 0	2.3558	5.16	Q V				

15+ 5	2.3928	5.37	Q	V			
15+10	2.4315	5.62	Q	V			
15+15	2.4720	5.89	Q	V			
15+20	2.5147	6.20	Q	V			
15+25	2.5594	6.48	Q	V			
15+30	2.6035	6.40	Q	V			
15+35	2.6469	6.31	Q	V			
15+40	2.6927	6.65	Q	V			
15+45	2.7425	7.23	Q	V			
15+50	2.7991	8.21	Q	V			
15+55	2.8665	9.79	Q	V			
16+ 0	2.9565	13.07	Q	V			
16+ 5	3.1110	22.43	Q	V			
16+10	3.4517	49.48	V	Q			
16+15	3.8030	51.01	V	Q			
16+20	4.0024	28.95	Q	V			
16+25	4.1398	19.94	Q	V			
16+30	4.2473	15.61	Q	V			
16+35	4.3363	12.92	Q	V			
16+40	4.4114	10.91	Q	V			
16+45	4.4762	9.41	Q	V			
16+50	4.5327	8.20	Q	V			
16+55	4.5820	7.17	Q	V			
17+ 0	4.6251	6.26	Q	V			
17+ 5	4.6645	5.72	Q	V			
17+10	4.7019	5.43	Q	V			
17+15	4.7359	4.93	Q	V			
17+20	4.7668	4.49	Q	V			
17+25	4.7935	3.87	Q	V			
17+30	4.8188	3.67	Q	V			
17+35	4.8429	3.51	Q	V			
17+40	4.8661	3.37	Q	V			
17+45	4.8884	3.24	Q	V			
17+50	4.9099	3.12	Q	V			
17+55	4.9307	3.02	Q	V			
18+ 0	4.9508	2.92	Q	V			
18+ 5	4.9703	2.83	Q	V			
18+10	4.9892	2.74	Q	V			
18+15	5.0075	2.65	Q	V			
18+20	5.0252	2.58	Q	V			
18+25	5.0425	2.51	Q	V			
18+30	5.0594	2.45	Q	V			
18+35	5.0758	2.39	Q	V			
18+40	5.0919	2.34	Q	V			
18+45	5.1076	2.28	Q	V			
18+50	5.1230	2.24	Q	V			
18+55	5.1381	2.19	Q	V			
19+ 0	5.1529	2.15	Q	V			
19+ 5	5.1675	2.11	Q	V			
19+10	5.1817	2.07	Q	V			

```
19+15       5.1957      2.03  |Q        |         |         |    V    |
19+20       5.2095      2.00  |Q        |         |         |    V    |
19+25       5.2230      1.97  |Q        |         |         |     V   |
19+30       5.2363      1.93  |Q        |         |         |     V   |
19+35       5.2494      1.90  |Q        |         |         |     V   |
19+40       5.2623      1.87  |Q        |         |         |     V   |
19+45       5.2750      1.85  |Q        |         |         |     V   |
19+50       5.2876      1.82  |Q        |         |         |     V   |
19+55       5.2999      1.79  |Q        |         |         |     V   |
20+ 0       5.3121      1.77  |Q        |         |         |     V   |
20+ 5       5.3241      1.74  |Q        |         |         |     V   |
20+10       5.3359      1.72  |Q        |         |         |     V   |
20+15       5.3476      1.70  |Q        |         |         |     V   |
20+20       5.3592      1.68  |Q        |         |         |      V  |
20+25       5.3706      1.66  |Q        |         |         |      V  |
20+30       5.3818      1.63  |Q        |         |         |      V  |
20+35       5.3930      1.62  |Q        |         |         |      V  |
20+40       5.4040      1.60  |Q        |         |         |      V  |
20+45       5.4148      1.58  |Q        |         |         |      V  |
20+50       5.4256      1.56  |Q        |         |         |      V  |
20+55       5.4362      1.54  |Q        |         |         |      V  |
21+ 0       5.4467      1.53  |Q        |         |         |      V  |
21+ 5       5.4571      1.51  |Q        |         |         |      V  |
21+10       5.4674      1.49  Q        |         |         |      V  |
21+15       5.4776      1.48  Q        |         |         |      V  |
21+20       5.4876      1.46  Q        |         |         |      V  |
21+25       5.4976      1.45  Q        |         |         |      V  |
21+30       5.5075      1.43  Q        |         |         |       V |
21+35       5.5173      1.42  Q        |         |         |       V |
21+40       5.5269      1.41  Q        |         |         |       V |
21+45       5.5365      1.39  Q        |         |         |       V |
21+50       5.5460      1.38  Q        |         |         |       V |
21+55       5.5555      1.37  Q        |         |         |       V |
22+ 0       5.5648      1.36  Q        |         |         |       V |
22+ 5       5.5740      1.34  Q        |         |         |       V |
22+10       5.5832      1.33  Q        |         |         |       V |
22+15       5.5923      1.32  Q        |         |         |       V |
22+20       5.6013      1.31  Q        |         |         |       V |
22+25       5.6103      1.30  Q        |         |         |       V |
22+30       5.6191      1.29  Q        |         |         |       V |
22+35       5.6279      1.28  Q        |         |         |       V |
22+40       5.6366      1.27  Q        |         |         |       V |
22+45       5.6453      1.26  Q        |         |         |       V |
22+50       5.6539      1.25  Q        |         |         |        V|
22+55       5.6624      1.24  Q        |         |         |        V|
23+ 0       5.6709      1.23  Q        |         |         |        V|
23+ 5       5.6792      1.22  Q        |         |         |        V|
23+10       5.6876      1.21  Q        |         |         |        V|
23+15       5.6958      1.20  Q        |         |         |        V|
23+20       5.7040      1.19  Q        |         |         |        V|
```

```
   23+25       5.7122      1.18  Q         |         |         |         V|
   23+30       5.7203      1.17  Q         |         |         |         V|
   23+35       5.7283      1.17  Q         |         |         |         V|
   23+40       5.7363      1.16  Q         |         |         |         V|
   23+45       5.7442      1.15  Q         |         |         |         V|
   23+50       5.7521      1.14  Q         |         |         |         V|
   23+55       5.7599      1.13  Q         |         |         |         V|
   24+ 0       5.7677      1.13  Q         |         |         |         V|
-------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/06/22

++

San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area D
10-year Developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
37.56	1	0.61
Rainfall data for year 10		
37.56	6	1.24
Rainfall data for year 10		
37.56	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	37.56	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
3.76	0.100	69.0	69.0	4.49	0.124
33.80	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.184 (hours)
++
Watershed area = 37.56(Ac.)
Catchment Lag time = 0.147 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 56.6123
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 37.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 454.24 (CFS))	
1	4.973	22.590
2	37.958	149.829
3	65.824	126.579
4	77.737	54.117
5	84.689	31.575
6	89.324	21.055
7	92.440	14.153
8	94.734	10.424
9	96.405	7.589
10	97.562	5.257
11	98.253	3.139
12	98.912	2.994
13	99.526	2.788
14	100.000	2.152

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2885	0.2885
2	0.3551	0.0667
3	0.4011	0.0459
4	0.4372	0.0362
5	0.4675	0.0303
6	0.4938	0.0263
7	0.5172	0.0234
8	0.5383	0.0211
9	0.5577	0.0194
10	0.5756	0.0179
11	0.5923	0.0167
12	0.6079	0.0157
13	0.6276	0.0197
14	0.6464	0.0188
15	0.6644	0.0180
16	0.6817	0.0173
17	0.6984	0.0167
18	0.7145	0.0161
19	0.7300	0.0156
20	0.7451	0.0151
21	0.7597	0.0146
22	0.7739	0.0142
23	0.7877	0.0138
24	0.8012	0.0135
25	0.8143	0.0131
26	0.8271	0.0128
27	0.8397	0.0125
28	0.8519	0.0122

29	0.8639	0.0120
30	0.8756	0.0117
31	0.8872	0.0115
32	0.8984	0.0113
33	0.9095	0.0111
34	0.9204	0.0109
35	0.9311	0.0107
36	0.9416	0.0105
37	0.9519	0.0103
38	0.9620	0.0101
39	0.9720	0.0100
40	0.9818	0.0098
41	0.9915	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0197	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0642	0.0087
50	1.0728	0.0086
51	1.0812	0.0085
52	1.0896	0.0084
53	1.0979	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1379	0.0078
59	1.1456	0.0077
60	1.1533	0.0077
61	1.1609	0.0076
62	1.1684	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1978	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2191	0.0070
70	1.2261	0.0070
71	1.2330	0.0069
72	1.2399	0.0069
73	1.2465	0.0067
74	1.2532	0.0066
75	1.2598	0.0066
76	1.2663	0.0065
77	1.2728	0.0065
78	1.2792	0.0064

79	1.2856	0.0064
80	1.2919	0.0063
81	1.2982	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3409	0.0060
89	1.3468	0.0059
90	1.3527	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3872	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4095	0.0055
101	1.4150	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4366	0.0054
106	1.4419	0.0053
107	1.4472	0.0053
108	1.4524	0.0053
109	1.4577	0.0052
110	1.4629	0.0052
111	1.4681	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5085	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5281	0.0049
124	1.5329	0.0048
125	1.5377	0.0048
126	1.5425	0.0048
127	1.5473	0.0048
128	1.5520	0.0047

129	1.5568	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5708	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5983	0.0045
139	1.6028	0.0045
140	1.6073	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6382	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6640	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6850	0.0042
159	1.6891	0.0042
160	1.6933	0.0041
161	1.6974	0.0041
162	1.7015	0.0041
163	1.7056	0.0041
164	1.7097	0.0041
165	1.7137	0.0041
166	1.7178	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7378	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039
176	1.7574	0.0039
177	1.7613	0.0039
178	1.7652	0.0039

179	1.7691	0.0039
180	1.7729	0.0039
181	1.7768	0.0038
182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7920	0.0038
186	1.7958	0.0038
187	1.7995	0.0038
188	1.8033	0.0037
189	1.8070	0.0037
190	1.8107	0.0037
191	1.8144	0.0037
192	1.8181	0.0037
193	1.8218	0.0037
194	1.8255	0.0037
195	1.8292	0.0037
196	1.8328	0.0037
197	1.8365	0.0036
198	1.8401	0.0036
199	1.8437	0.0036
200	1.8473	0.0036
201	1.8509	0.0036
202	1.8545	0.0036
203	1.8581	0.0036
204	1.8617	0.0036
205	1.8652	0.0036
206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
209	1.8794	0.0035
210	1.8829	0.0035
211	1.8864	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
219	1.9140	0.0034
220	1.9174	0.0034
221	1.9208	0.0034
222	1.9242	0.0034
223	1.9275	0.0034
224	1.9309	0.0034
225	1.9343	0.0034
226	1.9376	0.0034
227	1.9410	0.0033
228	1.9443	0.0033

229	1.9476	0.0033
230	1.9509	0.0033
231	1.9542	0.0033
232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
235	1.9674	0.0033
236	1.9706	0.0033
237	1.9739	0.0033
238	1.9771	0.0032
239	1.9804	0.0032
240	1.9836	0.0032
241	1.9868	0.0032
242	1.9900	0.0032
243	1.9932	0.0032
244	1.9964	0.0032
245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
250	2.0155	0.0032
251	2.0186	0.0031
252	2.0217	0.0031
253	2.0249	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0435	0.0031
260	2.0465	0.0031
261	2.0496	0.0031
262	2.0527	0.0031
263	2.0557	0.0031
264	2.0588	0.0030
265	2.0618	0.0030
266	2.0649	0.0030
267	2.0679	0.0030
268	2.0709	0.0030
269	2.0739	0.0030
270	2.0769	0.0030
271	2.0799	0.0030
272	2.0829	0.0030
273	2.0859	0.0030
274	2.0889	0.0030
275	2.0918	0.0030
276	2.0948	0.0030
277	2.0978	0.0030
278	2.1007	0.0030

279	2.1037	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1125	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026
33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027

36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033
83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034

86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047
133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049

136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0090
172	0.0113	0.0021	0.0092
173	0.0117	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0029	0.0131
182	0.0167	0.0031	0.0136
183	0.0180	0.0033	0.0147
184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128

186	0.0167	0.0031	0.0136
187	0.0194	0.0036	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0414
192	0.0667	0.0046	0.0621
193	0.2885	0.0046	0.2839
194	0.0362	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0122	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041
233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039

236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025
283	0.0030	0.0005	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024

286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 55.36(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

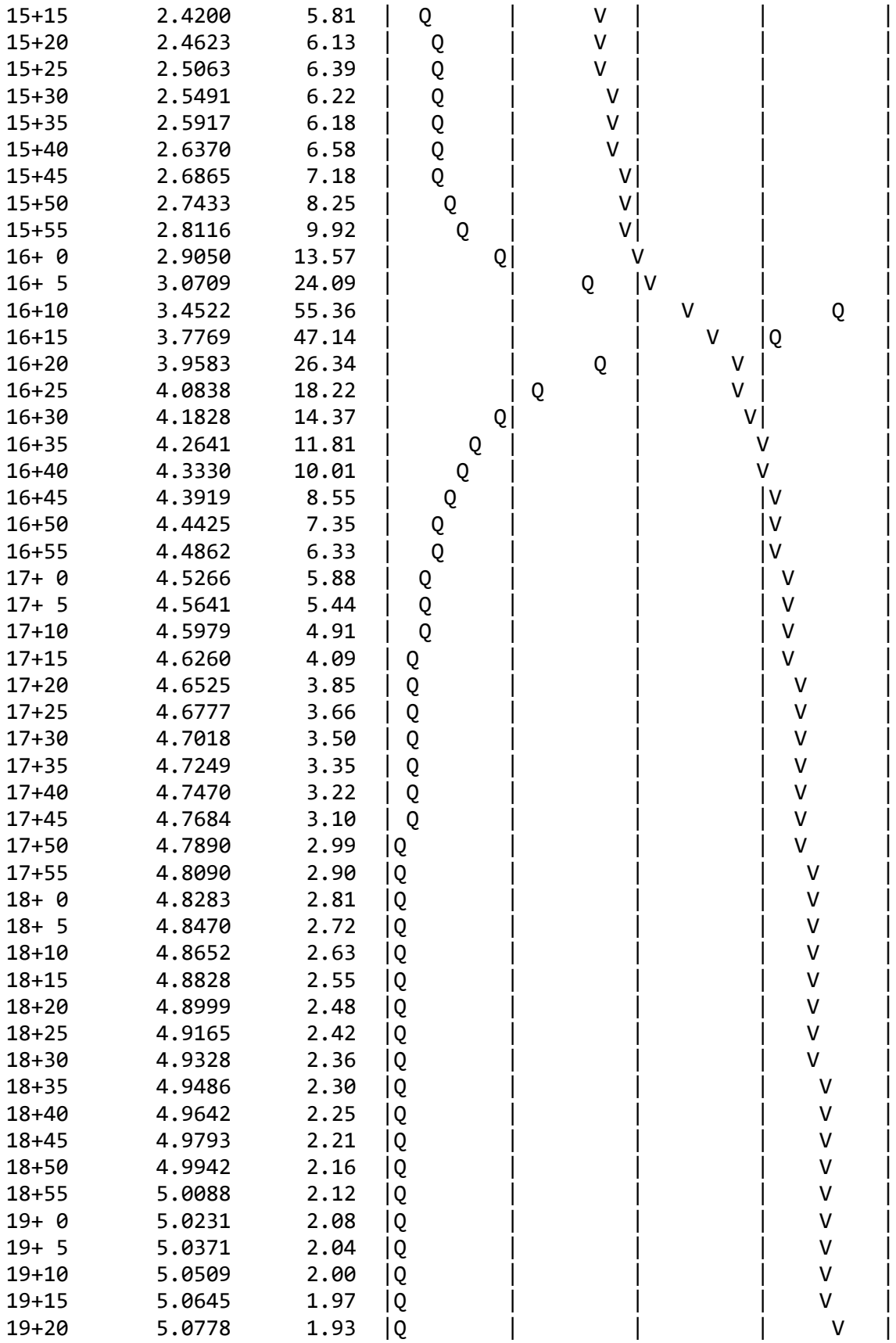
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	15.0	30.0	45.0	60.0
0+ 5	0.0004	0.05	Q				
0+10	0.0032	0.41	Q				
0+15	0.0080	0.71	Q				
0+20	0.0138	0.84	Q				
0+25	0.0201	0.91	Q				
0+30	0.0267	0.97	Q				
0+35	0.0337	1.00	Q				
0+40	0.0408	1.03	Q				
0+45	0.0480	1.05	Q				
0+50	0.0554	1.07	Q				
0+55	0.0628	1.08	Q				
1+ 0	0.0703	1.09	Q				
1+ 5	0.0779	1.10	Q				
1+10	0.0855	1.11	Q				
1+15	0.0931	1.11	Q				
1+20	0.1008	1.12	Q				
1+25	0.1085	1.12	Q				
1+30	0.1163	1.12	Q				
1+35	0.1240	1.13	Q				
1+40	0.1318	1.13	Q				
1+45	0.1397	1.14	Q				
1+50	0.1475	1.14	QV				
1+55	0.1554	1.14	QV				
2+ 0	0.1633	1.15	QV				
2+ 5	0.1712	1.15	QV				
2+10	0.1792	1.16	QV				
2+15	0.1872	1.16	QV				
2+20	0.1952	1.16	QV				
2+25	0.2032	1.17	QV				
2+30	0.2113	1.17	QV				
2+35	0.2194	1.18	QV				
2+40	0.2275	1.18	QV				

2+45	0.2357	1.19	QV	|	|	|	|
2+50	0.2439	1.19	QV	|	|	|	|
2+55	0.2521	1.19	QV	|	|	|	|
3+ 0	0.2604	1.20	QV	|	|	|	|
3+ 5	0.2687	1.20	QV	|	|	|	|
3+10	0.2770	1.21	QV	|	|	|	|
3+15	0.2854	1.21	Q V	|	|	|	|
3+20	0.2937	1.22	Q V	|	|	|	|
3+25	0.3022	1.22	Q V	|	|	|	|
3+30	0.3106	1.23	Q V	|	|	|	|
3+35	0.3191	1.23	Q V	|	|	|	|
3+40	0.3276	1.24	Q V	|	|	|	|
3+45	0.3362	1.24	Q V	|	|	|	|
3+50	0.3448	1.25	Q V	|	|	|	|
3+55	0.3534	1.25	Q V	|	|	|	|
4+ 0	0.3621	1.26	Q V	|	|	|	|
4+ 5	0.3708	1.26	Q V	|	|	|	|
4+10	0.3795	1.27	Q V	|	|	|	|
4+15	0.3883	1.27	Q V	|	|	|	|
4+20	0.3971	1.28	Q V	|	|	|	|
4+25	0.4059	1.28	Q V	|	|	|	|
4+30	0.4148	1.29	Q V	|	|	|	|
4+35	0.4237	1.30	Q V	|	|	|	|
4+40	0.4327	1.30	Q V	|	|	|	|
4+45	0.4417	1.31	Q V	|	|	|	|
4+50	0.4508	1.31	Q V	|	|	|	|
4+55	0.4598	1.32	Q V	|	|	|	|
5+ 0	0.4690	1.32	Q V	|	|	|	|
5+ 5	0.4781	1.33	Q V	|	|	|	|
5+10	0.4873	1.34	Q V	|	|	|	|
5+15	0.4966	1.34	Q V	|	|	|	|
5+20	0.5059	1.35	Q V	|	|	|	|
5+25	0.5152	1.36	Q V	|	|	|	|
5+30	0.5246	1.36	Q V	|	|	|	|
5+35	0.5340	1.37	Q V	|	|	|	|
5+40	0.5435	1.37	Q V	|	|	|	|
5+45	0.5530	1.38	Q V	|	|	|	|
5+50	0.5626	1.39	Q V	|	|	|	|
5+55	0.5722	1.39	Q V	|	|	|	|
6+ 0	0.5818	1.40	Q V	|	|	|	|
6+ 5	0.5915	1.41	Q V	|	|	|	|
6+10	0.6013	1.42	Q V	|	|	|	|
6+15	0.6111	1.42	Q V	|	|	|	|
6+20	0.6209	1.43	Q V	|	|	|	|
6+25	0.6308	1.44	Q V	|	|	|	|
6+30	0.6408	1.45	Q V	|	|	|	|
6+35	0.6508	1.45	Q V	|	|	|	|
6+40	0.6608	1.46	Q V	|	|	|	|
6+45	0.6710	1.47	Q V	|	|	|	|
6+50	0.6811	1.48	Q V	|	|	|	|

6+55	0.6913	1.48	Q V	|	|	|	|
7+ 0	0.7016	1.49	Q V	|	|	|	|
7+ 5	0.7119	1.50	|Q V	|	|	|	|
7+10	0.7223	1.51	|Q V	|	|	|	|
7+15	0.7328	1.52	|Q V	|	|	|	|
7+20	0.7433	1.53	|Q V	|	|	|	|
7+25	0.7539	1.53	|Q V	|	|	|	|
7+30	0.7645	1.54	|Q V	|	|	|	|
7+35	0.7752	1.55	|Q V	|	|	|	|
7+40	0.7859	1.56	|Q V	|	|	|	|
7+45	0.7968	1.57	|Q V	|	|	|	|
7+50	0.8076	1.58	|Q V	|	|	|	|
7+55	0.8186	1.59	|Q V	|	|	|	|
8+ 0	0.8296	1.60	|Q V	|	|	|	|
8+ 5	0.8407	1.61	|Q V	|	|	|	|
8+10	0.8518	1.62	|Q V	|	|	|	|
8+15	0.8631	1.63	|Q V	|	|	|	|
8+20	0.8744	1.64	|Q V	|	|	|	|
8+25	0.8857	1.65	|Q V	|	|	|	|
8+30	0.8972	1.66	|Q V	|	|	|	|
8+35	0.9087	1.67	|Q V	|	|	|	|
8+40	0.9203	1.68	|Q V	|	|	|	|
8+45	0.9320	1.69	|Q V	|	|	|	|
8+50	0.9437	1.71	|Q V	|	|	|	|
8+55	0.9555	1.72	|Q V	|	|	|	|
9+ 0	0.9675	1.73	|Q V	|	|	|	|
9+ 5	0.9795	1.74	|Q V	|	|	|	|
9+10	0.9915	1.75	|Q V	|	|	|	|
9+15	1.0037	1.77	|Q V	|	|	|	|
9+20	1.0160	1.78	|Q V	|	|	|	|
9+25	1.0283	1.79	|Q V	|	|	|	|
9+30	1.0408	1.81	|Q V	|	|	|	|
9+35	1.0533	1.82	|Q V	|	|	|	|
9+40	1.0659	1.83	|Q V	|	|	|	|
9+45	1.0787	1.85	|Q V	|	|	|	|
9+50	1.0915	1.86	|Q V	|	|	|	|
9+55	1.1044	1.88	|Q V	|	|	|	|
10+ 0	1.1175	1.89	|Q V	|	|	|	|
10+ 5	1.1306	1.91	|Q V	|	|	|	|
10+10	1.1439	1.92	|Q V	|	|	|	|
10+15	1.1572	1.94	|Q V	|	|	|	|
10+20	1.1707	1.96	|Q V	|	|	|	|
10+25	1.1843	1.97	|Q V	|	|	|	|
10+30	1.1980	1.99	|Q V	|	|	|	|
10+35	1.2119	2.01	|Q V	|	|	|	|
10+40	1.2258	2.03	|Q V	|	|	|	|
10+45	1.2399	2.05	|Q V	|	|	|	|
10+50	1.2541	2.07	|Q V	|	|	|	|
10+55	1.2685	2.08	|Q V	|	|	|	|
11+ 0	1.2830	2.10	|Q V|	|	|	|	|

11+ 5	1.2976	2.12	|Q V|	|	|	|
11+10	1.3124	2.15	|Q V|	|	|	|
11+15	1.3273	2.17	|Q V|	|	|	|
11+20	1.3424	2.19	|Q V|	|	|	|
11+25	1.3577	2.21	|Q V|	|	|	|
11+30	1.3731	2.24	|Q V|	|	|	|
11+35	1.3886	2.26	|Q V|	|	|	|
11+40	1.4044	2.29	|Q V|	|	|	|
11+45	1.4203	2.31	|Q V	|	|	|
11+50	1.4364	2.34	|Q V	|	|	|
11+55	1.4526	2.36	|Q V	|	|	|
12+ 0	1.4691	2.39	|Q V	|	|	|
12+ 5	1.4858	2.42	|Q V	|	|	|
12+10	1.5028	2.47	|Q V	|	|	|
12+15	1.5201	2.51	|Q V	|	|	|
12+20	1.5376	2.55	|Q V	|	|	|
12+25	1.5554	2.58	|Q |V	|	|	|
12+30	1.5735	2.62	|Q |V	|	|	|
12+35	1.5918	2.66	|Q |V	|	|	|
12+40	1.6103	2.69	|Q |V	|	|	|
12+45	1.6291	2.73	|Q |V	|	|	|
12+50	1.6482	2.77	|Q |V	|	|	|
12+55	1.6676	2.81	|Q |V	|	|	|
13+ 0	1.6873	2.86	|Q |V	|	|	|
13+ 5	1.7073	2.90	|Q | V	|	|	|
13+10	1.7276	2.95	|Q | V	|	|	|
13+15	1.7483	3.00	|Q | V	|	|	|
13+20	1.7693	3.05	| Q | V	|	|	|
13+25	1.7907	3.10	| Q | V	|	|	|
13+30	1.8124	3.16	| Q | V	|	|	|
13+35	1.8346	3.22	| Q | V	|	|	|
13+40	1.8572	3.28	| Q | V	|	|	|
13+45	1.8802	3.34	| Q | V	|	|	|
13+50	1.9037	3.41	| Q | V	|	|	|
13+55	1.9277	3.49	| Q | V	|	|	|
14+ 0	1.9523	3.56	| Q | V	|	|	|
14+ 5	1.9774	3.64	| Q | V	|	|	|
14+10	2.0031	3.74	| Q | V	|	|	|
14+15	2.0295	3.83	| Q | V	|	|	|
14+20	2.0566	3.93	| Q | V	|	|	|
14+25	2.0844	4.04	| Q | V	|	|	|
14+30	2.1130	4.16	| Q | V	|	|	|
14+35	2.1424	4.27	| Q | V	|	|	|
14+40	2.1728	4.41	| Q | V	|	|	|
14+45	2.2042	4.55	| Q | V	|	|	|
14+50	2.2367	4.72	| Q | V	|	|	|
14+55	2.2703	4.89	| Q | V	|	|	|
15+ 0	2.3054	5.09	| Q | V	|	|	|
15+ 5	2.3418	5.29	| Q | V	|	|	|
15+10	2.3800	5.54	| Q | V	|	|	|



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19+25       5.0909      1.90  |Q        |         |         |     V   |
19+30       5.1038      1.87  |Q        |         |         |     V   |
19+35       5.1165      1.84  |Q        |         |         |     V   |
19+40       5.1290      1.81  |Q        |         |         |     V   |
19+45       5.1413      1.79  |Q        |         |         |     V   |
19+50       5.1534      1.76  |Q        |         |         |     V   |
19+55       5.1654      1.74  |Q        |         |         |     V   |
20+ 0       5.1772      1.71  |Q        |         |         |     V   |
20+ 5       5.1888      1.69  |Q        |         |         |     V   |
20+10       5.2003      1.67  |Q        |         |         |     V   |
20+15       5.2116      1.65  |Q        |         |         |     V   |
20+20       5.2228      1.62  |Q        |         |         |      V  |
20+25       5.2338      1.60  |Q        |         |         |      V  |
20+30       5.2448      1.58  |Q        |         |         |      V  |
20+35       5.2555      1.57  |Q        |         |         |      V  |
20+40       5.2662      1.55  |Q        |         |         |      V  |
20+45       5.2767      1.53  |Q        |         |         |      V  |
20+50       5.2872      1.51  |Q        |         |         |      V  |
20+55       5.2975      1.50  Q         |         |         |      V  |
21+ 0       5.3076      1.48  Q         |         |         |      V  |
21+ 5       5.3177      1.46  Q         |         |         |      V  |
21+10       5.3277      1.45  Q         |         |         |      V  |
21+15       5.3376      1.43  Q         |         |         |      V  |
21+20       5.3474      1.42  Q         |         |         |      V  |
21+25       5.3570      1.41  Q         |         |         |       V |
21+30       5.3666      1.39  Q         |         |         |       V |
21+35       5.3761      1.38  Q         |         |         |       V |
21+40       5.3855      1.36  Q         |         |         |       V |
21+45       5.3948      1.35  Q         |         |         |       V |
21+50       5.4040      1.34  Q         |         |         |       V |
21+55       5.4132      1.33  Q         |         |         |       V |
22+ 0       5.4222      1.32  Q         |         |         |       V |
22+ 5       5.4312      1.30  Q         |         |         |       V |
22+10       5.4401      1.29  Q         |         |         |       V |
22+15       5.4490      1.28  Q         |         |         |       V |
22+20       5.4577      1.27  Q         |         |         |       V |
22+25       5.4664      1.26  Q         |         |         |       V |
22+30       5.4750      1.25  Q         |         |         |       V |
22+35       5.4835      1.24  Q         |         |         |       V |
22+40       5.4920      1.23  Q         |         |         |       V |
22+45       5.5004      1.22  Q         |         |         |        V|
22+50       5.5087      1.21  Q         |         |         |        V|
22+55       5.5170      1.20  Q         |         |         |        V|
23+ 0       5.5252      1.19  Q         |         |         |        V|
23+ 5       5.5334      1.18  Q         |         |         |        V|
23+10       5.5415      1.17  Q         |         |         |        V|
23+15       5.5495      1.17  Q         |         |         |        V|
23+20       5.5575      1.16  Q         |         |         |        V|
23+25       5.5654      1.15  Q         |         |         |        V|
23+30       5.5732      1.14  Q         |         |         |        V|
```

23+35	5.5810	1.13	Q	|	|	|	V|
23+40	5.5888	1.13	Q	|	|	|	V|
23+45	5.5965	1.12	Q	|	|	|	V|
23+50	5.6041	1.11	Q	|	|	|	V|
23+55	5.6117	1.10	Q	|	|	|	V|
24+ 0	5.6193	1.10	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/08/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IENLC
Area A
100-yr Developed

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
47.41	1	1.08
Rainfall data for year 100		
47.41	6	2.04
Rainfall data for year 100		
47.41	24	3.42

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	86.2	47.41	1.000	0.262	0.100	0.026

Area-averaged adjusted loss rate Fm (In/Hr) = 0.026

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
4.74	0.100	69.0	86.2	1.60	0.598
42.67	0.900	98.0	98.0	0.20	0.932

Area-averaged catchment yield fraction, Y = 0.898
Area-averaged low loss fraction, Yb = 0.102
User entry of time of concentration = 0.221 (hours)
++
Watershed area = 47.41(Ac.)
Catchment Lag time = 0.177 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 47.1342
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.026(In/Hr)
Average low loss rate fraction (Yb) = 0.102 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.512(In)
Computed peak 30-minute rainfall = 0.877(In)
Specified peak 1-hour rainfall = 1.080(In)
Computed peak 3-hour rainfall = 1.595(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 3.420(In)

Rainfall depth area reduction factors:
Using a total area of 47.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.511(In)
30-minute factor = 0.998 Adjusted rainfall = 0.875(In)
1-hour factor = 0.998 Adjusted rainfall = 1.078(In)
3-hour factor = 1.000 Adjusted rainfall = 1.595(In)
6-hour factor = 1.000 Adjusted rainfall = 2.040(In)
24-hour factor = 1.000 Adjusted rainfall = 3.420(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 573.36 (CFS))	
1	3.594	20.608
2	27.120	134.887
3	57.814	175.991
4	71.740	79.843
5	79.819	46.322
6	85.150	30.571
7	89.019	22.179
8	91.734	15.569
9	93.866	12.224
10	95.486	9.287
11	96.739	7.184
12	97.636	5.146
13	98.195	3.206
14	98.736	3.099
15	99.298	3.226
16	99.691	2.252
17	100.000	1.771

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5113	0.5113
2	0.6295	0.1182
3	0.7110	0.0814
4	0.7750	0.0641
5	0.8287	0.0537
6	0.8753	0.0466
7	0.9167	0.0414
8	0.9542	0.0375
9	0.9885	0.0343
10	1.0202	0.0317
11	1.0498	0.0296
12	1.0776	0.0278
13	1.1088	0.0312
14	1.1385	0.0297
15	1.1669	0.0284
16	1.1941	0.0272
17	1.2202	0.0261
18	1.2453	0.0251
19	1.2695	0.0243
20	1.2930	0.0234
21	1.3157	0.0227
22	1.3377	0.0220
23	1.3591	0.0214
24	1.3799	0.0208
25	1.4001	0.0202

26	1.4198	0.0197
27	1.4391	0.0192
28	1.4579	0.0188
29	1.4762	0.0184
30	1.4942	0.0180
31	1.5118	0.0176
32	1.5290	0.0172
33	1.5459	0.0169
34	1.5624	0.0166
35	1.5787	0.0162
36	1.5946	0.0159
37	1.6102	0.0156
38	1.6255	0.0153
39	1.6406	0.0151
40	1.6554	0.0148
41	1.6700	0.0146
42	1.6844	0.0144
43	1.6985	0.0141
44	1.7124	0.0139
45	1.7261	0.0137
46	1.7397	0.0135
47	1.7530	0.0133
48	1.7662	0.0132
49	1.7791	0.0130
50	1.7919	0.0128
51	1.8046	0.0126
52	1.8171	0.0125
53	1.8294	0.0123
54	1.8416	0.0122
55	1.8536	0.0120
56	1.8655	0.0119
57	1.8773	0.0118
58	1.8889	0.0116
59	1.9004	0.0115
60	1.9118	0.0114
61	1.9231	0.0113
62	1.9342	0.0111
63	1.9452	0.0110
64	1.9561	0.0109
65	1.9669	0.0108
66	1.9776	0.0107
67	1.9882	0.0106
68	1.9987	0.0105
69	2.0091	0.0104
70	2.0194	0.0103
71	2.0296	0.0102
72	2.0397	0.0101
73	2.0502	0.0105
74	2.0606	0.0104
75	2.0710	0.0103

76	2.0812	0.0103
77	2.0914	0.0102
78	2.1015	0.0101
79	2.1115	0.0100
80	2.1214	0.0099
81	2.1312	0.0098
82	2.1410	0.0098
83	2.1507	0.0097
84	2.1603	0.0096
85	2.1699	0.0096
86	2.1794	0.0095
87	2.1888	0.0094
88	2.1981	0.0093
89	2.2074	0.0093
90	2.2166	0.0092
91	2.2258	0.0091
92	2.2349	0.0091
93	2.2439	0.0090
94	2.2528	0.0090
95	2.2618	0.0089
96	2.2706	0.0088
97	2.2794	0.0088
98	2.2881	0.0087
99	2.2968	0.0087
100	2.3054	0.0086
101	2.3140	0.0086
102	2.3225	0.0085
103	2.3310	0.0085
104	2.3394	0.0084
105	2.3477	0.0084
106	2.3560	0.0083
107	2.3643	0.0083
108	2.3725	0.0082
109	2.3807	0.0082
110	2.3888	0.0081
111	2.3969	0.0081
112	2.4049	0.0080
113	2.4129	0.0080
114	2.4208	0.0079
115	2.4287	0.0079
116	2.4366	0.0079
117	2.4444	0.0078
118	2.4521	0.0078
119	2.4599	0.0077
120	2.4676	0.0077
121	2.4752	0.0076
122	2.4828	0.0076
123	2.4904	0.0076
124	2.4979	0.0075
125	2.5054	0.0075

126	2.5128	0.0075
127	2.5203	0.0074
128	2.5276	0.0074
129	2.5350	0.0073
130	2.5423	0.0073
131	2.5496	0.0073
132	2.5568	0.0072
133	2.5640	0.0072
134	2.5712	0.0072
135	2.5783	0.0071
136	2.5854	0.0071
137	2.5925	0.0071
138	2.5995	0.0070
139	2.6065	0.0070
140	2.6135	0.0070
141	2.6204	0.0069
142	2.6274	0.0069
143	2.6342	0.0069
144	2.6411	0.0069
145	2.6479	0.0068
146	2.6547	0.0068
147	2.6615	0.0068
148	2.6682	0.0067
149	2.6749	0.0067
150	2.6816	0.0067
151	2.6882	0.0067
152	2.6949	0.0066
153	2.7015	0.0066
154	2.7080	0.0066
155	2.7146	0.0065
156	2.7211	0.0065
157	2.7276	0.0065
158	2.7340	0.0065
159	2.7405	0.0064
160	2.7469	0.0064
161	2.7533	0.0064
162	2.7596	0.0064
163	2.7660	0.0063
164	2.7723	0.0063
165	2.7786	0.0063
166	2.7848	0.0063
167	2.7911	0.0062
168	2.7973	0.0062
169	2.8035	0.0062
170	2.8097	0.0062
171	2.8158	0.0061
172	2.8219	0.0061
173	2.8281	0.0061
174	2.8341	0.0061
175	2.8402	0.0061

176	2.8462	0.0060
177	2.8523	0.0060
178	2.8582	0.0060
179	2.8642	0.0060
180	2.8702	0.0060
181	2.8761	0.0059
182	2.8820	0.0059
183	2.8879	0.0059
184	2.8938	0.0059
185	2.8996	0.0059
186	2.9055	0.0058
187	2.9113	0.0058
188	2.9171	0.0058
189	2.9229	0.0058
190	2.9286	0.0058
191	2.9344	0.0057
192	2.9401	0.0057
193	2.9458	0.0057
194	2.9514	0.0057
195	2.9571	0.0057
196	2.9628	0.0056
197	2.9684	0.0056
198	2.9740	0.0056
199	2.9796	0.0056
200	2.9852	0.0056
201	2.9907	0.0056
202	2.9962	0.0055
203	3.0018	0.0055
204	3.0073	0.0055
205	3.0128	0.0055
206	3.0182	0.0055
207	3.0237	0.0055
208	3.0291	0.0054
209	3.0345	0.0054
210	3.0399	0.0054
211	3.0453	0.0054
212	3.0507	0.0054
213	3.0561	0.0054
214	3.0614	0.0053
215	3.0667	0.0053
216	3.0720	0.0053
217	3.0773	0.0053
218	3.0826	0.0053
219	3.0879	0.0053
220	3.0931	0.0052
221	3.0984	0.0052
222	3.1036	0.0052
223	3.1088	0.0052
224	3.1140	0.0052
225	3.1191	0.0052

226	3.1243	0.0052
227	3.1294	0.0051
228	3.1346	0.0051
229	3.1397	0.0051
230	3.1448	0.0051
231	3.1499	0.0051
232	3.1550	0.0051
233	3.1600	0.0051
234	3.1651	0.0050
235	3.1701	0.0050
236	3.1751	0.0050
237	3.1801	0.0050
238	3.1851	0.0050
239	3.1901	0.0050
240	3.1951	0.0050
241	3.2000	0.0050
242	3.2050	0.0049
243	3.2099	0.0049
244	3.2148	0.0049
245	3.2197	0.0049
246	3.2246	0.0049
247	3.2295	0.0049
248	3.2344	0.0049
249	3.2392	0.0049
250	3.2441	0.0048
251	3.2489	0.0048
252	3.2537	0.0048
253	3.2585	0.0048
254	3.2633	0.0048
255	3.2681	0.0048
256	3.2729	0.0048
257	3.2777	0.0048
258	3.2824	0.0047
259	3.2871	0.0047
260	3.2919	0.0047
261	3.2966	0.0047
262	3.3013	0.0047
263	3.3060	0.0047
264	3.3107	0.0047
265	3.3153	0.0047
266	3.3200	0.0047
267	3.3246	0.0046
268	3.3293	0.0046
269	3.3339	0.0046
270	3.3385	0.0046
271	3.3431	0.0046
272	3.3477	0.0046
273	3.3523	0.0046
274	3.3569	0.0046
275	3.3614	0.0046

276	3.3660	0.0046
277	3.3705	0.0045
278	3.3750	0.0045
279	3.3796	0.0045
280	3.3841	0.0045
281	3.3886	0.0045
282	3.3931	0.0045
283	3.3975	0.0045
284	3.4020	0.0045
285	3.4065	0.0045
286	3.4109	0.0045
287	3.4154	0.0044
288	3.4198	0.0044

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0044	0.0005	0.0040
2	0.0044	0.0005	0.0040
3	0.0045	0.0005	0.0040
4	0.0045	0.0005	0.0040
5	0.0045	0.0005	0.0040
6	0.0045	0.0005	0.0040
7	0.0045	0.0005	0.0041
8	0.0045	0.0005	0.0041
9	0.0046	0.0005	0.0041
10	0.0046	0.0005	0.0041
11	0.0046	0.0005	0.0041
12	0.0046	0.0005	0.0041
13	0.0046	0.0005	0.0041
14	0.0046	0.0005	0.0042
15	0.0046	0.0005	0.0042
16	0.0047	0.0005	0.0042
17	0.0047	0.0005	0.0042
18	0.0047	0.0005	0.0042
19	0.0047	0.0005	0.0042
20	0.0047	0.0005	0.0042
21	0.0047	0.0005	0.0043
22	0.0048	0.0005	0.0043
23	0.0048	0.0005	0.0043
24	0.0048	0.0005	0.0043
25	0.0048	0.0005	0.0043
26	0.0048	0.0005	0.0043
27	0.0049	0.0005	0.0044
28	0.0049	0.0005	0.0044
29	0.0049	0.0005	0.0044
30	0.0049	0.0005	0.0044
31	0.0049	0.0005	0.0044
32	0.0049	0.0005	0.0044

33	0.0050	0.0005	0.0045
34	0.0050	0.0005	0.0045
35	0.0050	0.0005	0.0045
36	0.0050	0.0005	0.0045
37	0.0050	0.0005	0.0045
38	0.0051	0.0005	0.0045
39	0.0051	0.0005	0.0046
40	0.0051	0.0005	0.0046
41	0.0051	0.0005	0.0046
42	0.0051	0.0005	0.0046
43	0.0052	0.0005	0.0046
44	0.0052	0.0005	0.0047
45	0.0052	0.0005	0.0047
46	0.0052	0.0005	0.0047
47	0.0053	0.0005	0.0047
48	0.0053	0.0005	0.0047
49	0.0053	0.0005	0.0048
50	0.0053	0.0005	0.0048
51	0.0054	0.0005	0.0048
52	0.0054	0.0005	0.0048
53	0.0054	0.0005	0.0049
54	0.0054	0.0006	0.0049
55	0.0055	0.0006	0.0049
56	0.0055	0.0006	0.0049
57	0.0055	0.0006	0.0049
58	0.0055	0.0006	0.0050
59	0.0056	0.0006	0.0050
60	0.0056	0.0006	0.0050
61	0.0056	0.0006	0.0050
62	0.0056	0.0006	0.0051
63	0.0057	0.0006	0.0051
64	0.0057	0.0006	0.0051
65	0.0057	0.0006	0.0051
66	0.0057	0.0006	0.0052
67	0.0058	0.0006	0.0052
68	0.0058	0.0006	0.0052
69	0.0058	0.0006	0.0052
70	0.0059	0.0006	0.0053
71	0.0059	0.0006	0.0053
72	0.0059	0.0006	0.0053
73	0.0060	0.0006	0.0053
74	0.0060	0.0006	0.0054
75	0.0060	0.0006	0.0054
76	0.0060	0.0006	0.0054
77	0.0061	0.0006	0.0055
78	0.0061	0.0006	0.0055
79	0.0061	0.0006	0.0055
80	0.0062	0.0006	0.0055
81	0.0062	0.0006	0.0056
82	0.0062	0.0006	0.0056

83	0.0063	0.0006	0.0057
84	0.0063	0.0006	0.0057
85	0.0064	0.0006	0.0057
86	0.0064	0.0006	0.0057
87	0.0064	0.0007	0.0058
88	0.0065	0.0007	0.0058
89	0.0065	0.0007	0.0059
90	0.0065	0.0007	0.0059
91	0.0066	0.0007	0.0059
92	0.0066	0.0007	0.0059
93	0.0067	0.0007	0.0060
94	0.0067	0.0007	0.0060
95	0.0068	0.0007	0.0061
96	0.0068	0.0007	0.0061
97	0.0069	0.0007	0.0062
98	0.0069	0.0007	0.0062
99	0.0069	0.0007	0.0062
100	0.0070	0.0007	0.0063
101	0.0070	0.0007	0.0063
102	0.0071	0.0007	0.0064
103	0.0071	0.0007	0.0064
104	0.0072	0.0007	0.0064
105	0.0072	0.0007	0.0065
106	0.0073	0.0007	0.0065
107	0.0073	0.0007	0.0066
108	0.0074	0.0007	0.0066
109	0.0075	0.0008	0.0067
110	0.0075	0.0008	0.0067
111	0.0076	0.0008	0.0068
112	0.0076	0.0008	0.0068
113	0.0077	0.0008	0.0069
114	0.0077	0.0008	0.0069
115	0.0078	0.0008	0.0070
116	0.0079	0.0008	0.0071
117	0.0079	0.0008	0.0071
118	0.0080	0.0008	0.0072
119	0.0081	0.0008	0.0073
120	0.0081	0.0008	0.0073
121	0.0082	0.0008	0.0074
122	0.0083	0.0008	0.0074
123	0.0084	0.0008	0.0075
124	0.0084	0.0009	0.0076
125	0.0085	0.0009	0.0076
126	0.0086	0.0009	0.0077
127	0.0087	0.0009	0.0078
128	0.0087	0.0009	0.0078
129	0.0088	0.0009	0.0079
130	0.0089	0.0009	0.0080
131	0.0090	0.0009	0.0081
132	0.0091	0.0009	0.0082

133	0.0092	0.0009	0.0083
134	0.0093	0.0009	0.0083
135	0.0094	0.0010	0.0085
136	0.0095	0.0010	0.0085
137	0.0096	0.0010	0.0086
138	0.0097	0.0010	0.0087
139	0.0098	0.0010	0.0088
140	0.0099	0.0010	0.0089
141	0.0101	0.0010	0.0091
142	0.0102	0.0010	0.0091
143	0.0103	0.0011	0.0093
144	0.0104	0.0011	0.0094
145	0.0101	0.0010	0.0091
146	0.0102	0.0010	0.0092
147	0.0104	0.0011	0.0093
148	0.0105	0.0011	0.0094
149	0.0107	0.0011	0.0096
150	0.0108	0.0011	0.0097
151	0.0110	0.0011	0.0099
152	0.0111	0.0011	0.0100
153	0.0114	0.0012	0.0102
154	0.0115	0.0012	0.0103
155	0.0118	0.0012	0.0106
156	0.0119	0.0012	0.0107
157	0.0122	0.0012	0.0109
158	0.0123	0.0013	0.0111
159	0.0126	0.0013	0.0114
160	0.0128	0.0013	0.0115
161	0.0132	0.0013	0.0118
162	0.0133	0.0014	0.0120
163	0.0137	0.0014	0.0123
164	0.0139	0.0014	0.0125
165	0.0144	0.0015	0.0129
166	0.0146	0.0015	0.0131
167	0.0151	0.0015	0.0135
168	0.0153	0.0016	0.0138
169	0.0159	0.0016	0.0143
170	0.0162	0.0017	0.0146
171	0.0169	0.0017	0.0152
172	0.0172	0.0017	0.0155
173	0.0180	0.0018	0.0161
174	0.0184	0.0019	0.0165
175	0.0192	0.0020	0.0173
176	0.0197	0.0020	0.0177
177	0.0208	0.0021	0.0187
178	0.0214	0.0022	0.0192
179	0.0227	0.0022	0.0205
180	0.0234	0.0022	0.0213
181	0.0251	0.0022	0.0230
182	0.0261	0.0022	0.0239

183	0.0284	0.0022	0.0262
184	0.0297	0.0022	0.0275
185	0.0278	0.0022	0.0256
186	0.0296	0.0022	0.0274
187	0.0343	0.0022	0.0321
188	0.0375	0.0022	0.0353
189	0.0466	0.0022	0.0444
190	0.0537	0.0022	0.0515
191	0.0814	0.0022	0.0792
192	0.1182	0.0022	0.1160
193	0.5113	0.0022	0.5092
194	0.0641	0.0022	0.0619
195	0.0414	0.0022	0.0392
196	0.0317	0.0022	0.0296
197	0.0312	0.0022	0.0290
198	0.0272	0.0022	0.0250
199	0.0243	0.0022	0.0221
200	0.0220	0.0022	0.0198
201	0.0202	0.0021	0.0182
202	0.0188	0.0019	0.0169
203	0.0176	0.0018	0.0158
204	0.0166	0.0017	0.0149
205	0.0156	0.0016	0.0140
206	0.0148	0.0015	0.0133
207	0.0141	0.0014	0.0127
208	0.0135	0.0014	0.0122
209	0.0130	0.0013	0.0117
210	0.0125	0.0013	0.0112
211	0.0120	0.0012	0.0108
212	0.0116	0.0012	0.0104
213	0.0113	0.0011	0.0101
214	0.0109	0.0011	0.0098
215	0.0106	0.0011	0.0095
216	0.0103	0.0010	0.0092
217	0.0105	0.0011	0.0094
218	0.0103	0.0010	0.0092
219	0.0100	0.0010	0.0090
220	0.0098	0.0010	0.0088
221	0.0096	0.0010	0.0086
222	0.0093	0.0009	0.0084
223	0.0091	0.0009	0.0082
224	0.0090	0.0009	0.0081
225	0.0088	0.0009	0.0079
226	0.0086	0.0009	0.0077
227	0.0085	0.0009	0.0076
228	0.0083	0.0008	0.0075
229	0.0082	0.0008	0.0073
230	0.0080	0.0008	0.0072
231	0.0079	0.0008	0.0071
232	0.0078	0.0008	0.0070

233	0.0076	0.0008	0.0069
234	0.0075	0.0008	0.0068
235	0.0074	0.0008	0.0067
236	0.0073	0.0007	0.0066
237	0.0072	0.0007	0.0065
238	0.0071	0.0007	0.0064
239	0.0070	0.0007	0.0063
240	0.0069	0.0007	0.0062
241	0.0068	0.0007	0.0061
242	0.0067	0.0007	0.0061
243	0.0067	0.0007	0.0060
244	0.0066	0.0007	0.0059
245	0.0065	0.0007	0.0058
246	0.0064	0.0007	0.0058
247	0.0063	0.0006	0.0057
248	0.0063	0.0006	0.0056
249	0.0062	0.0006	0.0056
250	0.0061	0.0006	0.0055
251	0.0061	0.0006	0.0054
252	0.0060	0.0006	0.0054
253	0.0059	0.0006	0.0053
254	0.0059	0.0006	0.0053
255	0.0058	0.0006	0.0052
256	0.0058	0.0006	0.0052
257	0.0057	0.0006	0.0051
258	0.0056	0.0006	0.0051
259	0.0056	0.0006	0.0050
260	0.0055	0.0006	0.0050
261	0.0055	0.0006	0.0049
262	0.0054	0.0006	0.0049
263	0.0054	0.0005	0.0048
264	0.0053	0.0005	0.0048
265	0.0053	0.0005	0.0048
266	0.0052	0.0005	0.0047
267	0.0052	0.0005	0.0047
268	0.0052	0.0005	0.0046
269	0.0051	0.0005	0.0046
270	0.0051	0.0005	0.0046
271	0.0050	0.0005	0.0045
272	0.0050	0.0005	0.0045
273	0.0050	0.0005	0.0045
274	0.0049	0.0005	0.0044
275	0.0049	0.0005	0.0044
276	0.0048	0.0005	0.0044
277	0.0048	0.0005	0.0043
278	0.0048	0.0005	0.0043
279	0.0047	0.0005	0.0043
280	0.0047	0.0005	0.0042
281	0.0047	0.0005	0.0042
282	0.0046	0.0005	0.0042

283	0.0046	0.0005	0.0041
284	0.0046	0.0005	0.0041
285	0.0045	0.0005	0.0041
286	0.0045	0.0005	0.0041
287	0.0045	0.0005	0.0040
288	0.0045	0.0005	0.0040

Total soil rain loss = 0.26(In)
Total effective rainfall = 3.16(In)
Peak flow rate in flood hydrograph = 116.10(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	50.0	100.0	150.0	200.0
0+ 5	0.0006	0.08	Q				
0+10	0.0048	0.62	Q				
0+15	0.0139	1.32	Q				
0+20	0.0252	1.64	Q				
0+25	0.0379	1.83	Q				
0+30	0.0514	1.96	Q				
0+35	0.0655	2.06	Q				
0+40	0.0802	2.12	Q				
0+45	0.0952	2.18	Q				
0+50	0.1105	2.22	Q				
0+55	0.1261	2.26	Q				
1+ 0	0.1418	2.29	Q				
1+ 5	0.1577	2.31	Q				
1+10	0.1738	2.33	Q				
1+15	0.1900	2.35	Q				
1+20	0.2063	2.37	Q				
1+25	0.2227	2.38	Q				
1+30	0.2392	2.39	Q				
1+35	0.2557	2.40	Q				
1+40	0.2723	2.41	Q				
1+45	0.2889	2.42	Q				
1+50	0.3056	2.43	Q				
1+55	0.3224	2.43	QV				
2+ 0	0.3392	2.44	QV				
2+ 5	0.3561	2.45	QV				
2+10	0.3731	2.46	QV				
2+15	0.3901	2.47	QV				
2+20	0.4072	2.48	QV				
2+25	0.4243	2.49	QV				

2+30	0.4415	2.50	QV	|	|	|	|
2+35	0.4588	2.51	QV	|	|	|	|
2+40	0.4761	2.52	QV	|	|	|	|
2+45	0.4935	2.53	QV	|	|	|	|
2+50	0.5110	2.54	QV	|	|	|	|
2+55	0.5285	2.55	QV	|	|	|	|
3+ 0	0.5461	2.56	QV	|	|	|	|
3+ 5	0.5638	2.57	QV	|	|	|	|
3+10	0.5816	2.58	QV	|	|	|	|
3+15	0.5994	2.59	QV	|	|	|	|
3+20	0.6173	2.60	QV	|	|	|	|
3+25	0.6353	2.61	Q V	|	|	|	|
3+30	0.6533	2.62	Q V	|	|	|	|
3+35	0.6714	2.63	Q V	|	|	|	|
3+40	0.6896	2.64	Q V	|	|	|	|
3+45	0.7078	2.65	Q V	|	|	|	|
3+50	0.7262	2.66	Q V	|	|	|	|
3+55	0.7446	2.67	Q V	|	|	|	|
4+ 0	0.7631	2.69	Q V	|	|	|	|
4+ 5	0.7817	2.70	Q V	|	|	|	|
4+10	0.8003	2.71	Q V	|	|	|	|
4+15	0.8190	2.72	Q V	|	|	|	|
4+20	0.8379	2.73	Q V	|	|	|	|
4+25	0.8568	2.74	Q V	|	|	|	|
4+30	0.8757	2.76	Q V	|	|	|	|
4+35	0.8948	2.77	Q V	|	|	|	|
4+40	0.9139	2.78	Q V	|	|	|	|
4+45	0.9332	2.79	Q V	|	|	|	|
4+50	0.9525	2.81	Q V	|	|	|	|
4+55	0.9719	2.82	Q V	|	|	|	|
5+ 0	0.9914	2.83	Q V	|	|	|	|
5+ 5	1.0110	2.84	Q V	|	|	|	|
5+10	1.0307	2.86	Q V	|	|	|	|
5+15	1.0505	2.87	Q V	|	|	|	|
5+20	1.0703	2.89	Q V	|	|	|	|
5+25	1.0903	2.90	Q V	|	|	|	|
5+30	1.1104	2.91	Q V	|	|	|	|
5+35	1.1305	2.93	Q V	|	|	|	|
5+40	1.1508	2.94	Q V	|	|	|	|
5+45	1.1711	2.96	Q V	|	|	|	|
5+50	1.1916	2.97	Q V	|	|	|	|
5+55	1.2122	2.99	Q V	|	|	|	|
6+ 0	1.2328	3.00	Q V	|	|	|	|
6+ 5	1.2536	3.02	Q V	|	|	|	|
6+10	1.2745	3.03	Q V	|	|	|	|
6+15	1.2955	3.05	Q V	|	|	|	|
6+20	1.3166	3.06	Q V	|	|	|	|
6+25	1.3378	3.08	Q V	|	|	|	|
6+30	1.3591	3.10	Q V	|	|	|	|
6+35	1.3805	3.11	Q V	|	|	|	|

6+40	1.4021	3.13	Q	V				
6+45	1.4237	3.15	Q	V				
6+50	1.4455	3.16	Q	V				
6+55	1.4674	3.18	Q	V				
7+ 0	1.4894	3.20	Q	V				
7+ 5	1.5116	3.22	Q	V				
7+10	1.5339	3.23	Q	V				
7+15	1.5563	3.25	Q	V				
7+20	1.5788	3.27	Q	V				
7+25	1.6015	3.29	Q	V				
7+30	1.6243	3.31	Q	V				
7+35	1.6472	3.33	Q	V				
7+40	1.6703	3.35	Q	V				
7+45	1.6935	3.37	Q	V				
7+50	1.7169	3.39	Q	V				
7+55	1.7404	3.41	Q	V				
8+ 0	1.7641	3.43	Q	V				
8+ 5	1.7879	3.46	Q	V				
8+10	1.8118	3.48	Q	V				
8+15	1.8359	3.50	Q	V				
8+20	1.8602	3.52	Q	V				
8+25	1.8846	3.55	Q	V				
8+30	1.9092	3.57	Q	V				
8+35	1.9340	3.59	Q	V				
8+40	1.9589	3.62	Q	V				
8+45	1.9840	3.64	Q	V				
8+50	2.0093	3.67	Q	V				
8+55	2.0347	3.70	Q	V				
9+ 0	2.0604	3.72	Q	V				
9+ 5	2.0862	3.75	Q	V				
9+10	2.1122	3.78	Q	V				
9+15	2.1384	3.80	Q	V				
9+20	2.1648	3.83	Q	V				
9+25	2.1914	3.86	Q	V				
9+30	2.2181	3.89	Q	V				
9+35	2.2451	3.92	Q	V				
9+40	2.2724	3.95	Q	V				
9+45	2.2998	3.98	Q	V				
9+50	2.3274	4.01	Q	V				
9+55	2.3553	4.05	Q	V				
10+ 0	2.3834	4.08	Q	V				
10+ 5	2.4118	4.12	Q	V				
10+10	2.4403	4.15	Q	V				
10+15	2.4692	4.19	Q	V				
10+20	2.4983	4.22	Q	V				
10+25	2.5276	4.26	Q	V				
10+30	2.5572	4.30	Q	V				
10+35	2.5871	4.34	Q	V				
10+40	2.6172	4.38	Q	V				
10+45	2.6476	4.42	Q	V				

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10+50       2.6783      4.46  Q       V |          |          |          |
10+55       2.7093      4.50  Q       V |          |          |          |
11+ 0       2.7407      4.55  Q       V |          |          |          |
11+ 5       2.7723      4.59  Q       V |          |          |          |
11+10       2.8042      4.64  Q       V |          |          |          |
11+15       2.8365      4.69  Q        V|          |          |          |
11+20       2.8691      4.74  Q        V|          |          |          |
11+25       2.9021      4.79  Q        V|          |          |          |
11+30       2.9354      4.84  Q        V|          |          |          |
11+35       2.9691      4.89  Q        V|          |          |          |
11+40       3.0031      4.95  Q        V|          |          |          |
11+45       3.0376      5.00  |Q       V|          |          |          |
11+50       3.0724      5.06  |Q       V|          |          |          |
11+55       3.1077      5.12  |Q       V|          |          |          |
12+ 0       3.1434      5.18  |Q        V          |          |          |
12+ 5       3.1794      5.24  |Q        V          |          |          |
12+10       3.2155      5.24  |Q        V          |          |          |
12+15       3.2516      5.23  |Q        V          |          |          |
12+20       3.2878      5.26  |Q        V          |          |          |
12+25       3.3244      5.31  |Q        V          |          |          |
12+30       3.3614      5.38  |Q        V          |          |          |
12+35       3.3989      5.44  |Q        V          |          |          |
12+40       3.4369      5.51  |Q        |V          |          |          |
12+45       3.4754      5.59  |Q        |V          |          |          |
12+50       3.5145      5.67  |Q        |V          |          |          |
12+55       3.5541      5.76  |Q        |V          |          |          |
13+ 0       3.5944      5.85  |Q        |V          |          |          |
13+ 5       3.6354      5.95  |Q        |V          |          |          |
13+10       3.6770      6.05  |Q        |V          |          |          |
13+15       3.7194      6.15  |Q        |V          |          |          |
13+20       3.7625      6.26  |Q        | V         |          |          |
13+25       3.8064      6.38  |Q        | V         |          |          |
13+30       3.8511      6.50  |Q        | V         |          |          |
13+35       3.8968      6.62  |Q        | V         |          |          |
13+40       3.9433      6.76  |Q        | V         |          |          |
13+45       3.9908      6.90  |Q        | V         |          |          |
13+50       4.0394      7.05  |Q        | V         |          |          |
13+55       4.0890      7.21  |Q        |  V        |          |          |
14+ 0       4.1398      7.37  |Q        |  V        |          |          |
14+ 5       4.1918      7.55  |Q        |  V        |          |          |
14+10       4.2452      7.75  |Q        |  V        |          |          |
14+15       4.3000      7.96  |Q        |  V        |          |          |
14+20       4.3564      8.18  |Q        |  V        |          |          |
14+25       4.4144      8.42  |Q        |   V       |          |          |
14+30       4.4741      8.67  |Q        |   V       |          |          |
14+35       4.5357      8.94  |Q        |   V       |          |          |
14+40       4.5993      9.23  |Q        |   V       |          |          |
14+45       4.6651      9.55  |Q        |   V       |          |          |
14+50       4.7333      9.90  |Q        |    V      |          |          |
14+55       4.8041     10.29  | Q       |    V      |          |          |
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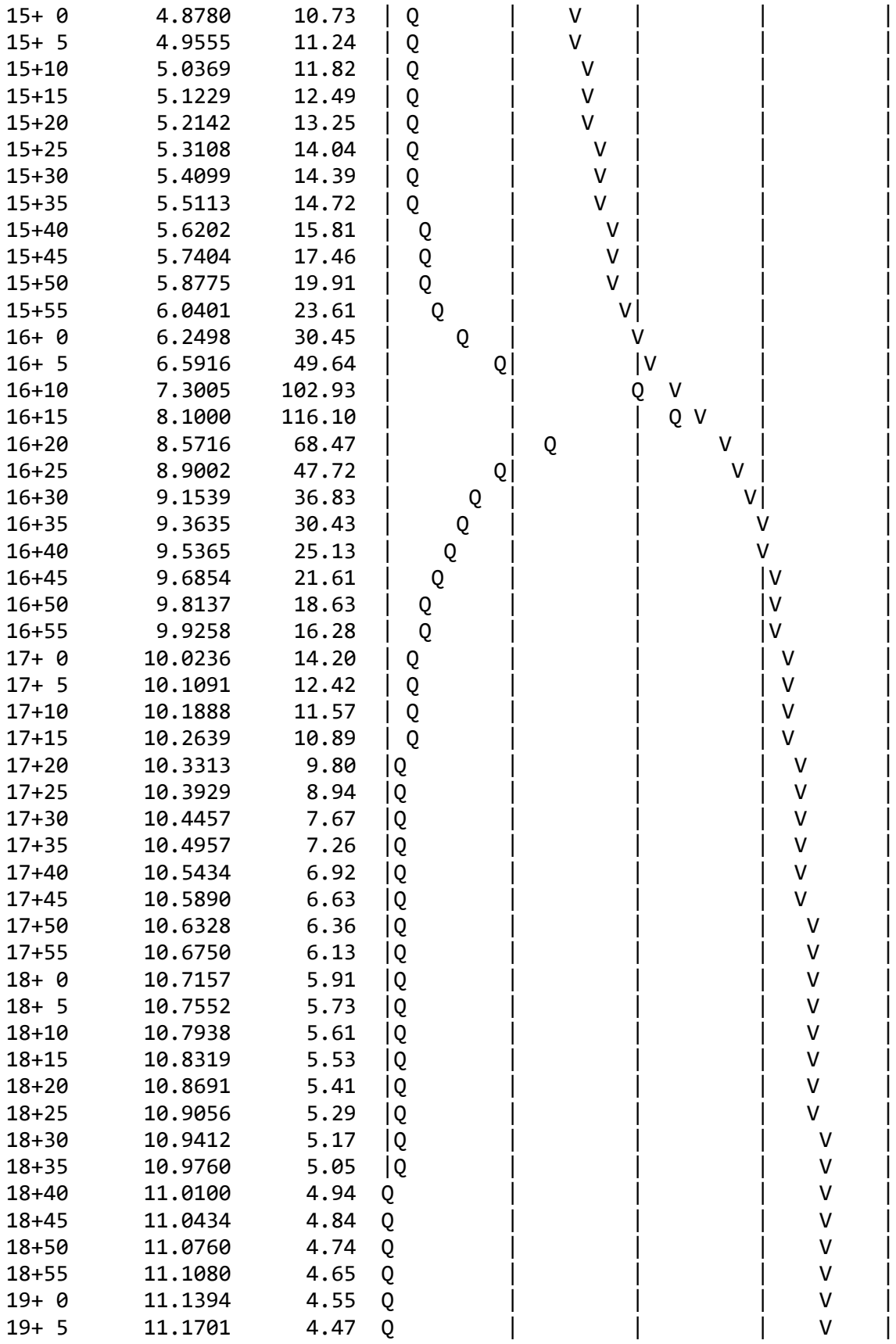

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19+10      11.2003      4.38  Q        |          |          |    V     |
19+15      11.2300      4.31  Q        |          |          |    V     |
19+20      11.2591      4.23  Q        |          |          |     V    |
19+25      11.2878      4.16  Q        |          |          |     V    |
19+30      11.3159      4.09  Q        |          |          |     V    |
19+35      11.3436      4.02  Q        |          |          |     V    |
19+40      11.3709      3.96  Q        |          |          |     V    |
19+45      11.3977      3.90  Q        |          |          |     V    |
19+50      11.4242      3.84  Q        |          |          |     V    |
19+55      11.4502      3.78  Q        |          |          |     V    |
20+ 0      11.4759      3.73  Q        |          |          |     V    |
20+ 5      11.5012      3.67  Q        |          |          |     V    |
20+10      11.5261      3.62  Q        |          |          |     V    |
20+15      11.5508      3.57  Q        |          |          |      V   |
20+20      11.5750      3.53  Q        |          |          |      V   |
20+25      11.5990      3.48  Q        |          |          |      V   |
20+30      11.6227      3.44  Q        |          |          |      V   |
20+35      11.6461      3.40  Q        |          |          |      V   |
20+40      11.6692      3.35  Q        |          |          |      V   |
20+45      11.6920      3.31  Q        |          |          |      V   |
20+50      11.7146      3.27  Q        |          |          |      V   |
20+55      11.7369      3.24  Q        |          |          |      V   |
21+ 0      11.7589      3.20  Q        |          |          |      V   |
21+ 5      11.7807      3.17  Q        |          |          |      V   |
21+10      11.8023      3.13  Q        |          |          |      V   |
21+15      11.8236      3.10  Q        |          |          |      V   |
21+20      11.8447      3.06  Q        |          |          |      V   |
21+25      11.8656      3.03  Q        |          |          |       V  |
21+30      11.8863      3.00  Q        |          |          |       V  |
21+35      11.9067      2.97  Q        |          |          |       V  |
21+40      11.9270      2.94  Q        |          |          |       V  |
21+45      11.9471      2.91  Q        |          |          |       V  |
21+50      11.9669      2.89  Q        |          |          |       V  |
21+55      11.9866      2.86  Q        |          |          |       V  |
22+ 0      12.0061      2.83  Q        |          |          |       V  |
22+ 5      12.0255      2.81  Q        |          |          |       V  |
22+10      12.0446      2.78  Q        |          |          |       V  |
22+15      12.0636      2.76  Q        |          |          |       V  |
22+20      12.0824      2.73  Q        |          |          |       V  |
22+25      12.1011      2.71  Q        |          |          |       V  |
22+30      12.1196      2.69  Q        |          |          |       V  |
22+35      12.1379      2.66  Q        |          |          |       V  |
22+40      12.1561      2.64  Q        |          |          |       V  |
22+45      12.1742      2.62  Q        |          |          |        V |
22+50      12.1921      2.60  Q        |          |          |        V |
22+55      12.2098      2.58  Q        |          |          |        V |
23+ 0      12.2274      2.56  Q        |          |          |        V |
23+ 5      12.2449      2.54  Q        |          |          |        V |
23+10      12.2623      2.52  Q        |          |          |        V |
23+15      12.2795      2.50  Q        |          |          |        V |
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```
   23+20      12.2965      2.48  Q         |         |         |         V|
   23+25      12.3135      2.46  Q         |         |         |         V|
   23+30      12.3303      2.44  Q         |         |         |         V|
   23+35      12.3470      2.43  Q         |         |         |         V|
   23+40      12.3636      2.41  Q         |         |         |         V|
   23+45      12.3801      2.39  Q         |         |         |         V|
   23+50      12.3965      2.38  Q         |         |         |         V|
   23+55      12.4127      2.36  Q         |         |         |         V|
   24+ 0      12.4288      2.34  Q         |         |         |         V|
-----------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/08/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area B
100-year Developed

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
48.02	1	1.08
Rainfall data for year 100		
48.02	6	2.04
Rainfall data for year 100		
48.02	24	3.42

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	86.2	48.02	1.000	0.262	0.100	0.026

Area-averaged adjusted loss rate Fm (In/Hr) = 0.026

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
4.80	0.100	69.0	86.2	1.60	0.598
43.22	0.900	98.0	98.0	0.20	0.932

Area-averaged catchment yield fraction, Y = 0.898
Area-averaged low loss fraction, Yb = 0.102
User entry of time of concentration = 0.220 (hours)
++
Watershed area = 48.02(Ac.)
Catchment Lag time = 0.176 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 47.3485
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.026(In/Hr)
Average low loss rate fraction (Yb) = 0.102 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.512(In)
Computed peak 30-minute rainfall = 0.877(In)
Specified peak 1-hour rainfall = 1.080(In)
Computed peak 3-hour rainfall = 1.595(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 3.420(In)

Rainfall depth area reduction factors:
Using a total area of 48.02(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.511(In)
30-minute factor = 0.998 Adjusted rainfall = 0.875(In)
1-hour factor = 0.998 Adjusted rainfall = 1.078(In)
3-hour factor = 1.000 Adjusted rainfall = 1.595(In)
6-hour factor = 1.000 Adjusted rainfall = 2.040(In)
24-hour factor = 1.000 Adjusted rainfall = 3.420(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 580.74 (CFS))	
1	3.621	21.031
2	27.374	137.943
3	58.032	178.044
4	71.898	80.526
5	79.947	46.743
6	85.264	30.875
7	89.111	22.341
8	91.816	15.709
9	93.936	12.314
10	95.547	9.354
11	96.789	7.216
12	97.673	5.132
13	98.224	3.197
14	98.770	3.175
15	99.332	3.263
16	99.712	2.204
17	100.000	1.673

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5113	0.5113
2	0.6295	0.1182
3	0.7109	0.0814
4	0.7750	0.0641
5	0.8287	0.0537
6	0.8753	0.0466
7	0.9167	0.0414
8	0.9542	0.0375
9	0.9885	0.0343
10	1.0202	0.0317
11	1.0498	0.0296
12	1.0776	0.0278
13	1.1088	0.0312
14	1.1385	0.0297
15	1.1669	0.0284
16	1.1940	0.0272
17	1.2201	0.0261
18	1.2453	0.0251
19	1.2695	0.0243
20	1.2930	0.0234
21	1.3157	0.0227
22	1.3377	0.0220
23	1.3591	0.0214
24	1.3799	0.0208
25	1.4001	0.0202

26	1.4198	0.0197
27	1.4391	0.0192
28	1.4579	0.0188
29	1.4762	0.0184
30	1.4942	0.0180
31	1.5118	0.0176
32	1.5290	0.0172
33	1.5459	0.0169
34	1.5624	0.0166
35	1.5787	0.0162
36	1.5946	0.0159
37	1.6102	0.0156
38	1.6255	0.0153
39	1.6406	0.0151
40	1.6554	0.0148
41	1.6700	0.0146
42	1.6843	0.0144
43	1.6985	0.0141
44	1.7124	0.0139
45	1.7261	0.0137
46	1.7397	0.0135
47	1.7530	0.0133
48	1.7661	0.0132
49	1.7791	0.0130
50	1.7919	0.0128
51	1.8046	0.0126
52	1.8171	0.0125
53	1.8294	0.0123
54	1.8416	0.0122
55	1.8536	0.0120
56	1.8655	0.0119
57	1.8773	0.0118
58	1.8889	0.0116
59	1.9004	0.0115
60	1.9118	0.0114
61	1.9231	0.0113
62	1.9342	0.0111
63	1.9452	0.0110
64	1.9561	0.0109
65	1.9669	0.0108
66	1.9776	0.0107
67	1.9882	0.0106
68	1.9987	0.0105
69	2.0091	0.0104
70	2.0194	0.0103
71	2.0296	0.0102
72	2.0397	0.0101
73	2.0502	0.0105
74	2.0606	0.0104
75	2.0710	0.0103

76	2.0812	0.0103
77	2.0914	0.0102
78	2.1015	0.0101
79	2.1115	0.0100
80	2.1214	0.0099
81	2.1312	0.0098
82	2.1410	0.0098
83	2.1507	0.0097
84	2.1603	0.0096
85	2.1699	0.0096
86	2.1794	0.0095
87	2.1888	0.0094
88	2.1981	0.0093
89	2.2074	0.0093
90	2.2166	0.0092
91	2.2258	0.0091
92	2.2349	0.0091
93	2.2439	0.0090
94	2.2528	0.0090
95	2.2617	0.0089
96	2.2706	0.0088
97	2.2794	0.0088
98	2.2881	0.0087
99	2.2968	0.0087
100	2.3054	0.0086
101	2.3140	0.0086
102	2.3225	0.0085
103	2.3310	0.0085
104	2.3394	0.0084
105	2.3477	0.0084
106	2.3560	0.0083
107	2.3643	0.0083
108	2.3725	0.0082
109	2.3807	0.0082
110	2.3888	0.0081
111	2.3969	0.0081
112	2.4049	0.0080
113	2.4129	0.0080
114	2.4208	0.0079
115	2.4287	0.0079
116	2.4366	0.0079
117	2.4444	0.0078
118	2.4521	0.0078
119	2.4599	0.0077
120	2.4675	0.0077
121	2.4752	0.0076
122	2.4828	0.0076
123	2.4904	0.0076
124	2.4979	0.0075
125	2.5054	0.0075

126	2.5128	0.0075
127	2.5203	0.0074
128	2.5276	0.0074
129	2.5350	0.0073
130	2.5423	0.0073
131	2.5496	0.0073
132	2.5568	0.0072
133	2.5640	0.0072
134	2.5712	0.0072
135	2.5783	0.0071
136	2.5854	0.0071
137	2.5925	0.0071
138	2.5995	0.0070
139	2.6065	0.0070
140	2.6135	0.0070
141	2.6204	0.0069
142	2.6274	0.0069
143	2.6342	0.0069
144	2.6411	0.0069
145	2.6479	0.0068
146	2.6547	0.0068
147	2.6615	0.0068
148	2.6682	0.0067
149	2.6749	0.0067
150	2.6816	0.0067
151	2.6882	0.0067
152	2.6949	0.0066
153	2.7015	0.0066
154	2.7080	0.0066
155	2.7146	0.0065
156	2.7211	0.0065
157	2.7276	0.0065
158	2.7340	0.0065
159	2.7405	0.0064
160	2.7469	0.0064
161	2.7533	0.0064
162	2.7596	0.0064
163	2.7660	0.0063
164	2.7723	0.0063
165	2.7786	0.0063
166	2.7848	0.0063
167	2.7911	0.0062
168	2.7973	0.0062
169	2.8035	0.0062
170	2.8097	0.0062
171	2.8158	0.0061
172	2.8219	0.0061
173	2.8280	0.0061
174	2.8341	0.0061
175	2.8402	0.0061

176	2.8462	0.0060
177	2.8522	0.0060
178	2.8582	0.0060
179	2.8642	0.0060
180	2.8702	0.0060
181	2.8761	0.0059
182	2.8820	0.0059
183	2.8879	0.0059
184	2.8938	0.0059
185	2.8996	0.0059
186	2.9055	0.0058
187	2.9113	0.0058
188	2.9171	0.0058
189	2.9229	0.0058
190	2.9286	0.0058
191	2.9343	0.0057
192	2.9401	0.0057
193	2.9458	0.0057
194	2.9514	0.0057
195	2.9571	0.0057
196	2.9628	0.0056
197	2.9684	0.0056
198	2.9740	0.0056
199	2.9796	0.0056
200	2.9851	0.0056
201	2.9907	0.0056
202	2.9962	0.0055
203	3.0018	0.0055
204	3.0073	0.0055
205	3.0128	0.0055
206	3.0182	0.0055
207	3.0237	0.0055
208	3.0291	0.0054
209	3.0345	0.0054
210	3.0399	0.0054
211	3.0453	0.0054
212	3.0507	0.0054
213	3.0561	0.0054
214	3.0614	0.0053
215	3.0667	0.0053
216	3.0720	0.0053
217	3.0773	0.0053
218	3.0826	0.0053
219	3.0879	0.0053
220	3.0931	0.0052
221	3.0983	0.0052
222	3.1036	0.0052
223	3.1088	0.0052
224	3.1140	0.0052
225	3.1191	0.0052

226	3.1243	0.0052
227	3.1294	0.0051
228	3.1346	0.0051
229	3.1397	0.0051
230	3.1448	0.0051
231	3.1499	0.0051
232	3.1550	0.0051
233	3.1600	0.0051
234	3.1651	0.0050
235	3.1701	0.0050
236	3.1751	0.0050
237	3.1801	0.0050
238	3.1851	0.0050
239	3.1901	0.0050
240	3.1951	0.0050
241	3.2000	0.0050
242	3.2050	0.0049
243	3.2099	0.0049
244	3.2148	0.0049
245	3.2197	0.0049
246	3.2246	0.0049
247	3.2295	0.0049
248	3.2344	0.0049
249	3.2392	0.0049
250	3.2441	0.0048
251	3.2489	0.0048
252	3.2537	0.0048
253	3.2585	0.0048
254	3.2633	0.0048
255	3.2681	0.0048
256	3.2729	0.0048
257	3.2777	0.0048
258	3.2824	0.0047
259	3.2871	0.0047
260	3.2919	0.0047
261	3.2966	0.0047
262	3.3013	0.0047
263	3.3060	0.0047
264	3.3107	0.0047
265	3.3153	0.0047
266	3.3200	0.0047
267	3.3246	0.0046
268	3.3293	0.0046
269	3.3339	0.0046
270	3.3385	0.0046
271	3.3431	0.0046
272	3.3477	0.0046
273	3.3523	0.0046
274	3.3569	0.0046
275	3.3614	0.0046

276	3.3660	0.0046
277	3.3705	0.0045
278	3.3750	0.0045
279	3.3796	0.0045
280	3.3841	0.0045
281	3.3886	0.0045
282	3.3931	0.0045
283	3.3975	0.0045
284	3.4020	0.0045
285	3.4065	0.0045
286	3.4109	0.0045
287	3.4154	0.0044
288	3.4198	0.0044

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0044	0.0005	0.0040
2	0.0044	0.0005	0.0040
3	0.0045	0.0005	0.0040
4	0.0045	0.0005	0.0040
5	0.0045	0.0005	0.0040
6	0.0045	0.0005	0.0040
7	0.0045	0.0005	0.0041
8	0.0045	0.0005	0.0041
9	0.0046	0.0005	0.0041
10	0.0046	0.0005	0.0041
11	0.0046	0.0005	0.0041
12	0.0046	0.0005	0.0041
13	0.0046	0.0005	0.0041
14	0.0046	0.0005	0.0042
15	0.0046	0.0005	0.0042
16	0.0047	0.0005	0.0042
17	0.0047	0.0005	0.0042
18	0.0047	0.0005	0.0042
19	0.0047	0.0005	0.0042
20	0.0047	0.0005	0.0042
21	0.0047	0.0005	0.0043
22	0.0048	0.0005	0.0043
23	0.0048	0.0005	0.0043
24	0.0048	0.0005	0.0043
25	0.0048	0.0005	0.0043
26	0.0048	0.0005	0.0043
27	0.0049	0.0005	0.0044
28	0.0049	0.0005	0.0044
29	0.0049	0.0005	0.0044
30	0.0049	0.0005	0.0044
31	0.0049	0.0005	0.0044
32	0.0049	0.0005	0.0044

33	0.0050	0.0005	0.0045
34	0.0050	0.0005	0.0045
35	0.0050	0.0005	0.0045
36	0.0050	0.0005	0.0045
37	0.0050	0.0005	0.0045
38	0.0051	0.0005	0.0045
39	0.0051	0.0005	0.0046
40	0.0051	0.0005	0.0046
41	0.0051	0.0005	0.0046
42	0.0051	0.0005	0.0046
43	0.0052	0.0005	0.0046
44	0.0052	0.0005	0.0047
45	0.0052	0.0005	0.0047
46	0.0052	0.0005	0.0047
47	0.0053	0.0005	0.0047
48	0.0053	0.0005	0.0047
49	0.0053	0.0005	0.0048
50	0.0053	0.0005	0.0048
51	0.0054	0.0005	0.0048
52	0.0054	0.0005	0.0048
53	0.0054	0.0005	0.0049
54	0.0054	0.0006	0.0049
55	0.0055	0.0006	0.0049
56	0.0055	0.0006	0.0049
57	0.0055	0.0006	0.0049
58	0.0055	0.0006	0.0050
59	0.0056	0.0006	0.0050
60	0.0056	0.0006	0.0050
61	0.0056	0.0006	0.0050
62	0.0056	0.0006	0.0051
63	0.0057	0.0006	0.0051
64	0.0057	0.0006	0.0051
65	0.0057	0.0006	0.0051
66	0.0057	0.0006	0.0052
67	0.0058	0.0006	0.0052
68	0.0058	0.0006	0.0052
69	0.0058	0.0006	0.0052
70	0.0059	0.0006	0.0053
71	0.0059	0.0006	0.0053
72	0.0059	0.0006	0.0053
73	0.0060	0.0006	0.0053
74	0.0060	0.0006	0.0054
75	0.0060	0.0006	0.0054
76	0.0060	0.0006	0.0054
77	0.0061	0.0006	0.0055
78	0.0061	0.0006	0.0055
79	0.0061	0.0006	0.0055
80	0.0062	0.0006	0.0055
81	0.0062	0.0006	0.0056
82	0.0062	0.0006	0.0056

83	0.0063	0.0006	0.0057
84	0.0063	0.0006	0.0057
85	0.0064	0.0006	0.0057
86	0.0064	0.0006	0.0057
87	0.0064	0.0007	0.0058
88	0.0065	0.0007	0.0058
89	0.0065	0.0007	0.0059
90	0.0065	0.0007	0.0059
91	0.0066	0.0007	0.0059
92	0.0066	0.0007	0.0059
93	0.0067	0.0007	0.0060
94	0.0067	0.0007	0.0060
95	0.0068	0.0007	0.0061
96	0.0068	0.0007	0.0061
97	0.0069	0.0007	0.0062
98	0.0069	0.0007	0.0062
99	0.0069	0.0007	0.0062
100	0.0070	0.0007	0.0063
101	0.0070	0.0007	0.0063
102	0.0071	0.0007	0.0064
103	0.0071	0.0007	0.0064
104	0.0072	0.0007	0.0064
105	0.0072	0.0007	0.0065
106	0.0073	0.0007	0.0065
107	0.0073	0.0007	0.0066
108	0.0074	0.0007	0.0066
109	0.0075	0.0008	0.0067
110	0.0075	0.0008	0.0067
111	0.0076	0.0008	0.0068
112	0.0076	0.0008	0.0068
113	0.0077	0.0008	0.0069
114	0.0077	0.0008	0.0069
115	0.0078	0.0008	0.0070
116	0.0079	0.0008	0.0071
117	0.0079	0.0008	0.0071
118	0.0080	0.0008	0.0072
119	0.0081	0.0008	0.0073
120	0.0081	0.0008	0.0073
121	0.0082	0.0008	0.0074
122	0.0083	0.0008	0.0074
123	0.0084	0.0008	0.0075
124	0.0084	0.0009	0.0076
125	0.0085	0.0009	0.0076
126	0.0086	0.0009	0.0077
127	0.0087	0.0009	0.0078
128	0.0087	0.0009	0.0078
129	0.0088	0.0009	0.0079
130	0.0089	0.0009	0.0080
131	0.0090	0.0009	0.0081
132	0.0091	0.0009	0.0082

133	0.0092	0.0009	0.0083
134	0.0093	0.0009	0.0083
135	0.0094	0.0010	0.0085
136	0.0095	0.0010	0.0085
137	0.0096	0.0010	0.0086
138	0.0097	0.0010	0.0087
139	0.0098	0.0010	0.0088
140	0.0099	0.0010	0.0089
141	0.0101	0.0010	0.0091
142	0.0102	0.0010	0.0091
143	0.0103	0.0011	0.0093
144	0.0104	0.0011	0.0094
145	0.0101	0.0010	0.0091
146	0.0102	0.0010	0.0092
147	0.0104	0.0011	0.0093
148	0.0105	0.0011	0.0094
149	0.0107	0.0011	0.0096
150	0.0108	0.0011	0.0097
151	0.0110	0.0011	0.0099
152	0.0111	0.0011	0.0100
153	0.0114	0.0012	0.0102
154	0.0115	0.0012	0.0103
155	0.0118	0.0012	0.0106
156	0.0119	0.0012	0.0107
157	0.0122	0.0012	0.0109
158	0.0123	0.0013	0.0111
159	0.0126	0.0013	0.0114
160	0.0128	0.0013	0.0115
161	0.0132	0.0013	0.0118
162	0.0133	0.0014	0.0120
163	0.0137	0.0014	0.0123
164	0.0139	0.0014	0.0125
165	0.0144	0.0015	0.0129
166	0.0146	0.0015	0.0131
167	0.0151	0.0015	0.0135
168	0.0153	0.0016	0.0138
169	0.0159	0.0016	0.0143
170	0.0162	0.0017	0.0146
171	0.0169	0.0017	0.0152
172	0.0172	0.0017	0.0155
173	0.0180	0.0018	0.0161
174	0.0184	0.0019	0.0165
175	0.0192	0.0020	0.0173
176	0.0197	0.0020	0.0177
177	0.0208	0.0021	0.0187
178	0.0214	0.0022	0.0192
179	0.0227	0.0022	0.0205
180	0.0234	0.0022	0.0213
181	0.0251	0.0022	0.0230
182	0.0261	0.0022	0.0239

183	0.0284	0.0022	0.0262
184	0.0297	0.0022	0.0275
185	0.0278	0.0022	0.0256
186	0.0296	0.0022	0.0274
187	0.0343	0.0022	0.0321
188	0.0375	0.0022	0.0353
189	0.0466	0.0022	0.0444
190	0.0537	0.0022	0.0515
191	0.0814	0.0022	0.0792
192	0.1182	0.0022	0.1160
193	0.5113	0.0022	0.5091
194	0.0641	0.0022	0.0619
195	0.0414	0.0022	0.0392
196	0.0317	0.0022	0.0296
197	0.0312	0.0022	0.0290
198	0.0272	0.0022	0.0250
199	0.0243	0.0022	0.0221
200	0.0220	0.0022	0.0198
201	0.0202	0.0021	0.0182
202	0.0188	0.0019	0.0169
203	0.0176	0.0018	0.0158
204	0.0166	0.0017	0.0149
205	0.0156	0.0016	0.0140
206	0.0148	0.0015	0.0133
207	0.0141	0.0014	0.0127
208	0.0135	0.0014	0.0122
209	0.0130	0.0013	0.0117
210	0.0125	0.0013	0.0112
211	0.0120	0.0012	0.0108
212	0.0116	0.0012	0.0104
213	0.0113	0.0011	0.0101
214	0.0109	0.0011	0.0098
215	0.0106	0.0011	0.0095
216	0.0103	0.0010	0.0092
217	0.0105	0.0011	0.0094
218	0.0103	0.0010	0.0092
219	0.0100	0.0010	0.0090
220	0.0098	0.0010	0.0088
221	0.0096	0.0010	0.0086
222	0.0093	0.0009	0.0084
223	0.0091	0.0009	0.0082
224	0.0090	0.0009	0.0081
225	0.0088	0.0009	0.0079
226	0.0086	0.0009	0.0077
227	0.0085	0.0009	0.0076
228	0.0083	0.0008	0.0075
229	0.0082	0.0008	0.0073
230	0.0080	0.0008	0.0072
231	0.0079	0.0008	0.0071
232	0.0078	0.0008	0.0070

233	0.0076	0.0008	0.0069
234	0.0075	0.0008	0.0068
235	0.0074	0.0008	0.0067
236	0.0073	0.0007	0.0066
237	0.0072	0.0007	0.0065
238	0.0071	0.0007	0.0064
239	0.0070	0.0007	0.0063
240	0.0069	0.0007	0.0062
241	0.0068	0.0007	0.0061
242	0.0067	0.0007	0.0061
243	0.0067	0.0007	0.0060
244	0.0066	0.0007	0.0059
245	0.0065	0.0007	0.0058
246	0.0064	0.0007	0.0058
247	0.0063	0.0006	0.0057
248	0.0063	0.0006	0.0056
249	0.0062	0.0006	0.0056
250	0.0061	0.0006	0.0055
251	0.0061	0.0006	0.0054
252	0.0060	0.0006	0.0054
253	0.0059	0.0006	0.0053
254	0.0059	0.0006	0.0053
255	0.0058	0.0006	0.0052
256	0.0058	0.0006	0.0052
257	0.0057	0.0006	0.0051
258	0.0056	0.0006	0.0051
259	0.0056	0.0006	0.0050
260	0.0055	0.0006	0.0050
261	0.0055	0.0006	0.0049
262	0.0054	0.0006	0.0049
263	0.0054	0.0005	0.0048
264	0.0053	0.0005	0.0048
265	0.0053	0.0005	0.0048
266	0.0052	0.0005	0.0047
267	0.0052	0.0005	0.0047
268	0.0052	0.0005	0.0046
269	0.0051	0.0005	0.0046
270	0.0051	0.0005	0.0046
271	0.0050	0.0005	0.0045
272	0.0050	0.0005	0.0045
273	0.0050	0.0005	0.0045
274	0.0049	0.0005	0.0044
275	0.0049	0.0005	0.0044
276	0.0048	0.0005	0.0044
277	0.0048	0.0005	0.0043
278	0.0048	0.0005	0.0043
279	0.0047	0.0005	0.0043
280	0.0047	0.0005	0.0042
281	0.0047	0.0005	0.0042
282	0.0046	0.0005	0.0042

283	0.0046	0.0005	0.0041
284	0.0046	0.0005	0.0041
285	0.0045	0.0005	0.0041
286	0.0045	0.0005	0.0041
287	0.0045	0.0005	0.0040
288	0.0045	0.0005	0.0040

Total soil rain loss = 0.26(In)
Total effective rainfall = 3.16(In)
Peak flow rate in flood hydrograph = 117.49(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

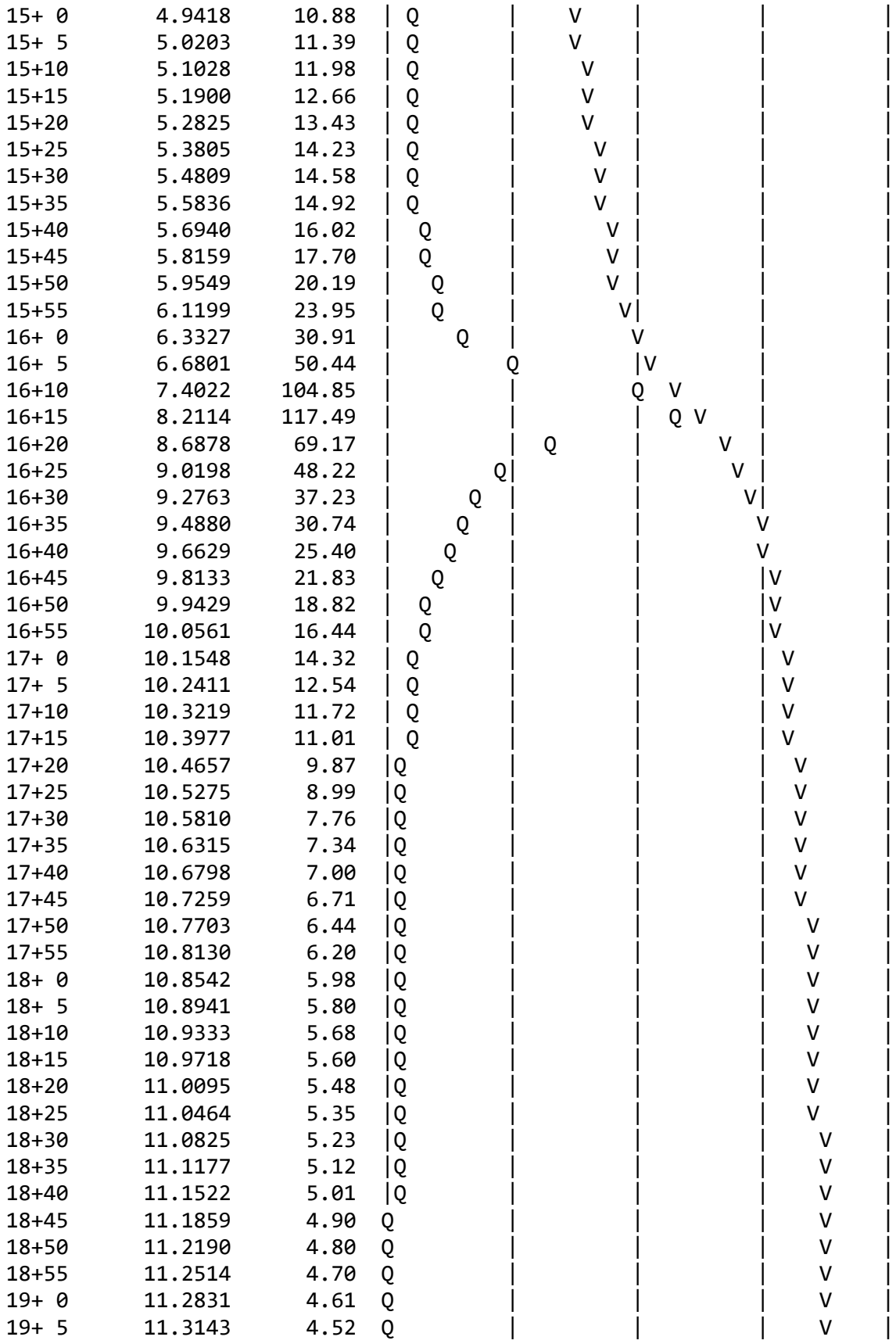
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	50.0	100.0	150.0	200.0
0+ 5	0.0006	0.08	Q	|	|	|	|
0+10	0.0049	0.63	Q	|	|	|	|
0+15	0.0142	1.34	Q	|	|	|	|
0+20	0.0257	1.67	Q	|	|	|	|
0+25	0.0385	1.86	Q	|	|	|	|
0+30	0.0522	1.99	Q	|	|	|	|
0+35	0.0665	2.08	Q	|	|	|	|
0+40	0.0814	2.15	Q	|	|	|	|
0+45	0.0966	2.21	Q	|	|	|	|
0+50	0.1121	2.25	Q	|	|	|	|
0+55	0.1279	2.29	Q	|	|	|	|
1+ 0	0.1439	2.32	Q	|	|	|	|
1+ 5	0.1600	2.34	Q	|	|	|	|
1+10	0.1762	2.36	Q	|	|	|	|
1+15	0.1926	2.38	Q	|	|	|	|
1+20	0.2092	2.40	Q	|	|	|	|
1+25	0.2258	2.41	Q	|	|	|	|
1+30	0.2425	2.42	Q	|	|	|	|
1+35	0.2592	2.43	Q	|	|	|	|
1+40	0.2760	2.44	Q	|	|	|	|
1+45	0.2929	2.45	Q	|	|	|	|
1+50	0.3098	2.46	Q	|	|	|	|
1+55	0.3268	2.47	QV	|	|	|	|
2+ 0	0.3438	2.48	QV	|	|	|	|
2+ 5	0.3609	2.48	QV	|	|	|	|
2+10	0.3781	2.49	QV	|	|	|	|
2+15	0.3953	2.50	QV	|	|	|	|
2+20	0.4126	2.51	QV	|	|	|	|
2+25	0.4300	2.52	QV	|	|	|	|

2+30	0.4474	2.53	QV	|	|	|	|
2+35	0.4649	2.54	QV	|	|	|	|
2+40	0.4825	2.55	QV	|	|	|	|
2+45	0.5001	2.56	QV	|	|	|	|
2+50	0.5178	2.57	QV	|	|	|	|
2+55	0.5356	2.58	QV	|	|	|	|
3+ 0	0.5534	2.59	QV	|	|	|	|
3+ 5	0.5713	2.60	QV	|	|	|	|
3+10	0.5893	2.61	QV	|	|	|	|
3+15	0.6074	2.62	QV	|	|	|	|
3+20	0.6255	2.63	QV	|	|	|	|
3+25	0.6437	2.64	Q V	|	|	|	|
3+30	0.6620	2.65	Q V	|	|	|	|
3+35	0.6803	2.66	Q V	|	|	|	|
3+40	0.6987	2.67	Q V	|	|	|	|
3+45	0.7172	2.69	Q V	|	|	|	|
3+50	0.7358	2.70	Q V	|	|	|	|
3+55	0.7544	2.71	Q V	|	|	|	|
4+ 0	0.7732	2.72	Q V	|	|	|	|
4+ 5	0.7920	2.73	Q V	|	|	|	|
4+10	0.8109	2.74	Q V	|	|	|	|
4+15	0.8299	2.76	Q V	|	|	|	|
4+20	0.8489	2.77	Q V	|	|	|	|
4+25	0.8680	2.78	Q V	|	|	|	|
4+30	0.8873	2.79	Q V	|	|	|	|
4+35	0.9066	2.80	Q V	|	|	|	|
4+40	0.9260	2.82	Q V	|	|	|	|
4+45	0.9455	2.83	Q V	|	|	|	|
4+50	0.9650	2.84	Q V	|	|	|	|
4+55	0.9847	2.86	Q V	|	|	|	|
5+ 0	1.0045	2.87	Q V	|	|	|	|
5+ 5	1.0243	2.88	Q V	|	|	|	|
5+10	1.0442	2.89	Q V	|	|	|	|
5+15	1.0643	2.91	Q V	|	|	|	|
5+20	1.0844	2.92	Q V	|	|	|	|
5+25	1.1046	2.94	Q V	|	|	|	|
5+30	1.1249	2.95	Q V	|	|	|	|
5+35	1.1454	2.96	Q V	|	|	|	|
5+40	1.1659	2.98	Q V	|	|	|	|
5+45	1.1865	2.99	Q V	|	|	|	|
5+50	1.2072	3.01	Q V	|	|	|	|
5+55	1.2280	3.02	Q V	|	|	|	|
6+ 0	1.2490	3.04	Q V	|	|	|	|
6+ 5	1.2700	3.05	Q V	|	|	|	|
6+10	1.2912	3.07	Q V	|	|	|	|
6+15	1.3124	3.09	Q V	|	|	|	|
6+20	1.3338	3.10	Q V	|	|	|	|
6+25	1.3553	3.12	Q V	|	|	|	|
6+30	1.3769	3.14	Q V	|	|	|	|
6+35	1.3986	3.15	Q V	|	|	|	|

6+40	1.4204	3.17	Q	V				
6+45	1.4424	3.19	Q	V				
6+50	1.4644	3.20	Q	V				
6+55	1.4866	3.22	Q	V				
7+ 0	1.5089	3.24	Q	V				
7+ 5	1.5314	3.26	Q	V				
7+10	1.5539	3.28	Q	V				
7+15	1.5766	3.30	Q	V				
7+20	1.5995	3.31	Q	V				
7+25	1.6224	3.33	Q	V				
7+30	1.6455	3.35	Q	V				
7+35	1.6688	3.37	Q	V				
7+40	1.6921	3.39	Q	V				
7+45	1.7157	3.42	Q	V				
7+50	1.7393	3.44	Q	V				
7+55	1.7631	3.46	Q	V				
8+ 0	1.7871	3.48	Q	V				
8+ 5	1.8112	3.50	Q	V				
8+10	1.8355	3.52	Q	V				
8+15	1.8599	3.55	Q	V				
8+20	1.8845	3.57	Q	V				
8+25	1.9092	3.59	Q	V				
8+30	1.9341	3.62	Q	V				
8+35	1.9592	3.64	Q	V				
8+40	1.9845	3.67	Q	V				
8+45	2.0099	3.69	Q	V				
8+50	2.0355	3.72	Q	V				
8+55	2.0613	3.74	Q	V				
9+ 0	2.0872	3.77	Q	V				
9+ 5	2.1134	3.80	Q	V				
9+10	2.1397	3.82	Q	V				
9+15	2.1663	3.85	Q	V				
9+20	2.1930	3.88	Q	V				
9+25	2.2199	3.91	Q	V				
9+30	2.2471	3.94	Q	V				
9+35	2.2744	3.97	Q	V				
9+40	2.3020	4.00	Q	V				
9+45	2.3298	4.03	Q	V				
9+50	2.3578	4.07	Q	V				
9+55	2.3860	4.10	Q	V				
10+ 0	2.4145	4.13	Q	V				
10+ 5	2.4432	4.17	Q	V				
10+10	2.4722	4.20	Q	V				
10+15	2.5014	4.24	Q	V				
10+20	2.5308	4.28	Q	V				
10+25	2.5605	4.31	Q	V				
10+30	2.5905	4.35	Q	V				
10+35	2.6208	4.39	Q	V				
10+40	2.6513	4.43	Q	V				
10+45	2.6821	4.48	Q	V				

```
10+50       2.7132      4.52  Q       V |          |          |          |
10+55       2.7446      4.56  Q       V |          |          |          |
11+ 0       2.7764      4.61  Q       V |          |          |          |
11+ 5       2.8084      4.65  Q       V |          |          |          |
11+10       2.8408      4.70  Q       V |          |          |          |
11+15       2.8735      4.75  Q        V|          |          |          |
11+20       2.9065      4.80  Q        V|          |          |          |
11+25       2.9399      4.85  Q        V|          |          |          |
11+30       2.9736      4.90  Q        V|          |          |          |
11+35       3.0077      4.95  Q        V|          |          |          |
11+40       3.0422      5.01  |Q       V|          |          |          |
11+45       3.0771      5.07  |Q       V|          |          |          |
11+50       3.1124      5.13  |Q       V|          |          |          |
11+55       3.1482      5.19  |Q       V|          |          |          |
12+ 0       3.1843      5.25  |Q        V          |          |          |
12+ 5       3.2209      5.30  |Q        V          |          |          |
12+10       3.2574      5.31  |Q        V          |          |          |
12+15       3.2939      5.30  |Q        V          |          |          |
12+20       3.3306      5.33  |Q        V          |          |          |
12+25       3.3677      5.38  |Q        V          |          |          |
12+30       3.4052      5.44  |Q        V          |          |          |
12+35       3.4432      5.51  |Q        V          |          |          |
12+40       3.4816      5.59  |Q        |V          |          |          |
12+45       3.5207      5.67  |Q        |V          |          |          |
12+50       3.5602      5.75  |Q        |V          |          |          |
12+55       3.6004      5.84  |Q        |V          |          |          |
13+ 0       3.6413      5.93  |Q        |V          |          |          |
13+ 5       3.6827      6.02  |Q        |V          |          |          |
13+10       3.7249      6.12  |Q        |V          |          |          |
13+15       3.7678      6.23  |Q        |V          |          |          |
13+20       3.8115      6.34  |Q        | V         |          |          |
13+25       3.8560      6.46  |Q        | V         |          |          |
13+30       3.9013      6.58  |Q        | V         |          |          |
13+35       3.9475      6.71  |Q        | V         |          |          |
13+40       3.9947      6.85  |Q        | V         |          |          |
13+45       4.0428      6.99  |Q        | V         |          |          |
13+50       4.0920      7.14  |Q        | V         |          |          |
13+55       4.1423      7.30  |Q        |  V        |          |          |
14+ 0       4.1938      7.47  |Q        |  V        |          |          |
14+ 5       4.2465      7.65  |Q        |  V        |          |          |
14+10       4.3005      7.85  |Q        |  V        |          |          |
14+15       4.3561      8.07  |Q        |  V        |          |          |
14+20       4.4132      8.29  |Q        |  V        |          |          |
14+25       4.4720      8.53  |Q        |   V       |          |          |
14+30       4.5325      8.79  |Q        |   V       |          |          |
14+35       4.5949      9.06  |Q        |   V       |          |          |
14+40       4.6593      9.36  |Q        |   V       |          |          |
14+45       4.7260      9.68  |Q        |   V       |          |          |
14+50       4.7951     10.03  | Q       |    V      |          |          |
14+55       4.8669     10.43  | Q       |    V      |          |          |
```



```
19+10      11.3449      4.44  Q        |          |          |    V     |
19+15      11.3749      4.36  Q        |          |          |    V     |
19+20      11.4044      4.28  Q        |          |          |     V    |
19+25      11.4334      4.21  Q        |          |          |     V    |
19+30      11.4619      4.14  Q        |          |          |     V    |
19+35      11.4900      4.07  Q        |          |          |     V    |
19+40      11.5176      4.01  Q        |          |          |     V    |
19+45      11.5448      3.95  Q        |          |          |     V    |
19+50      11.5715      3.89  Q        |          |          |     V    |
19+55      11.5979      3.83  Q        |          |          |     V    |
20+ 0      11.6239      3.77  Q        |          |          |     V    |
20+ 5      11.6495      3.72  Q        |          |          |     V    |
20+10      11.6748      3.67  Q        |          |          |     V    |
20+15      11.6997      3.62  Q        |          |          |      V   |
20+20      11.7243      3.57  Q        |          |          |      V   |
20+25      11.7486      3.53  Q        |          |          |      V   |
20+30      11.7726      3.48  Q        |          |          |      V   |
20+35      11.7963      3.44  Q        |          |          |      V   |
20+40      11.8196      3.40  Q        |          |          |      V   |
20+45      11.8428      3.36  Q        |          |          |      V   |
20+50      11.8656      3.32  Q        |          |          |      V   |
20+55      11.8882      3.28  Q        |          |          |      V   |
21+ 0      11.9105      3.24  Q        |          |          |      V   |
21+ 5      11.9326      3.21  Q        |          |          |      V   |
21+10      11.9544      3.17  Q        |          |          |      V   |
21+15      11.9760      3.14  Q        |          |          |      V   |
21+20      11.9974      3.10  Q        |          |          |      V   |
21+25      12.0185      3.07  Q        |          |          |       V  |
21+30      12.0395      3.04  Q        |          |          |       V  |
21+35      12.0602      3.01  Q        |          |          |       V  |
21+40      12.0807      2.98  Q        |          |          |       V  |
21+45      12.1011      2.95  Q        |          |          |       V  |
21+50      12.1212      2.92  Q        |          |          |       V  |
21+55      12.1411      2.90  Q        |          |          |       V  |
22+ 0      12.1609      2.87  Q        |          |          |       V  |
22+ 5      12.1805      2.84  Q        |          |          |       V  |
22+10      12.1999      2.82  Q        |          |          |       V  |
22+15      12.2191      2.79  Q        |          |          |       V  |
22+20      12.2382      2.77  Q        |          |          |       V  |
22+25      12.2570      2.74  Q        |          |          |       V  |
22+30      12.2758      2.72  Q        |          |          |       V  |
22+35      12.2944      2.70  Q        |          |          |       V  |
22+40      12.3128      2.67  Q        |          |          |       V  |
22+45      12.3311      2.65  Q        |          |          |        V |
22+50      12.3492      2.63  Q        |          |          |        V |
22+55      12.3672      2.61  Q        |          |          |        V |
23+ 0      12.3850      2.59  Q        |          |          |        V |
23+ 5      12.4027      2.57  Q        |          |          |        V |
23+10      12.4203      2.55  Q        |          |          |        V |
23+15      12.4377      2.53  Q        |          |          |        V |
```

```
   23+20      12.4550      2.51  Q         |          |          |         V|
   23+25      12.4722      2.49  Q         |          |          |         V|
   23+30      12.4892      2.48  Q         |          |          |         V|
   23+35      12.5061      2.46  Q         |          |          |         V|
   23+40      12.5229      2.44  Q         |          |          |         V|
   23+45      12.5396      2.42  Q         |          |          |         V|
   23+50      12.5562      2.41  Q         |          |          |         V|
   23+55      12.5726      2.39  Q         |          |          |         V|
   24+ 0      12.5890      2.37  Q         |          |          |         V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/08/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Basin C
100-year Developed

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
38.57	1	1.08
Rainfall data for year 100		
38.57	6	2.04
Rainfall data for year 100		
38.57	24	3.42

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	86.2	38.57	1.000	0.262	0.100	0.026

Area-averaged adjusted loss rate Fm (In/Hr) = 0.026

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
3.86	0.100	69.0	86.2	1.60	0.598
34.71	0.900	98.0	98.0	0.20	0.932

Area-averaged catchment yield fraction, Y = 0.898
Area-averaged low loss fraction, Yb = 0.102
User entry of time of concentration = 0.208 (hours)
++
Watershed area = 38.57(Ac.)
Catchment Lag time = 0.166 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 50.0801
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.026(In/Hr)
Average low loss rate fraction (Yb) = 0.102 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.512(In)
Computed peak 30-minute rainfall = 0.877(In)
Specified peak 1-hour rainfall = 1.080(In)
Computed peak 3-hour rainfall = 1.595(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 3.420(In)

Rainfall depth area reduction factors:
Using a total area of 38.57(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.512(In)
30-minute factor = 0.998 Adjusted rainfall = 0.876(In)
1-hour factor = 0.998 Adjusted rainfall = 1.078(In)
3-hour factor = 1.000 Adjusted rainfall = 1.595(In)
6-hour factor = 1.000 Adjusted rainfall = 2.040(In)
24-hour factor = 1.000 Adjusted rainfall = 3.420(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 466.46 (CFS))	
1	3.973	18.532
2	30.607	124.236
3	60.634	140.065
4	73.829	61.548
5	81.493	35.748
6	86.639	24.002
7	90.205	16.637
8	92.803	12.116
9	94.773	9.192
10	96.270	6.981
11	97.365	5.109
12	98.059	3.238
13	98.612	2.579
14	99.213	2.803
15	99.664	2.102
16	100.000	1.570

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5115	0.5115
2	0.6298	0.1182
3	0.7112	0.0815
4	0.7754	0.0641
5	0.8290	0.0537
6	0.8756	0.0466
7	0.9171	0.0414
8	0.9546	0.0375
9	0.9889	0.0343
10	1.0207	0.0318
11	1.0503	0.0296
12	1.0780	0.0278
13	1.1092	0.0312
14	1.1389	0.0297
15	1.1673	0.0284
16	1.1944	0.0272
17	1.2205	0.0261
18	1.2456	0.0251
19	1.2699	0.0242
20	1.2933	0.0234
21	1.3160	0.0227
22	1.3380	0.0220
23	1.3594	0.0214
24	1.3801	0.0208
25	1.4004	0.0202
26	1.4201	0.0197

27	1.4393	0.0192
28	1.4581	0.0188
29	1.4764	0.0183
30	1.4944	0.0179
31	1.5119	0.0176
32	1.5291	0.0172
33	1.5460	0.0169
34	1.5625	0.0165
35	1.5788	0.0162
36	1.5947	0.0159
37	1.6103	0.0156
38	1.6256	0.0153
39	1.6407	0.0151
40	1.6555	0.0148
41	1.6701	0.0146
42	1.6844	0.0144
43	1.6986	0.0141
44	1.7125	0.0139
45	1.7262	0.0137
46	1.7397	0.0135
47	1.7531	0.0133
48	1.7662	0.0132
49	1.7792	0.0130
50	1.7920	0.0128
51	1.8047	0.0126
52	1.8171	0.0125
53	1.8295	0.0123
54	1.8417	0.0122
55	1.8537	0.0120
56	1.8656	0.0119
57	1.8774	0.0118
58	1.8890	0.0116
59	1.9005	0.0115
60	1.9119	0.0114
61	1.9231	0.0113
62	1.9343	0.0111
63	1.9453	0.0110
64	1.9562	0.0109
65	1.9670	0.0108
66	1.9777	0.0107
67	1.9883	0.0106
68	1.9988	0.0105
69	2.0092	0.0104
70	2.0195	0.0103
71	2.0296	0.0102
72	2.0398	0.0101
73	2.0503	0.0105
74	2.0607	0.0104
75	2.0710	0.0103
76	2.0813	0.0103

77	2.0914	0.0102
78	2.1015	0.0101
79	2.1115	0.0100
80	2.1215	0.0099
81	2.1313	0.0098
82	2.1411	0.0098
83	2.1508	0.0097
84	2.1604	0.0096
85	2.1699	0.0096
86	2.1794	0.0095
87	2.1888	0.0094
88	2.1982	0.0093
89	2.2075	0.0093
90	2.2167	0.0092
91	2.2258	0.0091
92	2.2349	0.0091
93	2.2439	0.0090
94	2.2529	0.0090
95	2.2618	0.0089
96	2.2707	0.0088
97	2.2794	0.0088
98	2.2882	0.0087
99	2.2968	0.0087
100	2.3055	0.0086
101	2.3140	0.0086
102	2.3226	0.0085
103	2.3310	0.0085
104	2.3394	0.0084
105	2.3478	0.0084
106	2.3561	0.0083
107	2.3644	0.0083
108	2.3726	0.0082
109	2.3807	0.0082
110	2.3889	0.0081
111	2.3969	0.0081
112	2.4050	0.0080
113	2.4129	0.0080
114	2.4209	0.0079
115	2.4288	0.0079
116	2.4366	0.0079
117	2.4444	0.0078
118	2.4522	0.0078
119	2.4599	0.0077
120	2.4676	0.0077
121	2.4752	0.0076
122	2.4829	0.0076
123	2.4904	0.0076
124	2.4980	0.0075
125	2.5054	0.0075
126	2.5129	0.0075

127	2.5203	0.0074
128	2.5277	0.0074
129	2.5350	0.0073
130	2.5423	0.0073
131	2.5496	0.0073
132	2.5568	0.0072
133	2.5641	0.0072
134	2.5712	0.0072
135	2.5784	0.0071
136	2.5855	0.0071
137	2.5925	0.0071
138	2.5996	0.0070
139	2.6066	0.0070
140	2.6136	0.0070
141	2.6205	0.0069
142	2.6274	0.0069
143	2.6343	0.0069
144	2.6411	0.0069
145	2.6480	0.0068
146	2.6548	0.0068
147	2.6615	0.0068
148	2.6683	0.0067
149	2.6750	0.0067
150	2.6816	0.0067
151	2.6883	0.0067
152	2.6949	0.0066
153	2.7015	0.0066
154	2.7081	0.0066
155	2.7146	0.0065
156	2.7211	0.0065
157	2.7276	0.0065
158	2.7341	0.0065
159	2.7405	0.0064
160	2.7469	0.0064
161	2.7533	0.0064
162	2.7597	0.0064
163	2.7660	0.0063
164	2.7723	0.0063
165	2.7786	0.0063
166	2.7849	0.0063
167	2.7911	0.0062
168	2.7974	0.0062
169	2.8035	0.0062
170	2.8097	0.0062
171	2.8159	0.0061
172	2.8220	0.0061
173	2.8281	0.0061
174	2.8342	0.0061
175	2.8402	0.0061
176	2.8463	0.0060

177	2.8523	0.0060
178	2.8583	0.0060
179	2.8643	0.0060
180	2.8702	0.0060
181	2.8762	0.0059
182	2.8821	0.0059
183	2.8880	0.0059
184	2.8938	0.0059
185	2.8997	0.0059
186	2.9055	0.0058
187	2.9113	0.0058
188	2.9171	0.0058
189	2.9229	0.0058
190	2.9287	0.0058
191	2.9344	0.0057
192	2.9401	0.0057
193	2.9458	0.0057
194	2.9515	0.0057
195	2.9572	0.0057
196	2.9628	0.0056
197	2.9684	0.0056
198	2.9740	0.0056
199	2.9796	0.0056
200	2.9852	0.0056
201	2.9908	0.0056
202	2.9963	0.0055
203	3.0018	0.0055
204	3.0073	0.0055
205	3.0128	0.0055
206	3.0183	0.0055
207	3.0237	0.0055
208	3.0292	0.0054
209	3.0346	0.0054
210	3.0400	0.0054
211	3.0454	0.0054
212	3.0507	0.0054
213	3.0561	0.0054
214	3.0614	0.0053
215	3.0668	0.0053
216	3.0721	0.0053
217	3.0774	0.0053
218	3.0827	0.0053
219	3.0879	0.0053
220	3.0932	0.0052
221	3.0984	0.0052
222	3.1036	0.0052
223	3.1088	0.0052
224	3.1140	0.0052
225	3.1192	0.0052
226	3.1243	0.0052

227	3.1295	0.0051
228	3.1346	0.0051
229	3.1397	0.0051
230	3.1448	0.0051
231	3.1499	0.0051
232	3.1550	0.0051
233	3.1601	0.0051
234	3.1651	0.0050
235	3.1702	0.0050
236	3.1752	0.0050
237	3.1802	0.0050
238	3.1852	0.0050
239	3.1902	0.0050
240	3.1951	0.0050
241	3.2001	0.0050
242	3.2050	0.0049
243	3.2100	0.0049
244	3.2149	0.0049
245	3.2198	0.0049
246	3.2247	0.0049
247	3.2296	0.0049
248	3.2344	0.0049
249	3.2393	0.0049
250	3.2441	0.0048
251	3.2490	0.0048
252	3.2538	0.0048
253	3.2586	0.0048
254	3.2634	0.0048
255	3.2682	0.0048
256	3.2729	0.0048
257	3.2777	0.0048
258	3.2824	0.0047
259	3.2872	0.0047
260	3.2919	0.0047
261	3.2966	0.0047
262	3.3013	0.0047
263	3.3060	0.0047
264	3.3107	0.0047
265	3.3154	0.0047
266	3.3200	0.0047
267	3.3247	0.0046
268	3.3293	0.0046
269	3.3339	0.0046
270	3.3385	0.0046
271	3.3431	0.0046
272	3.3477	0.0046
273	3.3523	0.0046
274	3.3569	0.0046
275	3.3615	0.0046
276	3.3660	0.0046

277	3.3705	0.0045
278	3.3751	0.0045
279	3.3796	0.0045
280	3.3841	0.0045
281	3.3886	0.0045
282	3.3931	0.0045
283	3.3976	0.0045
284	3.4021	0.0045
285	3.4065	0.0045
286	3.4110	0.0045
287	3.4154	0.0044
288	3.4198	0.0044

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0044	0.0005	0.0040
2	0.0044	0.0005	0.0040
3	0.0045	0.0005	0.0040
4	0.0045	0.0005	0.0040
5	0.0045	0.0005	0.0040
6	0.0045	0.0005	0.0040
7	0.0045	0.0005	0.0041
8	0.0045	0.0005	0.0041
9	0.0046	0.0005	0.0041
10	0.0046	0.0005	0.0041
11	0.0046	0.0005	0.0041
12	0.0046	0.0005	0.0041
13	0.0046	0.0005	0.0041
14	0.0046	0.0005	0.0042
15	0.0046	0.0005	0.0042
16	0.0047	0.0005	0.0042
17	0.0047	0.0005	0.0042
18	0.0047	0.0005	0.0042
19	0.0047	0.0005	0.0042
20	0.0047	0.0005	0.0042
21	0.0047	0.0005	0.0043
22	0.0048	0.0005	0.0043
23	0.0048	0.0005	0.0043
24	0.0048	0.0005	0.0043
25	0.0048	0.0005	0.0043
26	0.0048	0.0005	0.0043
27	0.0049	0.0005	0.0044
28	0.0049	0.0005	0.0044
29	0.0049	0.0005	0.0044
30	0.0049	0.0005	0.0044
31	0.0049	0.0005	0.0044
32	0.0049	0.0005	0.0044
33	0.0050	0.0005	0.0045

34	0.0050	0.0005	0.0045
35	0.0050	0.0005	0.0045
36	0.0050	0.0005	0.0045
37	0.0050	0.0005	0.0045
38	0.0051	0.0005	0.0045
39	0.0051	0.0005	0.0046
40	0.0051	0.0005	0.0046
41	0.0051	0.0005	0.0046
42	0.0051	0.0005	0.0046
43	0.0052	0.0005	0.0046
44	0.0052	0.0005	0.0047
45	0.0052	0.0005	0.0047
46	0.0052	0.0005	0.0047
47	0.0053	0.0005	0.0047
48	0.0053	0.0005	0.0047
49	0.0053	0.0005	0.0048
50	0.0053	0.0005	0.0048
51	0.0054	0.0005	0.0048
52	0.0054	0.0005	0.0048
53	0.0054	0.0005	0.0049
54	0.0054	0.0006	0.0049
55	0.0055	0.0006	0.0049
56	0.0055	0.0006	0.0049
57	0.0055	0.0006	0.0049
58	0.0055	0.0006	0.0050
59	0.0056	0.0006	0.0050
60	0.0056	0.0006	0.0050
61	0.0056	0.0006	0.0050
62	0.0056	0.0006	0.0051
63	0.0057	0.0006	0.0051
64	0.0057	0.0006	0.0051
65	0.0057	0.0006	0.0051
66	0.0057	0.0006	0.0052
67	0.0058	0.0006	0.0052
68	0.0058	0.0006	0.0052
69	0.0058	0.0006	0.0052
70	0.0059	0.0006	0.0053
71	0.0059	0.0006	0.0053
72	0.0059	0.0006	0.0053
73	0.0060	0.0006	0.0053
74	0.0060	0.0006	0.0054
75	0.0060	0.0006	0.0054
76	0.0060	0.0006	0.0054
77	0.0061	0.0006	0.0055
78	0.0061	0.0006	0.0055
79	0.0061	0.0006	0.0055
80	0.0062	0.0006	0.0055
81	0.0062	0.0006	0.0056
82	0.0062	0.0006	0.0056
83	0.0063	0.0006	0.0057

84	0.0063	0.0006	0.0057
85	0.0064	0.0006	0.0057
86	0.0064	0.0006	0.0057
87	0.0064	0.0007	0.0058
88	0.0065	0.0007	0.0058
89	0.0065	0.0007	0.0059
90	0.0065	0.0007	0.0059
91	0.0066	0.0007	0.0059
92	0.0066	0.0007	0.0059
93	0.0067	0.0007	0.0060
94	0.0067	0.0007	0.0060
95	0.0068	0.0007	0.0061
96	0.0068	0.0007	0.0061
97	0.0069	0.0007	0.0062
98	0.0069	0.0007	0.0062
99	0.0069	0.0007	0.0062
100	0.0070	0.0007	0.0063
101	0.0070	0.0007	0.0063
102	0.0071	0.0007	0.0064
103	0.0071	0.0007	0.0064
104	0.0072	0.0007	0.0064
105	0.0072	0.0007	0.0065
106	0.0073	0.0007	0.0065
107	0.0073	0.0007	0.0066
108	0.0074	0.0007	0.0066
109	0.0075	0.0008	0.0067
110	0.0075	0.0008	0.0067
111	0.0076	0.0008	0.0068
112	0.0076	0.0008	0.0068
113	0.0077	0.0008	0.0069
114	0.0077	0.0008	0.0069
115	0.0078	0.0008	0.0070
116	0.0079	0.0008	0.0071
117	0.0079	0.0008	0.0071
118	0.0080	0.0008	0.0072
119	0.0081	0.0008	0.0073
120	0.0081	0.0008	0.0073
121	0.0082	0.0008	0.0074
122	0.0083	0.0008	0.0074
123	0.0084	0.0008	0.0075
124	0.0084	0.0009	0.0076
125	0.0085	0.0009	0.0076
126	0.0086	0.0009	0.0077
127	0.0087	0.0009	0.0078
128	0.0087	0.0009	0.0078
129	0.0088	0.0009	0.0079
130	0.0089	0.0009	0.0080
131	0.0090	0.0009	0.0081
132	0.0091	0.0009	0.0082
133	0.0092	0.0009	0.0083

134	0.0093	0.0009	0.0083
135	0.0094	0.0010	0.0085
136	0.0095	0.0010	0.0085
137	0.0096	0.0010	0.0086
138	0.0097	0.0010	0.0087
139	0.0098	0.0010	0.0088
140	0.0099	0.0010	0.0089
141	0.0101	0.0010	0.0091
142	0.0102	0.0010	0.0091
143	0.0103	0.0011	0.0093
144	0.0104	0.0011	0.0094
145	0.0101	0.0010	0.0091
146	0.0102	0.0010	0.0092
147	0.0104	0.0011	0.0093
148	0.0105	0.0011	0.0094
149	0.0107	0.0011	0.0096
150	0.0108	0.0011	0.0097
151	0.0110	0.0011	0.0099
152	0.0111	0.0011	0.0100
153	0.0114	0.0012	0.0102
154	0.0115	0.0012	0.0103
155	0.0118	0.0012	0.0106
156	0.0119	0.0012	0.0107
157	0.0122	0.0012	0.0109
158	0.0123	0.0013	0.0111
159	0.0126	0.0013	0.0114
160	0.0128	0.0013	0.0115
161	0.0132	0.0013	0.0118
162	0.0133	0.0014	0.0120
163	0.0137	0.0014	0.0123
164	0.0139	0.0014	0.0125
165	0.0144	0.0015	0.0129
166	0.0146	0.0015	0.0131
167	0.0151	0.0015	0.0135
168	0.0153	0.0016	0.0138
169	0.0159	0.0016	0.0143
170	0.0162	0.0016	0.0146
171	0.0169	0.0017	0.0151
172	0.0172	0.0017	0.0155
173	0.0179	0.0018	0.0161
174	0.0183	0.0019	0.0165
175	0.0192	0.0020	0.0173
176	0.0197	0.0020	0.0177
177	0.0208	0.0021	0.0187
178	0.0214	0.0022	0.0192
179	0.0227	0.0022	0.0205
180	0.0234	0.0022	0.0212
181	0.0251	0.0022	0.0229
182	0.0261	0.0022	0.0239
183	0.0284	0.0022	0.0262

184	0.0297	0.0022	0.0275
185	0.0278	0.0022	0.0256
186	0.0296	0.0022	0.0274
187	0.0343	0.0022	0.0322
188	0.0375	0.0022	0.0353
189	0.0466	0.0022	0.0444
190	0.0537	0.0022	0.0515
191	0.0815	0.0022	0.0793
192	0.1182	0.0022	0.1161
193	0.5115	0.0022	0.5094
194	0.0641	0.0022	0.0619
195	0.0414	0.0022	0.0393
196	0.0318	0.0022	0.0296
197	0.0312	0.0022	0.0290
198	0.0272	0.0022	0.0250
199	0.0242	0.0022	0.0221
200	0.0220	0.0022	0.0198
201	0.0202	0.0021	0.0182
202	0.0188	0.0019	0.0169
203	0.0176	0.0018	0.0158
204	0.0165	0.0017	0.0149
205	0.0156	0.0016	0.0140
206	0.0148	0.0015	0.0133
207	0.0141	0.0014	0.0127
208	0.0135	0.0014	0.0122
209	0.0130	0.0013	0.0117
210	0.0125	0.0013	0.0112
211	0.0120	0.0012	0.0108
212	0.0116	0.0012	0.0104
213	0.0113	0.0011	0.0101
214	0.0109	0.0011	0.0098
215	0.0106	0.0011	0.0095
216	0.0103	0.0010	0.0092
217	0.0105	0.0011	0.0094
218	0.0103	0.0010	0.0092
219	0.0100	0.0010	0.0090
220	0.0098	0.0010	0.0088
221	0.0096	0.0010	0.0086
222	0.0093	0.0009	0.0084
223	0.0091	0.0009	0.0082
224	0.0090	0.0009	0.0081
225	0.0088	0.0009	0.0079
226	0.0086	0.0009	0.0077
227	0.0085	0.0009	0.0076
228	0.0083	0.0008	0.0075
229	0.0082	0.0008	0.0073
230	0.0080	0.0008	0.0072
231	0.0079	0.0008	0.0071
232	0.0078	0.0008	0.0070
233	0.0076	0.0008	0.0069

234	0.0075	0.0008	0.0068
235	0.0074	0.0008	0.0067
236	0.0073	0.0007	0.0066
237	0.0072	0.0007	0.0065
238	0.0071	0.0007	0.0064
239	0.0070	0.0007	0.0063
240	0.0069	0.0007	0.0062
241	0.0068	0.0007	0.0061
242	0.0067	0.0007	0.0061
243	0.0067	0.0007	0.0060
244	0.0066	0.0007	0.0059
245	0.0065	0.0007	0.0058
246	0.0064	0.0007	0.0058
247	0.0063	0.0006	0.0057
248	0.0063	0.0006	0.0056
249	0.0062	0.0006	0.0056
250	0.0061	0.0006	0.0055
251	0.0061	0.0006	0.0054
252	0.0060	0.0006	0.0054
253	0.0059	0.0006	0.0053
254	0.0059	0.0006	0.0053
255	0.0058	0.0006	0.0052
256	0.0058	0.0006	0.0052
257	0.0057	0.0006	0.0051
258	0.0056	0.0006	0.0051
259	0.0056	0.0006	0.0050
260	0.0055	0.0006	0.0050
261	0.0055	0.0006	0.0049
262	0.0054	0.0006	0.0049
263	0.0054	0.0005	0.0048
264	0.0053	0.0005	0.0048
265	0.0053	0.0005	0.0048
266	0.0052	0.0005	0.0047
267	0.0052	0.0005	0.0047
268	0.0052	0.0005	0.0046
269	0.0051	0.0005	0.0046
270	0.0051	0.0005	0.0046
271	0.0050	0.0005	0.0045
272	0.0050	0.0005	0.0045
273	0.0050	0.0005	0.0045
274	0.0049	0.0005	0.0044
275	0.0049	0.0005	0.0044
276	0.0048	0.0005	0.0044
277	0.0048	0.0005	0.0043
278	0.0048	0.0005	0.0043
279	0.0047	0.0005	0.0043
280	0.0047	0.0005	0.0042
281	0.0047	0.0005	0.0042
282	0.0046	0.0005	0.0042
283	0.0046	0.0005	0.0041

284	0.0046	0.0005	0.0041
285	0.0045	0.0005	0.0041
286	0.0045	0.0005	0.0041
287	0.0045	0.0005	0.0040
288	0.0045	0.0005	0.0040

Total soil rain loss = 0.26(In)
Total effective rainfall = 3.16(In)
Peak flow rate in flood hydrograph = 93.07(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	25.0	50.0	75.0	100.0
0+ 5	0.0005	0.07	Q				
0+10	0.0044	0.57	Q				
0+15	0.0122	1.13	Q				
0+20	0.0217	1.38	Q				
0+25	0.0322	1.52	Q				
0+30	0.0433	1.62	Q				
0+35	0.0550	1.69	Q				
0+40	0.0671	1.75	Q				
0+45	0.0794	1.79	Q				
0+50	0.0920	1.83	Q				
0+55	0.1047	1.85	Q				
1+ 0	0.1176	1.87	Q				
1+ 5	0.1306	1.89	Q				
1+10	0.1437	1.91	Q				
1+15	0.1569	1.92	Q				
1+20	0.1703	1.93	Q				
1+25	0.1836	1.94	Q				
1+30	0.1970	1.95	Q				
1+35	0.2105	1.95	Q				
1+40	0.2240	1.96	Q				
1+45	0.2375	1.97	Q				
1+50	0.2511	1.97	Q				
1+55	0.2648	1.98	QV				
2+ 0	0.2785	1.99	QV				
2+ 5	0.2922	2.00	QV				
2+10	0.3060	2.00	QV				
2+15	0.3199	2.01	QV				
2+20	0.3338	2.02	QV				
2+25	0.3477	2.03	QV				
2+30	0.3617	2.03	QV				

2+35	0.3758	2.04	QV	|	|	|	|
2+40	0.3899	2.05	QV	|	|	|	|
2+45	0.4041	2.06	QV	|	|	|	|
2+50	0.4183	2.07	QV	|	|	|	|
2+55	0.4326	2.07	QV	|	|	|	|
3+ 0	0.4469	2.08	QV	|	|	|	|
3+ 5	0.4613	2.09	QV	|	|	|	|
3+10	0.4758	2.10	QV	|	|	|	|
3+15	0.4903	2.11	QV	|	|	|	|
3+20	0.5049	2.12	QV	|	|	|	|
3+25	0.5195	2.12	Q V	|	|	|	|
3+30	0.5342	2.13	Q V	|	|	|	|
3+35	0.5489	2.14	Q V	|	|	|	|
3+40	0.5637	2.15	Q V	|	|	|	|
3+45	0.5786	2.16	Q V	|	|	|	|
3+50	0.5935	2.17	Q V	|	|	|	|
3+55	0.6085	2.18	Q V	|	|	|	|
4+ 0	0.6236	2.19	Q V	|	|	|	|
4+ 5	0.6387	2.20	Q V	|	|	|	|
4+10	0.6539	2.20	Q V	|	|	|	|
4+15	0.6691	2.21	Q V	|	|	|	|
4+20	0.6844	2.22	Q V	|	|	|	|
4+25	0.6998	2.23	Q V	|	|	|	|
4+30	0.7153	2.24	Q V	|	|	|	|
4+35	0.7308	2.25	Q V	|	|	|	|
4+40	0.7464	2.26	Q V	|	|	|	|
4+45	0.7620	2.27	Q V	|	|	|	|
4+50	0.7778	2.28	Q V	|	|	|	|
4+55	0.7936	2.29	Q V	|	|	|	|
5+ 0	0.8095	2.31	Q V	|	|	|	|
5+ 5	0.8254	2.32	Q V	|	|	|	|
5+10	0.8414	2.33	Q V	|	|	|	|
5+15	0.8575	2.34	Q V	|	|	|	|
5+20	0.8737	2.35	Q V	|	|	|	|
5+25	0.8900	2.36	Q V	|	|	|	|
5+30	0.9063	2.37	Q V	|	|	|	|
5+35	0.9227	2.38	Q V	|	|	|	|
5+40	0.9392	2.40	Q V	|	|	|	|
5+45	0.9558	2.41	Q V	|	|	|	|
5+50	0.9724	2.42	Q V	|	|	|	|
5+55	0.9892	2.43	Q V	|	|	|	|
6+ 0	1.0060	2.44	Q V	|	|	|	|
6+ 5	1.0229	2.46	Q V	|	|	|	|
6+10	1.0399	2.47	Q V	|	|	|	|
6+15	1.0570	2.48	Q V	|	|	|	|
6+20	1.0742	2.49	Q V	|	|	|	|
6+25	1.0915	2.51	|Q V	|	|	|	|
6+30	1.1088	2.52	|Q V	|	|	|	|
6+35	1.1263	2.53	|Q V	|	|	|	|
6+40	1.1438	2.55	|Q V	|	|	|	|

6+45	1.1615	2.56	Q V	|	|	|
6+50	1.1792	2.58	Q V	|	|	|
6+55	1.1970	2.59	Q V	|	|	|
7+ 0	1.2150	2.60	Q V	|	|	|
7+ 5	1.2330	2.62	Q V	|	|	|
7+10	1.2512	2.63	Q V	|	|	|
7+15	1.2694	2.65	Q V	|	|	|
7+20	1.2878	2.67	Q V	|	|	|
7+25	1.3062	2.68	Q V	|	|	|
7+30	1.3248	2.70	Q V	|	|	|
7+35	1.3435	2.71	Q V	|	|	|
7+40	1.3623	2.73	Q V	|	|	|
7+45	1.3812	2.75	Q V	|	|	|
7+50	1.4002	2.76	Q V	|	|	|
7+55	1.4194	2.78	Q V	|	|	|
8+ 0	1.4386	2.80	Q V	|	|	|
8+ 5	1.4580	2.81	Q V	|	|	|
8+10	1.4775	2.83	Q V	|	|	|
8+15	1.4972	2.85	Q V	|	|	|
8+20	1.5169	2.87	Q V	|	|	|
8+25	1.5368	2.89	Q V	|	|	|
8+30	1.5569	2.91	Q V	|	|	|
8+35	1.5770	2.93	Q V	|	|	|
8+40	1.5973	2.95	Q V	|	|	|
8+45	1.6178	2.97	Q V	|	|	|
8+50	1.6384	2.99	Q V	|	|	|
8+55	1.6591	3.01	Q V	|	|	|
9+ 0	1.6800	3.03	Q V	|	|	|
9+ 5	1.7010	3.05	Q V	|	|	|
9+10	1.7222	3.08	Q V	|	|	|
9+15	1.7435	3.10	Q V	|	|	|
9+20	1.7650	3.12	Q V	|	|	|
9+25	1.7867	3.15	Q V	|	|	|
9+30	1.8085	3.17	Q V	|	|	|
9+35	1.8305	3.19	Q V	|	|	|
9+40	1.8527	3.22	Q V	|	|	|
9+45	1.8750	3.24	Q V	|	|	|
9+50	1.8975	3.27	Q V	|	|	|
9+55	1.9203	3.30	Q V	|	|	|
10+ 0	1.9432	3.32	Q V	|	|	|
10+ 5	1.9662	3.35	Q V	|	|	|
10+10	1.9895	3.38	Q V	|	|	|
10+15	2.0130	3.41	Q V	|	|	|
10+20	2.0367	3.44	Q V	|	|	|
10+25	2.0606	3.47	Q V	|	|	|
10+30	2.0847	3.50	Q V	|	|	|
10+35	2.1091	3.53	Q V	|	|	|
10+40	2.1336	3.57	Q V	|	|	|
10+45	2.1584	3.60	Q V	|	|	|
10+50	2.1835	3.63	Q V	|	|	|

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10+55       2.2087      3.67  |Q      V |          |          |          |
11+ 0       2.2342      3.71  |Q      V |          |          |          |
11+ 5       2.2600      3.74  |Q      V |          |          |          |
11+10       2.2860      3.78  |Q       V|          |          |          |
11+15       2.3124      3.82  |Q       V|          |          |          |
11+20       2.3389      3.86  |Q       V|          |          |          |
11+25       2.3658      3.90  |Q       V|          |          |          |
11+30       2.3929      3.94  |Q       V|          |          |          |
11+35       2.4204      3.99  |Q       V|          |          |          |
11+40       2.4482      4.03  |Q       V|          |          |          |
11+45       2.4762      4.08  |Q       V|          |          |          |
11+50       2.5047      4.13  |Q       V|          |          |          |
11+55       2.5334      4.17  |Q       V|          |          |          |
12+ 0       2.5625      4.22  |Q        V          |          |          |
12+ 5       2.5919      4.27  |Q        V          |          |          |
12+10       2.6213      4.27  |Q        V          |          |          |
12+15       2.6506      4.26  |Q        V          |          |          |
12+20       2.6801      4.29  |Q        V          |          |          |
12+25       2.7100      4.33  |Q        V          |          |          |
12+30       2.7401      4.38  |Q        V          |          |          |
12+35       2.7707      4.44  |Q        V          |          |          |
12+40       2.8016      4.50  |Q        |V          |          |          |
12+45       2.8330      4.56  |Q        |V          |          |          |
12+50       2.8649      4.63  |Q        |V          |          |          |
12+55       2.8972      4.70  |Q        |V          |          |          |
13+ 0       2.9301      4.77  |Q        |V          |          |          |
13+ 5       2.9635      4.85  |Q        |V          |          |          |
13+10       2.9975      4.93  |Q        |V          |          |          |
13+15       3.0320      5.02  | Q       |V          |          |          |
13+20       3.0672      5.11  | Q       | V         |          |          |
13+25       3.1030      5.20  | Q       | V         |          |          |
13+30       3.1395      5.30  | Q       | V         |          |          |
13+35       3.1768      5.41  | Q       | V         |          |          |
13+40       3.2148      5.52  | Q       | V         |          |          |
13+45       3.2536      5.63  | Q       | V         |          |          |
13+50       3.2932      5.76  | Q       | V         |          |          |
13+55       3.3337      5.88  | Q       |  V        |          |          |
14+ 0       3.3752      6.02  | Q       |  V        |          |          |
14+ 5       3.4177      6.17  | Q       |  V        |          |          |
14+10       3.4613      6.33  | Q       |  V        |          |          |
14+15       3.5061      6.50  | Q       |  V        |          |          |
14+20       3.5521      6.68  | Q       |  V        |          |          |
14+25       3.5994      6.88  | Q       |   V       |          |          |
14+30       3.6482      7.08  | Q       |   V       |          |          |
14+35       3.6985      7.30  | Q       |   V       |          |          |
14+40       3.7505      7.55  |  Q      |   V       |          |          |
14+45       3.8043      7.81  |  Q      |   V       |          |          |
14+50       3.8601      8.10  |  Q      |    V      |          |          |
14+55       3.9180      8.41  |  Q      |    V      |          |          |
15+ 0       3.9785      8.79  |  Q      |    V      |          |          |
```

15+ 5	4.0419	9.20	Q	V			
15+10	4.1086	9.69	Q	V			
15+15	4.1791	10.23	Q	V			
15+20	4.2540	10.87	Q	V			
15+25	4.3333	11.51	Q	V			
15+30	4.4142	11.76	Q	V			
15+35	4.4973	12.05	Q	V			
15+40	4.5868	13.00	Q	V			
15+45	4.6859	14.39	Q	V			
15+50	4.7995	16.49	Q	V			
15+55	4.9344	19.60	Q	V			
16+ 0	5.1105	25.56	Q	V			
16+ 5	5.4016	42.27	Q	V			
16+10	6.0235	90.31	V	Q			
16+15	6.6645	93.07	V	Q			
16+20	7.0357	53.90	Q	V			
16+25	7.2947	37.60	Q	V			
16+30	7.4963	29.27	Q	V			
16+35	7.6606	23.85	Q	V			
16+40	7.7976	19.90	Q	V			
16+45	7.9144	16.96	Q	V			
16+50	8.0151	14.62	Q	V			
16+55	8.1022	12.65	Q	V			
17+ 0	8.1775	10.93	Q	V			
17+ 5	8.2458	9.91	Q	V			
17+10	8.3101	9.34	Q	V			
17+15	8.3682	8.43	Q	V			
17+20	8.4206	7.61	Q	V			
17+25	8.4652	6.48	Q	V			
17+30	8.5074	6.11	Q	V			
17+35	8.5474	5.82	Q	V			
17+40	8.5857	5.56	Q	V			
17+45	8.6224	5.33	Q	V			
17+50	8.6577	5.12	Q	V			
17+55	8.6917	4.94	Q	V			
18+ 0	8.7245	4.77	Q	V			
18+ 5	8.7564	4.62	Q	V			
18+10	8.7876	4.54	Q	V			
18+15	8.8184	4.47	Q	V			
18+20	8.8486	4.38	Q	V			
18+25	8.8781	4.28	Q	V			
18+30	8.9069	4.19	Q	V			
18+35	8.9351	4.09	Q	V			
18+40	8.9627	4.00	Q	V			
18+45	8.9897	3.92	Q	V			
18+50	9.0161	3.84	Q	V			
18+55	9.0420	3.76	Q	V			
19+ 0	9.0675	3.69	Q	V			
19+ 5	9.0924	3.62	Q	V			
19+10	9.1169	3.55	Q	V			

19+15	9.1409	3.49	|Q	|	|	|	V |
19+20	9.1645	3.43	|Q	|	|	|	V |
19+25	9.1877	3.37	|Q	|	|	|	V |
19+30	9.2106	3.31	|Q	|	|	|	V |
19+35	9.2330	3.26	|Q	|	|	|	V |
19+40	9.2551	3.21	|Q	|	|	|	V |
19+45	9.2769	3.16	|Q	|	|	|	V |
19+50	9.2983	3.11	|Q	|	|	|	V |
19+55	9.3195	3.07	|Q	|	|	|	V |
20+ 0	9.3403	3.02	|Q	|	|	|	V |
20+ 5	9.3608	2.98	|Q	|	|	|	V |
20+10	9.3811	2.94	|Q	|	|	|	V |
20+15	9.4010	2.90	|Q	|	|	|	V |
20+20	9.4207	2.86	|Q	|	|	|	V |
20+25	9.4402	2.83	|Q	|	|	|	V |
20+30	9.4594	2.79	|Q	|	|	|	V |
20+35	9.4784	2.76	|Q	|	|	|	V |
20+40	9.4971	2.72	|Q	|	|	|	V |
20+45	9.5157	2.69	|Q	|	|	|	V |
20+50	9.5340	2.66	|Q	|	|	|	V |
20+55	9.5521	2.63	|Q	|	|	|	V |
21+ 0	9.5700	2.60	|Q	|	|	|	V |
21+ 5	9.5876	2.57	|Q	|	|	|	V |
21+10	9.6052	2.54	|Q	|	|	|	V |
21+15	9.6225	2.51	|Q	|	|	|	V |
21+20	9.6396	2.49	Q	|	|	|	V |
21+25	9.6566	2.46	Q	|	|	|	V |
21+30	9.6734	2.44	Q	|	|	|	V |
21+35	9.6900	2.41	Q	|	|	|	V |
21+40	9.7064	2.39	Q	|	|	|	V |
21+45	9.7227	2.37	Q	|	|	|	V |
21+50	9.7389	2.34	Q	|	|	|	V |
21+55	9.7549	2.32	Q	|	|	|	V |
22+ 0	9.7707	2.30	Q	|	|	|	V |
22+ 5	9.7864	2.28	Q	|	|	|	V |
22+10	9.8019	2.26	Q	|	|	|	V |
22+15	9.8174	2.24	Q	|	|	|	V |
22+20	9.8327	2.22	Q	|	|	|	V |
22+25	9.8478	2.20	Q	|	|	|	V |
22+30	9.8628	2.18	Q	|	|	|	V |
22+35	9.8777	2.16	Q	|	|	|	V |
22+40	9.8925	2.15	Q	|	|	|	V |
22+45	9.9072	2.13	Q	|	|	|	V|
22+50	9.9217	2.11	Q	|	|	|	V|
22+55	9.9361	2.09	Q	|	|	|	V|
23+ 0	9.9504	2.08	Q	|	|	|	V|
23+ 5	9.9646	2.06	Q	|	|	|	V|
23+10	9.9787	2.05	Q	|	|	|	V|
23+15	9.9927	2.03	Q	|	|	|	V|
23+20	10.0066	2.01	Q	|	|	|	V|

```
   23+25      10.0203      2.00  Q         |         |         |         V|
   23+30      10.0340      1.99  Q         |         |         |         V|
   23+35      10.0476      1.97  Q         |         |         |         V|
   23+40      10.0611      1.96  Q         |         |         |         V|
   23+45      10.0744      1.94  Q         |         |         |         V|
   23+50      10.0877      1.93  Q         |         |         |         V|
   23+55      10.1009      1.92  Q         |         |         |         V|
   24+ 0      10.1140      1.90  Q         |         |         |         V|
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/08/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area D
100-year Developed

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
37.56	1	1.08
Rainfall data for year 100		
37.56	6	2.04
Rainfall data for year 100		
37.56	24	3.42

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 3)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	86.2	37.56	1.000	0.262	0.100	0.026

Area-averaged adjusted loss rate Fm (In/Hr) = 0.026

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
3.76	0.100	69.0	86.2	1.60	0.598
33.80	0.900	98.0	98.0	0.20	0.932

Area-averaged catchment yield fraction, Y = 0.898
Area-averaged low loss fraction, Yb = 0.102
User entry of time of concentration = 0.180 (hours)
++
Watershed area = 37.56(Ac.)
Catchment Lag time = 0.144 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 57.8704
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.026(In/Hr)
Average low loss rate fraction (Yb) = 0.102 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.512(In)
Computed peak 30-minute rainfall = 0.877(In)
Specified peak 1-hour rainfall = 1.080(In)
Computed peak 3-hour rainfall = 1.595(In)
Specified peak 6-hour rainfall = 2.040(In)
Specified peak 24-hour rainfall = 3.420(In)

Rainfall depth area reduction factors:
Using a total area of 37.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.512(In)
30-minute factor = 0.998 Adjusted rainfall = 0.876(In)
1-hour factor = 0.998 Adjusted rainfall = 1.078(In)
3-hour factor = 1.000 Adjusted rainfall = 1.595(In)
6-hour factor = 1.000 Adjusted rainfall = 2.040(In)
24-hour factor = 1.000 Adjusted rainfall = 3.420(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 454.24 (CFS))	
1	5.194	23.594
2	39.293	154.892
3	66.686	124.432
4	78.397	53.194
5	85.236	31.065
6	89.761	20.553
7	92.821	13.904
8	95.045	10.102
9	96.659	7.332
10	97.739	4.904
11	98.400	3.001
12	99.086	3.119
13	99.645	2.537
14	100.000	1.614

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.5116	0.5116
2	0.6298	0.1182
3	0.7113	0.0815
4	0.7754	0.0641
5	0.8291	0.0537
6	0.8757	0.0466
7	0.9171	0.0414
8	0.9546	0.0375
9	0.9890	0.0343
10	1.0207	0.0318
11	1.0503	0.0296
12	1.0781	0.0278
13	1.1093	0.0312
14	1.1390	0.0297
15	1.1673	0.0283
16	1.1945	0.0272
17	1.2206	0.0261
18	1.2457	0.0251
19	1.2699	0.0242
20	1.2933	0.0234
21	1.3160	0.0227
22	1.3380	0.0220
23	1.3594	0.0214
24	1.3802	0.0208
25	1.4004	0.0202
26	1.4201	0.0197
27	1.4393	0.0192
28	1.4581	0.0188

29	1.4765	0.0183
30	1.4944	0.0179
31	1.5120	0.0176
32	1.5292	0.0172
33	1.5460	0.0169
34	1.5626	0.0165
35	1.5788	0.0162
36	1.5947	0.0159
37	1.6103	0.0156
38	1.6256	0.0153
39	1.6407	0.0151
40	1.6555	0.0148
41	1.6701	0.0146
42	1.6844	0.0144
43	1.6986	0.0141
44	1.7125	0.0139
45	1.7262	0.0137
46	1.7397	0.0135
47	1.7531	0.0133
48	1.7662	0.0132
49	1.7792	0.0130
50	1.7920	0.0128
51	1.8047	0.0126
52	1.8172	0.0125
53	1.8295	0.0123
54	1.8417	0.0122
55	1.8537	0.0120
56	1.8656	0.0119
57	1.8774	0.0118
58	1.8890	0.0116
59	1.9005	0.0115
60	1.9119	0.0114
61	1.9231	0.0113
62	1.9343	0.0111
63	1.9453	0.0110
64	1.9562	0.0109
65	1.9670	0.0108
66	1.9777	0.0107
67	1.9883	0.0106
68	1.9988	0.0105
69	2.0092	0.0104
70	2.0195	0.0103
71	2.0297	0.0102
72	2.0398	0.0101
73	2.0503	0.0105
74	2.0607	0.0104
75	2.0710	0.0103
76	2.0813	0.0103
77	2.0915	0.0102
78	2.1015	0.0101

79	2.1115	0.0100
80	2.1215	0.0099
81	2.1313	0.0098
82	2.1411	0.0098
83	2.1508	0.0097
84	2.1604	0.0096
85	2.1700	0.0096
86	2.1794	0.0095
87	2.1888	0.0094
88	2.1982	0.0093
89	2.2075	0.0093
90	2.2167	0.0092
91	2.2258	0.0091
92	2.2349	0.0091
93	2.2439	0.0090
94	2.2529	0.0090
95	2.2618	0.0089
96	2.2707	0.0088
97	2.2794	0.0088
98	2.2882	0.0087
99	2.2969	0.0087
100	2.3055	0.0086
101	2.3140	0.0086
102	2.3226	0.0085
103	2.3310	0.0085
104	2.3394	0.0084
105	2.3478	0.0084
106	2.3561	0.0083
107	2.3644	0.0083
108	2.3726	0.0082
109	2.3807	0.0082
110	2.3889	0.0081
111	2.3969	0.0081
112	2.4050	0.0080
113	2.4129	0.0080
114	2.4209	0.0079
115	2.4288	0.0079
116	2.4366	0.0079
117	2.4444	0.0078
118	2.4522	0.0078
119	2.4599	0.0077
120	2.4676	0.0077
121	2.4753	0.0076
122	2.4829	0.0076
123	2.4904	0.0076
124	2.4980	0.0075
125	2.5054	0.0075
126	2.5129	0.0075
127	2.5203	0.0074
128	2.5277	0.0074

129	2.5350	0.0073
130	2.5423	0.0073
131	2.5496	0.0073
132	2.5569	0.0072
133	2.5641	0.0072
134	2.5712	0.0072
135	2.5784	0.0071
136	2.5855	0.0071
137	2.5925	0.0071
138	2.5996	0.0070
139	2.6066	0.0070
140	2.6136	0.0070
141	2.6205	0.0069
142	2.6274	0.0069
143	2.6343	0.0069
144	2.6411	0.0069
145	2.6480	0.0068
146	2.6548	0.0068
147	2.6615	0.0068
148	2.6683	0.0067
149	2.6750	0.0067
150	2.6816	0.0067
151	2.6883	0.0067
152	2.6949	0.0066
153	2.7015	0.0066
154	2.7081	0.0066
155	2.7146	0.0065
156	2.7211	0.0065
157	2.7276	0.0065
158	2.7341	0.0065
159	2.7405	0.0064
160	2.7469	0.0064
161	2.7533	0.0064
162	2.7597	0.0064
163	2.7660	0.0063
164	2.7723	0.0063
165	2.7786	0.0063
166	2.7849	0.0063
167	2.7911	0.0062
168	2.7974	0.0062
169	2.8036	0.0062
170	2.8097	0.0062
171	2.8159	0.0061
172	2.8220	0.0061
173	2.8281	0.0061
174	2.8342	0.0061
175	2.8402	0.0061
176	2.8463	0.0060
177	2.8523	0.0060
178	2.8583	0.0060

179	2.8643	0.0060
180	2.8702	0.0060
181	2.8762	0.0059
182	2.8821	0.0059
183	2.8880	0.0059
184	2.8938	0.0059
185	2.8997	0.0059
186	2.9055	0.0058
187	2.9113	0.0058
188	2.9171	0.0058
189	2.9229	0.0058
190	2.9287	0.0058
191	2.9344	0.0057
192	2.9401	0.0057
193	2.9458	0.0057
194	2.9515	0.0057
195	2.9572	0.0057
196	2.9628	0.0056
197	2.9684	0.0056
198	2.9740	0.0056
199	2.9796	0.0056
200	2.9852	0.0056
201	2.9908	0.0056
202	2.9963	0.0055
203	3.0018	0.0055
204	3.0073	0.0055
205	3.0128	0.0055
206	3.0183	0.0055
207	3.0237	0.0055
208	3.0292	0.0054
209	3.0346	0.0054
210	3.0400	0.0054
211	3.0454	0.0054
212	3.0508	0.0054
213	3.0561	0.0054
214	3.0614	0.0053
215	3.0668	0.0053
216	3.0721	0.0053
217	3.0774	0.0053
218	3.0827	0.0053
219	3.0879	0.0053
220	3.0932	0.0052
221	3.0984	0.0052
222	3.1036	0.0052
223	3.1088	0.0052
224	3.1140	0.0052
225	3.1192	0.0052
226	3.1243	0.0052
227	3.1295	0.0051
228	3.1346	0.0051

229	3.1397	0.0051
230	3.1448	0.0051
231	3.1499	0.0051
232	3.1550	0.0051
233	3.1601	0.0051
234	3.1651	0.0050
235	3.1702	0.0050
236	3.1752	0.0050
237	3.1802	0.0050
238	3.1852	0.0050
239	3.1902	0.0050
240	3.1951	0.0050
241	3.2001	0.0050
242	3.2050	0.0049
243	3.2100	0.0049
244	3.2149	0.0049
245	3.2198	0.0049
246	3.2247	0.0049
247	3.2296	0.0049
248	3.2344	0.0049
249	3.2393	0.0049
250	3.2441	0.0048
251	3.2490	0.0048
252	3.2538	0.0048
253	3.2586	0.0048
254	3.2634	0.0048
255	3.2682	0.0048
256	3.2729	0.0048
257	3.2777	0.0048
258	3.2824	0.0047
259	3.2872	0.0047
260	3.2919	0.0047
261	3.2966	0.0047
262	3.3013	0.0047
263	3.3060	0.0047
264	3.3107	0.0047
265	3.3154	0.0047
266	3.3200	0.0047
267	3.3247	0.0046
268	3.3293	0.0046
269	3.3339	0.0046
270	3.3385	0.0046
271	3.3432	0.0046
272	3.3477	0.0046
273	3.3523	0.0046
274	3.3569	0.0046
275	3.3615	0.0046
276	3.3660	0.0046
277	3.3706	0.0045
278	3.3751	0.0045

279	3.3796	0.0045
280	3.3841	0.0045
281	3.3886	0.0045
282	3.3931	0.0045
283	3.3976	0.0045
284	3.4021	0.0045
285	3.4065	0.0045
286	3.4110	0.0045
287	3.4154	0.0044
288	3.4198	0.0044

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0044	0.0005	0.0040
2	0.0044	0.0005	0.0040
3	0.0045	0.0005	0.0040
4	0.0045	0.0005	0.0040
5	0.0045	0.0005	0.0040
6	0.0045	0.0005	0.0040
7	0.0045	0.0005	0.0041
8	0.0045	0.0005	0.0041
9	0.0046	0.0005	0.0041
10	0.0046	0.0005	0.0041
11	0.0046	0.0005	0.0041
12	0.0046	0.0005	0.0041
13	0.0046	0.0005	0.0041
14	0.0046	0.0005	0.0042
15	0.0046	0.0005	0.0042
16	0.0047	0.0005	0.0042
17	0.0047	0.0005	0.0042
18	0.0047	0.0005	0.0042
19	0.0047	0.0005	0.0042
20	0.0047	0.0005	0.0042
21	0.0047	0.0005	0.0043
22	0.0048	0.0005	0.0043
23	0.0048	0.0005	0.0043
24	0.0048	0.0005	0.0043
25	0.0048	0.0005	0.0043
26	0.0048	0.0005	0.0043
27	0.0049	0.0005	0.0044
28	0.0049	0.0005	0.0044
29	0.0049	0.0005	0.0044
30	0.0049	0.0005	0.0044
31	0.0049	0.0005	0.0044
32	0.0049	0.0005	0.0044
33	0.0050	0.0005	0.0045
34	0.0050	0.0005	0.0045
35	0.0050	0.0005	0.0045

36	0.0050	0.0005	0.0045
37	0.0050	0.0005	0.0045
38	0.0051	0.0005	0.0045
39	0.0051	0.0005	0.0046
40	0.0051	0.0005	0.0046
41	0.0051	0.0005	0.0046
42	0.0051	0.0005	0.0046
43	0.0052	0.0005	0.0046
44	0.0052	0.0005	0.0047
45	0.0052	0.0005	0.0047
46	0.0052	0.0005	0.0047
47	0.0053	0.0005	0.0047
48	0.0053	0.0005	0.0047
49	0.0053	0.0005	0.0048
50	0.0053	0.0005	0.0048
51	0.0054	0.0005	0.0048
52	0.0054	0.0005	0.0048
53	0.0054	0.0005	0.0049
54	0.0054	0.0006	0.0049
55	0.0055	0.0006	0.0049
56	0.0055	0.0006	0.0049
57	0.0055	0.0006	0.0049
58	0.0055	0.0006	0.0050
59	0.0056	0.0006	0.0050
60	0.0056	0.0006	0.0050
61	0.0056	0.0006	0.0050
62	0.0056	0.0006	0.0051
63	0.0057	0.0006	0.0051
64	0.0057	0.0006	0.0051
65	0.0057	0.0006	0.0051
66	0.0057	0.0006	0.0052
67	0.0058	0.0006	0.0052
68	0.0058	0.0006	0.0052
69	0.0058	0.0006	0.0052
70	0.0059	0.0006	0.0053
71	0.0059	0.0006	0.0053
72	0.0059	0.0006	0.0053
73	0.0060	0.0006	0.0053
74	0.0060	0.0006	0.0054
75	0.0060	0.0006	0.0054
76	0.0060	0.0006	0.0054
77	0.0061	0.0006	0.0055
78	0.0061	0.0006	0.0055
79	0.0061	0.0006	0.0055
80	0.0062	0.0006	0.0055
81	0.0062	0.0006	0.0056
82	0.0062	0.0006	0.0056
83	0.0063	0.0006	0.0057
84	0.0063	0.0006	0.0057
85	0.0064	0.0006	0.0057

86	0.0064	0.0006	0.0057
87	0.0064	0.0007	0.0058
88	0.0065	0.0007	0.0058
89	0.0065	0.0007	0.0059
90	0.0065	0.0007	0.0059
91	0.0066	0.0007	0.0059
92	0.0066	0.0007	0.0059
93	0.0067	0.0007	0.0060
94	0.0067	0.0007	0.0060
95	0.0068	0.0007	0.0061
96	0.0068	0.0007	0.0061
97	0.0069	0.0007	0.0062
98	0.0069	0.0007	0.0062
99	0.0069	0.0007	0.0062
100	0.0070	0.0007	0.0063
101	0.0070	0.0007	0.0063
102	0.0071	0.0007	0.0064
103	0.0071	0.0007	0.0064
104	0.0072	0.0007	0.0064
105	0.0072	0.0007	0.0065
106	0.0073	0.0007	0.0065
107	0.0073	0.0007	0.0066
108	0.0074	0.0007	0.0066
109	0.0075	0.0008	0.0067
110	0.0075	0.0008	0.0067
111	0.0076	0.0008	0.0068
112	0.0076	0.0008	0.0068
113	0.0077	0.0008	0.0069
114	0.0077	0.0008	0.0069
115	0.0078	0.0008	0.0070
116	0.0079	0.0008	0.0071
117	0.0079	0.0008	0.0071
118	0.0080	0.0008	0.0072
119	0.0081	0.0008	0.0073
120	0.0081	0.0008	0.0073
121	0.0082	0.0008	0.0074
122	0.0083	0.0008	0.0074
123	0.0084	0.0008	0.0075
124	0.0084	0.0009	0.0076
125	0.0085	0.0009	0.0076
126	0.0086	0.0009	0.0077
127	0.0087	0.0009	0.0078
128	0.0087	0.0009	0.0078
129	0.0088	0.0009	0.0079
130	0.0089	0.0009	0.0080
131	0.0090	0.0009	0.0081
132	0.0091	0.0009	0.0082
133	0.0092	0.0009	0.0083
134	0.0093	0.0009	0.0083
135	0.0094	0.0010	0.0085

136	0.0095	0.0010	0.0085
137	0.0096	0.0010	0.0086
138	0.0097	0.0010	0.0087
139	0.0098	0.0010	0.0088
140	0.0099	0.0010	0.0089
141	0.0101	0.0010	0.0091
142	0.0102	0.0010	0.0091
143	0.0103	0.0011	0.0093
144	0.0104	0.0011	0.0094
145	0.0101	0.0010	0.0091
146	0.0102	0.0010	0.0092
147	0.0104	0.0011	0.0093
148	0.0105	0.0011	0.0094
149	0.0107	0.0011	0.0096
150	0.0108	0.0011	0.0097
151	0.0110	0.0011	0.0099
152	0.0111	0.0011	0.0100
153	0.0114	0.0012	0.0102
154	0.0115	0.0012	0.0103
155	0.0118	0.0012	0.0106
156	0.0119	0.0012	0.0107
157	0.0122	0.0012	0.0109
158	0.0123	0.0013	0.0111
159	0.0126	0.0013	0.0114
160	0.0128	0.0013	0.0115
161	0.0132	0.0013	0.0118
162	0.0133	0.0014	0.0120
163	0.0137	0.0014	0.0123
164	0.0139	0.0014	0.0125
165	0.0144	0.0015	0.0129
166	0.0146	0.0015	0.0131
167	0.0151	0.0015	0.0135
168	0.0153	0.0016	0.0138
169	0.0159	0.0016	0.0143
170	0.0162	0.0016	0.0146
171	0.0169	0.0017	0.0151
172	0.0172	0.0017	0.0155
173	0.0179	0.0018	0.0161
174	0.0183	0.0019	0.0165
175	0.0192	0.0020	0.0173
176	0.0197	0.0020	0.0177
177	0.0208	0.0021	0.0187
178	0.0214	0.0022	0.0192
179	0.0227	0.0022	0.0205
180	0.0234	0.0022	0.0212
181	0.0251	0.0022	0.0229
182	0.0261	0.0022	0.0239
183	0.0283	0.0022	0.0262
184	0.0297	0.0022	0.0275
185	0.0278	0.0022	0.0256

186	0.0296	0.0022	0.0274
187	0.0343	0.0022	0.0322
188	0.0375	0.0022	0.0353
189	0.0466	0.0022	0.0444
190	0.0537	0.0022	0.0515
191	0.0815	0.0022	0.0793
192	0.1182	0.0022	0.1161
193	0.5116	0.0022	0.5094
194	0.0641	0.0022	0.0619
195	0.0414	0.0022	0.0393
196	0.0318	0.0022	0.0296
197	0.0312	0.0022	0.0290
198	0.0272	0.0022	0.0250
199	0.0242	0.0022	0.0221
200	0.0220	0.0022	0.0198
201	0.0202	0.0021	0.0182
202	0.0188	0.0019	0.0169
203	0.0176	0.0018	0.0158
204	0.0165	0.0017	0.0149
205	0.0156	0.0016	0.0140
206	0.0148	0.0015	0.0133
207	0.0141	0.0014	0.0127
208	0.0135	0.0014	0.0122
209	0.0130	0.0013	0.0117
210	0.0125	0.0013	0.0112
211	0.0120	0.0012	0.0108
212	0.0116	0.0012	0.0104
213	0.0113	0.0011	0.0101
214	0.0109	0.0011	0.0098
215	0.0106	0.0011	0.0095
216	0.0103	0.0010	0.0092
217	0.0105	0.0011	0.0094
218	0.0103	0.0010	0.0092
219	0.0100	0.0010	0.0090
220	0.0098	0.0010	0.0088
221	0.0096	0.0010	0.0086
222	0.0093	0.0009	0.0084
223	0.0091	0.0009	0.0082
224	0.0090	0.0009	0.0081
225	0.0088	0.0009	0.0079
226	0.0086	0.0009	0.0077
227	0.0085	0.0009	0.0076
228	0.0083	0.0008	0.0075
229	0.0082	0.0008	0.0073
230	0.0080	0.0008	0.0072
231	0.0079	0.0008	0.0071
232	0.0078	0.0008	0.0070
233	0.0076	0.0008	0.0069
234	0.0075	0.0008	0.0068
235	0.0074	0.0008	0.0067

236	0.0073	0.0007	0.0066
237	0.0072	0.0007	0.0065
238	0.0071	0.0007	0.0064
239	0.0070	0.0007	0.0063
240	0.0069	0.0007	0.0062
241	0.0068	0.0007	0.0061
242	0.0067	0.0007	0.0061
243	0.0067	0.0007	0.0060
244	0.0066	0.0007	0.0059
245	0.0065	0.0007	0.0058
246	0.0064	0.0007	0.0058
247	0.0063	0.0006	0.0057
248	0.0063	0.0006	0.0056
249	0.0062	0.0006	0.0056
250	0.0061	0.0006	0.0055
251	0.0061	0.0006	0.0054
252	0.0060	0.0006	0.0054
253	0.0059	0.0006	0.0053
254	0.0059	0.0006	0.0053
255	0.0058	0.0006	0.0052
256	0.0058	0.0006	0.0052
257	0.0057	0.0006	0.0051
258	0.0056	0.0006	0.0051
259	0.0056	0.0006	0.0050
260	0.0055	0.0006	0.0050
261	0.0055	0.0006	0.0049
262	0.0054	0.0006	0.0049
263	0.0054	0.0005	0.0048
264	0.0053	0.0005	0.0048
265	0.0053	0.0005	0.0048
266	0.0052	0.0005	0.0047
267	0.0052	0.0005	0.0047
268	0.0052	0.0005	0.0046
269	0.0051	0.0005	0.0046
270	0.0051	0.0005	0.0046
271	0.0050	0.0005	0.0045
272	0.0050	0.0005	0.0045
273	0.0050	0.0005	0.0045
274	0.0049	0.0005	0.0044
275	0.0049	0.0005	0.0044
276	0.0048	0.0005	0.0044
277	0.0048	0.0005	0.0043
278	0.0048	0.0005	0.0043
279	0.0047	0.0005	0.0043
280	0.0047	0.0005	0.0042
281	0.0047	0.0005	0.0042
282	0.0046	0.0005	0.0042
283	0.0046	0.0005	0.0041
284	0.0046	0.0005	0.0041
285	0.0045	0.0005	0.0041

286	0.0045	0.0005	0.0041
287	0.0045	0.0005	0.0040
288	0.0045	0.0005	0.0040

Total soil rain loss = 0.26(In)
Total effective rainfall = 3.16(In)
Peak flow rate in flood hydrograph = 102.94(CFS)

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

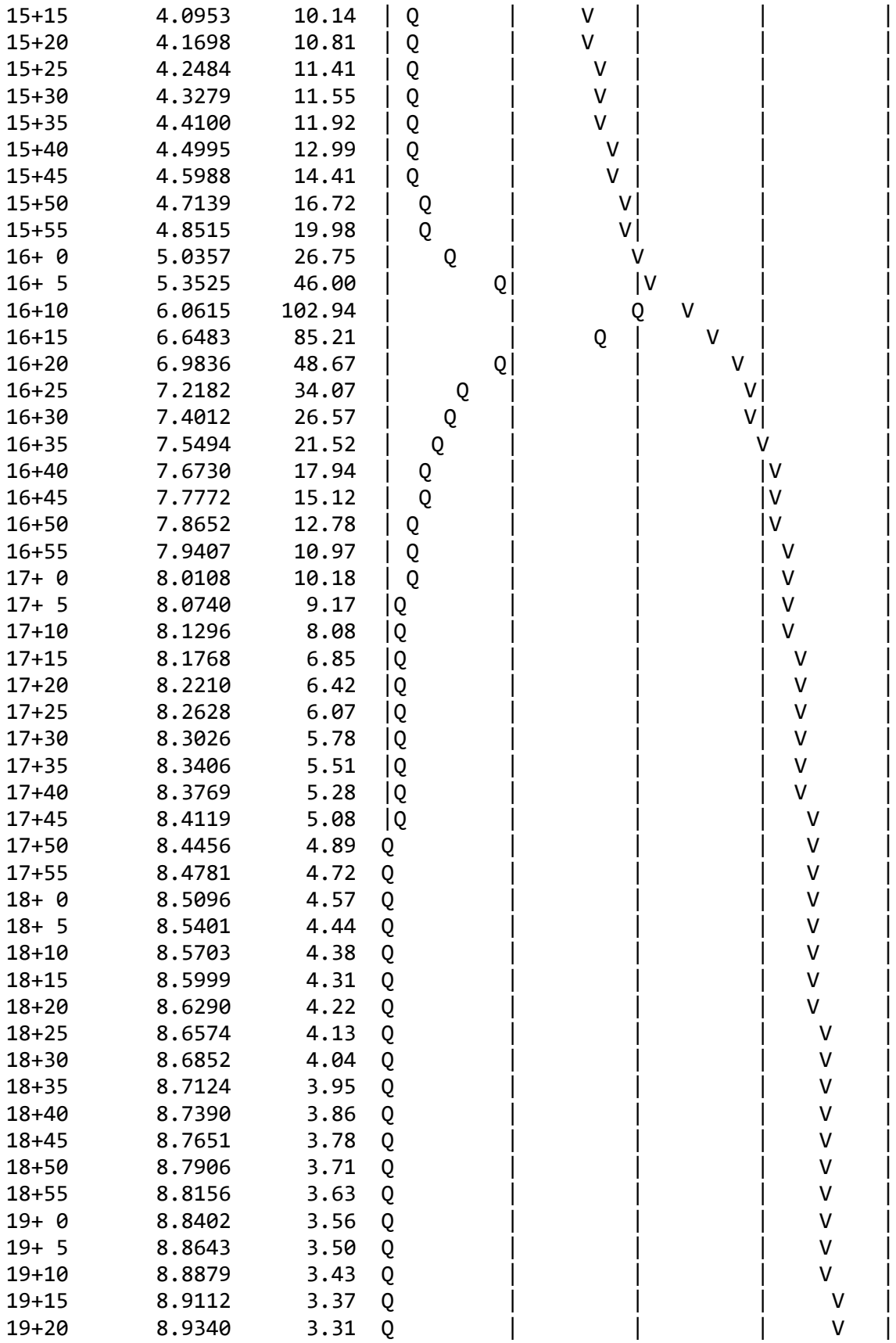
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	50.0	100.0	150.0	200.0
0+ 5	0.0006	0.09	Q	|	|	|	|
0+10	0.0055	0.71	Q	|	|	|	|
0+15	0.0139	1.21	Q	|	|	|	|
0+20	0.0237	1.42	Q	|	|	|	|
0+25	0.0344	1.55	Q	|	|	|	|
0+30	0.0456	1.64	Q	|	|	|	|
0+35	0.0573	1.70	Q	|	|	|	|
0+40	0.0694	1.75	Q	|	|	|	|
0+45	0.0816	1.78	Q	|	|	|	|
0+50	0.0941	1.81	Q	|	|	|	|
0+55	0.1066	1.82	Q	|	|	|	|
1+ 0	0.1193	1.84	Q	|	|	|	|
1+ 5	0.1321	1.86	Q	|	|	|	|
1+10	0.1450	1.87	Q	|	|	|	|
1+15	0.1580	1.88	Q	|	|	|	|
1+20	0.1709	1.89	Q	|	|	|	|
1+25	0.1840	1.89	Q	|	|	|	|
1+30	0.1970	1.90	Q	|	|	|	|
1+35	0.2102	1.91	Q	|	|	|	|
1+40	0.2233	1.91	Q	|	|	|	|
1+45	0.2365	1.92	Q	|	|	|	|
1+50	0.2498	1.93	QV	|	|	|	|
1+55	0.2631	1.93	QV	|	|	|	|
2+ 0	0.2765	1.94	QV	|	|	|	|
2+ 5	0.2899	1.95	QV	|	|	|	|
2+10	0.3033	1.95	QV	|	|	|	|
2+15	0.3168	1.96	QV	|	|	|	|
2+20	0.3304	1.97	QV	|	|	|	|
2+25	0.3440	1.98	QV	|	|	|	|
2+30	0.3577	1.98	QV	|	|	|	|
2+35	0.3714	1.99	QV	|	|	|	|
2+40	0.3852	2.00	QV	|	|	|	|

2+45	0.3990	2.01	QV	|	|	|	|
2+50	0.4129	2.01	QV	|	|	|	|
2+55	0.4268	2.02	QV	|	|	|	|
3+ 0	0.4408	2.03	QV	|	|	|	|
3+ 5	0.4548	2.04	QV	|	|	|	|
3+10	0.4689	2.05	QV	|	|	|	|
3+15	0.4830	2.05	QV	|	|	|	|
3+20	0.4973	2.06	Q V	|	|	|	|
3+25	0.5115	2.07	Q V	|	|	|	|
3+30	0.5258	2.08	Q V	|	|	|	|
3+35	0.5402	2.09	Q V	|	|	|	|
3+40	0.5547	2.10	Q V	|	|	|	|
3+45	0.5692	2.11	Q V	|	|	|	|
3+50	0.5837	2.11	Q V	|	|	|	|
3+55	0.5983	2.12	Q V	|	|	|	|
4+ 0	0.6130	2.13	Q V	|	|	|	|
4+ 5	0.6278	2.14	Q V	|	|	|	|
4+10	0.6426	2.15	Q V	|	|	|	|
4+15	0.6575	2.16	Q V	|	|	|	|
4+20	0.6724	2.17	Q V	|	|	|	|
4+25	0.6874	2.18	Q V	|	|	|	|
4+30	0.7025	2.19	Q V	|	|	|	|
4+35	0.7176	2.20	Q V	|	|	|	|
4+40	0.7328	2.21	Q V	|	|	|	|
4+45	0.7481	2.22	Q V	|	|	|	|
4+50	0.7635	2.23	Q V	|	|	|	|
4+55	0.7789	2.24	Q V	|	|	|	|
5+ 0	0.7944	2.25	Q V	|	|	|	|
5+ 5	0.8099	2.26	Q V	|	|	|	|
5+10	0.8256	2.27	Q V	|	|	|	|
5+15	0.8413	2.28	Q V	|	|	|	|
5+20	0.8571	2.29	Q V	|	|	|	|
5+25	0.8729	2.30	Q V	|	|	|	|
5+30	0.8889	2.31	Q V	|	|	|	|
5+35	0.9049	2.33	Q V	|	|	|	|
5+40	0.9210	2.34	Q V	|	|	|	|
5+45	0.9371	2.35	Q V	|	|	|	|
5+50	0.9534	2.36	Q V	|	|	|	|
5+55	0.9697	2.37	Q V	|	|	|	|
6+ 0	0.9862	2.38	Q V	|	|	|	|
6+ 5	1.0027	2.40	Q V	|	|	|	|
6+10	1.0192	2.41	Q V	|	|	|	|
6+15	1.0359	2.42	Q V	|	|	|	|
6+20	1.0527	2.43	Q V	|	|	|	|
6+25	1.0695	2.45	Q V	|	|	|	|
6+30	1.0865	2.46	Q V	|	|	|	|
6+35	1.1035	2.47	Q V	|	|	|	|
6+40	1.1206	2.49	Q V	|	|	|	|
6+45	1.1378	2.50	Q V	|	|	|	|
6+50	1.1552	2.51	Q V	|	|	|	|

6+55	1.1726	2.53	Q	V	|	|	|	|
7+ 0	1.1901	2.54	Q	V	|	|	|	|
7+ 5	1.2077	2.56	Q	V	|	|	|	|
7+10	1.2254	2.57	Q	V	|	|	|	|
7+15	1.2432	2.59	Q	V	|	|	|	|
7+20	1.2611	2.60	Q	V	|	|	|	|
7+25	1.2791	2.62	Q	V	|	|	|	|
7+30	1.2973	2.63	Q	V	|	|	|	|
7+35	1.3155	2.65	Q	V	|	|	|	|
7+40	1.3338	2.66	Q	V	|	|	|	|
7+45	1.3523	2.68	Q	V	|	|	|	|
7+50	1.3709	2.70	Q	V	|	|	|	|
7+55	1.3896	2.71	Q	V	|	|	|	|
8+ 0	1.4084	2.73	Q	V	|	|	|	|
8+ 5	1.4273	2.75	Q	V	|	|	|	|
8+10	1.4463	2.77	Q	V	|	|	|	|
8+15	1.4655	2.78	Q	V	|	|	|	|
8+20	1.4848	2.80	Q	V	|	|	|	|
8+25	1.5042	2.82	Q	V	|	|	|	|
8+30	1.5238	2.84	Q	V	|	|	|	|
8+35	1.5435	2.86	Q	V	|	|	|	|
8+40	1.5633	2.88	Q	V	|	|	|	|
8+45	1.5833	2.90	Q	V	|	|	|	|
8+50	1.6034	2.92	Q	V	|	|	|	|
8+55	1.6236	2.94	Q	V	|	|	|	|
9+ 0	1.6440	2.96	Q	V	|	|	|	|
9+ 5	1.6645	2.98	Q	V	|	|	|	|
9+10	1.6852	3.00	Q	V	|	|	|	|
9+15	1.7061	3.03	Q	V	|	|	|	|
9+20	1.7271	3.05	Q	V	|	|	|	|
9+25	1.7482	3.07	Q	V	|	|	|	|
9+30	1.7695	3.10	Q	V	|	|	|	|
9+35	1.7910	3.12	Q	V	|	|	|	|
9+40	1.8127	3.14	Q	V	|	|	|	|
9+45	1.8345	3.17	Q	V	|	|	|	|
9+50	1.8565	3.20	Q	V	|	|	|	|
9+55	1.8787	3.22	Q	V	|	|	|	|
10+ 0	1.9011	3.25	Q	V	|	|	|	|
10+ 5	1.9236	3.27	Q	V	|	|	|	|
10+10	1.9464	3.30	Q	V	|	|	|	|
10+15	1.9693	3.33	Q	V	|	|	|	|
10+20	1.9925	3.36	Q	V	|	|	|	|
10+25	2.0158	3.39	Q	V	|	|	|	|
10+30	2.0394	3.42	Q	V	|	|	|	|
10+35	2.0632	3.45	Q	V	|	|	|	|
10+40	2.0872	3.49	Q	V	|	|	|	|
10+45	2.1114	3.52	Q	V	|	|	|	|
10+50	2.1359	3.55	Q	V	|	|	|	|
10+55	2.1606	3.59	Q	V	|	|	|	|
11+ 0	2.1855	3.62	Q	V	|	|	|	|

11+ 5	2.2107	3.66	Q	V	|	|	|
11+10	2.2361	3.70	Q	V	|	|	|
11+15	2.2619	3.73	Q	V	|	|	|
11+20	2.2878	3.77	Q	V	|	|	|
11+25	2.3141	3.81	Q	V	|	|	|
11+30	2.3407	3.86	Q	V	|	|	|
11+35	2.3675	3.90	Q	V	|	|	|
11+40	2.3947	3.94	Q	V	|	|	|
11+45	2.4221	3.99	Q	V	|	|	|
11+50	2.4499	4.04	Q	V	|	|	|
11+55	2.4780	4.08	Q	V		|	|
12+ 0	2.5065	4.13	Q	V		|	|
12+ 5	2.5352	4.17	Q	V		|	|
12+10	2.5639	4.16	Q	V		|	|
12+15	2.5925	4.15	Q	V		|	|
12+20	2.6213	4.19	Q	V		|	|
12+25	2.6505	4.23	Q	V		|	|
12+30	2.6800	4.28	Q	V		|	|
12+35	2.7098	4.34	Q	V		|	|
12+40	2.7401	4.40	Q	|V		|	|
12+45	2.7708	4.46	Q	|V		|	|
12+50	2.8020	4.53	Q	|V		|	|
12+55	2.8337	4.60	Q	|V		|	|
13+ 0	2.8659	4.67	Q	|V		|	|
13+ 5	2.8986	4.75	Q	|V		|	|
13+10	2.9319	4.83	Q	|V		|	|
13+15	2.9657	4.92	Q	|V		|	|
13+20	3.0002	5.01	|Q	| V		|	|
13+25	3.0353	5.10	|Q	| V		|	|
13+30	3.0711	5.20	|Q	| V		|	|
13+35	3.1077	5.30	|Q	| V		|	|
13+40	3.1449	5.41	|Q	| V		|	|
13+45	3.1830	5.53	|Q	| V		|	|
13+50	3.2219	5.65	|Q	| V		|	|
13+55	3.2617	5.78	|Q	| V		|	|
14+ 0	3.3024	5.92	|Q	| V		|	|
14+ 5	3.3441	6.06	|Q	| V		|	|
14+10	3.3870	6.23	|Q	| V		|	|
14+15	3.4310	6.39	|Q	| V		|	|
14+20	3.4763	6.58	|Q	| V		|	|
14+25	3.5229	6.76	|Q	| V		|	|
14+30	3.5709	6.97	|Q	| V		|	|
14+35	3.6204	7.19	|Q	| V		|	|
14+40	3.6717	7.44	|Q	| V		|	|
14+45	3.7246	7.69	|Q	| V		|	|
14+50	3.7797	7.99	|Q	| V		|	|
14+55	3.8368	8.30	|Q	| V		|	|
15+ 0	3.8967	8.69	|Q	| V		|	|
15+ 5	3.9593	9.10	|Q	| V		|	|
15+10	4.0255	9.61	|Q	| V		|	|



19+25	8.9564	3.26	Q	|	|	|	V |
19+30	8.9785	3.20	Q	|	|	|	V |
19+35	9.0002	3.15	Q	|	|	|	V |
19+40	9.0216	3.10	Q	|	|	|	V |
19+45	9.0426	3.06	Q	|	|	|	V |
19+50	9.0634	3.01	Q	|	|	|	V |
19+55	9.0838	2.97	Q	|	|	|	V |
20+ 0	9.1040	2.93	Q	|	|	|	V |
20+ 5	9.1238	2.89	Q	|	|	|	V |
20+10	9.1434	2.85	Q	|	|	|	V |
20+15	9.1628	2.81	Q	|	|	|	V |
20+20	9.1819	2.77	Q	|	|	|	V |
20+25	9.2007	2.74	Q	|	|	|	V |
20+30	9.2193	2.70	Q	|	|	|	V |
20+35	9.2377	2.67	Q	|	|	|	V |
20+40	9.2559	2.64	Q	|	|	|	V |
20+45	9.2738	2.61	Q	|	|	|	V |
20+50	9.2916	2.58	Q	|	|	|	V |
20+55	9.3091	2.55	Q	|	|	|	V |
21+ 0	9.3264	2.52	Q	|	|	|	V |
21+ 5	9.3436	2.49	Q	|	|	|	V |
21+10	9.3606	2.46	Q	|	|	|	V |
21+15	9.3773	2.44	Q	|	|	|	V |
21+20	9.3940	2.41	Q	|	|	|	V |
21+25	9.4104	2.39	Q	|	|	|	V |
21+30	9.4267	2.36	Q	|	|	|	V |
21+35	9.4428	2.34	Q	|	|	|	V |
21+40	9.4588	2.32	Q	|	|	|	V |
21+45	9.4746	2.29	Q	|	|	|	V |
21+50	9.4902	2.27	Q	|	|	|	V |
21+55	9.5057	2.25	Q	|	|	|	V |
22+ 0	9.5211	2.23	Q	|	|	|	V |
22+ 5	9.5363	2.21	Q	|	|	|	V |
22+10	9.5514	2.19	Q	|	|	|	V |
22+15	9.5664	2.17	Q	|	|	|	V |
22+20	9.5812	2.15	Q	|	|	|	V |
22+25	9.5959	2.13	Q	|	|	|	V |
22+30	9.6105	2.12	Q	|	|	|	V |
22+35	9.6249	2.10	Q	|	|	|	V |
22+40	9.6393	2.08	Q	|	|	|	V |
22+45	9.6535	2.07	Q	|	|	|	V|
22+50	9.6676	2.05	Q	|	|	|	V|
22+55	9.6816	2.03	Q	|	|	|	V|
23+ 0	9.6955	2.02	Q	|	|	|	V|
23+ 5	9.7093	2.00	Q	|	|	|	V|
23+10	9.7229	1.99	Q	|	|	|	V|
23+15	9.7365	1.97	Q	|	|	|	V|
23+20	9.7500	1.96	Q	|	|	|	V|
23+25	9.7634	1.94	Q	|	|	|	V|
23+30	9.7766	1.93	Q	|	|	|	V|

23+35	9.7898	1.91	Q	|	|	|	V|
23+40	9.8029	1.90	Q	|	|	|	V|
23+45	9.8159	1.89	Q	|	|	|	V|
23+50	9.8288	1.87	Q	|	|	|	V|
23+55	9.8416	1.86	Q	|	|	|	V|
24+ 0	9.8543	1.85	Q	|	|	|	V|

APPENDIX 'E'

Basin Routing

Detention Basin Tables
Outlet Pipe Sizing—10 and 100 year storm event
Basin Routing—10 and 100 year storm events

Detention Basin Table
10-year
Basin A (Q10in=63.66 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	24" pipe outlet (cfs)	24" pipe outlet (cfs)	Total Outlet Flow (cfs)
2903	0-	0	0	0	0	0
2904.5	1.5	77,482	1.78	0	0	0
2905	2	103,310	2.37	0	0	0
2905.5	2.5	129,138	2.96	0	0	0
2906	3	154,965	3.56	0	0	0
2906.5	3.5	180,793	4.15	0	0	0
2907	4	206,620	4.74	20	0	20
2907.5	4.5	222,116	5.10	20	10	30
2908	5	227,392	5.22	20	23	43

Qout=20.2 cfs

Detention Basin Table
10-year
Basin B (Q10in=64.41 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	24" pipe outlet (cfs)	24" pipe outlet (cfs)	Total Outlet Flow (cfs)
2909	0-			0	0	0
2910.5	1.5	78,488	1.80	0	0	0
2911	2	104,650	2.40	0	0	0
2911.5	2.5	130,812	3.00	0	0	0
2912	3	156,975	3.60	0	0	0
2912.5	3.5	183,138	4.20	0	0	0
2913	4	209,300	4.80	20	0	0
2913.5	4.5	224,998	5.17	20	5	25
2914	5	230,364	5.29	20	5	25

Qout=20.1 cfs

Detention Basin Table
10-year
Basin C (Q10in=51.01 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	18" pipe outlet (cfs)	18" pipe outlet (cfs)	Total Outlet Flow (cfs)
2947	0-			0	0	0
2948.5	1.5	63,300	1.45	0	0	0
2949	2	84,400	1.94	0	0	0
2949.5	2.5	105,500	2.42	0	0	0
2950	3	126,600	2.91	0	0	0
2950.5	3.5	147,700	3.39	0	0	0
2951	4	168,800	3.88	10	0	10
2951.5	4.5	181,460	4.17	10	10	20
2952	5	185,343	4.25	10	10	20

Qout=13.2 cfs

Detention Basin Table
10-year
Basin D (Q10in=55.36 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	18" pipe outlet (cfs)	18" pipe outlet (cfs)	Total Outlet Flow (cfs)
2953	0-	0	0	0	0	0
2954.5	1.5	61,665	1.41	0	0	0
2955	2	82,220	1.89	0	0	0
2955.5	2.5	102,775	2.36	0	0	0
2956	3	123,330	2.83	0	0	0
2956.5	3.5	143,885	3.03	0	0	0
2957	4	164,440	3.76	5	0	5
2957.5	4.5	176,773	4.06	5	7	12
2958	5	180,500	4.14	5	7	12

Qout=10.2 cfs

Detention Basin Table
100-year
Basin A (Q100in=116.1 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	pipe outlet (cfs)	pipe outlet (cfs)	Total Outlet Flow (cfs)
2903	0-	0	0	0	0	0
2904.5	1.5	77,482	1.78	0	0	0
2905	2	103,310	2.37	0	0	0
2905.5	2.5	129,138	2.96	0	0	0
2906	3	154,965	3.56	0	0	0
2906.5	3.5	180,793	4.15	45	0	45
2907	4	206,620	4.74	45	30	75
2907.5	4.5	222,116	5.10	45	40	85
2908	5	227,392	5.22	45	45	90

Qout=74.0 cfs

Detention Basin Table
100-year
Basin B (Q100in=117.5 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	pipe outlet (cfs)	pipe outlet (cfs)	Total Outlet Flow (cfs)
2909	0-			0	0	0
2910.5	1.5	78,488	1.80	0	0	0
2911	2	104,650	2.40	0	0	0
2911.5	2.5	130,812	3.00	0	0	0
2912	3	156,975	3.60	0	0	0
2912.5	3.5	183,138	4.20	45	0	45
2913	4	209,300	4.80	45	30	75
2913.5	4.5	224,998	5.17	45	40	85
2914	5	230,364	5.29	45	45	90

Qout=74.5 cfs

Detention Basin Table
100-year
Basin C (Q100in=93.1 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	pipe outlet (cfs)	pipe outlet (cfs)	Total Outlet Flow (cfs)
2947	0-			0	0	0
2948.5	1.5	63,300	1.45	0	0	0
2949	2	84,400	1.94	0	0	0
2949.5	2.5	105,500	2.42	0	0	0
2950	3	126,600	2.91	0	0	0
2950.5	3.5	147,700	3.39	40	0	40
2951	4	168,800	3.88	40	30	70
2951.5	4.5	181,460	4.17	40	40	80
2952	5	185,343	4.25	40	40	80

Qout=64.6 cfs

Detention Basin Table
100-year
Basin D (Q100in=102.9 cfs)

Elevation (feet)	Depth (feet)	Basin Volume (CF)	Basin Volume (ac.ft)	pipe outlet (cfs)	pipe outlet (cfs)	Total Outlet Flow (cfs)
2953	0-	0	0	0	0	0
2954.5	1.5	61,665	1.41	0	0	0
2955	2	82,220	1.89	0	0	0
2955.5	2.5	102,775	2.36	0	0	0
2956	3	123,330	2.83	0	0	0
2956.5	3.5	143,885	3.03	40	0	40
2957	4	164,440	3.76	40	30	70
2957.5	4.5	176,773	4.06	40	40	80
2958	5	180,500	4.14	40	45	80

Qout=61.4 cfs

Pipe from Basins A and B capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.010 ft/ft
Normal Depth	23.0 in
Diameter	24.0 in

Results	
Discharge	24.25 cfs
Flow Area	3.1 ft²
Wetted Perimeter	5.5 ft
Hydraulic Radius	6.8 in
Top Width	0.80 ft
Critical Depth	20.9 in
Percent Full	95.8 %
Critical Slope	0.010 ft/ft
Velocity	7.83 ft/s
Velocity Head	0.95 ft
Specific Energy	2.87 ft
Froude Number	0.701
Maximum Discharge	24.33 cfs
Discharge Full	22.62 cfs
Slope Full	0.011 ft/ft
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	70.8 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	23.0 in
Critical Depth	20.9 in
Channel Slope	0.010 ft/ft
Critical Slope	0.010 ft/ft

Pipe from Basin C and D capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.010 ft/ft
Normal Depth	17.0 in
Diameter	18.0 in

Results	
Discharge	11.30 cfs
Flow Area	1.7 ft²
Wetted Perimeter	4.0 ft
Hydraulic Radius	5.2 in
Top Width	0.69 ft
Critical Depth	15.4 in
Percent Full	94.4 %
Critical Slope	0.011 ft/ft
Velocity	6.53 ft/s
Velocity Head	0.66 ft
Specific Energy	2.08 ft
Froude Number	0.726
Maximum Discharge	11.30 cfs
Discharge Full	10.50 cfs
Slope Full	0.012 ft/ft
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	61.1 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	17.0 in
Critical Depth	15.4 in
Channel Slope	0.010 ft/ft
Critical Slope	0.011 ft/ft

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 08/07/22

IENLC
Basin A
10-year

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: 10yrareaA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 304
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 63.664 (CFS)
Total volume = 7.117 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 10.000 to Point/Station 40.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 304
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)

Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.780	0.001	1.780	1.780
2.000	2.370	0.010	2.370	2.370
2.500	2.960	0.010	2.960	2.960
3.000	3.560	0.010	3.560	3.560
3.500	4.150	0.010	4.150	4.150
4.000	4.740	20.000	4.671	4.809
4.500	5.100	30.000	4.997	5.203
5.000	5.220	43.000	5.072	5.368

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 15.9 31.83 47.75 63.66	Depth (Ft.)
0.083	0.05	0.00	0.000	O | | | |	0.00
0.167	0.37	0.00	0.002	O | | | |	0.00
0.250	0.78	0.00	0.006	O | | | |	0.00
0.333	0.97	0.00	0.012	O | | | |	0.01
0.417	1.09	0.00	0.019	O | | | |	0.02
0.500	1.16	0.00	0.026	O | | | |	0.02
0.583	1.22	0.00	0.035	O | | | |	0.03
0.667	1.26	0.00	0.043	O | | | |	0.04
0.750	1.29	0.00	0.052	O | | | |	0.04
0.833	1.32	0.00	0.061	O | | | |	0.05
0.917	1.34	0.00	0.070	O | | | |	0.06
1.000	1.36	0.00	0.079	O | | | |	0.07
1.083	1.37	0.00	0.089	O | | | |	0.07
1.167	1.38	0.00	0.098	O | | | |	0.08
1.250	1.39	0.00	0.108	O | | | |	0.09
1.333	1.40	0.00	0.117	O | | | |	0.10
1.417	1.41	0.00	0.127	O | | | |	0.11
1.500	1.42	0.00	0.137	O | | | |	0.12
1.583	1.42	0.00	0.147	O | | | |	0.12
1.667	1.43	0.00	0.156	O | | | |	0.13
1.750	1.43	0.00	0.166	O | | | |	0.14
1.833	1.44	0.00	0.176	O | | | |	0.15
1.917	1.44	0.00	0.186	O | | | |	0.16
2.000	1.45	0.00	0.196	O | | | |	0.17
2.083	1.45	0.00	0.206	O | | | |	0.17

2.167	1.46	0.00	0.216	O	|	|	|	0.18
2.250	1.46	0.00	0.226	O	|	|	|	0.19
2.333	1.47	0.00	0.236	O	|	|	|	0.20
2.417	1.47	0.00	0.246	O	|	|	|	0.21
2.500	1.48	0.00	0.256	O	|	|	|	0.22
2.583	1.48	0.00	0.266	O	|	|	|	0.22
2.667	1.49	0.00	0.277	O	|	|	|	0.23
2.750	1.49	0.00	0.287	O	|	|	|	0.24
2.833	1.50	0.00	0.297	O	|	|	|	0.25
2.917	1.51	0.00	0.308	O	|	|	|	0.26
3.000	1.51	0.00	0.318	O	|	|	|	0.27
3.083	1.52	0.00	0.328	O	|	|	|	0.28
3.167	1.52	0.00	0.339	O	|	|	|	0.29
3.250	1.53	0.00	0.349	O	|	|	|	0.29
3.333	1.53	0.00	0.360	O	|	|	|	0.30
3.417	1.54	0.00	0.371	O	|	|	|	0.31
3.500	1.55	0.00	0.381	O	|	|	|	0.32
3.583	1.55	0.00	0.392	O	|	|	|	0.33
3.667	1.56	0.00	0.403	O	|	|	|	0.34
3.750	1.57	0.00	0.413	O	|	|	|	0.35
3.833	1.57	0.00	0.424	O	|	|	|	0.36
3.917	1.58	0.00	0.435	O	|	|	|	0.37
4.000	1.58	0.00	0.446	O	|	|	|	0.38
4.083	1.59	0.00	0.457	O	|	|	|	0.38
4.167	1.60	0.00	0.468	O	|	|	|	0.39
4.250	1.60	0.00	0.479	O	|	|	|	0.40
4.333	1.61	0.00	0.490	O	|	|	|	0.41
4.417	1.62	0.00	0.501	O	|	|	|	0.42
4.500	1.62	0.00	0.512	O	|	|	|	0.43
4.583	1.63	0.00	0.523	O	|	|	|	0.44
4.667	1.64	0.00	0.535	O	|	|	|	0.45
4.750	1.65	0.00	0.546	O	|	|	|	0.46
4.833	1.65	0.00	0.557	O	|	|	|	0.47
4.917	1.66	0.00	0.569	O	|	|	|	0.48
5.000	1.67	0.00	0.580	O	|	|	|	0.49
5.083	1.68	0.00	0.592	O	|	|	|	0.50
5.167	1.68	0.00	0.603	O	|	|	|	0.51
5.250	1.69	0.00	0.615	O	|	|	|	0.52
5.333	1.70	0.00	0.627	O	|	|	|	0.53
5.417	1.71	0.00	0.638	O	|	|	|	0.54
5.500	1.71	0.00	0.650	O	|	|	|	0.55
5.583	1.72	0.00	0.662	O	|	|	|	0.56
5.667	1.73	0.00	0.674	O	|	|	|	0.57
5.750	1.74	0.00	0.686	O	|	|	|	0.58
5.833	1.75	0.00	0.698	O	|	|	|	0.59
5.917	1.76	0.00	0.710	O	|	|	|	0.60
6.000	1.77	0.00	0.722	O	|	|	|	0.61
6.083	1.77	0.00	0.734	O	|	|	|	0.62
6.167	1.78	0.00	0.746	O	|	|	|	0.63
6.250	1.79	0.00	0.759	O	|	|	|	0.64

6.333	1.80	0.00	0.771	O				0.65
6.417	1.81	0.00	0.783	O				0.66
6.500	1.82	0.00	0.796	O				0.67
6.583	1.83	0.00	0.808	O				0.68
6.667	1.84	0.00	0.821	O				0.69
6.750	1.85	0.00	0.834	O				0.70
6.833	1.86	0.00	0.847	O				0.71
6.917	1.87	0.00	0.859	O				0.72
7.000	1.88	0.00	0.872	O				0.74
7.083	1.89	0.00	0.885	O				0.75
7.167	1.90	0.00	0.898	O				0.76
7.250	1.91	0.00	0.911	O				0.77
7.333	1.92	0.00	0.925	O				0.78
7.417	1.93	0.00	0.938	O				0.79
7.500	1.94	0.00	0.951	O				0.80
7.583	1.95	0.00	0.965	O				0.81
7.667	1.97	0.00	0.978	O				0.82
7.750	1.98	0.00	0.992	O				0.84
7.833	1.99	0.00	1.005	O				0.85
7.917	2.00	0.00	1.019	OI				0.86
8.000	2.01	0.00	1.033	OI				0.87
8.083	2.03	0.00	1.047	OI				0.88
8.167	2.04	0.00	1.061	OI				0.89
8.250	2.05	0.00	1.075	OI				0.91
8.333	2.06	0.00	1.089	OI				0.92
8.417	2.08	0.00	1.103	OI				0.93
8.500	2.09	0.00	1.118	OI				0.94
8.583	2.10	0.00	1.132	OI				0.95
8.667	2.12	0.00	1.147	OI				0.97
8.750	2.13	0.00	1.161	OI				0.98
8.833	2.15	0.00	1.176	OI				0.99
8.917	2.16	0.00	1.191	OI				1.00
9.000	2.18	0.00	1.206	OI				1.02
9.083	2.19	0.00	1.221	OI				1.03
9.167	2.21	0.00	1.236	OI				1.04
9.250	2.22	0.00	1.251	OI				1.05
9.333	2.24	0.00	1.266	OI				1.07
9.417	2.26	0.00	1.282	OI				1.08
9.500	2.27	0.00	1.298	OI				1.09
9.583	2.29	0.00	1.313	OI				1.11
9.667	2.31	0.00	1.329	OI				1.12
9.750	2.32	0.00	1.345	OI				1.13
9.833	2.34	0.00	1.361	OI				1.15
9.917	2.36	0.00	1.377	OI				1.16
10.000	2.38	0.00	1.394	OI				1.17
10.083	2.40	0.00	1.410	OI				1.19
10.167	2.42	0.00	1.427	OI				1.20
10.250	2.44	0.00	1.443	OI				1.22
10.333	2.46	0.00	1.460	OI				1.23
10.417	2.48	0.00	1.477	OI				1.24

10.500	2.50	0.00	1.494	OI	|	|	|	1.26
10.583	2.52	0.00	1.512	OI	|	|	|	1.27
10.667	2.55	0.00	1.529	OI	|	|	|	1.29
10.750	2.57	0.00	1.547	OI	|	|	|	1.30
10.833	2.59	0.00	1.565	OI	|	|	|	1.32
10.917	2.62	0.00	1.582	OI	|	|	|	1.33
11.000	2.64	0.00	1.601	OI	|	|	|	1.35
11.083	2.67	0.00	1.619	OI	|	|	|	1.36
11.167	2.70	0.00	1.637	OI	|	|	|	1.38
11.250	2.72	0.00	1.656	OI	|	|	|	1.40
11.333	2.75	0.00	1.675	OI	|	|	|	1.41
11.417	2.78	0.00	1.694	OI	|	|	|	1.43
11.500	2.81	0.00	1.713	OI	|	|	|	1.44
11.583	2.84	0.00	1.733	OI	|	|	|	1.46
11.667	2.87	0.00	1.752	OI	|	|	|	1.48
11.750	2.90	0.00	1.772	OI	|	|	|	1.49
11.833	2.93	0.00	1.792	OI	|	|	|	1.51
11.917	2.97	0.00	1.812	OI	|	|	|	1.53
12.000	3.00	0.00	1.833	OI	|	|	|	1.54
12.083	3.04	0.00	1.854	OI	|	|	|	1.56
12.167	3.09	0.00	1.875	OI	|	|	|	1.58
12.250	3.14	0.00	1.896	OI	|	|	|	1.60
12.333	3.19	0.00	1.918	OI	|	|	|	1.62
12.417	3.24	0.00	1.940	OI	|	|	|	1.64
12.500	3.28	0.00	1.963	OI	|	|	|	1.65
12.583	3.33	0.00	1.985	OI	|	|	|	1.67
12.667	3.38	0.00	2.008	OI	|	|	|	1.69
12.750	3.43	0.00	2.032	OI	|	|	|	1.71
12.833	3.47	0.01	2.056	OI	|	|	|	1.73
12.917	3.53	0.01	2.080	OI	|	|	|	1.75
13.000	3.58	0.01	2.104	OI	|	|	|	1.77
13.083	3.64	0.01	2.129	OI	|	|	|	1.80
13.167	3.69	0.01	2.154	OI	|	|	|	1.82
13.250	3.76	0.01	2.180	OI	|	|	|	1.84
13.333	3.82	0.01	2.206	OI	|	|	|	1.86
13.417	3.89	0.01	2.232	OI	|	|	|	1.88
13.500	3.95	0.01	2.259	OI	|	|	|	1.91
13.583	4.03	0.01	2.287	O I	|	|	|	1.93
13.667	4.10	0.01	2.314	O I	|	|	|	1.95
13.750	4.18	0.01	2.343	O I	|	|	|	1.98
13.833	4.27	0.01	2.372	O I	|	|	|	2.00
13.917	4.36	0.01	2.402	O I	|	|	|	2.03
14.000	4.45	0.01	2.432	O I	|	|	|	2.05
14.083	4.55	0.01	2.463	O I	|	|	|	2.08
14.167	4.66	0.01	2.494	O I	|	|	|	2.11
14.250	4.78	0.01	2.527	O I	|	|	|	2.13
14.333	4.91	0.01	2.560	O I	|	|	|	2.16
14.417	5.04	0.01	2.594	O I	|	|	|	2.19
14.500	5.18	0.01	2.630	O I	|	|	|	2.22
14.583	5.33	0.01	2.666	O I	|	|	|	2.25

14.667	5.49	0.01	2.703	O I				2.28
14.750	5.67	0.01	2.741	O I				2.31
14.833	5.86	0.01	2.781	O I				2.35
14.917	6.08	0.01	2.822	O I				2.38
15.000	6.31	0.01	2.864	O I				2.42
15.083	6.57	0.01	2.909	O I				2.46
15.167	6.86	0.01	2.955	O I				2.50
15.250	7.19	0.01	3.003	O I				2.54
15.333	7.57	0.01	3.054	O I				2.58
15.417	7.92	0.01	3.107	O I				2.62
15.500	7.87	0.01	3.162	O I				2.67
15.583	7.74	0.01	3.215	O I				2.71
15.667	8.11	0.01	3.270	O I				2.76
15.750	8.80	0.01	3.328	O I				2.81
15.833	9.93	0.01	3.392	O I				2.86
15.917	11.80	0.01	3.467	O I				2.92
16.000	15.55	0.01	3.561	O I				3.00
16.083	26.30	0.01	3.705	O I				3.12
16.167	56.32	0.01	3.990	O			I	3.36
16.250	63.66	7.68	4.376	O			I	3.69
16.333	36.83	16.57	4.639	O	I			3.91
16.417	25.33	19.61	4.728	O I				3.99
16.500	19.62	20.17	4.746	IO				4.01
16.583	16.45	19.76	4.733	IO				3.99
16.667	13.74	18.79	4.704	I O				3.97
16.750	11.96	17.55	4.668	I O				3.94
16.833	10.42	16.22	4.628	I O				3.91
16.917	9.19	14.88	4.589	I O				3.87
17.000	8.09	13.57	4.550	I O				3.84
17.083	7.14	12.33	4.514	I O				3.81
17.167	6.71	11.20	4.480	I O				3.78
17.250	6.35	10.22	4.451	I O				3.76
17.333	5.75	9.35	4.426	I O				3.73
17.417	5.29	8.55	4.402	I O				3.71
17.500	4.59	7.80	4.380	IO				3.69
17.583	4.37	7.10	4.359	IO				3.68
17.667	4.18	6.51	4.342	IO				3.66
17.750	4.02	6.01	4.327	IO				3.65
17.833	3.87	5.58	4.314	IO				3.64
17.917	3.74	5.21	4.303	IO				3.63
18.000	3.62	4.89	4.294	IO				3.62
18.083	3.51	4.61	4.286	IO				3.62
18.167	3.39	4.37	4.279	IO				3.61
18.250	3.28	4.15	4.272	IO				3.60
18.333	3.19	3.96	4.267	O				3.60
18.417	3.10	3.79	4.262	O				3.59
18.500	3.03	3.64	4.257	O				3.59
18.583	2.95	3.50	4.253	O				3.59
18.667	2.89	3.38	4.249	O				3.58
18.750	2.82	3.27	4.246	O				3.58

18.833	2.76	3.17	4.243	|O	|	|	|	3.58
18.917	2.71	3.08	4.241	|O	|	|	|	3.58
19.000	2.65	3.00	4.238	|O	|	|	|	3.57
19.083	2.60	2.92	4.236	|O	|	|	|	3.57
19.167	2.55	2.85	4.234	|O	|	|	|	3.57
19.250	2.51	2.78	4.232	|O	|	|	|	3.57
19.333	2.47	2.72	4.230	|O	|	|	|	3.57
19.417	2.42	2.66	4.228	|O	|	|	|	3.57
19.500	2.38	2.61	4.227	|O	|	|	|	3.56
19.583	2.35	2.56	4.225	|O	|	|	|	3.56
19.667	2.31	2.51	4.224	|O	|	|	|	3.56
19.750	2.28	2.46	4.222	|O	|	|	|	3.56
19.833	2.24	2.42	4.221	|O	|	|	|	3.56
19.917	2.21	2.38	4.220	|O	|	|	|	3.56
20.000	2.18	2.34	4.219	|O	|	|	|	3.56
20.083	2.15	2.30	4.218	|O	|	|	|	3.56
20.167	2.12	2.27	4.217	|O	|	|	|	3.56
20.250	2.09	2.24	4.216	|O	|	|	|	3.56
20.333	2.07	2.20	4.215	|O	|	|	|	3.55
20.417	2.04	2.17	4.214	|O	|	|	|	3.55
20.500	2.01	2.14	4.213	|O	|	|	|	3.55
20.583	1.99	2.11	4.212	|O	|	|	|	3.55
20.667	1.97	2.08	4.211	IO	|	|	|	3.55
20.750	1.94	2.06	4.210	IO	|	|	|	3.55
20.833	1.92	2.03	4.210	IO	|	|	|	3.55
20.917	1.90	2.01	4.209	IO	|	|	|	3.55
21.000	1.88	1.98	4.208	O	|	|	|	3.55
21.083	1.86	1.96	4.208	O	|	|	|	3.55
21.167	1.84	1.94	4.207	O	|	|	|	3.55
21.250	1.82	1.91	4.206	O	|	|	|	3.55
21.333	1.80	1.89	4.206	O	|	|	|	3.55
21.417	1.78	1.87	4.205	O	|	|	|	3.55
21.500	1.77	1.85	4.204	O	|	|	|	3.55
21.583	1.75	1.83	4.204	O	|	|	|	3.55
21.667	1.73	1.81	4.203	O	|	|	|	3.55
21.750	1.72	1.79	4.203	O	|	|	|	3.54
21.833	1.70	1.78	4.202	O	|	|	|	3.54
21.917	1.68	1.76	4.202	O	|	|	|	3.54
22.000	1.67	1.74	4.201	O	|	|	|	3.54
22.083	1.65	1.72	4.201	O	|	|	|	3.54
22.167	1.64	1.71	4.200	O	|	|	|	3.54
22.250	1.63	1.69	4.200	O	|	|	|	3.54
22.333	1.61	1.68	4.199	O	|	|	|	3.54
22.417	1.60	1.66	4.199	O	|	|	|	3.54
22.500	1.58	1.65	4.198	O	|	|	|	3.54
22.583	1.57	1.63	4.198	O	|	|	|	3.54
22.667	1.56	1.62	4.197	O	|	|	|	3.54
22.750	1.55	1.61	4.197	O	|	|	|	3.54
22.833	1.53	1.59	4.197	O	|	|	|	3.54
22.917	1.52	1.58	4.196	O	|	|	|	3.54

23.000	1.51	1.57	4.196	O				3.54
23.083	1.50	1.55	4.196	O				3.54
23.167	1.49	1.54	4.195	O				3.54
23.250	1.48	1.53	4.195	O				3.54
23.333	1.47	1.52	4.194	O				3.54
23.417	1.46	1.51	4.194	O				3.54
23.500	1.45	1.49	4.194	O				3.54
23.583	1.44	1.48	4.193	O				3.54
23.667	1.43	1.47	4.193	O				3.54
23.750	1.42	1.46	4.193	O				3.54
23.833	1.41	1.45	4.193	O				3.54
23.917	1.40	1.44	4.192	O				3.54
24.000	1.39	1.43	4.192	O				3.54
24.083	1.33	1.42	4.191	O				3.54
24.167	1.00	1.36	4.190	O				3.53
24.250	0.58	1.24	4.186	O				3.53
24.333	0.39	1.09	4.182	O				3.53
24.417	0.28	0.93	4.177	O				3.52
24.500	0.21	0.79	4.173	O				3.52
24.583	0.15	0.66	4.169	O				3.52
24.667	0.11	0.55	4.166	O				3.51
24.750	0.08	0.45	4.163	O				3.51
24.833	0.06	0.38	4.161	O				3.51
24.917	0.04	0.31	4.159	O				3.51
25.000	0.03	0.25	4.157	O				3.51
25.083	0.02	0.20	4.156	O				3.50
25.167	0.02	0.17	4.155	O				3.50
25.250	0.01	0.13	4.154	O				3.50
25.333	0.00	0.11	4.153	O				3.50
25.417	0.00	0.09	4.152	O				3.50
25.500	0.00	0.07	4.152	O				3.50
25.583	0.00	0.05	4.151	O				3.50
25.667	0.00	0.04	4.151	O				3.50
25.750	0.00	0.03	4.151	O				3.50
25.833	0.00	0.03	4.150	O				3.50
25.917	0.00	0.02	4.150	O				3.50
26.000	0.00	0.02	4.150	O				3.50
26.083	0.00	0.01	4.150	O				3.50
26.167	0.00	0.01	4.150	O				3.50
26.250	0.00	0.01	4.150	O				3.50
26.333	0.00	0.01	4.150	O				3.50
26.417	0.00	0.01	4.150	O				3.50
26.500	0.00	0.01	4.150	O				3.50
26.583	0.00	0.01	4.150	O				3.50
26.667	0.00	0.01	4.150	O				3.50
26.750	0.00	0.01	4.150	O				3.50
26.833	0.00	0.01	4.149	O				3.50
26.917	0.00	0.01	4.149	O				3.50
27.000	0.00	0.01	4.149	O				3.50
27.083	0.00	0.01	4.149	O				3.50

27.167	0.00	0.01	4.149	O	|	|	|	3.50
27.250	0.00	0.01	4.149	O	|	|	|	3.50
27.333	0.00	0.01	4.149	O	|	|	|	3.50
27.417	0.00	0.01	4.149	O	|	|	|	3.50
27.500	0.00	0.01	4.149	O	|	|	|	3.50
27.583	0.00	0.01	4.149	O	|	|	|	3.50
27.667	0.00	0.01	4.149	O	|	|	|	3.50
27.750	0.00	0.01	4.149	O	|	|	|	3.50
27.833	0.00	0.01	4.149	O	|	|	|	3.50
27.917	0.00	0.01	4.149	O	|	|	|	3.50
28.000	0.00	0.01	4.148	O	|	|	|	3.50
28.083	0.00	0.01	4.148	O	|	|	|	3.50
28.167	0.00	0.01	4.148	O	|	|	|	3.50
28.250	0.00	0.01	4.148	O	|	|	|	3.50
28.333	0.00	0.01	4.148	O	|	|	|	3.50
28.417	0.00	0.01	4.148	O	|	|	|	3.50
28.500	0.00	0.01	4.148	O	|	|	|	3.50
28.583	0.00	0.01	4.148	O	|	|	|	3.50
28.667	0.00	0.01	4.148	O	|	|	|	3.50
28.750	0.00	0.01	4.148	O	|	|	|	3.50
28.833	0.00	0.01	4.148	O	|	|	|	3.50
28.917	0.00	0.01	4.148	O	|	|	|	3.50
29.000	0.00	0.01	4.148	O	|	|	|	3.50
29.083	0.00	0.01	4.148	O	|	|	|	3.50
29.167	0.00	0.01	4.148	O	|	|	|	3.50
29.250	0.00	0.01	4.147	O	|	|	|	3.50
29.333	0.00	0.01	4.147	O	|	|	|	3.50
29.417	0.00	0.01	4.147	O	|	|	|	3.50
29.500	0.00	0.01	4.147	O	|	|	|	3.50
29.583	0.00	0.01	4.147	O	|	|	|	3.50
29.667	0.00	0.01	4.147	O	|	|	|	3.50
29.750	0.00	0.01	4.147	O	|	|	|	3.50
29.833	0.00	0.01	4.147	O	|	|	|	3.50
29.917	0.00	0.01	4.147	O	|	|	|	3.50
30.000	0.00	0.01	4.147	O	|	|	|	3.50
30.083	0.00	0.01	4.147	O	|	|	|	3.50
30.167	0.00	0.01	4.147	O	|	|	|	3.50
30.250	0.00	0.01	4.147	O	|	|	|	3.50
30.333	0.00	0.01	4.147	O	|	|	|	3.50
30.417	0.00	0.01	4.146	O	|	|	|	3.50
30.500	0.00	0.01	4.146	O	|	|	|	3.50
30.583	0.00	0.01	4.146	O	|	|	|	3.50
30.667	0.00	0.01	4.146	O	|	|	|	3.50
30.750	0.00	0.01	4.146	O	|	|	|	3.50
30.833	0.00	0.01	4.146	O	|	|	|	3.50
30.917	0.00	0.01	4.146	O	|	|	|	3.50
31.000	0.00	0.01	4.146	O	|	|	|	3.50
31.083	0.00	0.01	4.146	O	|	|	|	3.50
31.167	0.00	0.01	4.146	O	|	|	|	3.50
31.250	0.00	0.01	4.146	O	|	|	|	3.50

31.333	0.00	0.01	4.146	O				3.50
31.417	0.00	0.01	4.146	O				3.50
31.500	0.00	0.01	4.146	O				3.50
31.583	0.00	0.01	4.146	O				3.50
31.667	0.00	0.01	4.145	O				3.50
31.750	0.00	0.01	4.145	O				3.50
31.833	0.00	0.01	4.145	O				3.50
31.917	0.00	0.01	4.145	O				3.50
32.000	0.00	0.01	4.145	O				3.50
32.083	0.00	0.01	4.145	O				3.50
32.167	0.00	0.01	4.145	O				3.50
32.250	0.00	0.01	4.145	O				3.50
32.333	0.00	0.01	4.145	O				3.50
32.417	0.00	0.01	4.145	O				3.50
32.500	0.00	0.01	4.145	O				3.50
32.583	0.00	0.01	4.145	O				3.50
32.667	0.00	0.01	4.145	O				3.50
32.750	0.00	0.01	4.145	O				3.50
32.833	0.00	0.01	4.145	O				3.50
32.917	0.00	0.01	4.144	O				3.50
33.000	0.00	0.01	4.144	O				3.50
33.083	0.00	0.01	4.144	O				3.50
33.167	0.00	0.01	4.144	O				3.50
33.250	0.00	0.01	4.144	O				3.50
33.333	0.00	0.01	4.144	O				3.49
33.417	0.00	0.01	4.144	O				3.49
33.500	0.00	0.01	4.144	O				3.49
33.583	0.00	0.01	4.144	O				3.49
33.667	0.00	0.01	4.144	O				3.49
33.750	0.00	0.01	4.144	O				3.49
33.833	0.00	0.01	4.144	O				3.49
33.917	0.00	0.01	4.144	O				3.49
34.000	0.00	0.01	4.144	O				3.49
34.083	0.00	0.01	4.143	O				3.49
34.167	0.00	0.01	4.143	O				3.49
34.250	0.00	0.01	4.143	O				3.49
34.333	0.00	0.01	4.143	O				3.49
34.417	0.00	0.01	4.143	O				3.49
34.500	0.00	0.01	4.143	O				3.49
34.583	0.00	0.01	4.143	O				3.49
34.667	0.00	0.01	4.143	O				3.49
34.750	0.00	0.01	4.143	O				3.49
34.833	0.00	0.01	4.143	O				3.49
34.917	0.00	0.01	4.143	O				3.49
35.000	0.00	0.01	4.143	O				3.49
35.083	0.00	0.01	4.143	O				3.49
35.167	0.00	0.01	4.143	O				3.49
35.250	0.00	0.01	4.143	O				3.49
35.333	0.00	0.01	4.142	O				3.49
35.417	0.00	0.01	4.142	O				3.49

35.500	0.00	0.01	4.142	O				3.49
35.583	0.00	0.01	4.142	O				3.49
35.667	0.00	0.01	4.142	O				3.49
35.750	0.00	0.01	4.142	O				3.49
35.833	0.00	0.01	4.142	O				3.49
35.917	0.00	0.01	4.142	O				3.49
36.000	0.00	0.01	4.142	O				3.49
36.083	0.00	0.01	4.142	O				3.49
36.167	0.00	0.01	4.142	O				3.49
36.250	0.00	0.01	4.142	O				3.49
36.333	0.00	0.01	4.142	O				3.49
36.417	0.00	0.01	4.142	O				3.49
36.500	0.00	0.01	4.141	O				3.49
36.583	0.00	0.01	4.141	O				3.49
36.667	0.00	0.01	4.141	O				3.49
36.750	0.00	0.01	4.141	O				3.49
36.833	0.00	0.01	4.141	O				3.49
36.917	0.00	0.01	4.141	O				3.49
37.000	0.00	0.01	4.141	O				3.49
37.083	0.00	0.01	4.141	O				3.49
37.167	0.00	0.01	4.141	O				3.49
37.250	0.00	0.01	4.141	O				3.49
37.333	0.00	0.01	4.141	O				3.49
37.417	0.00	0.01	4.141	O				3.49
37.500	0.00	0.01	4.141	O				3.49
37.583	0.00	0.01	4.141	O				3.49
37.667	0.00	0.01	4.141	O				3.49
37.750	0.00	0.01	4.140	O				3.49
37.833	0.00	0.01	4.140	O				3.49
37.917	0.00	0.01	4.140	O				3.49
38.000	0.00	0.01	4.140	O				3.49
38.083	0.00	0.01	4.140	O				3.49
38.167	0.00	0.01	4.140	O				3.49
38.250	0.00	0.01	4.140	O				3.49
38.333	0.00	0.01	4.140	O				3.49
38.417	0.00	0.01	4.140	O				3.49
38.500	0.00	0.01	4.140	O				3.49
38.583	0.00	0.01	4.140	O				3.49
38.667	0.00	0.01	4.140	O				3.49
38.750	0.00	0.01	4.140	O				3.49
38.833	0.00	0.01	4.140	O				3.49
38.917	0.00	0.01	4.139	O				3.49
39.000	0.00	0.01	4.139	O				3.49
39.083	0.00	0.01	4.139	O				3.49
39.167	0.00	0.01	4.139	O				3.49
39.250	0.00	0.01	4.139	O				3.49
39.333	0.00	0.01	4.139	O				3.49
39.417	0.00	0.01	4.139	O				3.49
39.500	0.00	0.01	4.139	O				3.49
39.583	0.00	0.01	4.139	O				3.49

39.667	0.00	0.01	4.139	O					3.49
39.750	0.00	0.01	4.139	O					3.49
39.833	0.00	0.01	4.139	O					3.49
39.917	0.00	0.01	4.139	O					3.49
40.000	0.00	0.01	4.139	O					3.49
40.083	0.00	0.01	4.139	O					3.49
40.167	0.00	0.01	4.138	O					3.49
40.250	0.00	0.01	4.138	O					3.49
40.333	0.00	0.01	4.138	O					3.49
40.417	0.00	0.01	4.138	O					3.49
40.500	0.00	0.01	4.138	O					3.49
40.583	0.00	0.01	4.138	O					3.49
40.667	0.00	0.01	4.138	O					3.49
40.750	0.00	0.01	4.138	O					3.49
40.833	0.00	0.01	4.138	O					3.49
40.917	0.00	0.01	4.138	O					3.49
41.000	0.00	0.01	4.138	O					3.49
41.083	0.00	0.01	4.138	O					3.49
41.167	0.00	0.01	4.138	O					3.49
41.250	0.00	0.01	4.138	O					3.49
41.333	0.00	0.01	4.137	O					3.49
41.417	0.00	0.01	4.137	O					3.49
41.500	0.00	0.01	4.137	O					3.49
41.583	0.00	0.01	4.137	O					3.49
41.667	0.00	0.01	4.137	O					3.49
41.750	0.00	0.01	4.137	O					3.49
41.833	0.00	0.01	4.137	O					3.49
41.917	0.00	0.01	4.137	O					3.49
42.000	0.00	0.01	4.137	O					3.49
42.083	0.00	0.01	4.137	O					3.49
42.167	0.00	0.01	4.137	O					3.49
42.250	0.00	0.01	4.137	O					3.49
42.333	0.00	0.01	4.137	O					3.49
42.417	0.00	0.01	4.137	O					3.49
42.500	0.00	0.01	4.137	O					3.49
42.583	0.00	0.01	4.136	O					3.49
42.667	0.00	0.01	4.136	O					3.49
42.750	0.00	0.01	4.136	O					3.49
42.833	0.00	0.01	4.136	O					3.49
42.917	0.00	0.01	4.136	O					3.49
43.000	0.00	0.01	4.136	O					3.49
43.083	0.00	0.01	4.136	O					3.49
43.167	0.00	0.01	4.136	O					3.49
43.250	0.00	0.01	4.136	O					3.49
43.333	0.00	0.01	4.136	O					3.49
43.417	0.00	0.01	4.136	O					3.49
43.500	0.00	0.01	4.136	O					3.49
43.583	0.00	0.01	4.136	O					3.49
43.667	0.00	0.01	4.136	O					3.49
43.750	0.00	0.01	4.135	O					3.49

43.833	0.00	0.01	4.135	O				3.49
43.917	0.00	0.01	4.135	O				3.49
44.000	0.00	0.01	4.135	O				3.49
44.083	0.00	0.01	4.135	O				3.49
44.167	0.00	0.01	4.135	O				3.49
44.250	0.00	0.01	4.135	O				3.49
44.333	0.00	0.01	4.135	O				3.49
44.417	0.00	0.01	4.135	O				3.49
44.500	0.00	0.01	4.135	O				3.49
44.583	0.00	0.01	4.135	O				3.49
44.667	0.00	0.01	4.135	O				3.49
44.750	0.00	0.01	4.135	O				3.49
44.833	0.00	0.01	4.135	O				3.49
44.917	0.00	0.01	4.135	O				3.49
45.000	0.00	0.01	4.134	O				3.49
45.083	0.00	0.01	4.134	O				3.49
45.167	0.00	0.01	4.134	O				3.49
45.250	0.00	0.01	4.134	O				3.49
45.333	0.00	0.01	4.134	O				3.49
45.417	0.00	0.01	4.134	O				3.49
45.500	0.00	0.01	4.134	O				3.49
45.583	0.00	0.01	4.134	O				3.49
45.667	0.00	0.01	4.134	O				3.49
45.750	0.00	0.01	4.134	O				3.49
45.833	0.00	0.01	4.134	O				3.49
45.917	0.00	0.01	4.134	O				3.49
46.000	0.00	0.01	4.134	O				3.49
46.083	0.00	0.01	4.134	O				3.49
46.167	0.00	0.01	4.133	O				3.49
46.250	0.00	0.01	4.133	O				3.49
46.333	0.00	0.01	4.133	O				3.49
46.417	0.00	0.01	4.133	O				3.49
46.500	0.00	0.01	4.133	O				3.49
46.583	0.00	0.01	4.133	O				3.49
46.667	0.00	0.01	4.133	O				3.49
46.750	0.00	0.01	4.133	O				3.49
46.833	0.00	0.01	4.133	O				3.49
46.917	0.00	0.01	4.133	O				3.49
47.000	0.00	0.01	4.133	O				3.49
47.083	0.00	0.01	4.133	O				3.49
47.167	0.00	0.01	4.133	O				3.49
47.250	0.00	0.01	4.133	O				3.49
47.333	0.00	0.01	4.133	O				3.49
47.417	0.00	0.01	4.132	O				3.49
47.500	0.00	0.01	4.132	O				3.49
47.583	0.00	0.01	4.132	O				3.49
47.667	0.00	0.01	4.132	O				3.48
47.750	0.00	0.01	4.132	O				3.48
47.833	0.00	0.01	4.132	O				3.48
47.917	0.00	0.01	4.132	O				3.48

48.000	0.00	0.01	4.132	O	|	|	|	3.48
48.083	0.00	0.01	4.132	O	|	|	|	3.48
48.167	0.00	0.01	4.132	O	|	|	|	3.48
48.250	0.00	0.01	4.132	O	|	|	|	3.48
48.333	0.00	0.01	4.132	O	|	|	|	3.48
48.417	0.00	0.01	4.132	O	|	|	|	3.48
48.500	0.00	0.01	4.132	O	|	|	|	3.48
48.583	0.00	0.01	4.131	O	|	|	|	3.48
48.667	0.00	0.01	4.131	O	|	|	|	3.48
48.750	0.00	0.01	4.131	O	|	|	|	3.48
48.833	0.00	0.01	4.131	O	|	|	|	3.48
48.917	0.00	0.01	4.131	O	|	|	|	3.48
49.000	0.00	0.01	4.131	O	|	|	|	3.48
49.083	0.00	0.01	4.131	O	|	|	|	3.48
49.167	0.00	0.01	4.131	O	|	|	|	3.48
49.250	0.00	0.01	4.131	O	|	|	|	3.48
49.333	0.00	0.01	4.131	O	|	|	|	3.48
49.417	0.00	0.01	4.131	O	|	|	|	3.48
49.500	0.00	0.01	4.131	O	|	|	|	3.48
49.583	0.00	0.01	4.131	O	|	|	|	3.48
49.667	0.00	0.01	4.131	O	|	|	|	3.48
49.750	0.00	0.01	4.131	O	|	|	|	3.48
49.833	0.00	0.01	4.130	O	|	|	|	3.48
49.917	0.00	0.01	4.130	O	|	|	|	3.48
50.000	0.00	0.01	4.130	O	|	|	|	3.48
50.083	0.00	0.01	4.130	O	|	|	|	3.48
50.167	0.00	0.01	4.130	O	|	|	|	3.48
50.250	0.00	0.01	4.130	O	|	|	|	3.48
50.333	0.00	0.01	4.130	O	|	|	|	3.48
50.417	0.00	0.01	4.130	O	|	|	|	3.48
50.500	0.00	0.01	4.130	O	|	|	|	3.48
50.583	0.00	0.01	4.130	O	|	|	|	3.48
50.667	0.00	0.01	4.130	O	|	|	|	3.48
50.750	0.00	0.01	4.130	O	|	|	|	3.48
50.833	0.00	0.01	4.130	O	|	|	|	3.48
50.917	0.00	0.01	4.130	O	|	|	|	3.48
51.000	0.00	0.01	4.129	O	|	|	|	3.48
51.083	0.00	0.01	4.129	O	|	|	|	3.48
51.167	0.00	0.01	4.129	O	|	|	|	3.48
51.250	0.00	0.01	4.129	O	|	|	|	3.48
51.333	0.00	0.01	4.129	O	|	|	|	3.48
51.417	0.00	0.01	4.129	O	|	|	|	3.48
51.500	0.00	0.01	4.129	O	|	|	|	3.48
51.583	0.00	0.01	4.129	O	|	|	|	3.48
51.667	0.00	0.01	4.129	O	|	|	|	3.48
51.750	0.00	0.01	4.129	O	|	|	|	3.48
51.833	0.00	0.01	4.129	O	|	|	|	3.48
51.917	0.00	0.01	4.129	O	|	|	|	3.48
52.000	0.00	0.01	4.129	O	|	|	|	3.48
52.083	0.00	0.01	4.129	O	|	|	|	3.48

52.167	0.00	0.01	4.129	O				3.48
52.250	0.00	0.01	4.128	O				3.48
52.333	0.00	0.01	4.128	O				3.48
52.417	0.00	0.01	4.128	O				3.48
52.500	0.00	0.01	4.128	O				3.48
52.583	0.00	0.01	4.128	O				3.48
52.667	0.00	0.01	4.128	O				3.48
52.750	0.00	0.01	4.128	O				3.48
52.833	0.00	0.01	4.128	O				3.48
52.917	0.00	0.01	4.128	O				3.48
53.000	0.00	0.01	4.128	O				3.48
53.083	0.00	0.01	4.128	O				3.48
53.167	0.00	0.01	4.128	O				3.48
53.250	0.00	0.01	4.128	O				3.48
53.333	0.00	0.01	4.128	O				3.48
53.417	0.00	0.01	4.127	O				3.48
53.500	0.00	0.01	4.127	O				3.48
53.583	0.00	0.01	4.127	O				3.48
53.667	0.00	0.01	4.127	O				3.48
53.750	0.00	0.01	4.127	O				3.48
53.833	0.00	0.01	4.127	O				3.48
53.917	0.00	0.01	4.127	O				3.48
54.000	0.00	0.01	4.127	O				3.48
54.083	0.00	0.01	4.127	O				3.48
54.167	0.00	0.01	4.127	O				3.48
54.250	0.00	0.01	4.127	O				3.48
54.333	0.00	0.01	4.127	O				3.48
54.417	0.00	0.01	4.127	O				3.48
54.500	0.00	0.01	4.127	O				3.48
54.583	0.00	0.01	4.127	O				3.48
54.667	0.00	0.01	4.126	O				3.48
54.750	0.00	0.01	4.126	O				3.48
54.833	0.00	0.01	4.126	O				3.48
54.917	0.00	0.01	4.126	O				3.48
55.000	0.00	0.01	4.126	O				3.48
55.083	0.00	0.01	4.126	O				3.48
55.167	0.00	0.01	4.126	O				3.48
55.250	0.00	0.01	4.126	O				3.48
55.333	0.00	0.01	4.126	O				3.48
55.417	0.00	0.01	4.126	O				3.48
55.500	0.00	0.01	4.126	O				3.48
55.583	0.00	0.01	4.126	O				3.48
55.667	0.00	0.01	4.126	O				3.48
55.750	0.00	0.01	4.126	O				3.48
55.833	0.00	0.01	4.125	O				3.48
55.917	0.00	0.01	4.125	O				3.48
56.000	0.00	0.01	4.125	O				3.48
56.083	0.00	0.01	4.125	O				3.48
56.167	0.00	0.01	4.125	O				3.48
56.250	0.00	0.01	4.125	O				3.48

56.333	0.00	0.01	4.125	O				3.48
56.417	0.00	0.01	4.125	O				3.48
56.500	0.00	0.01	4.125	O				3.48
56.583	0.00	0.01	4.125	O				3.48
56.667	0.00	0.01	4.125	O				3.48
56.750	0.00	0.01	4.125	O				3.48
56.833	0.00	0.01	4.125	O				3.48
56.917	0.00	0.01	4.125	O				3.48
57.000	0.00	0.01	4.125	O				3.48
57.083	0.00	0.01	4.124	O				3.48
57.167	0.00	0.01	4.124	O				3.48
57.250	0.00	0.01	4.124	O				3.48
57.333	0.00	0.01	4.124	O				3.48
57.417	0.00	0.01	4.124	O				3.48
57.500	0.00	0.01	4.124	O				3.48
57.583	0.00	0.01	4.124	O				3.48
57.667	0.00	0.01	4.124	O				3.48
57.750	0.00	0.01	4.124	O				3.48
57.833	0.00	0.01	4.124	O				3.48
57.917	0.00	0.01	4.124	O				3.48
58.000	0.00	0.01	4.124	O				3.48
58.083	0.00	0.01	4.124	O				3.48
58.167	0.00	0.01	4.124	O				3.48
58.250	0.00	0.01	4.123	O				3.48
58.333	0.00	0.01	4.123	O				3.48
58.417	0.00	0.01	4.123	O				3.48
58.500	0.00	0.01	4.123	O				3.48
58.583	0.00	0.01	4.123	O				3.48
58.667	0.00	0.01	4.123	O				3.48
58.750	0.00	0.01	4.123	O				3.48
58.833	0.00	0.01	4.123	O				3.48
58.917	0.00	0.01	4.123	O				3.48
59.000	0.00	0.01	4.123	O				3.48
59.083	0.00	0.01	4.123	O				3.48
59.167	0.00	0.01	4.123	O				3.48
59.250	0.00	0.01	4.123	O				3.48
59.333	0.00	0.01	4.123	O				3.48
59.417	0.00	0.01	4.123	O				3.48
59.500	0.00	0.01	4.122	O				3.48
59.583	0.00	0.01	4.122	O				3.48
59.667	0.00	0.01	4.122	O				3.48
59.750	0.00	0.01	4.122	O				3.48
59.833	0.00	0.01	4.122	O				3.48
59.917	0.00	0.01	4.122	O				3.48
60.000	0.00	0.01	4.122	O				3.48
60.083	0.00	0.01	4.122	O				3.48
60.167	0.00	0.01	4.122	O				3.48
60.250	0.00	0.01	4.122	O				3.48
60.333	0.00	0.01	4.122	O				3.48
60.417	0.00	0.01	4.122	O				3.48

60.500	0.00	0.01	4.122	O	|	|	|	3.48
60.583	0.00	0.01	4.122	O	|	|	|	3.48
60.667	0.00	0.01	4.121	O	|	|	|	3.48
60.750	0.00	0.01	4.121	O	|	|	|	3.48
60.833	0.00	0.01	4.121	O	|	|	|	3.48
60.917	0.00	0.01	4.121	O	|	|	|	3.48
61.000	0.00	0.01	4.121	O	|	|	|	3.48
61.083	0.00	0.01	4.121	O	|	|	|	3.48
61.167	0.00	0.01	4.121	O	|	|	|	3.48
61.250	0.00	0.01	4.121	O	|	|	|	3.48
61.333	0.00	0.01	4.121	O	|	|	|	3.48
61.417	0.00	0.01	4.121	O	|	|	|	3.48
61.500	0.00	0.01	4.121	O	|	|	|	3.48
61.583	0.00	0.01	4.121	O	|	|	|	3.48
61.667	0.00	0.01	4.121	O	|	|	|	3.48
61.750	0.00	0.01	4.121	O	|	|	|	3.48
61.833	0.00	0.01	4.121	O	|	|	|	3.48
61.917	0.00	0.01	4.120	O	|	|	|	3.47
62.000	0.00	0.01	4.120	O	|	|	|	3.47
62.083	0.00	0.01	4.120	O	|	|	|	3.47
62.167	0.00	0.01	4.120	O	|	|	|	3.47
62.250	0.00	0.01	4.120	O	|	|	|	3.47
62.333	0.00	0.01	4.120	O	|	|	|	3.47
62.417	0.00	0.01	4.120	O	|	|	|	3.47
62.500	0.00	0.01	4.120	O	|	|	|	3.47
62.583	0.00	0.01	4.120	O	|	|	|	3.47
62.667	0.00	0.01	4.120	O	|	|	|	3.47
62.750	0.00	0.01	4.120	O	|	|	|	3.47
62.833	0.00	0.01	4.120	O	|	|	|	3.47
62.917	0.00	0.01	4.120	O	|	|	|	3.47
63.000	0.00	0.01	4.120	O	|	|	|	3.47
63.083	0.00	0.01	4.120	O	|	|	|	3.47
63.167	0.00	0.01	4.119	O	|	|	|	3.47
63.250	0.00	0.01	4.119	O	|	|	|	3.47
63.333	0.00	0.01	4.119	O	|	|	|	3.47
63.417	0.00	0.01	4.119	O	|	|	|	3.47
63.500	0.00	0.01	4.119	O	|	|	|	3.47
63.583	0.00	0.01	4.119	O	|	|	|	3.47
63.667	0.00	0.01	4.119	O	|	|	|	3.47
63.750	0.00	0.01	4.119	O	|	|	|	3.47
63.833	0.00	0.01	4.119	O	|	|	|	3.47
63.917	0.00	0.01	4.119	O	|	|	|	3.47
64.000	0.00	0.01	4.119	O	|	|	|	3.47
64.083	0.00	0.01	4.119	O	|	|	|	3.47
64.167	0.00	0.01	4.119	O	|	|	|	3.47
64.250	0.00	0.01	4.119	O	|	|	|	3.47
64.333	0.00	0.01	4.118	O	|	|	|	3.47
64.417	0.00	0.01	4.118	O	|	|	|	3.47
64.500	0.00	0.01	4.118	O	|	|	|	3.47
64.583	0.00	0.01	4.118	O	|	|	|	3.47

64.667	0.00	0.01	4.118	O				3.47
64.750	0.00	0.01	4.118	O				3.47
64.833	0.00	0.01	4.118	O				3.47
64.917	0.00	0.01	4.118	O				3.47
65.000	0.00	0.01	4.118	O				3.47
65.083	0.00	0.01	4.118	O				3.47
65.167	0.00	0.01	4.118	O				3.47
65.250	0.00	0.01	4.118	O				3.47
65.333	0.00	0.01	4.118	O				3.47
65.417	0.00	0.01	4.118	O				3.47
65.500	0.00	0.01	4.118	O				3.47
65.583	0.00	0.01	4.117	O				3.47
65.667	0.00	0.01	4.117	O				3.47
65.750	0.00	0.01	4.117	O				3.47
65.833	0.00	0.01	4.117	O				3.47
65.917	0.00	0.01	4.117	O				3.47
66.000	0.00	0.01	4.117	O				3.47
66.083	0.00	0.01	4.117	O				3.47
66.167	0.00	0.01	4.117	O				3.47
66.250	0.00	0.01	4.117	O				3.47
66.333	0.00	0.01	4.117	O				3.47
66.417	0.00	0.01	4.117	O				3.47
66.500	0.00	0.01	4.117	O				3.47
66.583	0.00	0.01	4.117	O				3.47
66.667	0.00	0.01	4.117	O				3.47
66.750	0.00	0.01	4.116	O				3.47
66.833	0.00	0.01	4.116	O				3.47
66.917	0.00	0.01	4.116	O				3.47
67.000	0.00	0.01	4.116	O				3.47
67.083	0.00	0.01	4.116	O				3.47
67.167	0.00	0.01	4.116	O				3.47
67.250	0.00	0.01	4.116	O				3.47
67.333	0.00	0.01	4.116	O				3.47
67.417	0.00	0.01	4.116	O				3.47
67.500	0.00	0.01	4.116	O				3.47
67.583	0.00	0.01	4.116	O				3.47
67.667	0.00	0.01	4.116	O				3.47
67.750	0.00	0.01	4.116	O				3.47
67.833	0.00	0.01	4.116	O				3.47
67.917	0.00	0.01	4.116	O				3.47
68.000	0.00	0.01	4.115	O				3.47
68.083	0.00	0.01	4.115	O				3.47
68.167	0.00	0.01	4.115	O				3.47
68.250	0.00	0.01	4.115	O				3.47
68.333	0.00	0.01	4.115	O				3.47
68.417	0.00	0.01	4.115	O				3.47
68.500	0.00	0.01	4.115	O				3.47
68.583	0.00	0.01	4.115	O				3.47
68.667	0.00	0.01	4.115	O				3.47
68.750	0.00	0.01	4.115	O				3.47

68.833	0.00	0.01	4.115	O				3.47
68.917	0.00	0.01	4.115	O				3.47
69.000	0.00	0.01	4.115	O				3.47
69.083	0.00	0.01	4.115	O				3.47
69.167	0.00	0.01	4.114	O				3.47
69.250	0.00	0.01	4.114	O				3.47
69.333	0.00	0.01	4.114	O				3.47
69.417	0.00	0.01	4.114	O				3.47
69.500	0.00	0.01	4.114	O				3.47
69.583	0.00	0.01	4.114	O				3.47
69.667	0.00	0.01	4.114	O				3.47
69.750	0.00	0.01	4.114	O				3.47
69.833	0.00	0.01	4.114	O				3.47
69.917	0.00	0.01	4.114	O				3.47
70.000	0.00	0.01	4.114	O				3.47
70.083	0.00	0.01	4.114	O				3.47
70.167	0.00	0.01	4.114	O				3.47
70.250	0.00	0.01	4.114	O				3.47
70.333	0.00	0.01	4.114	O				3.47
70.417	0.00	0.01	4.113	O				3.47
70.500	0.00	0.01	4.113	O				3.47
70.583	0.00	0.01	4.113	O				3.47
70.667	0.00	0.01	4.113	O				3.47
70.750	0.00	0.01	4.113	O				3.47
70.833	0.00	0.01	4.113	O				3.47
70.917	0.00	0.01	4.113	O				3.47
71.000	0.00	0.01	4.113	O				3.47
71.083	0.00	0.01	4.113	O				3.47
71.167	0.00	0.01	4.113	O				3.47
71.250	0.00	0.01	4.113	O				3.47
71.333	0.00	0.01	4.113	O				3.47
71.417	0.00	0.01	4.113	O				3.47
71.500	0.00	0.01	4.113	O				3.47
71.583	0.00	0.01	4.112	O				3.47
71.667	0.00	0.01	4.112	O				3.47
71.750	0.00	0.01	4.112	O				3.47
71.833	0.00	0.01	4.112	O				3.47
71.917	0.00	0.01	4.112	O				3.47
72.000	0.00	0.01	4.112	O				3.47
72.083	0.00	0.01	4.112	O				3.47
72.167	0.00	0.01	4.112	O				3.47
72.250	0.00	0.01	4.112	O				3.47
72.333	0.00	0.01	4.112	O				3.47
72.417	0.00	0.01	4.112	O				3.47
72.500	0.00	0.01	4.112	O				3.47
72.583	0.00	0.01	4.112	O				3.47
72.667	0.00	0.01	4.112	O				3.47
72.750	0.00	0.01	4.112	O				3.47
72.833	0.00	0.01	4.111	O				3.47
72.917	0.00	0.01	4.111	O				3.47

73.000	0.00	0.01	4.111	O				3.47
73.083	0.00	0.01	4.111	O				3.47
73.167	0.00	0.01	4.111	O				3.47
73.250	0.00	0.01	4.111	O				3.47
73.333	0.00	0.01	4.111	O				3.47
73.417	0.00	0.01	4.111	O				3.47
73.500	0.00	0.01	4.111	O				3.47
73.583	0.00	0.01	4.111	O				3.47
73.667	0.00	0.01	4.111	O				3.47
73.750	0.00	0.01	4.111	O				3.47
73.833	0.00	0.01	4.111	O				3.47
73.917	0.00	0.01	4.111	O				3.47
74.000	0.00	0.01	4.110	O				3.47
74.083	0.00	0.01	4.110	O				3.47
74.167	0.00	0.01	4.110	O				3.47
74.250	0.00	0.01	4.110	O				3.47
74.333	0.00	0.01	4.110	O				3.47
74.417	0.00	0.01	4.110	O				3.47
74.500	0.00	0.01	4.110	O				3.47
74.583	0.00	0.01	4.110	O				3.47
74.667	0.00	0.01	4.110	O				3.47
74.750	0.00	0.01	4.110	O				3.47
74.833	0.00	0.01	4.110	O				3.47
74.917	0.00	0.01	4.110	O				3.47
75.000	0.00	0.01	4.110	O				3.47
75.083	0.00	0.01	4.110	O				3.47
75.167	0.00	0.01	4.110	O				3.47
75.250	0.00	0.01	4.109	O				3.47
75.333	0.00	0.01	4.109	O				3.47
75.417	0.00	0.01	4.109	O				3.47
75.500	0.00	0.01	4.109	O				3.47
75.583	0.00	0.01	4.109	O				3.47
75.667	0.00	0.01	4.109	O				3.47
75.750	0.00	0.01	4.109	O				3.47
75.833	0.00	0.01	4.109	O				3.47
75.917	0.00	0.01	4.109	O				3.47
76.000	0.00	0.01	4.109	O				3.47
76.083	0.00	0.01	4.109	O				3.47
76.167	0.00	0.01	4.109	O				3.46
76.250	0.00	0.01	4.109	O				3.46
76.333	0.00	0.01	4.109	O				3.46
76.417	0.00	0.01	4.108	O				3.46
76.500	0.00	0.01	4.108	O				3.46
76.583	0.00	0.01	4.108	O				3.46
76.667	0.00	0.01	4.108	O				3.46
76.750	0.00	0.01	4.108	O				3.46
76.833	0.00	0.01	4.108	O				3.46
76.917	0.00	0.01	4.108	O				3.46
77.000	0.00	0.01	4.108	O				3.46
77.083	0.00	0.01	4.108	O				3.46

77.167	0.00	0.01	4.108	O				3.46
77.250	0.00	0.01	4.108	O				3.46
77.333	0.00	0.01	4.108	O				3.46
77.417	0.00	0.01	4.108	O				3.46
77.500	0.00	0.01	4.108	O				3.46
77.583	0.00	0.01	4.108	O				3.46
77.667	0.00	0.01	4.107	O				3.46
77.750	0.00	0.01	4.107	O				3.46
77.833	0.00	0.01	4.107	O				3.46
77.917	0.00	0.01	4.107	O				3.46
78.000	0.00	0.01	4.107	O				3.46
78.083	0.00	0.01	4.107	O				3.46
78.167	0.00	0.01	4.107	O				3.46
78.250	0.00	0.01	4.107	O				3.46
78.333	0.00	0.01	4.107	O				3.46
78.417	0.00	0.01	4.107	O				3.46
78.500	0.00	0.01	4.107	O				3.46
78.583	0.00	0.01	4.107	O				3.46
78.667	0.00	0.01	4.107	O				3.46
78.750	0.00	0.01	4.107	O				3.46
78.833	0.00	0.01	4.106	O				3.46
78.917	0.00	0.01	4.106	O				3.46
79.000	0.00	0.01	4.106	O				3.46
79.083	0.00	0.01	4.106	O				3.46
79.167	0.00	0.01	4.106	O				3.46
79.250	0.00	0.01	4.106	O				3.46
79.333	0.00	0.01	4.106	O				3.46
79.417	0.00	0.01	4.106	O				3.46
79.500	0.00	0.01	4.106	O				3.46
79.583	0.00	0.01	4.106	O				3.46
79.667	0.00	0.01	4.106	O				3.46
79.750	0.00	0.01	4.106	O				3.46
79.833	0.00	0.01	4.106	O				3.46
79.917	0.00	0.01	4.106	O				3.46
80.000	0.00	0.01	4.106	O				3.46
80.083	0.00	0.01	4.105	O				3.46
80.167	0.00	0.01	4.105	O				3.46
80.250	0.00	0.01	4.105	O				3.46
80.333	0.00	0.01	4.105	O				3.46
80.417	0.00	0.01	4.105	O				3.46
80.500	0.00	0.01	4.105	O				3.46
80.583	0.00	0.01	4.105	O				3.46
80.667	0.00	0.01	4.105	O				3.46
80.750	0.00	0.01	4.105	O				3.46
80.833	0.00	0.01	4.105	O				3.46
80.917	0.00	0.01	4.105	O				3.46
81.000	0.00	0.01	4.105	O				3.46
81.083	0.00	0.01	4.105	O				3.46
81.167	0.00	0.01	4.105	O				3.46
81.250	0.00	0.01	4.104	O				3.46

81.333	0.00	0.01	4.104	O				3.46
81.417	0.00	0.01	4.104	O				3.46
81.500	0.00	0.01	4.104	O				3.46
81.583	0.00	0.01	4.104	O				3.46
81.667	0.00	0.01	4.104	O				3.46
81.750	0.00	0.01	4.104	O				3.46
81.833	0.00	0.01	4.104	O				3.46
81.917	0.00	0.01	4.104	O				3.46
82.000	0.00	0.01	4.104	O				3.46
82.083	0.00	0.01	4.104	O				3.46
82.167	0.00	0.01	4.104	O				3.46
82.250	0.00	0.01	4.104	O				3.46
82.333	0.00	0.01	4.104	O				3.46
82.417	0.00	0.01	4.104	O				3.46
82.500	0.00	0.01	4.103	O				3.46
82.583	0.00	0.01	4.103	O				3.46
82.667	0.00	0.01	4.103	O				3.46
82.750	0.00	0.01	4.103	O				3.46
82.833	0.00	0.01	4.103	O				3.46
82.917	0.00	0.01	4.103	O				3.46
83.000	0.00	0.01	4.103	O				3.46
83.083	0.00	0.01	4.103	O				3.46
83.167	0.00	0.01	4.103	O				3.46
83.250	0.00	0.01	4.103	O				3.46
83.333	0.00	0.01	4.103	O				3.46
83.417	0.00	0.01	4.103	O				3.46
83.500	0.00	0.01	4.103	O				3.46
83.583	0.00	0.01	4.103	O				3.46
83.667	0.00	0.01	4.102	O				3.46
83.750	0.00	0.01	4.102	O				3.46
83.833	0.00	0.01	4.102	O				3.46
83.917	0.00	0.01	4.102	O				3.46
84.000	0.00	0.01	4.102	O				3.46
84.083	0.00	0.01	4.102	O				3.46
84.167	0.00	0.01	4.102	O				3.46
84.250	0.00	0.01	4.102	O				3.46
84.333	0.00	0.01	4.102	O				3.46
84.417	0.00	0.01	4.102	O				3.46
84.500	0.00	0.01	4.102	O				3.46
84.583	0.00	0.01	4.102	O				3.46
84.667	0.00	0.01	4.102	O				3.46
84.750	0.00	0.01	4.102	O				3.46
84.833	0.00	0.01	4.102	O				3.46
84.917	0.00	0.01	4.101	O				3.46
85.000	0.00	0.01	4.101	O				3.46
85.083	0.00	0.01	4.101	O				3.46
85.167	0.00	0.01	4.101	O				3.46
85.250	0.00	0.01	4.101	O				3.46
85.333	0.00	0.01	4.101	O				3.46
85.417	0.00	0.01	4.101	O				3.46

85.500	0.00	0.01	4.101	O					3.46
85.583	0.00	0.01	4.101	O					3.46
85.667	0.00	0.01	4.101	O					3.46
85.750	0.00	0.01	4.101	O					3.46
85.833	0.00	0.01	4.101	O					3.46
85.917	0.00	0.01	4.101	O					3.46
86.000	0.00	0.01	4.101	O					3.46
86.083	0.00	0.01	4.100	O					3.46
86.167	0.00	0.01	4.100	O					3.46
86.250	0.00	0.01	4.100	O					3.46
86.333	0.00	0.01	4.100	O					3.46
86.417	0.00	0.01	4.100	O					3.46
86.500	0.00	0.01	4.100	O					3.46
86.583	0.00	0.01	4.100	O					3.46
86.667	0.00	0.01	4.100	O					3.46
86.750	0.00	0.01	4.100	O					3.46
86.833	0.00	0.01	4.100	O					3.46
86.917	0.00	0.01	4.100	O					3.46
87.000	0.00	0.01	4.100	O					3.46
87.083	0.00	0.01	4.100	O					3.46
87.167	0.00	0.01	4.100	O					3.46
87.250	0.00	0.01	4.100	O					3.46
87.333	0.00	0.01	4.099	O					3.46
87.417	0.00	0.01	4.099	O					3.46
87.500	0.00	0.01	4.099	O					3.46
87.583	0.00	0.01	4.099	O					3.46
87.667	0.00	0.01	4.099	O					3.46
87.750	0.00	0.01	4.099	O					3.46
87.833	0.00	0.01	4.099	O					3.46
87.917	0.00	0.01	4.099	O					3.46
88.000	0.00	0.01	4.099	O					3.46
88.083	0.00	0.01	4.099	O					3.46
88.167	0.00	0.01	4.099	O					3.46
88.250	0.00	0.01	4.099	O					3.46
88.333	0.00	0.01	4.099	O					3.46
88.417	0.00	0.01	4.099	O					3.46
88.500	0.00	0.01	4.098	O					3.46
88.583	0.00	0.01	4.098	O					3.46
88.667	0.00	0.01	4.098	O					3.46
88.750	0.00	0.01	4.098	O					3.46
88.833	0.00	0.01	4.098	O					3.46
88.917	0.00	0.01	4.098	O					3.46
89.000	0.00	0.01	4.098	O					3.46
89.083	0.00	0.01	4.098	O					3.46
89.167	0.00	0.01	4.098	O					3.46
89.250	0.00	0.01	4.098	O					3.46
89.333	0.00	0.01	4.098	O					3.46
89.417	0.00	0.01	4.098	O					3.46
89.500	0.00	0.01	4.098	O					3.46
89.583	0.00	0.01	4.098	O					3.46

89.667	0.00	0.01	4.098	O				3.46
89.750	0.00	0.01	4.097	O				3.46
89.833	0.00	0.01	4.097	O				3.46
89.917	0.00	0.01	4.097	O				3.46
90.000	0.00	0.01	4.097	O				3.46
90.083	0.00	0.01	4.097	O				3.46
90.167	0.00	0.01	4.097	O				3.46
90.250	0.00	0.01	4.097	O				3.46
90.333	0.00	0.01	4.097	O				3.46
90.417	0.00	0.01	4.097	O				3.46
90.500	0.00	0.01	4.097	O				3.45
90.583	0.00	0.01	4.097	O				3.45
90.667	0.00	0.01	4.097	O				3.45
90.750	0.00	0.01	4.097	O				3.45
90.833	0.00	0.01	4.097	O				3.45
90.917	0.00	0.01	4.096	O				3.45
91.000	0.00	0.01	4.096	O				3.45
91.083	0.00	0.01	4.096	O				3.45
91.167	0.00	0.01	4.096	O				3.45
91.250	0.00	0.01	4.096	O				3.45
91.333	0.00	0.01	4.096	O				3.45
91.417	0.00	0.01	4.096	O				3.45
91.500	0.00	0.01	4.096	O				3.45
91.583	0.00	0.01	4.096	O				3.45
91.667	0.00	0.01	4.096	O				3.45
91.750	0.00	0.01	4.096	O				3.45
91.833	0.00	0.01	4.096	O				3.45
91.917	0.00	0.01	4.096	O				3.45
92.000	0.00	0.01	4.096	O				3.45
92.083	0.00	0.01	4.096	O				3.45
92.167	0.00	0.01	4.095	O				3.45
92.250	0.00	0.01	4.095	O				3.45
92.333	0.00	0.01	4.095	O				3.45
92.417	0.00	0.01	4.095	O				3.45
92.500	0.00	0.01	4.095	O				3.45
92.583	0.00	0.01	4.095	O				3.45
92.667	0.00	0.01	4.095	O				3.45
92.750	0.00	0.01	4.095	O				3.45
92.833	0.00	0.01	4.095	O				3.45
92.917	0.00	0.01	4.095	O				3.45
93.000	0.00	0.01	4.095	O				3.45
93.083	0.00	0.01	4.095	O				3.45
93.167	0.00	0.01	4.095	O				3.45
93.250	0.00	0.01	4.095	O				3.45
93.333	0.00	0.01	4.095	O				3.45
93.417	0.00	0.01	4.094	O				3.45
93.500	0.00	0.01	4.094	O				3.45
93.583	0.00	0.01	4.094	O				3.45
93.667	0.00	0.01	4.094	O				3.45
93.750	0.00	0.01	4.094	O				3.45

93.833	0.00	0.01	4.094	O				3.45
93.917	0.00	0.01	4.094	O				3.45
94.000	0.00	0.01	4.094	O				3.45
94.083	0.00	0.01	4.094	O				3.45
94.167	0.00	0.01	4.094	O				3.45
94.250	0.00	0.01	4.094	O				3.45
94.333	0.00	0.01	4.094	O				3.45
94.417	0.00	0.01	4.094	O				3.45
94.500	0.00	0.01	4.094	O				3.45
94.583	0.00	0.01	4.093	O				3.45
94.667	0.00	0.01	4.093	O				3.45
94.750	0.00	0.01	4.093	O				3.45
94.833	0.00	0.01	4.093	O				3.45
94.917	0.00	0.01	4.093	O				3.45
95.000	0.00	0.01	4.093	O				3.45
95.083	0.00	0.01	4.093	O				3.45
95.167	0.00	0.01	4.093	O				3.45
95.250	0.00	0.01	4.093	O				3.45
95.333	0.00	0.01	4.093	O				3.45
95.417	0.00	0.01	4.093	O				3.45
95.500	0.00	0.01	4.093	O				3.45
95.583	0.00	0.01	4.093	O				3.45
95.667	0.00	0.01	4.093	O				3.45
95.750	0.00	0.01	4.093	O				3.45
95.833	0.00	0.01	4.092	O				3.45
95.917	0.00	0.01	4.092	O				3.45
96.000	0.00	0.01	4.092	O				3.45
96.083	0.00	0.01	4.092	O				3.45
96.167	0.00	0.01	4.092	O				3.45
96.250	0.00	0.01	4.092	O				3.45
96.333	0.00	0.01	4.092	O				3.45
96.417	0.00	0.01	4.092	O				3.45
96.500	0.00	0.01	4.092	O				3.45
96.583	0.00	0.01	4.092	O				3.45
96.667	0.00	0.01	4.092	O				3.45
96.750	0.00	0.01	4.092	O				3.45
96.833	0.00	0.01	4.092	O				3.45
96.917	0.00	0.01	4.092	O				3.45
97.000	0.00	0.01	4.091	O				3.45
97.083	0.00	0.01	4.091	O				3.45
97.167	0.00	0.01	4.091	O				3.45
97.250	0.00	0.01	4.091	O				3.45
97.333	0.00	0.01	4.091	O				3.45
97.417	0.00	0.01	4.091	O				3.45
97.500	0.00	0.01	4.091	O				3.45
97.583	0.00	0.01	4.091	O				3.45
97.667	0.00	0.01	4.091	O				3.45
97.750	0.00	0.01	4.091	O				3.45
97.833	0.00	0.01	4.091	O				3.45
97.917	0.00	0.01	4.091	O				3.45

98.000	0.00	0.01	4.091	O				3.45
98.083	0.00	0.01	4.091	O				3.45
98.167	0.00	0.01	4.091	O				3.45
98.250	0.00	0.01	4.090	O				3.45
98.333	0.00	0.01	4.090	O				3.45
98.417	0.00	0.01	4.090	O				3.45
98.500	0.00	0.01	4.090	O				3.45
98.583	0.00	0.01	4.090	O				3.45
98.667	0.00	0.01	4.090	O				3.45
98.750	0.00	0.01	4.090	O				3.45
98.833	0.00	0.01	4.090	O				3.45
98.917	0.00	0.01	4.090	O				3.45
99.000	0.00	0.01	4.090	O				3.45
99.083	0.00	0.01	4.090	O				3.45
99.167	0.00	0.01	4.090	O				3.45
99.250	0.00	0.01	4.090	O				3.45
99.333	0.00	0.01	4.090	O				3.45
99.417	0.00	0.01	4.089	O				3.45
99.500	0.00	0.01	4.089	O				3.45
99.583	0.00	0.01	4.089	O				3.45
99.667	0.00	0.01	4.089	O				3.45
99.750	0.00	0.01	4.089	O				3.45
99.833	0.00	0.01	4.089	O				3.45
99.917	0.00	0.01	4.089	O				3.45
100.000	0.00	0.01	4.089	O				3.45
100.083	0.00	0.01	4.089	O				3.45
100.167	0.00	0.01	4.089	O				3.45
100.250	0.00	0.01	4.089	O				3.45
100.333	0.00	0.01	4.089	O				3.45
100.417	0.00	0.01	4.089	O				3.45
100.500	0.00	0.01	4.089	O				3.45
100.583	0.00	0.01	4.089	O				3.45
100.667	0.00	0.01	4.088	O				3.45
100.750	0.00	0.01	4.088	O				3.45
100.833	0.00	0.01	4.088	O				3.45
100.917	0.00	0.01	4.088	O				3.45
101.000	0.00	0.01	4.088	O				3.45
101.083	0.00	0.01	4.088	O				3.45
101.167	0.00	0.01	4.088	O				3.45
101.250	0.00	0.01	4.088	O				3.45
101.333	0.00	0.01	4.088	O				3.45
101.417	0.00	0.01	4.088	O				3.45
101.500	0.00	0.01	4.088	O				3.45
101.583	0.00	0.01	4.088	O				3.45
101.667	0.00	0.01	4.088	O				3.45
101.750	0.00	0.01	4.088	O				3.45
101.833	0.00	0.01	4.087	O				3.45
101.917	0.00	0.01	4.087	O				3.45
102.000	0.00	0.01	4.087	O				3.45
102.083	0.00	0.01	4.087	O				3.45

102.167	0.00	0.01	4.087	O				3.45
102.250	0.00	0.01	4.087	O				3.45
102.333	0.00	0.01	4.087	O				3.45
102.417	0.00	0.01	4.087	O				3.45
102.500	0.00	0.01	4.087	O				3.45
102.583	0.00	0.01	4.087	O				3.45
102.667	0.00	0.01	4.087	O				3.45
102.750	0.00	0.01	4.087	O				3.45
102.833	0.00	0.01	4.087	O				3.45
102.917	0.00	0.01	4.087	O				3.45
103.000	0.00	0.01	4.087	O				3.45
103.083	0.00	0.01	4.086	O				3.45
103.167	0.00	0.01	4.086	O				3.45
103.250	0.00	0.01	4.086	O				3.45
103.333	0.00	0.01	4.086	O				3.45
103.417	0.00	0.01	4.086	O				3.45
103.500	0.00	0.01	4.086	O				3.45
103.583	0.00	0.01	4.086	O				3.45
103.667	0.00	0.01	4.086	O				3.45
103.750	0.00	0.01	4.086	O				3.45
103.833	0.00	0.01	4.086	O				3.45
103.917	0.00	0.01	4.086	O				3.45
104.000	0.00	0.01	4.086	O				3.45
104.083	0.00	0.01	4.086	O				3.45
104.167	0.00	0.01	4.086	O				3.45
104.250	0.00	0.01	4.085	O				3.45
104.333	0.00	0.01	4.085	O				3.45
104.417	0.00	0.01	4.085	O				3.45
104.500	0.00	0.01	4.085	O				3.45
104.583	0.00	0.01	4.085	O				3.45
104.667	0.00	0.01	4.085	O				3.45
104.750	0.00	0.01	4.085	O				3.44
104.833	0.00	0.01	4.085	O				3.44
104.917	0.00	0.01	4.085	O				3.44
105.000	0.00	0.01	4.085	O				3.44
105.083	0.00	0.01	4.085	O				3.44
105.167	0.00	0.01	4.085	O				3.44
105.250	0.00	0.01	4.085	O				3.44
105.333	0.00	0.01	4.085	O				3.44
105.417	0.00	0.01	4.085	O				3.44
105.500	0.00	0.01	4.084	O				3.44
105.583	0.00	0.01	4.084	O				3.44
105.667	0.00	0.01	4.084	O				3.44
105.750	0.00	0.01	4.084	O				3.44
105.833	0.00	0.01	4.084	O				3.44
105.917	0.00	0.01	4.084	O				3.44
106.000	0.00	0.01	4.084	O				3.44
106.083	0.00	0.01	4.084	O				3.44
106.167	0.00	0.01	4.084	O				3.44
106.250	0.00	0.01	4.084	O				3.44

106.333	0.00	0.01	4.084	O					3.44
106.417	0.00	0.01	4.084	O					3.44
106.500	0.00	0.01	4.084	O					3.44
106.583	0.00	0.01	4.084	O					3.44
106.667	0.00	0.01	4.083	O					3.44
106.750	0.00	0.01	4.083	O					3.44
106.833	0.00	0.01	4.083	O					3.44
106.917	0.00	0.01	4.083	O					3.44
107.000	0.00	0.01	4.083	O					3.44
107.083	0.00	0.01	4.083	O					3.44
107.167	0.00	0.01	4.083	O					3.44
107.250	0.00	0.01	4.083	O					3.44
107.333	0.00	0.01	4.083	O					3.44
107.417	0.00	0.01	4.083	O					3.44
107.500	0.00	0.01	4.083	O					3.44
107.583	0.00	0.01	4.083	O					3.44
107.667	0.00	0.01	4.083	O					3.44
107.750	0.00	0.01	4.083	O					3.44
107.833	0.00	0.01	4.083	O					3.44
107.917	0.00	0.01	4.082	O					3.44
108.000	0.00	0.01	4.082	O					3.44
108.083	0.00	0.01	4.082	O					3.44
108.167	0.00	0.01	4.082	O					3.44
108.250	0.00	0.01	4.082	O					3.44
108.333	0.00	0.01	4.082	O					3.44
108.417	0.00	0.01	4.082	O					3.44
108.500	0.00	0.01	4.082	O					3.44
108.583	0.00	0.01	4.082	O					3.44
108.667	0.00	0.01	4.082	O					3.44
108.750	0.00	0.01	4.082	O					3.44
108.833	0.00	0.01	4.082	O					3.44
108.917	0.00	0.01	4.082	O					3.44
109.000	0.00	0.01	4.082	O					3.44
109.083	0.00	0.01	4.081	O					3.44
109.167	0.00	0.01	4.081	O					3.44
109.250	0.00	0.01	4.081	O					3.44
109.333	0.00	0.01	4.081	O					3.44
109.417	0.00	0.01	4.081	O					3.44
109.500	0.00	0.01	4.081	O					3.44
109.583	0.00	0.01	4.081	O					3.44
109.667	0.00	0.01	4.081	O					3.44
109.750	0.00	0.01	4.081	O					3.44
109.833	0.00	0.01	4.081	O					3.44
109.917	0.00	0.01	4.081	O					3.44
110.000	0.00	0.01	4.081	O					3.44
110.083	0.00	0.01	4.081	O					3.44
110.167	0.00	0.01	4.081	O					3.44
110.250	0.00	0.01	4.081	O					3.44
110.333	0.00	0.01	4.080	O					3.44
110.417	0.00	0.01	4.080	O					3.44

110.500	0.00	0.01	4.080	O				3.44
110.583	0.00	0.01	4.080	O				3.44
110.667	0.00	0.01	4.080	O				3.44
110.750	0.00	0.01	4.080	O				3.44
110.833	0.00	0.01	4.080	O				3.44
110.917	0.00	0.01	4.080	O				3.44
111.000	0.00	0.01	4.080	O				3.44
111.083	0.00	0.01	4.080	O				3.44
111.167	0.00	0.01	4.080	O				3.44
111.250	0.00	0.01	4.080	O				3.44
111.333	0.00	0.01	4.080	O				3.44
111.417	0.00	0.01	4.080	O				3.44
111.500	0.00	0.01	4.079	O				3.44
111.583	0.00	0.01	4.079	O				3.44
111.667	0.00	0.01	4.079	O				3.44
111.750	0.00	0.01	4.079	O				3.44
111.833	0.00	0.01	4.079	O				3.44
111.917	0.00	0.01	4.079	O				3.44
112.000	0.00	0.01	4.079	O				3.44
112.083	0.00	0.01	4.079	O				3.44
112.167	0.00	0.01	4.079	O				3.44
112.250	0.00	0.01	4.079	O				3.44
112.333	0.00	0.01	4.079	O				3.44
112.417	0.00	0.01	4.079	O				3.44
112.500	0.00	0.01	4.079	O				3.44
112.583	0.00	0.01	4.079	O				3.44
112.667	0.00	0.01	4.079	O				3.44
112.750	0.00	0.01	4.078	O				3.44
112.833	0.00	0.01	4.078	O				3.44
112.917	0.00	0.01	4.078	O				3.44
113.000	0.00	0.01	4.078	O				3.44
113.083	0.00	0.01	4.078	O				3.44
113.167	0.00	0.01	4.078	O				3.44
113.250	0.00	0.01	4.078	O				3.44
113.333	0.00	0.01	4.078	O				3.44
113.417	0.00	0.01	4.078	O				3.44
113.500	0.00	0.01	4.078	O				3.44
113.583	0.00	0.01	4.078	O				3.44
113.667	0.00	0.01	4.078	O				3.44
113.750	0.00	0.01	4.078	O				3.44
113.833	0.00	0.01	4.078	O				3.44
113.917	0.00	0.01	4.077	O				3.44
114.000	0.00	0.01	4.077	O				3.44
114.083	0.00	0.01	4.077	O				3.44
114.167	0.00	0.01	4.077	O				3.44
114.250	0.00	0.01	4.077	O				3.44
114.333	0.00	0.01	4.077	O				3.44
114.417	0.00	0.01	4.077	O				3.44
114.500	0.00	0.01	4.077	O				3.44
114.583	0.00	0.01	4.077	O				3.44

114.667	0.00	0.01	4.077	O					3.44
114.750	0.00	0.01	4.077	O					3.44
114.833	0.00	0.01	4.077	O					3.44
114.917	0.00	0.01	4.077	O					3.44
115.000	0.00	0.01	4.077	O					3.44
115.083	0.00	0.01	4.077	O					3.44
115.167	0.00	0.01	4.076	O					3.44
115.250	0.00	0.01	4.076	O					3.44
115.333	0.00	0.01	4.076	O					3.44
115.417	0.00	0.01	4.076	O					3.44
115.500	0.00	0.01	4.076	O					3.44
115.583	0.00	0.01	4.076	O					3.44
115.667	0.00	0.01	4.076	O					3.44
115.750	0.00	0.01	4.076	O					3.44
115.833	0.00	0.01	4.076	O					3.44
115.917	0.00	0.01	4.076	O					3.44
116.000	0.00	0.01	4.076	O					3.44
116.083	0.00	0.01	4.076	O					3.44
116.167	0.00	0.01	4.076	O					3.44
116.250	0.00	0.01	4.076	O					3.44
116.333	0.00	0.01	4.075	O					3.44
116.417	0.00	0.01	4.075	O					3.44
116.500	0.00	0.01	4.075	O					3.44
116.583	0.00	0.01	4.075	O					3.44
116.667	0.00	0.01	4.075	O					3.44
116.750	0.00	0.01	4.075	O					3.44
116.833	0.00	0.01	4.075	O					3.44
116.917	0.00	0.01	4.075	O					3.44
117.000	0.00	0.01	4.075	O					3.44
117.083	0.00	0.01	4.075	O					3.44
117.167	0.00	0.01	4.075	O					3.44
117.250	0.00	0.01	4.075	O					3.44
117.333	0.00	0.01	4.075	O					3.44
117.417	0.00	0.01	4.075	O					3.44
117.500	0.00	0.01	4.075	O					3.44
117.583	0.00	0.01	4.074	O					3.44
117.667	0.00	0.01	4.074	O					3.44
117.750	0.00	0.01	4.074	O					3.44
117.833	0.00	0.01	4.074	O					3.44
117.917	0.00	0.01	4.074	O					3.44
118.000	0.00	0.01	4.074	O					3.44
118.083	0.00	0.01	4.074	O					3.44
118.167	0.00	0.01	4.074	O					3.44
118.250	0.00	0.01	4.074	O					3.44
118.333	0.00	0.01	4.074	O					3.44
118.417	0.00	0.01	4.074	O					3.44
118.500	0.00	0.01	4.074	O					3.44
118.583	0.00	0.01	4.074	O					3.44
118.667	0.00	0.01	4.074	O					3.44
118.750	0.00	0.01	4.073	O					3.44

118.833	0.00	0.01	4.073	O				3.44
118.917	0.00	0.01	4.073	O				3.44
119.000	0.00	0.01	4.073	O				3.43
119.083	0.00	0.01	4.073	O				3.43
119.167	0.00	0.01	4.073	O				3.43
119.250	0.00	0.01	4.073	O				3.43
119.333	0.00	0.01	4.073	O				3.43
119.417	0.00	0.01	4.073	O				3.43
119.500	0.00	0.01	4.073	O				3.43
119.583	0.00	0.01	4.073	O				3.43
119.667	0.00	0.01	4.073	O				3.43
119.750	0.00	0.01	4.073	O				3.43
119.833	0.00	0.01	4.073	O				3.43
119.917	0.00	0.01	4.073	O				3.43
120.000	0.00	0.01	4.072	O				3.43
120.083	0.00	0.01	4.072	O				3.43
120.167	0.00	0.01	4.072	O				3.43
120.250	0.00	0.01	4.072	O				3.43
120.333	0.00	0.01	4.072	O				3.43
120.417	0.00	0.01	4.072	O				3.43
120.500	0.00	0.01	4.072	O				3.43
120.583	0.00	0.01	4.072	O				3.43
120.667	0.00	0.01	4.072	O				3.43
120.750	0.00	0.01	4.072	O				3.43
120.833	0.00	0.01	4.072	O				3.43
120.917	0.00	0.01	4.072	O				3.43
121.000	0.00	0.01	4.072	O				3.43
121.083	0.00	0.01	4.072	O				3.43
121.167	0.00	0.01	4.071	O				3.43
121.250	0.00	0.01	4.071	O				3.43
121.333	0.00	0.01	4.071	O				3.43
121.417	0.00	0.01	4.071	O				3.43
121.500	0.00	0.01	4.071	O				3.43
121.583	0.00	0.01	4.071	O				3.43
121.667	0.00	0.01	4.071	O				3.43
121.750	0.00	0.01	4.071	O				3.43
121.833	0.00	0.01	4.071	O				3.43
121.917	0.00	0.01	4.071	O				3.43
122.000	0.00	0.01	4.071	O				3.43
122.083	0.00	0.01	4.071	O				3.43
122.167	0.00	0.01	4.071	O				3.43
122.250	0.00	0.01	4.071	O				3.43
122.333	0.00	0.01	4.071	O				3.43
122.417	0.00	0.01	4.070	O				3.43
122.500	0.00	0.01	4.070	O				3.43
122.583	0.00	0.01	4.070	O				3.43
122.667	0.00	0.01	4.070	O				3.43
122.750	0.00	0.01	4.070	O				3.43
122.833	0.00	0.01	4.070	O				3.43
122.917	0.00	0.01	4.070	O				3.43

123.000	0.00	0.01	4.070	O				3.43
123.083	0.00	0.01	4.070	O				3.43
123.167	0.00	0.01	4.070	O				3.43
123.250	0.00	0.01	4.070	O				3.43
123.333	0.00	0.01	4.070	O				3.43
123.417	0.00	0.01	4.070	O				3.43
123.500	0.00	0.01	4.070	O				3.43
123.583	0.00	0.01	4.070	O				3.43
123.667	0.00	0.01	4.069	O				3.43
123.750	0.00	0.01	4.069	O				3.43
123.833	0.00	0.01	4.069	O				3.43
123.917	0.00	0.01	4.069	O				3.43
124.000	0.00	0.01	4.069	O				3.43
124.083	0.00	0.01	4.069	O				3.43
124.167	0.00	0.01	4.069	O				3.43
124.250	0.00	0.01	4.069	O				3.43
124.333	0.00	0.01	4.069	O				3.43
124.417	0.00	0.01	4.069	O				3.43
124.500	0.00	0.01	4.069	O				3.43
124.583	0.00	0.01	4.069	O				3.43
124.667	0.00	0.01	4.069	O				3.43
124.750	0.00	0.01	4.069	O				3.43
124.833	0.00	0.01	4.068	O				3.43
124.917	0.00	0.01	4.068	O				3.43
125.000	0.00	0.01	4.068	O				3.43
125.083	0.00	0.01	4.068	O				3.43
125.167	0.00	0.01	4.068	O				3.43
125.250	0.00	0.01	4.068	O				3.43
125.333	0.00	0.01	4.068	O				3.43
125.417	0.00	0.01	4.068	O				3.43
125.500	0.00	0.01	4.068	O				3.43
125.583	0.00	0.01	4.068	O				3.43
125.667	0.00	0.01	4.068	O				3.43
125.750	0.00	0.01	4.068	O				3.43
125.833	0.00	0.01	4.068	O				3.43
125.917	0.00	0.01	4.068	O				3.43
126.000	0.00	0.01	4.068	O				3.43
126.083	0.00	0.01	4.067	O				3.43
126.167	0.00	0.01	4.067	O				3.43
126.250	0.00	0.01	4.067	O				3.43
126.333	0.00	0.01	4.067	O				3.43
126.417	0.00	0.01	4.067	O				3.43
126.500	0.00	0.01	4.067	O				3.43
126.583	0.00	0.01	4.067	O				3.43
126.667	0.00	0.01	4.067	O				3.43
126.750	0.00	0.01	4.067	O				3.43
126.833	0.00	0.01	4.067	O				3.43
126.917	0.00	0.01	4.067	O				3.43
127.000	0.00	0.01	4.067	O				3.43
127.083	0.00	0.01	4.067	O				3.43

127.167	0.00	0.01	4.067	O				3.43
127.250	0.00	0.01	4.066	O				3.43
127.333	0.00	0.01	4.066	O				3.43
127.417	0.00	0.01	4.066	O				3.43
127.500	0.00	0.01	4.066	O				3.43
127.583	0.00	0.01	4.066	O				3.43
127.667	0.00	0.01	4.066	O				3.43
127.750	0.00	0.01	4.066	O				3.43
127.833	0.00	0.01	4.066	O				3.43
127.917	0.00	0.01	4.066	O				3.43
128.000	0.00	0.01	4.066	O				3.43
128.083	0.00	0.01	4.066	O				3.43
128.167	0.00	0.01	4.066	O				3.43
128.250	0.00	0.01	4.066	O				3.43
128.333	0.00	0.01	4.066	O				3.43
128.417	0.00	0.01	4.066	O				3.43
128.500	0.00	0.01	4.065	O				3.43
128.583	0.00	0.01	4.065	O				3.43
128.667	0.00	0.01	4.065	O				3.43
128.750	0.00	0.01	4.065	O				3.43
128.833	0.00	0.01	4.065	O				3.43
128.917	0.00	0.01	4.065	O				3.43
129.000	0.00	0.01	4.065	O				3.43
129.083	0.00	0.01	4.065	O				3.43
129.167	0.00	0.01	4.065	O				3.43
129.250	0.00	0.01	4.065	O				3.43
129.333	0.00	0.01	4.065	O				3.43
129.417	0.00	0.01	4.065	O				3.43
129.500	0.00	0.01	4.065	O				3.43
129.583	0.00	0.01	4.065	O				3.43
129.667	0.00	0.01	4.064	O				3.43
129.750	0.00	0.01	4.064	O				3.43
129.833	0.00	0.01	4.064	O				3.43
129.917	0.00	0.01	4.064	O				3.43
130.000	0.00	0.01	4.064	O				3.43
130.083	0.00	0.01	4.064	O				3.43
130.167	0.00	0.01	4.064	O				3.43
130.250	0.00	0.01	4.064	O				3.43
130.333	0.00	0.01	4.064	O				3.43
130.417	0.00	0.01	4.064	O				3.43
130.500	0.00	0.01	4.064	O				3.43
130.583	0.00	0.01	4.064	O				3.43
130.667	0.00	0.01	4.064	O				3.43
130.750	0.00	0.01	4.064	O				3.43
130.833	0.00	0.01	4.064	O				3.43
130.917	0.00	0.01	4.063	O				3.43
131.000	0.00	0.01	4.063	O				3.43
131.083	0.00	0.01	4.063	O				3.43
131.167	0.00	0.01	4.063	O				3.43
131.250	0.00	0.01	4.063	O				3.43

131.333	0.00	0.01	4.063	O				3.43
131.417	0.00	0.01	4.063	O				3.43
131.500	0.00	0.01	4.063	O				3.43
131.583	0.00	0.01	4.063	O				3.43
131.667	0.00	0.01	4.063	O				3.43
131.750	0.00	0.01	4.063	O				3.43
131.833	0.00	0.01	4.063	O				3.43
131.917	0.00	0.01	4.063	O				3.43
132.000	0.00	0.01	4.063	O				3.43
132.083	0.00	0.01	4.062	O				3.43
132.167	0.00	0.01	4.062	O				3.43
132.250	0.00	0.01	4.062	O				3.43
132.333	0.00	0.01	4.062	O				3.43
132.417	0.00	0.01	4.062	O				3.43
132.500	0.00	0.01	4.062	O				3.43
132.583	0.00	0.01	4.062	O				3.43
132.667	0.00	0.01	4.062	O				3.43
132.750	0.00	0.01	4.062	O				3.43
132.833	0.00	0.01	4.062	O				3.43
132.917	0.00	0.01	4.062	O				3.43
133.000	0.00	0.01	4.062	O				3.43
133.083	0.00	0.01	4.062	O				3.43
133.167	0.00	0.01	4.062	O				3.43
133.250	0.00	0.01	4.062	O				3.43
133.333	0.00	0.01	4.061	O				3.42
133.417	0.00	0.01	4.061	O				3.42
133.500	0.00	0.01	4.061	O				3.42
133.583	0.00	0.01	4.061	O				3.42
133.667	0.00	0.01	4.061	O				3.42
133.750	0.00	0.01	4.061	O				3.42
133.833	0.00	0.01	4.061	O				3.42
133.917	0.00	0.01	4.061	O				3.42
134.000	0.00	0.01	4.061	O				3.42
134.083	0.00	0.01	4.061	O				3.42
134.167	0.00	0.01	4.061	O				3.42
134.250	0.00	0.01	4.061	O				3.42
134.333	0.00	0.01	4.061	O				3.42
134.417	0.00	0.01	4.061	O				3.42
134.500	0.00	0.01	4.060	O				3.42
134.583	0.00	0.01	4.060	O				3.42
134.667	0.00	0.01	4.060	O				3.42
134.750	0.00	0.01	4.060	O				3.42
134.833	0.00	0.01	4.060	O				3.42
134.917	0.00	0.01	4.060	O				3.42
135.000	0.00	0.01	4.060	O				3.42
135.083	0.00	0.01	4.060	O				3.42
135.167	0.00	0.01	4.060	O				3.42
135.250	0.00	0.01	4.060	O				3.42
135.333	0.00	0.01	4.060	O				3.42
135.417	0.00	0.01	4.060	O				3.42

135.500	0.00	0.01	4.060	O				3.42
135.583	0.00	0.01	4.060	O				3.42
135.667	0.00	0.01	4.060	O				3.42
135.750	0.00	0.01	4.059	O				3.42
135.833	0.00	0.01	4.059	O				3.42
135.917	0.00	0.01	4.059	O				3.42
136.000	0.00	0.01	4.059	O				3.42
136.083	0.00	0.01	4.059	O				3.42
136.167	0.00	0.01	4.059	O				3.42
136.250	0.00	0.01	4.059	O				3.42
136.333	0.00	0.01	4.059	O				3.42
136.417	0.00	0.01	4.059	O				3.42
136.500	0.00	0.01	4.059	O				3.42
136.583	0.00	0.01	4.059	O				3.42
136.667	0.00	0.01	4.059	O				3.42
136.750	0.00	0.01	4.059	O				3.42
136.833	0.00	0.01	4.059	O				3.42
136.917	0.00	0.01	4.058	O				3.42
137.000	0.00	0.01	4.058	O				3.42
137.083	0.00	0.01	4.058	O				3.42
137.167	0.00	0.01	4.058	O				3.42
137.250	0.00	0.01	4.058	O				3.42
137.333	0.00	0.01	4.058	O				3.42
137.417	0.00	0.01	4.058	O				3.42
137.500	0.00	0.01	4.058	O				3.42
137.583	0.00	0.01	4.058	O				3.42
137.667	0.00	0.01	4.058	O				3.42
137.750	0.00	0.01	4.058	O				3.42
137.833	0.00	0.01	4.058	O				3.42
137.917	0.00	0.01	4.058	O				3.42
138.000	0.00	0.01	4.058	O				3.42
138.083	0.00	0.01	4.058	O				3.42
138.167	0.00	0.01	4.057	O				3.42
138.250	0.00	0.01	4.057	O				3.42
138.333	0.00	0.01	4.057	O				3.42
138.417	0.00	0.01	4.057	O				3.42
138.500	0.00	0.01	4.057	O				3.42
138.583	0.00	0.01	4.057	O				3.42
138.667	0.00	0.01	4.057	O				3.42
138.750	0.00	0.01	4.057	O				3.42
138.833	0.00	0.01	4.057	O				3.42
138.917	0.00	0.01	4.057	O				3.42
139.000	0.00	0.01	4.057	O				3.42
139.083	0.00	0.01	4.057	O				3.42
139.167	0.00	0.01	4.057	O				3.42
139.250	0.00	0.01	4.057	O				3.42
139.333	0.00	0.01	4.056	O				3.42
139.417	0.00	0.01	4.056	O				3.42
139.500	0.00	0.01	4.056	O				3.42
139.583	0.00	0.01	4.056	O				3.42

139.667	0.00	0.01	4.056	O				3.42
139.750	0.00	0.01	4.056	O				3.42
139.833	0.00	0.01	4.056	O				3.42
139.917	0.00	0.01	4.056	O				3.42
140.000	0.00	0.01	4.056	O				3.42
140.083	0.00	0.01	4.056	O				3.42
140.167	0.00	0.01	4.056	O				3.42
140.250	0.00	0.01	4.056	O				3.42
140.333	0.00	0.01	4.056	O				3.42
140.417	0.00	0.01	4.056	O				3.42
140.500	0.00	0.01	4.056	O				3.42
140.583	0.00	0.01	4.055	O				3.42
140.667	0.00	0.01	4.055	O				3.42
140.750	0.00	0.01	4.055	O				3.42
140.833	0.00	0.01	4.055	O				3.42
140.917	0.00	0.01	4.055	O				3.42
141.000	0.00	0.01	4.055	O				3.42
141.083	0.00	0.01	4.055	O				3.42
141.167	0.00	0.01	4.055	O				3.42
141.250	0.00	0.01	4.055	O				3.42
141.333	0.00	0.01	4.055	O				3.42
141.417	0.00	0.01	4.055	O				3.42
141.500	0.00	0.01	4.055	O				3.42
141.583	0.00	0.01	4.055	O				3.42
141.667	0.00	0.01	4.055	O				3.42
141.750	0.00	0.01	4.054	O				3.42
141.833	0.00	0.01	4.054	O				3.42
141.917	0.00	0.01	4.054	O				3.42
142.000	0.00	0.01	4.054	O				3.42
142.083	0.00	0.01	4.054	O				3.42
142.167	0.00	0.01	4.054	O				3.42
142.250	0.00	0.01	4.054	O				3.42
142.333	0.00	0.01	4.054	O				3.42
142.417	0.00	0.01	4.054	O				3.42
142.500	0.00	0.01	4.054	O				3.42
142.583	0.00	0.01	4.054	O				3.42
142.667	0.00	0.01	4.054	O				3.42
142.750	0.00	0.01	4.054	O				3.42
142.833	0.00	0.01	4.054	O				3.42
142.917	0.00	0.01	4.054	O				3.42
143.000	0.00	0.01	4.053	O				3.42
143.083	0.00	0.01	4.053	O				3.42
143.167	0.00	0.01	4.053	O				3.42
143.250	0.00	0.01	4.053	O				3.42
143.333	0.00	0.01	4.053	O				3.42
143.417	0.00	0.01	4.053	O				3.42
143.500	0.00	0.01	4.053	O				3.42
143.583	0.00	0.01	4.053	O				3.42
143.667	0.00	0.01	4.053	O				3.42
143.750	0.00	0.01	4.053	O				3.42

143.833	0.00	0.01	4.053	O				3.42
143.917	0.00	0.01	4.053	O				3.42
144.000	0.00	0.01	4.053	O				3.42
144.083	0.00	0.01	4.053	O				3.42
144.167	0.00	0.01	4.052	O				3.42
144.250	0.00	0.01	4.052	O				3.42
144.333	0.00	0.01	4.052	O				3.42
144.417	0.00	0.01	4.052	O				3.42
144.500	0.00	0.01	4.052	O				3.42
144.583	0.00	0.01	4.052	O				3.42
144.667	0.00	0.01	4.052	O				3.42
144.750	0.00	0.01	4.052	O				3.42
144.833	0.00	0.01	4.052	O				3.42
144.917	0.00	0.01	4.052	O				3.42
145.000	0.00	0.01	4.052	O				3.42
145.083	0.00	0.01	4.052	O				3.42
145.167	0.00	0.01	4.052	O				3.42
145.250	0.00	0.01	4.052	O				3.42
145.333	0.00	0.01	4.052	O				3.42
145.417	0.00	0.01	4.051	O				3.42
145.500	0.00	0.01	4.051	O				3.42
145.583	0.00	0.01	4.051	O				3.42
145.667	0.00	0.01	4.051	O				3.42
145.750	0.00	0.01	4.051	O				3.42
145.833	0.00	0.01	4.051	O				3.42
145.917	0.00	0.01	4.051	O				3.42
146.000	0.00	0.01	4.051	O				3.42
146.083	0.00	0.01	4.051	O				3.42
146.167	0.00	0.01	4.051	O				3.42
146.250	0.00	0.01	4.051	O				3.42
146.333	0.00	0.01	4.051	O				3.42
146.417	0.00	0.01	4.051	O				3.42
146.500	0.00	0.01	4.051	O				3.42
146.583	0.00	0.01	4.050	O				3.42
146.667	0.00	0.01	4.050	O				3.42
146.750	0.00	0.01	4.050	O				3.42
146.833	0.00	0.01	4.050	O				3.42
146.917	0.00	0.01	4.050	O				3.42
147.000	0.00	0.01	4.050	O				3.42
147.083	0.00	0.01	4.050	O				3.42
147.167	0.00	0.01	4.050	O				3.42
147.250	0.00	0.01	4.050	O				3.42
147.333	0.00	0.01	4.050	O				3.42
147.417	0.00	0.01	4.050	O				3.42
147.500	0.00	0.01	4.050	O				3.42
147.583	0.00	0.01	4.050	O				3.41
147.667	0.00	0.01	4.050	O				3.41
147.750	0.00	0.01	4.050	O				3.41
147.833	0.00	0.01	4.049	O				3.41
147.917	0.00	0.01	4.049	O				3.41

148.000	0.00	0.01	4.049	O				3.41
148.083	0.00	0.01	4.049	O				3.41
148.167	0.00	0.01	4.049	O				3.41
148.250	0.00	0.01	4.049	O				3.41
148.333	0.00	0.01	4.049	O				3.41
148.417	0.00	0.01	4.049	O				3.41
148.500	0.00	0.01	4.049	O				3.41
148.583	0.00	0.01	4.049	O				3.41
148.667	0.00	0.01	4.049	O				3.41
148.750	0.00	0.01	4.049	O				3.41
148.833	0.00	0.01	4.049	O				3.41
148.917	0.00	0.01	4.049	O				3.41
149.000	0.00	0.01	4.048	O				3.41
149.083	0.00	0.01	4.048	O				3.41
149.167	0.00	0.01	4.048	O				3.41
149.250	0.00	0.01	4.048	O				3.41
149.333	0.00	0.01	4.048	O				3.41
149.417	0.00	0.01	4.048	O				3.41
149.500	0.00	0.01	4.048	O				3.41
149.583	0.00	0.01	4.048	O				3.41
149.667	0.00	0.01	4.048	O				3.41
149.750	0.00	0.01	4.048	O				3.41
149.833	0.00	0.01	4.048	O				3.41
149.917	0.00	0.01	4.048	O				3.41
150.000	0.00	0.01	4.048	O				3.41
150.083	0.00	0.01	4.048	O				3.41
150.167	0.00	0.01	4.048	O				3.41
150.250	0.00	0.01	4.047	O				3.41
150.333	0.00	0.01	4.047	O				3.41
150.417	0.00	0.01	4.047	O				3.41
150.500	0.00	0.01	4.047	O				3.41
150.583	0.00	0.01	4.047	O				3.41
150.667	0.00	0.01	4.047	O				3.41
150.750	0.00	0.01	4.047	O				3.41
150.833	0.00	0.01	4.047	O				3.41
150.917	0.00	0.01	4.047	O				3.41
151.000	0.00	0.01	4.047	O				3.41
151.083	0.00	0.01	4.047	O				3.41
151.167	0.00	0.01	4.047	O				3.41
151.250	0.00	0.01	4.047	O				3.41
151.333	0.00	0.01	4.047	O				3.41
151.417	0.00	0.01	4.046	O				3.41
151.500	0.00	0.01	4.046	O				3.41
151.583	0.00	0.01	4.046	O				3.41
151.667	0.00	0.01	4.046	O				3.41
151.750	0.00	0.01	4.046	O				3.41
151.833	0.00	0.01	4.046	O				3.41
151.917	0.00	0.01	4.046	O				3.41
152.000	0.00	0.01	4.046	O				3.41
152.083	0.00	0.01	4.046	O				3.41

152.167	0.00	0.01	4.046	O				3.41
152.250	0.00	0.01	4.046	O				3.41
152.333	0.00	0.01	4.046	O				3.41
152.417	0.00	0.01	4.046	O				3.41
152.500	0.00	0.01	4.046	O				3.41
152.583	0.00	0.01	4.046	O				3.41
152.667	0.00	0.01	4.045	O				3.41
152.750	0.00	0.01	4.045	O				3.41
152.833	0.00	0.01	4.045	O				3.41
152.917	0.00	0.01	4.045	O				3.41
153.000	0.00	0.01	4.045	O				3.41
153.083	0.00	0.01	4.045	O				3.41
153.167	0.00	0.01	4.045	O				3.41
153.250	0.00	0.01	4.045	O				3.41
153.333	0.00	0.01	4.045	O				3.41
153.417	0.00	0.01	4.045	O				3.41
153.500	0.00	0.01	4.045	O				3.41
153.583	0.00	0.01	4.045	O				3.41
153.667	0.00	0.01	4.045	O				3.41
153.750	0.00	0.01	4.045	O				3.41
153.833	0.00	0.01	4.045	O				3.41
153.917	0.00	0.01	4.044	O				3.41
154.000	0.00	0.01	4.044	O				3.41
154.083	0.00	0.01	4.044	O				3.41
154.167	0.00	0.01	4.044	O				3.41
154.250	0.00	0.01	4.044	O				3.41
154.333	0.00	0.01	4.044	O				3.41
154.417	0.00	0.01	4.044	O				3.41
154.500	0.00	0.01	4.044	O				3.41
154.583	0.00	0.01	4.044	O				3.41
154.667	0.00	0.01	4.044	O				3.41
154.750	0.00	0.01	4.044	O				3.41
154.833	0.00	0.01	4.044	O				3.41
154.917	0.00	0.01	4.044	O				3.41
155.000	0.00	0.01	4.044	O				3.41
155.083	0.00	0.01	4.043	O				3.41
155.167	0.00	0.01	4.043	O				3.41
155.250	0.00	0.01	4.043	O				3.41
155.333	0.00	0.01	4.043	O				3.41
155.417	0.00	0.01	4.043	O				3.41
155.500	0.00	0.01	4.043	O				3.41
155.583	0.00	0.01	4.043	O				3.41
155.667	0.00	0.01	4.043	O				3.41
155.750	0.00	0.01	4.043	O				3.41
155.833	0.00	0.01	4.043	O				3.41
155.917	0.00	0.01	4.043	O				3.41
156.000	0.00	0.01	4.043	O				3.41
156.083	0.00	0.01	4.043	O				3.41
156.167	0.00	0.01	4.043	O				3.41
156.250	0.00	0.01	4.043	O				3.41

156.333	0.00	0.01	4.042	O				3.41
156.417	0.00	0.01	4.042	O				3.41
156.500	0.00	0.01	4.042	O				3.41
156.583	0.00	0.01	4.042	O				3.41
156.667	0.00	0.01	4.042	O				3.41
156.750	0.00	0.01	4.042	O				3.41
156.833	0.00	0.01	4.042	O				3.41
156.917	0.00	0.01	4.042	O				3.41
157.000	0.00	0.01	4.042	O				3.41
157.083	0.00	0.01	4.042	O				3.41
157.167	0.00	0.01	4.042	O				3.41
157.250	0.00	0.01	4.042	O				3.41
157.333	0.00	0.01	4.042	O				3.41
157.417	0.00	0.01	4.042	O				3.41
157.500	0.00	0.01	4.041	O				3.41
157.583	0.00	0.01	4.041	O				3.41
157.667	0.00	0.01	4.041	O				3.41
157.750	0.00	0.01	4.041	O				3.41
157.833	0.00	0.01	4.041	O				3.41
157.917	0.00	0.01	4.041	O				3.41
158.000	0.00	0.01	4.041	O				3.41
158.083	0.00	0.01	4.041	O				3.41
158.167	0.00	0.01	4.041	O				3.41
158.250	0.00	0.01	4.041	O				3.41
158.333	0.00	0.01	4.041	O				3.41
158.417	0.00	0.01	4.041	O				3.41
158.500	0.00	0.01	4.041	O				3.41
158.583	0.00	0.01	4.041	O				3.41
158.667	0.00	0.01	4.041	O				3.41
158.750	0.00	0.01	4.040	O				3.41
158.833	0.00	0.01	4.040	O				3.41
158.917	0.00	0.01	4.040	O				3.41
159.000	0.00	0.01	4.040	O				3.41
159.083	0.00	0.01	4.040	O				3.41
159.167	0.00	0.01	4.040	O				3.41
159.250	0.00	0.01	4.040	O				3.41
159.333	0.00	0.01	4.040	O				3.41
159.417	0.00	0.01	4.040	O				3.41
159.500	0.00	0.01	4.040	O				3.41
159.583	0.00	0.01	4.040	O				3.41
159.667	0.00	0.01	4.040	O				3.41
159.750	0.00	0.01	4.040	O				3.41
159.833	0.00	0.01	4.040	O				3.41
159.917	0.00	0.01	4.039	O				3.41
160.000	0.00	0.01	4.039	O				3.41
160.083	0.00	0.01	4.039	O				3.41
160.167	0.00	0.01	4.039	O				3.41
160.250	0.00	0.01	4.039	O				3.41
160.333	0.00	0.01	4.039	O				3.41
160.417	0.00	0.01	4.039	O				3.41

160.500	0.00	0.01	4.039	O				3.41
160.583	0.00	0.01	4.039	O				3.41
160.667	0.00	0.01	4.039	O				3.41
160.750	0.00	0.01	4.039	O				3.41
160.833	0.00	0.01	4.039	O				3.41
160.917	0.00	0.01	4.039	O				3.41
161.000	0.00	0.01	4.039	O				3.41
161.083	0.00	0.01	4.039	O				3.41
161.167	0.00	0.01	4.038	O				3.41
161.250	0.00	0.01	4.038	O				3.41
161.333	0.00	0.01	4.038	O				3.41
161.417	0.00	0.01	4.038	O				3.41
161.500	0.00	0.01	4.038	O				3.41
161.583	0.00	0.01	4.038	O				3.41
161.667	0.00	0.01	4.038	O				3.41
161.750	0.00	0.01	4.038	O				3.41
161.833	0.00	0.01	4.038	O				3.40
161.917	0.00	0.01	4.038	O				3.40
162.000	0.00	0.01	4.038	O				3.40
162.083	0.00	0.01	4.038	O				3.40
162.167	0.00	0.01	4.038	O				3.40
162.250	0.00	0.01	4.038	O				3.40
162.333	0.00	0.01	4.037	O				3.40
162.417	0.00	0.01	4.037	O				3.40
162.500	0.00	0.01	4.037	O				3.40
162.583	0.00	0.01	4.037	O				3.40
162.667	0.00	0.01	4.037	O				3.40
162.750	0.00	0.01	4.037	O				3.40
162.833	0.00	0.01	4.037	O				3.40
162.917	0.00	0.01	4.037	O				3.40
163.000	0.00	0.01	4.037	O				3.40
163.083	0.00	0.01	4.037	O				3.40
163.167	0.00	0.01	4.037	O				3.40
163.250	0.00	0.01	4.037	O				3.40
163.333	0.00	0.01	4.037	O				3.40
163.417	0.00	0.01	4.037	O				3.40
163.500	0.00	0.01	4.037	O				3.40
163.583	0.00	0.01	4.036	O				3.40
163.667	0.00	0.01	4.036	O				3.40
163.750	0.00	0.01	4.036	O				3.40
163.833	0.00	0.01	4.036	O				3.40
163.917	0.00	0.01	4.036	O				3.40
164.000	0.00	0.01	4.036	O				3.40
164.083	0.00	0.01	4.036	O				3.40
164.167	0.00	0.01	4.036	O				3.40
164.250	0.00	0.01	4.036	O				3.40
164.333	0.00	0.01	4.036	O				3.40
164.417	0.00	0.01	4.036	O				3.40
164.500	0.00	0.01	4.036	O				3.40
164.583	0.00	0.01	4.036	O				3.40

164.667	0.00	0.01	4.036	O				3.40
164.750	0.00	0.01	4.035	O				3.40
164.833	0.00	0.01	4.035	O				3.40
164.917	0.00	0.01	4.035	O				3.40
165.000	0.00	0.01	4.035	O				3.40
165.083	0.00	0.01	4.035	O				3.40
165.167	0.00	0.01	4.035	O				3.40
165.250	0.00	0.01	4.035	O				3.40
165.333	0.00	0.01	4.035	O				3.40
165.417	0.00	0.01	4.035	O				3.40
165.500	0.00	0.01	4.035	O				3.40
165.583	0.00	0.01	4.035	O				3.40
165.667	0.00	0.01	4.035	O				3.40
165.750	0.00	0.01	4.035	O				3.40
165.833	0.00	0.01	4.035	O				3.40
165.917	0.00	0.01	4.035	O				3.40
166.000	0.00	0.01	4.034	O				3.40
166.083	0.00	0.01	4.034	O				3.40
166.167	0.00	0.01	4.034	O				3.40
166.250	0.00	0.01	4.034	O				3.40
166.333	0.00	0.01	4.034	O				3.40
166.417	0.00	0.01	4.034	O				3.40
166.500	0.00	0.01	4.034	O				3.40
166.583	0.00	0.01	4.034	O				3.40
166.667	0.00	0.01	4.034	O				3.40
166.750	0.00	0.01	4.034	O				3.40
166.833	0.00	0.01	4.034	O				3.40
166.917	0.00	0.01	4.034	O				3.40
167.000	0.00	0.01	4.034	O				3.40
167.083	0.00	0.01	4.034	O				3.40
167.167	0.00	0.01	4.033	O				3.40
167.250	0.00	0.01	4.033	O				3.40
167.333	0.00	0.01	4.033	O				3.40
167.417	0.00	0.01	4.033	O				3.40
167.500	0.00	0.01	4.033	O				3.40
167.583	0.00	0.01	4.033	O				3.40
167.667	0.00	0.01	4.033	O				3.40
167.750	0.00	0.01	4.033	O				3.40
167.833	0.00	0.01	4.033	O				3.40
167.917	0.00	0.01	4.033	O				3.40
168.000	0.00	0.01	4.033	O				3.40
168.083	0.00	0.01	4.033	O				3.40
168.167	0.00	0.01	4.033	O				3.40
168.250	0.00	0.01	4.033	O				3.40
168.333	0.00	0.01	4.033	O				3.40
168.417	0.00	0.01	4.032	O				3.40
168.500	0.00	0.01	4.032	O				3.40
168.583	0.00	0.01	4.032	O				3.40
168.667	0.00	0.01	4.032	O				3.40
168.750	0.00	0.01	4.032	O				3.40

168.833	0.00	0.01	4.032	O				3.40
168.917	0.00	0.01	4.032	O				3.40
169.000	0.00	0.01	4.032	O				3.40
169.083	0.00	0.01	4.032	O				3.40
169.167	0.00	0.01	4.032	O				3.40
169.250	0.00	0.01	4.032	O				3.40
169.333	0.00	0.01	4.032	O				3.40
169.417	0.00	0.01	4.032	O				3.40
169.500	0.00	0.01	4.032	O				3.40
169.583	0.00	0.01	4.031	O				3.40
169.667	0.00	0.01	4.031	O				3.40
169.750	0.00	0.01	4.031	O				3.40
169.833	0.00	0.01	4.031	O				3.40
169.917	0.00	0.01	4.031	O				3.40
170.000	0.00	0.01	4.031	O				3.40
170.083	0.00	0.01	4.031	O				3.40
170.167	0.00	0.01	4.031	O				3.40
170.250	0.00	0.01	4.031	O				3.40
170.333	0.00	0.01	4.031	O				3.40
170.417	0.00	0.01	4.031	O				3.40
170.500	0.00	0.01	4.031	O				3.40
170.583	0.00	0.01	4.031	O				3.40
170.667	0.00	0.01	4.031	O				3.40
170.750	0.00	0.01	4.031	O				3.40
170.833	0.00	0.01	4.030	O				3.40
170.917	0.00	0.01	4.030	O				3.40
171.000	0.00	0.01	4.030	O				3.40
171.083	0.00	0.01	4.030	O				3.40
171.167	0.00	0.01	4.030	O				3.40
171.250	0.00	0.01	4.030	O				3.40
171.333	0.00	0.01	4.030	O				3.40
171.417	0.00	0.01	4.030	O				3.40
171.500	0.00	0.01	4.030	O				3.40
171.583	0.00	0.01	4.030	O				3.40
171.667	0.00	0.01	4.030	O				3.40
171.750	0.00	0.01	4.030	O				3.40
171.833	0.00	0.01	4.030	O				3.40
171.917	0.00	0.01	4.030	O				3.40
172.000	0.00	0.01	4.029	O				3.40
172.083	0.00	0.01	4.029	O				3.40
172.167	0.00	0.01	4.029	O				3.40
172.250	0.00	0.01	4.029	O				3.40
172.333	0.00	0.01	4.029	O				3.40
172.417	0.00	0.01	4.029	O				3.40
172.500	0.00	0.01	4.029	O				3.40
172.583	0.00	0.01	4.029	O				3.40
172.667	0.00	0.01	4.029	O				3.40
172.750	0.00	0.01	4.029	O				3.40
172.833	0.00	0.01	4.029	O				3.40
172.917	0.00	0.01	4.029	O				3.40

173.000	0.00	0.01	4.029	O				3.40
173.083	0.00	0.01	4.029	O				3.40
173.167	0.00	0.01	4.029	O				3.40
173.250	0.00	0.01	4.028	O				3.40
173.333	0.00	0.01	4.028	O				3.40
173.417	0.00	0.01	4.028	O				3.40
173.500	0.00	0.01	4.028	O				3.40
173.583	0.00	0.01	4.028	O				3.40
173.667	0.00	0.01	4.028	O				3.40
173.750	0.00	0.01	4.028	O				3.40
173.833	0.00	0.01	4.028	O				3.40
173.917	0.00	0.01	4.028	O				3.40
174.000	0.00	0.01	4.028	O				3.40
174.083	0.00	0.01	4.028	O				3.40
174.167	0.00	0.01	4.028	O				3.40
174.250	0.00	0.01	4.028	O				3.40
174.333	0.00	0.01	4.028	O				3.40
174.417	0.00	0.01	4.027	O				3.40
174.500	0.00	0.01	4.027	O				3.40
174.583	0.00	0.01	4.027	O				3.40
174.667	0.00	0.01	4.027	O				3.40
174.750	0.00	0.01	4.027	O				3.40
174.833	0.00	0.01	4.027	O				3.40
174.917	0.00	0.01	4.027	O				3.40
175.000	0.00	0.01	4.027	O				3.40
175.083	0.00	0.01	4.027	O				3.40
175.167	0.00	0.01	4.027	O				3.40
175.250	0.00	0.01	4.027	O				3.40
175.333	0.00	0.01	4.027	O				3.40
175.417	0.00	0.01	4.027	O				3.40
175.500	0.00	0.01	4.027	O				3.40
175.583	0.00	0.01	4.027	O				3.40
175.667	0.00	0.01	4.026	O				3.40
175.750	0.00	0.01	4.026	O				3.40
175.833	0.00	0.01	4.026	O				3.40
175.917	0.00	0.01	4.026	O				3.40
176.000	0.00	0.01	4.026	O				3.40
176.083	0.00	0.01	4.026	O				3.40
176.167	0.00	0.01	4.026	O				3.39
176.250	0.00	0.01	4.026	O				3.39
176.333	0.00	0.01	4.026	O				3.39
176.417	0.00	0.01	4.026	O				3.39
176.500	0.00	0.01	4.026	O				3.39
176.583	0.00	0.01	4.026	O				3.39
176.667	0.00	0.01	4.026	O				3.39
176.750	0.00	0.01	4.026	O				3.39
176.833	0.00	0.01	4.025	O				3.39
176.917	0.00	0.01	4.025	O				3.39
177.000	0.00	0.01	4.025	O				3.39
177.083	0.00	0.01	4.025	O				3.39

177.167	0.00	0.01	4.025	O				3.39
177.250	0.00	0.01	4.025	O				3.39
177.333	0.00	0.01	4.025	O				3.39
177.417	0.00	0.01	4.025	O				3.39
177.500	0.00	0.01	4.025	O				3.39
177.583	0.00	0.01	4.025	O				3.39
177.667	0.00	0.01	4.025	O				3.39
177.750	0.00	0.01	4.025	O				3.39
177.833	0.00	0.01	4.025	O				3.39
177.917	0.00	0.01	4.025	O				3.39
178.000	0.00	0.01	4.025	O				3.39
178.083	0.00	0.01	4.024	O				3.39
178.167	0.00	0.01	4.024	O				3.39
178.250	0.00	0.01	4.024	O				3.39
178.333	0.00	0.01	4.024	O				3.39
178.417	0.00	0.01	4.024	O				3.39
178.500	0.00	0.01	4.024	O				3.39
178.583	0.00	0.01	4.024	O				3.39
178.667	0.00	0.01	4.024	O				3.39
178.750	0.00	0.01	4.024	O				3.39
178.833	0.00	0.01	4.024	O				3.39
178.917	0.00	0.01	4.024	O				3.39
179.000	0.00	0.01	4.024	O				3.39
179.083	0.00	0.01	4.024	O				3.39
179.167	0.00	0.01	4.024	O				3.39
179.250	0.00	0.01	4.023	O				3.39
179.333	0.00	0.01	4.023	O				3.39
179.417	0.00	0.01	4.023	O				3.39
179.500	0.00	0.01	4.023	O				3.39
179.583	0.00	0.01	4.023	O				3.39
179.667	0.00	0.01	4.023	O				3.39
179.750	0.00	0.01	4.023	O				3.39
179.833	0.00	0.01	4.023	O				3.39
179.917	0.00	0.01	4.023	O				3.39
180.000	0.00	0.01	4.023	O				3.39
180.083	0.00	0.01	4.023	O				3.39
180.167	0.00	0.01	4.023	O				3.39
180.250	0.00	0.01	4.023	O				3.39
180.333	0.00	0.01	4.023	O				3.39
180.417	0.00	0.01	4.023	O				3.39
180.500	0.00	0.01	4.022	O				3.39
180.583	0.00	0.01	4.022	O				3.39
180.667	0.00	0.01	4.022	O				3.39
180.750	0.00	0.01	4.022	O				3.39
180.833	0.00	0.01	4.022	O				3.39
180.917	0.00	0.01	4.022	O				3.39
181.000	0.00	0.01	4.022	O				3.39
181.083	0.00	0.01	4.022	O				3.39
181.167	0.00	0.01	4.022	O				3.39
181.250	0.00	0.01	4.022	O				3.39

181.333	0.00	0.01	4.022	O				3.39
181.417	0.00	0.01	4.022	O				3.39
181.500	0.00	0.01	4.022	O				3.39
181.583	0.00	0.01	4.022	O				3.39
181.667	0.00	0.01	4.021	O				3.39
181.750	0.00	0.01	4.021	O				3.39
181.833	0.00	0.01	4.021	O				3.39
181.917	0.00	0.01	4.021	O				3.39
182.000	0.00	0.01	4.021	O				3.39
182.083	0.00	0.01	4.021	O				3.39
182.167	0.00	0.01	4.021	O				3.39
182.250	0.00	0.01	4.021	O				3.39
182.333	0.00	0.01	4.021	O				3.39
182.417	0.00	0.01	4.021	O				3.39
182.500	0.00	0.01	4.021	O				3.39
182.583	0.00	0.01	4.021	O				3.39
182.667	0.00	0.01	4.021	O				3.39
182.750	0.00	0.01	4.021	O				3.39
182.833	0.00	0.01	4.021	O				3.39
182.917	0.00	0.01	4.020	O				3.39
183.000	0.00	0.01	4.020	O				3.39
183.083	0.00	0.01	4.020	O				3.39
183.167	0.00	0.01	4.020	O				3.39
183.250	0.00	0.01	4.020	O				3.39
183.333	0.00	0.01	4.020	O				3.39
183.417	0.00	0.01	4.020	O				3.39
183.500	0.00	0.01	4.020	O				3.39
183.583	0.00	0.01	4.020	O				3.39
183.667	0.00	0.01	4.020	O				3.39
183.750	0.00	0.01	4.020	O				3.39
183.833	0.00	0.01	4.020	O				3.39
183.917	0.00	0.01	4.020	O				3.39
184.000	0.00	0.01	4.020	O				3.39
184.083	0.00	0.01	4.020	O				3.39
184.167	0.00	0.01	4.019	O				3.39
184.250	0.00	0.01	4.019	O				3.39
184.333	0.00	0.01	4.019	O				3.39
184.417	0.00	0.01	4.019	O				3.39
184.500	0.00	0.01	4.019	O				3.39
184.583	0.00	0.01	4.019	O				3.39
184.667	0.00	0.01	4.019	O				3.39
184.750	0.00	0.01	4.019	O				3.39
184.833	0.00	0.01	4.019	O				3.39
184.917	0.00	0.01	4.019	O				3.39
185.000	0.00	0.01	4.019	O				3.39
185.083	0.00	0.01	4.019	O				3.39
185.167	0.00	0.01	4.019	O				3.39
185.250	0.00	0.01	4.019	O				3.39
185.333	0.00	0.01	4.018	O				3.39
185.417	0.00	0.01	4.018	O				3.39

185.500	0.00	0.01	4.018	O				3.39
185.583	0.00	0.01	4.018	O				3.39
185.667	0.00	0.01	4.018	O				3.39
185.750	0.00	0.01	4.018	O				3.39
185.833	0.00	0.01	4.018	O				3.39
185.917	0.00	0.01	4.018	O				3.39
186.000	0.00	0.01	4.018	O				3.39
186.083	0.00	0.01	4.018	O				3.39
186.167	0.00	0.01	4.018	O				3.39
186.250	0.00	0.01	4.018	O				3.39
186.333	0.00	0.01	4.018	O				3.39
186.417	0.00	0.01	4.018	O				3.39
186.500	0.00	0.01	4.018	O				3.39
186.583	0.00	0.01	4.017	O				3.39
186.667	0.00	0.01	4.017	O				3.39
186.750	0.00	0.01	4.017	O				3.39
186.833	0.00	0.01	4.017	O				3.39
186.917	0.00	0.01	4.017	O				3.39
187.000	0.00	0.01	4.017	O				3.39
187.083	0.00	0.01	4.017	O				3.39
187.167	0.00	0.01	4.017	O				3.39
187.250	0.00	0.01	4.017	O				3.39
187.333	0.00	0.01	4.017	O				3.39
187.417	0.00	0.01	4.017	O				3.39
187.500	0.00	0.01	4.017	O				3.39
187.583	0.00	0.01	4.017	O				3.39
187.667	0.00	0.01	4.017	O				3.39
187.750	0.00	0.01	4.016	O				3.39
187.833	0.00	0.01	4.016	O				3.39
187.917	0.00	0.01	4.016	O				3.39
188.000	0.00	0.01	4.016	O				3.39
188.083	0.00	0.01	4.016	O				3.39
188.167	0.00	0.01	4.016	O				3.39
188.250	0.00	0.01	4.016	O				3.39
188.333	0.00	0.01	4.016	O				3.39
188.417	0.00	0.01	4.016	O				3.39
188.500	0.00	0.01	4.016	O				3.39
188.583	0.00	0.01	4.016	O				3.39
188.667	0.00	0.01	4.016	O				3.39
188.750	0.00	0.01	4.016	O				3.39
188.833	0.00	0.01	4.016	O				3.39
188.917	0.00	0.01	4.016	O				3.39
189.000	0.00	0.01	4.015	O				3.39
189.083	0.00	0.01	4.015	O				3.39
189.167	0.00	0.01	4.015	O				3.39
189.250	0.00	0.01	4.015	O				3.39
189.333	0.00	0.01	4.015	O				3.39
189.417	0.00	0.01	4.015	O				3.39
189.500	0.00	0.01	4.015	O				3.39
189.583	0.00	0.01	4.015	O				3.39

189.667	0.00	0.01	4.015	O				3.39
189.750	0.00	0.01	4.015	O				3.39
189.833	0.00	0.01	4.015	O				3.39
189.917	0.00	0.01	4.015	O				3.39
190.000	0.00	0.01	4.015	O				3.39
190.083	0.00	0.01	4.015	O				3.39
190.167	0.00	0.01	4.014	O				3.39
190.250	0.00	0.01	4.014	O				3.39
190.333	0.00	0.01	4.014	O				3.39
190.417	0.00	0.01	4.014	O				3.38
190.500	0.00	0.01	4.014	O				3.38
190.583	0.00	0.01	4.014	O				3.38
190.667	0.00	0.01	4.014	O				3.38
190.750	0.00	0.01	4.014	O				3.38
190.833	0.00	0.01	4.014	O				3.38
190.917	0.00	0.01	4.014	O				3.38
191.000	0.00	0.01	4.014	O				3.38
191.083	0.00	0.01	4.014	O				3.38
191.167	0.00	0.01	4.014	O				3.38
191.250	0.00	0.01	4.014	O				3.38
191.333	0.00	0.01	4.014	O				3.38
191.417	0.00	0.01	4.013	O				3.38
191.500	0.00	0.01	4.013	O				3.38
191.583	0.00	0.01	4.013	O				3.38
191.667	0.00	0.01	4.013	O				3.38
191.750	0.00	0.01	4.013	O				3.38
191.833	0.00	0.01	4.013	O				3.38
191.917	0.00	0.01	4.013	O				3.38
192.000	0.00	0.01	4.013	O				3.38
192.083	0.00	0.01	4.013	O				3.38
192.167	0.00	0.01	4.013	O				3.38
192.250	0.00	0.01	4.013	O				3.38
192.333	0.00	0.01	4.013	O				3.38
192.417	0.00	0.01	4.013	O				3.38
192.500	0.00	0.01	4.013	O				3.38
192.583	0.00	0.01	4.012	O				3.38
192.667	0.00	0.01	4.012	O				3.38
192.750	0.00	0.01	4.012	O				3.38
192.833	0.00	0.01	4.012	O				3.38
192.917	0.00	0.01	4.012	O				3.38
193.000	0.00	0.01	4.012	O				3.38
193.083	0.00	0.01	4.012	O				3.38
193.167	0.00	0.01	4.012	O				3.38
193.250	0.00	0.01	4.012	O				3.38
193.333	0.00	0.01	4.012	O				3.38
193.417	0.00	0.01	4.012	O				3.38
193.500	0.00	0.01	4.012	O				3.38
193.583	0.00	0.01	4.012	O				3.38
193.667	0.00	0.01	4.012	O				3.38
193.750	0.00	0.01	4.012	O				3.38

193.833	0.00	0.01	4.011	O	|	|	|	3.38
193.917	0.00	0.01	4.011	O	|	|	|	3.38
194.000	0.00	0.01	4.011	O	|	|	|	3.38
194.083	0.00	0.01	4.011	O	|	|	|	3.38
194.167	0.00	0.01	4.011	O	|	|	|	3.38
194.250	0.00	0.01	4.011	O	|	|	|	3.38
194.333	0.00	0.01	4.011	O	|	|	|	3.38
194.417	0.00	0.01	4.011	O	|	|	|	3.38
194.500	0.00	0.01	4.011	O	|	|	|	3.38
194.583	0.00	0.01	4.011	O	|	|	|	3.38
194.667	0.00	0.01	4.011	O	|	|	|	3.38
194.750	0.00	0.01	4.011	O	|	|	|	3.38
194.833	0.00	0.01	4.011	O	|	|	|	3.38
194.917	0.00	0.01	4.011	O	|	|	|	3.38
195.000	0.00	0.01	4.010	O	|	|	|	3.38
195.083	0.00	0.01	4.010	O	|	|	|	3.38
195.167	0.00	0.01	4.010	O	|	|	|	3.38
195.250	0.00	0.01	4.010	O	|	|	|	3.38
195.333	0.00	0.01	4.010	O	|	|	|	3.38
195.417	0.00	0.01	4.010	O	|	|	|	3.38
195.500	0.00	0.01	4.010	O	|	|	|	3.38
195.583	0.00	0.01	4.010	O	|	|	|	3.38
195.667	0.00	0.01	4.010	O	|	|	|	3.38
195.750	0.00	0.01	4.010	O	|	|	|	3.38
195.833	0.00	0.01	4.010	O	|	|	|	3.38
195.917	0.00	0.01	4.010	O	|	|	|	3.38
196.000	0.00	0.01	4.010	O	|	|	|	3.38
196.083	0.00	0.01	4.010	O	|	|	|	3.38
196.167	0.00	0.01	4.010	O	|	|	|	3.38
196.250	0.00	0.01	4.009	O	|	|	|	3.38
196.333	0.00	0.01	4.009	O	|	|	|	3.38
196.417	0.00	0.01	4.009	O	|	|	|	3.38
196.500	0.00	0.01	4.009	O	|	|	|	3.38
196.583	0.00	0.01	4.009	O	|	|	|	3.38
196.667	0.00	0.01	4.009	O	|	|	|	3.38
196.750	0.00	0.01	4.009	O	|	|	|	3.38
196.833	0.00	0.01	4.009	O	|	|	|	3.38
196.917	0.00	0.01	4.009	O	|	|	|	3.38
197.000	0.00	0.01	4.009	O	|	|	|	3.38
197.083	0.00	0.01	4.009	O	|	|	|	3.38
197.167	0.00	0.01	4.009	O	|	|	|	3.38
197.250	0.00	0.01	4.009	O	|	|	|	3.38
197.333	0.00	0.01	4.009	O	|	|	|	3.38
197.417	0.00	0.01	4.008	O	|	|	|	3.38
197.500	0.00	0.01	4.008	O	|	|	|	3.38
197.583	0.00	0.01	4.008	O	|	|	|	3.38
197.667	0.00	0.01	4.008	O	|	|	|	3.38
197.750	0.00	0.01	4.008	O	|	|	|	3.38
197.833	0.00	0.01	4.008	O	|	|	|	3.38
197.917	0.00	0.01	4.008	O	|	|	|	3.38

198.000	0.00	0.01	4.008	O				3.38
198.083	0.00	0.01	4.008	O				3.38
198.167	0.00	0.01	4.008	O				3.38
198.250	0.00	0.01	4.008	O				3.38
198.333	0.00	0.01	4.008	O				3.38
198.417	0.00	0.01	4.008	O				3.38
198.500	0.00	0.01	4.008	O				3.38
198.583	0.00	0.01	4.008	O				3.38
198.667	0.00	0.01	4.007	O				3.38
198.750	0.00	0.01	4.007	O				3.38
198.833	0.00	0.01	4.007	O				3.38
198.917	0.00	0.01	4.007	O				3.38
199.000	0.00	0.01	4.007	O				3.38
199.083	0.00	0.01	4.007	O				3.38
199.167	0.00	0.01	4.007	O				3.38
199.250	0.00	0.01	4.007	O				3.38
199.333	0.00	0.01	4.007	O				3.38
199.417	0.00	0.01	4.007	O				3.38
199.500	0.00	0.01	4.007	O				3.38
199.583	0.00	0.01	4.007	O				3.38
199.667	0.00	0.01	4.007	O				3.38
199.750	0.00	0.01	4.007	O				3.38
199.833	0.00	0.01	4.006	O				3.38
199.917	0.00	0.01	4.006	O				3.38
200.000	0.00	0.01	4.006	O				3.38
200.083	0.00	0.01	4.006	O				3.38
200.167	0.00	0.01	4.006	O				3.38
200.250	0.00	0.01	4.006	O				3.38
200.333	0.00	0.01	4.006	O				3.38
200.417	0.00	0.01	4.006	O				3.38
200.500	0.00	0.01	4.006	O				3.38
200.583	0.00	0.01	4.006	O				3.38
200.667	0.00	0.01	4.006	O				3.38
200.750	0.00	0.01	4.006	O				3.38
200.833	0.00	0.01	4.006	O				3.38
200.917	0.00	0.01	4.006	O				3.38
201.000	0.00	0.01	4.006	O				3.38
201.083	0.00	0.01	4.005	O				3.38
201.167	0.00	0.01	4.005	O				3.38
201.250	0.00	0.01	4.005	O				3.38
201.333	0.00	0.01	4.005	O				3.38
201.417	0.00	0.01	4.005	O				3.38
201.500	0.00	0.01	4.005	O				3.38
201.583	0.00	0.01	4.005	O				3.38
201.667	0.00	0.01	4.005	O				3.38
201.750	0.00	0.01	4.005	O				3.38
201.833	0.00	0.01	4.005	O				3.38
201.917	0.00	0.01	4.005	O				3.38
202.000	0.00	0.01	4.005	O				3.38
202.083	0.00	0.01	4.005	O				3.38

202.167	0.00	0.01	4.005	O				3.38
202.250	0.00	0.01	4.004	O				3.38
202.333	0.00	0.01	4.004	O				3.38
202.417	0.00	0.01	4.004	O				3.38
202.500	0.00	0.01	4.004	O				3.38
202.583	0.00	0.01	4.004	O				3.38
202.667	0.00	0.01	4.004	O				3.38
202.750	0.00	0.01	4.004	O				3.38
202.833	0.00	0.01	4.004	O				3.38
202.917	0.00	0.01	4.004	O				3.38
203.000	0.00	0.01	4.004	O				3.38
203.083	0.00	0.01	4.004	O				3.38
203.167	0.00	0.01	4.004	O				3.38
203.250	0.00	0.01	4.004	O				3.38
203.333	0.00	0.01	4.004	O				3.38
203.417	0.00	0.01	4.004	O				3.38
203.500	0.00	0.01	4.003	O				3.38
203.583	0.00	0.01	4.003	O				3.38
203.667	0.00	0.01	4.003	O				3.38
203.750	0.00	0.01	4.003	O				3.38
203.833	0.00	0.01	4.003	O				3.38
203.917	0.00	0.01	4.003	O				3.38
204.000	0.00	0.01	4.003	O				3.38
204.083	0.00	0.01	4.003	O				3.38
204.167	0.00	0.01	4.003	O				3.38
204.250	0.00	0.01	4.003	O				3.38
204.333	0.00	0.01	4.003	O				3.38
204.417	0.00	0.01	4.003	O				3.38
204.500	0.00	0.01	4.003	O				3.38
204.583	0.00	0.01	4.003	O				3.38
204.667	0.00	0.01	4.002	O				3.37
204.750	0.00	0.01	4.002	O				3.37
204.833	0.00	0.01	4.002	O				3.37
204.917	0.00	0.01	4.002	O				3.37
205.000	0.00	0.01	4.002	O				3.37
205.083	0.00	0.01	4.002	O				3.37
205.167	0.00	0.01	4.002	O				3.37
205.250	0.00	0.01	4.002	O				3.37
205.333	0.00	0.01	4.002	O				3.37
205.417	0.00	0.01	4.002	O				3.37
205.500	0.00	0.01	4.002	O				3.37
205.583	0.00	0.01	4.002	O				3.37
205.667	0.00	0.01	4.002	O				3.37
205.750	0.00	0.01	4.002	O				3.37
205.833	0.00	0.01	4.002	O				3.37
205.917	0.00	0.01	4.001	O				3.37
206.000	0.00	0.01	4.001	O				3.37
206.083	0.00	0.01	4.001	O				3.37
206.167	0.00	0.01	4.001	O				3.37
206.250	0.00	0.01	4.001	O				3.37

206.333	0.00	0.01	4.001	O	|	|	|	3.37
206.417	0.00	0.01	4.001	O	|	|	|	3.37
206.500	0.00	0.01	4.001	O	|	|	|	3.37
206.583	0.00	0.01	4.001	O	|	|	|	3.37
206.667	0.00	0.01	4.001	O	|	|	|	3.37
206.750	0.00	0.01	4.001	O	|	|	|	3.37
206.833	0.00	0.01	4.001	O	|	|	|	3.37
206.917	0.00	0.01	4.001	O	|	|	|	3.37
207.000	0.00	0.01	4.001	O	|	|	|	3.37
207.083	0.00	0.01	4.000	O	|	|	|	3.37
207.167	0.00	0.01	4.000	O	|	|	|	3.37
207.250	0.00	0.01	4.000	O	|	|	|	3.37
207.333	0.00	0.01	4.000	O	|	|	|	3.37
207.417	0.00	0.01	4.000	O	|	|	|	3.37
207.500	0.00	0.01	4.000	O	|	|	|	3.37
207.583	0.00	0.01	4.000	O	|	|	|	3.37
207.667	0.00	0.01	4.000	O	|	|	|	3.37
207.750	0.00	0.01	4.000	O	|	|	|	3.37
207.833	0.00	0.01	4.000	O	|	|	|	3.37
207.917	0.00	0.01	4.000	O	|	|	|	3.37
208.000	0.00	0.01	4.000	O	|	|	|	3.37
208.083	0.00	0.01	4.000	O	|	|	|	3.37
208.167	0.00	0.01	4.000	O	|	|	|	3.37
208.250	0.00	0.01	4.000	O	|	|	|	3.37
208.333	0.00	0.01	3.999	O	|	|	|	3.37
208.417	0.00	0.01	3.999	O	|	|	|	3.37
208.500	0.00	0.01	3.999	O	|	|	|	3.37
208.583	0.00	0.01	3.999	O	|	|	|	3.37
208.667	0.00	0.01	3.999	O	|	|	|	3.37
208.750	0.00	0.01	3.999	O	|	|	|	3.37
208.833	0.00	0.01	3.999	O	|	|	|	3.37
208.917	0.00	0.01	3.999	O	|	|	|	3.37
209.000	0.00	0.01	3.999	O	|	|	|	3.37
209.083	0.00	0.01	3.999	O	|	|	|	3.37
209.167	0.00	0.01	3.999	O	|	|	|	3.37
209.250	0.00	0.01	3.999	O	|	|	|	3.37
209.333	0.00	0.01	3.999	O	|	|	|	3.37
209.417	0.00	0.01	3.999	O	|	|	|	3.37
209.500	0.00	0.01	3.998	O	|	|	|	3.37
209.583	0.00	0.01	3.998	O	|	|	|	3.37
209.667	0.00	0.01	3.998	O	|	|	|	3.37
209.750	0.00	0.01	3.998	O	|	|	|	3.37
209.833	0.00	0.01	3.998	O	|	|	|	3.37
209.917	0.00	0.01	3.998	O	|	|	|	3.37
210.000	0.00	0.01	3.998	O	|	|	|	3.37
210.083	0.00	0.01	3.998	O	|	|	|	3.37
210.167	0.00	0.01	3.998	O	|	|	|	3.37
210.250	0.00	0.01	3.998	O	|	|	|	3.37
210.333	0.00	0.01	3.998	O	|	|	|	3.37
210.417	0.00	0.01	3.998	O	|	|	|	3.37

210.500	0.00	0.01	3.998	O				3.37
210.583	0.00	0.01	3.998	O				3.37
210.667	0.00	0.01	3.998	O				3.37
210.750	0.00	0.01	3.997	O				3.37
210.833	0.00	0.01	3.997	O				3.37
210.917	0.00	0.01	3.997	O				3.37
211.000	0.00	0.01	3.997	O				3.37
211.083	0.00	0.01	3.997	O				3.37
211.167	0.00	0.01	3.997	O				3.37
211.250	0.00	0.01	3.997	O				3.37
211.333	0.00	0.01	3.997	O				3.37
211.417	0.00	0.01	3.997	O				3.37
211.500	0.00	0.01	3.997	O				3.37
211.583	0.00	0.01	3.997	O				3.37
211.667	0.00	0.01	3.997	O				3.37
211.750	0.00	0.01	3.997	O				3.37
211.833	0.00	0.01	3.997	O				3.37
211.917	0.00	0.01	3.996	O				3.37
212.000	0.00	0.01	3.996	O				3.37
212.083	0.00	0.01	3.996	O				3.37
212.167	0.00	0.01	3.996	O				3.37
212.250	0.00	0.01	3.996	O				3.37
212.333	0.00	0.01	3.996	O				3.37
212.417	0.00	0.01	3.996	O				3.37
212.500	0.00	0.01	3.996	O				3.37
212.583	0.00	0.01	3.996	O				3.37
212.667	0.00	0.01	3.996	O				3.37
212.750	0.00	0.01	3.996	O				3.37
212.833	0.00	0.01	3.996	O				3.37
212.917	0.00	0.01	3.996	O				3.37
213.000	0.00	0.01	3.996	O				3.37
213.083	0.00	0.01	3.996	O				3.37
213.167	0.00	0.01	3.995	O				3.37
213.250	0.00	0.01	3.995	O				3.37
213.333	0.00	0.01	3.995	O				3.37
213.417	0.00	0.01	3.995	O				3.37
213.500	0.00	0.01	3.995	O				3.37
213.583	0.00	0.01	3.995	O				3.37
213.667	0.00	0.01	3.995	O				3.37
213.750	0.00	0.01	3.995	O				3.37
213.833	0.00	0.01	3.995	O				3.37
213.917	0.00	0.01	3.995	O				3.37
214.000	0.00	0.01	3.995	O				3.37
214.083	0.00	0.01	3.995	O				3.37
214.167	0.00	0.01	3.995	O				3.37
214.250	0.00	0.01	3.995	O				3.37
214.333	0.00	0.01	3.995	O				3.37
214.417	0.00	0.01	3.994	O				3.37
214.500	0.00	0.01	3.994	O				3.37
214.583	0.00	0.01	3.994	O				3.37

214.667	0.00	0.01	3.994	O				3.37
214.750	0.00	0.01	3.994	O				3.37
214.833	0.00	0.01	3.994	O				3.37
214.917	0.00	0.01	3.994	O				3.37
215.000	0.00	0.01	3.994	O				3.37
215.083	0.00	0.01	3.994	O				3.37
215.167	0.00	0.01	3.994	O				3.37
215.250	0.00	0.01	3.994	O				3.37
215.333	0.00	0.01	3.994	O				3.37
215.417	0.00	0.01	3.994	O				3.37
215.500	0.00	0.01	3.994	O				3.37
215.583	0.00	0.01	3.993	O				3.37
215.667	0.00	0.01	3.993	O				3.37
215.750	0.00	0.01	3.993	O				3.37
215.833	0.00	0.01	3.993	O				3.37
215.917	0.00	0.01	3.993	O				3.37
216.000	0.00	0.01	3.993	O				3.37
216.083	0.00	0.01	3.993	O				3.37
216.167	0.00	0.01	3.993	O				3.37
216.250	0.00	0.01	3.993	O				3.37
216.333	0.00	0.01	3.993	O				3.37
216.417	0.00	0.01	3.993	O				3.37
216.500	0.00	0.01	3.993	O				3.37
216.583	0.00	0.01	3.993	O				3.37
216.667	0.00	0.01	3.993	O				3.37
216.750	0.00	0.01	3.993	O				3.37
216.833	0.00	0.01	3.992	O				3.37
216.917	0.00	0.01	3.992	O				3.37
217.000	0.00	0.01	3.992	O				3.37
217.083	0.00	0.01	3.992	O				3.37
217.167	0.00	0.01	3.992	O				3.37
217.250	0.00	0.01	3.992	O				3.37
217.333	0.00	0.01	3.992	O				3.37
217.417	0.00	0.01	3.992	O				3.37
217.500	0.00	0.01	3.992	O				3.37
217.583	0.00	0.01	3.992	O				3.37
217.667	0.00	0.01	3.992	O				3.37
217.750	0.00	0.01	3.992	O				3.37
217.833	0.00	0.01	3.992	O				3.37
217.917	0.00	0.01	3.992	O				3.37
218.000	0.00	0.01	3.991	O				3.37
218.083	0.00	0.01	3.991	O				3.37
218.167	0.00	0.01	3.991	O				3.37
218.250	0.00	0.01	3.991	O				3.37
218.333	0.00	0.01	3.991	O				3.37
218.417	0.00	0.01	3.991	O				3.37
218.500	0.00	0.01	3.991	O				3.37
218.583	0.00	0.01	3.991	O				3.37
218.667	0.00	0.01	3.991	O				3.37
218.750	0.00	0.01	3.991	O				3.37

218.833	0.00	0.01	3.991	O				3.37
218.917	0.00	0.01	3.991	O				3.37
219.000	0.00	0.01	3.991	O				3.36
219.083	0.00	0.01	3.991	O				3.36
219.167	0.00	0.01	3.991	O				3.36
219.250	0.00	0.01	3.990	O				3.36
219.333	0.00	0.01	3.990	O				3.36
219.417	0.00	0.01	3.990	O				3.36
219.500	0.00	0.01	3.990	O				3.36
219.583	0.00	0.01	3.990	O				3.36
219.667	0.00	0.01	3.990	O				3.36
219.750	0.00	0.01	3.990	O				3.36
219.833	0.00	0.01	3.990	O				3.36
219.917	0.00	0.01	3.990	O				3.36
220.000	0.00	0.01	3.990	O				3.36
220.083	0.00	0.01	3.990	O				3.36
220.167	0.00	0.01	3.990	O				3.36
220.250	0.00	0.01	3.990	O				3.36
220.333	0.00	0.01	3.990	O				3.36
220.417	0.00	0.01	3.989	O				3.36
220.500	0.00	0.01	3.989	O				3.36
220.583	0.00	0.01	3.989	O				3.36
220.667	0.00	0.01	3.989	O				3.36
220.750	0.00	0.01	3.989	O				3.36
220.833	0.00	0.01	3.989	O				3.36
220.917	0.00	0.01	3.989	O				3.36
221.000	0.00	0.01	3.989	O				3.36
221.083	0.00	0.01	3.989	O				3.36
221.167	0.00	0.01	3.989	O				3.36
221.250	0.00	0.01	3.989	O				3.36
221.333	0.00	0.01	3.989	O				3.36
221.417	0.00	0.01	3.989	O				3.36
221.500	0.00	0.01	3.989	O				3.36
221.583	0.00	0.01	3.989	O				3.36
221.667	0.00	0.01	3.988	O				3.36
221.750	0.00	0.01	3.988	O				3.36
221.833	0.00	0.01	3.988	O				3.36
221.917	0.00	0.01	3.988	O				3.36
222.000	0.00	0.01	3.988	O				3.36
222.083	0.00	0.01	3.988	O				3.36
222.167	0.00	0.01	3.988	O				3.36
222.250	0.00	0.01	3.988	O				3.36
222.333	0.00	0.01	3.988	O				3.36
222.417	0.00	0.01	3.988	O				3.36
222.500	0.00	0.01	3.988	O				3.36
222.583	0.00	0.01	3.988	O				3.36
222.667	0.00	0.01	3.988	O				3.36
222.750	0.00	0.01	3.988	O				3.36
222.833	0.00	0.01	3.987	O				3.36
222.917	0.00	0.01	3.987	O				3.36

223.000	0.00	0.01	3.987	O				3.36
223.083	0.00	0.01	3.987	O				3.36
223.167	0.00	0.01	3.987	O				3.36
223.250	0.00	0.01	3.987	O				3.36
223.333	0.00	0.01	3.987	O				3.36
223.417	0.00	0.01	3.987	O				3.36
223.500	0.00	0.01	3.987	O				3.36
223.583	0.00	0.01	3.987	O				3.36
223.667	0.00	0.01	3.987	O				3.36
223.750	0.00	0.01	3.987	O				3.36
223.833	0.00	0.01	3.987	O				3.36
223.917	0.00	0.01	3.987	O				3.36
224.000	0.00	0.01	3.987	O				3.36
224.083	0.00	0.01	3.986	O				3.36
224.167	0.00	0.01	3.986	O				3.36
224.250	0.00	0.01	3.986	O				3.36
224.333	0.00	0.01	3.986	O				3.36
224.417	0.00	0.01	3.986	O				3.36
224.500	0.00	0.01	3.986	O				3.36
224.583	0.00	0.01	3.986	O				3.36
224.667	0.00	0.01	3.986	O				3.36
224.750	0.00	0.01	3.986	O				3.36
224.833	0.00	0.01	3.986	O				3.36
224.917	0.00	0.01	3.986	O				3.36
225.000	0.00	0.01	3.986	O				3.36
225.083	0.00	0.01	3.986	O				3.36
225.167	0.00	0.01	3.986	O				3.36
225.250	0.00	0.01	3.985	O				3.36
225.333	0.00	0.01	3.985	O				3.36
225.417	0.00	0.01	3.985	O				3.36
225.500	0.00	0.01	3.985	O				3.36
225.583	0.00	0.01	3.985	O				3.36
225.667	0.00	0.01	3.985	O				3.36
225.750	0.00	0.01	3.985	O				3.36
225.833	0.00	0.01	3.985	O				3.36
225.917	0.00	0.01	3.985	O				3.36
226.000	0.00	0.01	3.985	O				3.36
226.083	0.00	0.01	3.985	O				3.36
226.167	0.00	0.01	3.985	O				3.36
226.250	0.00	0.01	3.985	O				3.36
226.333	0.00	0.01	3.985	O				3.36
226.417	0.00	0.01	3.985	O				3.36
226.500	0.00	0.01	3.984	O				3.36
226.583	0.00	0.01	3.984	O				3.36
226.667	0.00	0.01	3.984	O				3.36
226.750	0.00	0.01	3.984	O				3.36
226.833	0.00	0.01	3.984	O				3.36
226.917	0.00	0.01	3.984	O				3.36
227.000	0.00	0.01	3.984	O				3.36
227.083	0.00	0.01	3.984	O				3.36

227.167	0.00	0.01	3.984	O					3.36
227.250	0.00	0.01	3.984	O					3.36
227.333	0.00	0.01	3.984	O					3.36
227.417	0.00	0.01	3.984	O					3.36
227.500	0.00	0.01	3.984	O					3.36
227.583	0.00	0.01	3.984	O					3.36
227.667	0.00	0.01	3.983	O					3.36
227.750	0.00	0.01	3.983	O					3.36
227.833	0.00	0.01	3.983	O					3.36
227.917	0.00	0.01	3.983	O					3.36
228.000	0.00	0.01	3.983	O					3.36
228.083	0.00	0.01	3.983	O					3.36
228.167	0.00	0.01	3.983	O					3.36
228.250	0.00	0.01	3.983	O					3.36
228.333	0.00	0.01	3.983	O					3.36
228.417	0.00	0.01	3.983	O					3.36
228.500	0.00	0.01	3.983	O					3.36
228.583	0.00	0.01	3.983	O					3.36
228.667	0.00	0.01	3.983	O					3.36
228.750	0.00	0.01	3.983	O					3.36
228.833	0.00	0.01	3.983	O					3.36
228.917	0.00	0.01	3.982	O					3.36
229.000	0.00	0.01	3.982	O					3.36
229.083	0.00	0.01	3.982	O					3.36
229.167	0.00	0.01	3.982	O					3.36
229.250	0.00	0.01	3.982	O					3.36
229.333	0.00	0.01	3.982	O					3.36
229.417	0.00	0.01	3.982	O					3.36
229.500	0.00	0.01	3.982	O					3.36
229.583	0.00	0.01	3.982	O					3.36
229.667	0.00	0.01	3.982	O					3.36
229.750	0.00	0.01	3.982	O					3.36
229.833	0.00	0.01	3.982	O					3.36
229.917	0.00	0.01	3.982	O					3.36
230.000	0.00	0.01	3.982	O					3.36
230.083	0.00	0.01	3.981	O					3.36
230.167	0.00	0.01	3.981	O					3.36
230.250	0.00	0.01	3.981	O					3.36
230.333	0.00	0.01	3.981	O					3.36
230.417	0.00	0.01	3.981	O					3.36
230.500	0.00	0.01	3.981	O					3.36
230.583	0.00	0.01	3.981	O					3.36
230.667	0.00	0.01	3.981	O					3.36
230.750	0.00	0.01	3.981	O					3.36
230.833	0.00	0.01	3.981	O					3.36
230.917	0.00	0.01	3.981	O					3.36
231.000	0.00	0.01	3.981	O					3.36
231.083	0.00	0.01	3.981	O					3.36
231.167	0.00	0.01	3.981	O					3.36
231.250	0.00	0.01	3.981	O					3.36

231.333	0.00	0.01	3.980	O				3.36
231.417	0.00	0.01	3.980	O				3.36
231.500	0.00	0.01	3.980	O				3.36
231.583	0.00	0.01	3.980	O				3.36
231.667	0.00	0.01	3.980	O				3.36
231.750	0.00	0.01	3.980	O				3.36
231.833	0.00	0.01	3.980	O				3.36
231.917	0.00	0.01	3.980	O				3.36
232.000	0.00	0.01	3.980	O				3.36
232.083	0.00	0.01	3.980	O				3.36
232.167	0.00	0.01	3.980	O				3.36
232.250	0.00	0.01	3.980	O				3.36
232.333	0.00	0.01	3.980	O				3.36
232.417	0.00	0.01	3.980	O				3.36
232.500	0.00	0.01	3.979	O				3.36
232.583	0.00	0.01	3.979	O				3.36
232.667	0.00	0.01	3.979	O				3.36
232.750	0.00	0.01	3.979	O				3.36
232.833	0.00	0.01	3.979	O				3.36
232.917	0.00	0.01	3.979	O				3.36
233.000	0.00	0.01	3.979	O				3.36
233.083	0.00	0.01	3.979	O				3.36
233.167	0.00	0.01	3.979	O				3.36
233.250	0.00	0.01	3.979	O				3.35
233.333	0.00	0.01	3.979	O				3.35
233.417	0.00	0.01	3.979	O				3.35
233.500	0.00	0.01	3.979	O				3.35
233.583	0.00	0.01	3.979	O				3.35
233.667	0.00	0.01	3.979	O				3.35
233.750	0.00	0.01	3.978	O				3.35
233.833	0.00	0.01	3.978	O				3.35
233.917	0.00	0.01	3.978	O				3.35
234.000	0.00	0.01	3.978	O				3.35
234.083	0.00	0.01	3.978	O				3.35
234.167	0.00	0.01	3.978	O				3.35
234.250	0.00	0.01	3.978	O				3.35
234.333	0.00	0.01	3.978	O				3.35
234.417	0.00	0.01	3.978	O				3.35
234.500	0.00	0.01	3.978	O				3.35
234.583	0.00	0.01	3.978	O				3.35
234.667	0.00	0.01	3.978	O				3.35
234.750	0.00	0.01	3.978	O				3.35
234.833	0.00	0.01	3.978	O				3.35
234.917	0.00	0.01	3.977	O				3.35
235.000	0.00	0.01	3.977	O				3.35
235.083	0.00	0.01	3.977	O				3.35
235.167	0.00	0.01	3.977	O				3.35
235.250	0.00	0.01	3.977	O				3.35
235.333	0.00	0.01	3.977	O				3.35
235.417	0.00	0.01	3.977	O				3.35

235.500	0.00	0.01	3.977	O				3.35
235.583	0.00	0.01	3.977	O				3.35
235.667	0.00	0.01	3.977	O				3.35
235.750	0.00	0.01	3.977	O				3.35
235.833	0.00	0.01	3.977	O				3.35
235.917	0.00	0.01	3.977	O				3.35
236.000	0.00	0.01	3.977	O				3.35
236.083	0.00	0.01	3.977	O				3.35
236.167	0.00	0.01	3.976	O				3.35
236.250	0.00	0.01	3.976	O				3.35
236.333	0.00	0.01	3.976	O				3.35
236.417	0.00	0.01	3.976	O				3.35
236.500	0.00	0.01	3.976	O				3.35
236.583	0.00	0.01	3.976	O				3.35
236.667	0.00	0.01	3.976	O				3.35
236.750	0.00	0.01	3.976	O				3.35
236.833	0.00	0.01	3.976	O				3.35
236.917	0.00	0.01	3.976	O				3.35
237.000	0.00	0.01	3.976	O				3.35
237.083	0.00	0.01	3.976	O				3.35
237.167	0.00	0.01	3.976	O				3.35
237.250	0.00	0.01	3.976	O				3.35
237.333	0.00	0.01	3.975	O				3.35
237.417	0.00	0.01	3.975	O				3.35
237.500	0.00	0.01	3.975	O				3.35
237.583	0.00	0.01	3.975	O				3.35
237.667	0.00	0.01	3.975	O				3.35
237.750	0.00	0.01	3.975	O				3.35
237.833	0.00	0.01	3.975	O				3.35
237.917	0.00	0.01	3.975	O				3.35
238.000	0.00	0.01	3.975	O				3.35
238.083	0.00	0.01	3.975	O				3.35
238.167	0.00	0.01	3.975	O				3.35
238.250	0.00	0.01	3.975	O				3.35
238.333	0.00	0.01	3.975	O				3.35
238.417	0.00	0.01	3.975	O				3.35
238.500	0.00	0.01	3.975	O				3.35
238.583	0.00	0.01	3.974	O				3.35
238.667	0.00	0.01	3.974	O				3.35
238.750	0.00	0.01	3.974	O				3.35
238.833	0.00	0.01	3.974	O				3.35
238.917	0.00	0.01	3.974	O				3.35
239.000	0.00	0.01	3.974	O				3.35
239.083	0.00	0.01	3.974	O				3.35
239.167	0.00	0.01	3.974	O				3.35
239.250	0.00	0.01	3.974	O				3.35
239.333	0.00	0.01	3.974	O				3.35
239.417	0.00	0.01	3.974	O				3.35
239.500	0.00	0.01	3.974	O				3.35
239.583	0.00	0.01	3.974	O				3.35

239.667	0.00	0.01	3.974	O				3.35
239.750	0.00	0.01	3.973	O				3.35
239.833	0.00	0.01	3.973	O				3.35
239.917	0.00	0.01	3.973	O				3.35
240.000	0.00	0.01	3.973	O				3.35
240.083	0.00	0.01	3.973	O				3.35
240.167	0.00	0.01	3.973	O				3.35
240.250	0.00	0.01	3.973	O				3.35
240.333	0.00	0.01	3.973	O				3.35
240.417	0.00	0.01	3.973	O				3.35
240.500	0.00	0.01	3.973	O				3.35
240.583	0.00	0.01	3.973	O				3.35
240.667	0.00	0.01	3.973	O				3.35
240.750	0.00	0.01	3.973	O				3.35
240.833	0.00	0.01	3.973	O				3.35
240.917	0.00	0.01	3.973	O				3.35
241.000	0.00	0.01	3.972	O				3.35
241.083	0.00	0.01	3.972	O				3.35
241.167	0.00	0.01	3.972	O				3.35
241.250	0.00	0.01	3.972	O				3.35
241.333	0.00	0.01	3.972	O				3.35
241.417	0.00	0.01	3.972	O				3.35
241.500	0.00	0.01	3.972	O				3.35
241.583	0.00	0.01	3.972	O				3.35
241.667	0.00	0.01	3.972	O				3.35
241.750	0.00	0.01	3.972	O				3.35
241.833	0.00	0.01	3.972	O				3.35
241.917	0.00	0.01	3.972	O				3.35
242.000	0.00	0.01	3.972	O				3.35
242.083	0.00	0.01	3.972	O				3.35
242.167	0.00	0.01	3.971	O				3.35
242.250	0.00	0.01	3.971	O				3.35
242.333	0.00	0.01	3.971	O				3.35
242.417	0.00	0.01	3.971	O				3.35
242.500	0.00	0.01	3.971	O				3.35
242.583	0.00	0.01	3.971	O				3.35
242.667	0.00	0.01	3.971	O				3.35
242.750	0.00	0.01	3.971	O				3.35
242.833	0.00	0.01	3.971	O				3.35
242.917	0.00	0.01	3.971	O				3.35
243.000	0.00	0.01	3.971	O				3.35
243.083	0.00	0.01	3.971	O				3.35
243.167	0.00	0.01	3.971	O				3.35
243.250	0.00	0.01	3.971	O				3.35
243.333	0.00	0.01	3.971	O				3.35
243.417	0.00	0.01	3.970	O				3.35
243.500	0.00	0.01	3.970	O				3.35
243.583	0.00	0.01	3.970	O				3.35
243.667	0.00	0.01	3.970	O				3.35
243.750	0.00	0.01	3.970	O				3.35

243.833	0.00	0.01	3.970	O				3.35
243.917	0.00	0.01	3.970	O				3.35
244.000	0.00	0.01	3.970	O				3.35
244.083	0.00	0.01	3.970	O				3.35
244.167	0.00	0.01	3.970	O				3.35
244.250	0.00	0.01	3.970	O				3.35
244.333	0.00	0.01	3.970	O				3.35
244.417	0.00	0.01	3.970	O				3.35
244.500	0.00	0.01	3.970	O				3.35
244.583	0.00	0.01	3.970	O				3.35
244.667	0.00	0.01	3.969	O				3.35
244.750	0.00	0.01	3.969	O				3.35
244.833	0.00	0.01	3.969	O				3.35
244.917	0.00	0.01	3.969	O				3.35
245.000	0.00	0.01	3.969	O				3.35
245.083	0.00	0.01	3.969	O				3.35
245.167	0.00	0.01	3.969	O				3.35
245.250	0.00	0.01	3.969	O				3.35
245.333	0.00	0.01	3.969	O				3.35
245.417	0.00	0.01	3.969	O				3.35
245.500	0.00	0.01	3.969	O				3.35
245.583	0.00	0.01	3.969	O				3.35
245.667	0.00	0.01	3.969	O				3.35
245.750	0.00	0.01	3.969	O				3.35
245.833	0.00	0.01	3.968	O				3.35
245.917	0.00	0.01	3.968	O				3.35
246.000	0.00	0.01	3.968	O				3.35
246.083	0.00	0.01	3.968	O				3.35
246.167	0.00	0.01	3.968	O				3.35
246.250	0.00	0.01	3.968	O				3.35
246.333	0.00	0.01	3.968	O				3.35
246.417	0.00	0.01	3.968	O				3.35
246.500	0.00	0.01	3.968	O				3.35
246.583	0.00	0.01	3.968	O				3.35
246.667	0.00	0.01	3.968	O				3.35
246.750	0.00	0.01	3.968	O				3.35
246.833	0.00	0.01	3.968	O				3.35
246.917	0.00	0.01	3.968	O				3.35
247.000	0.00	0.01	3.968	O				3.35
247.083	0.00	0.01	3.967	O				3.35
247.167	0.00	0.01	3.967	O				3.35
247.250	0.00	0.01	3.967	O				3.35
247.333	0.00	0.01	3.967	O				3.35
247.417	0.00	0.01	3.967	O				3.35
247.500	0.00	0.01	3.967	O				3.34
247.583	0.00	0.01	3.967	O				3.34
247.667	0.00	0.01	3.967	O				3.34
247.750	0.00	0.01	3.967	O				3.34
247.833	0.00	0.01	3.967	O				3.34
247.917	0.00	0.01	3.967	O				3.34

248.000	0.00	0.01	3.967	O				3.34
248.083	0.00	0.01	3.967	O				3.34
248.167	0.00	0.01	3.967	O				3.34
248.250	0.00	0.01	3.966	O				3.34
248.333	0.00	0.01	3.966	O				3.34
248.417	0.00	0.01	3.966	O				3.34
248.500	0.00	0.01	3.966	O				3.34
248.583	0.00	0.01	3.966	O				3.34
248.667	0.00	0.01	3.966	O				3.34
248.750	0.00	0.01	3.966	O				3.34
248.833	0.00	0.01	3.966	O				3.34
248.917	0.00	0.01	3.966	O				3.34
249.000	0.00	0.01	3.966	O				3.34
249.083	0.00	0.01	3.966	O				3.34
249.167	0.00	0.01	3.966	O				3.34
249.250	0.00	0.01	3.966	O				3.34
249.333	0.00	0.01	3.966	O				3.34
249.417	0.00	0.01	3.966	O				3.34
249.500	0.00	0.01	3.965	O				3.34
249.583	0.00	0.01	3.965	O				3.34
249.667	0.00	0.01	3.965	O				3.34
249.750	0.00	0.01	3.965	O				3.34
249.833	0.00	0.01	3.965	O				3.34
249.917	0.00	0.01	3.965	O				3.34
250.000	0.00	0.01	3.965	O				3.34
250.083	0.00	0.01	3.965	O				3.34
250.167	0.00	0.01	3.965	O				3.34
250.250	0.00	0.01	3.965	O				3.34
250.333	0.00	0.01	3.965	O				3.34
250.417	0.00	0.01	3.965	O				3.34
250.500	0.00	0.01	3.965	O				3.34
250.583	0.00	0.01	3.965	O				3.34
250.667	0.00	0.01	3.964	O				3.34
250.750	0.00	0.01	3.964	O				3.34
250.833	0.00	0.01	3.964	O				3.34
250.917	0.00	0.01	3.964	O				3.34
251.000	0.00	0.01	3.964	O				3.34
251.083	0.00	0.01	3.964	O				3.34
251.167	0.00	0.01	3.964	O				3.34
251.250	0.00	0.01	3.964	O				3.34
251.333	0.00	0.01	3.964	O				3.34
251.417	0.00	0.01	3.964	O				3.34
251.500	0.00	0.01	3.964	O				3.34
251.583	0.00	0.01	3.964	O				3.34
251.667	0.00	0.01	3.964	O				3.34
251.750	0.00	0.01	3.964	O				3.34
251.833	0.00	0.01	3.964	O				3.34
251.917	0.00	0.01	3.963	O				3.34
252.000	0.00	0.01	3.963	O				3.34
252.083	0.00	0.01	3.963	O				3.34

252.167	0.00	0.01	3.963	O				3.34
252.250	0.00	0.01	3.963	O				3.34
252.333	0.00	0.01	3.963	O				3.34
252.417	0.00	0.01	3.963	O				3.34
252.500	0.00	0.01	3.963	O				3.34
252.583	0.00	0.01	3.963	O				3.34
252.667	0.00	0.01	3.963	O				3.34
252.750	0.00	0.01	3.963	O				3.34
252.833	0.00	0.01	3.963	O				3.34
252.917	0.00	0.01	3.963	O				3.34
253.000	0.00	0.01	3.963	O				3.34
253.083	0.00	0.01	3.962	O				3.34
253.167	0.00	0.01	3.962	O				3.34
253.250	0.00	0.01	3.962	O				3.34
253.333	0.00	0.01	3.962	O				3.34
253.417	0.00	0.01	3.962	O				3.34
253.500	0.00	0.01	3.962	O				3.34
253.583	0.00	0.01	3.962	O				3.34
253.667	0.00	0.01	3.962	O				3.34
253.750	0.00	0.01	3.962	O				3.34
253.833	0.00	0.01	3.962	O				3.34
253.917	0.00	0.01	3.962	O				3.34
254.000	0.00	0.01	3.962	O				3.34
254.083	0.00	0.01	3.962	O				3.34
254.167	0.00	0.01	3.962	O				3.34
254.250	0.00	0.01	3.962	O				3.34
254.333	0.00	0.01	3.961	O				3.34
254.417	0.00	0.01	3.961	O				3.34
254.500	0.00	0.01	3.961	O				3.34
254.583	0.00	0.01	3.961	O				3.34
254.667	0.00	0.01	3.961	O				3.34
254.750	0.00	0.01	3.961	O				3.34
254.833	0.00	0.01	3.961	O				3.34
254.917	0.00	0.01	3.961	O				3.34
255.000	0.00	0.01	3.961	O				3.34
255.083	0.00	0.01	3.961	O				3.34
255.167	0.00	0.01	3.961	O				3.34
255.250	0.00	0.01	3.961	O				3.34
255.333	0.00	0.01	3.961	O				3.34
255.417	0.00	0.01	3.961	O				3.34
255.500	0.00	0.01	3.960	O				3.34
255.583	0.00	0.01	3.960	O				3.34
255.667	0.00	0.01	3.960	O				3.34
255.750	0.00	0.01	3.960	O				3.34
255.833	0.00	0.01	3.960	O				3.34
255.917	0.00	0.01	3.960	O				3.34
256.000	0.00	0.01	3.960	O				3.34
256.083	0.00	0.01	3.960	O				3.34
256.167	0.00	0.01	3.960	O				3.34
256.250	0.00	0.01	3.960	O				3.34

256.333	0.00	0.01	3.960	O	|	|	|	3.34
256.417	0.00	0.01	3.960	O	|	|	|	3.34
256.500	0.00	0.01	3.960	O	|	|	|	3.34
256.583	0.00	0.01	3.960	O	|	|	|	3.34
256.667	0.00	0.01	3.960	O	|	|	|	3.34
256.750	0.00	0.01	3.959	O	|	|	|	3.34
256.833	0.00	0.01	3.959	O	|	|	|	3.34
256.917	0.00	0.01	3.959	O	|	|	|	3.34
257.000	0.00	0.01	3.959	O	|	|	|	3.34
257.083	0.00	0.01	3.959	O	|	|	|	3.34
257.167	0.00	0.01	3.959	O	|	|	|	3.34
257.250	0.00	0.01	3.959	O	|	|	|	3.34
257.333	0.00	0.01	3.959	O	|	|	|	3.34
257.417	0.00	0.01	3.959	O	|	|	|	3.34
257.500	0.00	0.01	3.959	O	|	|	|	3.34
257.583	0.00	0.01	3.959	O	|	|	|	3.34
257.667	0.00	0.01	3.959	O	|	|	|	3.34
257.750	0.00	0.01	3.959	O	|	|	|	3.34
257.833	0.00	0.01	3.959	O	|	|	|	3.34
257.917	0.00	0.01	3.958	O	|	|	|	3.34
258.000	0.00	0.01	3.958	O	|	|	|	3.34
258.083	0.00	0.01	3.958	O	|	|	|	3.34
258.167	0.00	0.01	3.958	O	|	|	|	3.34
258.250	0.00	0.01	3.958	O	|	|	|	3.34
258.333	0.00	0.01	3.958	O	|	|	|	3.34
258.417	0.00	0.01	3.958	O	|	|	|	3.34
258.500	0.00	0.01	3.958	O	|	|	|	3.34
258.583	0.00	0.01	3.958	O	|	|	|	3.34
258.667	0.00	0.01	3.958	O	|	|	|	3.34
258.750	0.00	0.01	3.958	O	|	|	|	3.34
258.833	0.00	0.01	3.958	O	|	|	|	3.34
258.917	0.00	0.01	3.958	O	|	|	|	3.34
259.000	0.00	0.01	3.958	O	|	|	|	3.34
259.083	0.00	0.01	3.958	O	|	|	|	3.34
259.167	0.00	0.01	3.957	O	|	|	|	3.34
259.250	0.00	0.01	3.957	O	|	|	|	3.34
259.333	0.00	0.01	3.957	O	|	|	|	3.34
259.417	0.00	0.01	3.957	O	|	|	|	3.34
259.500	0.00	0.01	3.957	O	|	|	|	3.34
259.583	0.00	0.01	3.957	O	|	|	|	3.34
259.667	0.00	0.01	3.957	O	|	|	|	3.34
259.750	0.00	0.01	3.957	O	|	|	|	3.34
259.833	0.00	0.01	3.957	O	|	|	|	3.34
259.917	0.00	0.01	3.957	O	|	|	|	3.34
260.000	0.00	0.01	3.957	O	|	|	|	3.34
260.083	0.00	0.01	3.957	O	|	|	|	3.34
260.167	0.00	0.01	3.957	O	|	|	|	3.34
260.250	0.00	0.01	3.957	O	|	|	|	3.34
260.333	0.00	0.01	3.956	O	|	|	|	3.34
260.417	0.00	0.01	3.956	O	|	|	|	3.34

260.500	0.00	0.01	3.956	O	|	|	|	3.34
260.583	0.00	0.01	3.956	O	|	|	|	3.34
260.667	0.00	0.01	3.956	O	|	|	|	3.34
260.750	0.00	0.01	3.956	O	|	|	|	3.34
260.833	0.00	0.01	3.956	O	|	|	|	3.34
260.917	0.00	0.01	3.956	O	|	|	|	3.34
261.000	0.00	0.01	3.956	O	|	|	|	3.34
261.083	0.00	0.01	3.956	O	|	|	|	3.34
261.167	0.00	0.01	3.956	O	|	|	|	3.34
261.250	0.00	0.01	3.956	O	|	|	|	3.34
261.333	0.00	0.01	3.956	O	|	|	|	3.34
261.417	0.00	0.01	3.956	O	|	|	|	3.34
261.500	0.00	0.01	3.956	O	|	|	|	3.34
261.583	0.00	0.01	3.955	O	|	|	|	3.34
261.667	0.00	0.01	3.955	O	|	|	|	3.34
261.750	0.00	0.01	3.955	O	|	|	|	3.34
261.833	0.00	0.01	3.955	O	|	|	|	3.33
261.917	0.00	0.01	3.955	O	|	|	|	3.33
262.000	0.00	0.01	3.955	O	|	|	|	3.33
262.083	0.00	0.01	3.955	O	|	|	|	3.33
262.167	0.00	0.01	3.955	O	|	|	|	3.33
262.250	0.00	0.01	3.955	O	|	|	|	3.33
262.333	0.00	0.01	3.955	O	|	|	|	3.33
262.417	0.00	0.01	3.955	O	|	|	|	3.33
262.500	0.00	0.01	3.955	O	|	|	|	3.33
262.583	0.00	0.01	3.955	O	|	|	|	3.33
262.667	0.00	0.01	3.955	O	|	|	|	3.33
262.750	0.00	0.01	3.954	O	|	|	|	3.33
262.833	0.00	0.01	3.954	O	|	|	|	3.33
262.917	0.00	0.01	3.954	O	|	|	|	3.33
263.000	0.00	0.01	3.954	O	|	|	|	3.33
263.083	0.00	0.01	3.954	O	|	|	|	3.33
263.167	0.00	0.01	3.954	O	|	|	|	3.33
263.250	0.00	0.01	3.954	O	|	|	|	3.33
263.333	0.00	0.01	3.954	O	|	|	|	3.33
263.417	0.00	0.01	3.954	O	|	|	|	3.33
263.500	0.00	0.01	3.954	O	|	|	|	3.33
263.583	0.00	0.01	3.954	O	|	|	|	3.33
263.667	0.00	0.01	3.954	O	|	|	|	3.33
263.750	0.00	0.01	3.954	O	|	|	|	3.33
263.833	0.00	0.01	3.954	O	|	|	|	3.33
263.917	0.00	0.01	3.954	O	|	|	|	3.33
264.000	0.00	0.01	3.953	O	|	|	|	3.33
264.083	0.00	0.01	3.953	O	|	|	|	3.33
264.167	0.00	0.01	3.953	O	|	|	|	3.33
264.250	0.00	0.01	3.953	O	|	|	|	3.33
264.333	0.00	0.01	3.953	O	|	|	|	3.33
264.417	0.00	0.01	3.953	O	|	|	|	3.33
264.500	0.00	0.01	3.953	O	|	|	|	3.33
264.583	0.00	0.01	3.953	O	|	|	|	3.33

264.667	0.00	0.01	3.953	O	|	|	|	3.33
264.750	0.00	0.01	3.953	O	|	|	|	3.33
264.833	0.00	0.01	3.953	O	|	|	|	3.33
264.917	0.00	0.01	3.953	O	|	|	|	3.33
265.000	0.00	0.01	3.953	O	|	|	|	3.33
265.083	0.00	0.01	3.953	O	|	|	|	3.33
265.167	0.00	0.01	3.952	O	|	|	|	3.33
265.250	0.00	0.01	3.952	O	|	|	|	3.33
265.333	0.00	0.01	3.952	O	|	|	|	3.33
265.417	0.00	0.01	3.952	O	|	|	|	3.33
265.500	0.00	0.01	3.952	O	|	|	|	3.33
265.583	0.00	0.01	3.952	O	|	|	|	3.33
265.667	0.00	0.01	3.952	O	|	|	|	3.33
265.750	0.00	0.01	3.952	O	|	|	|	3.33
265.833	0.00	0.01	3.952	O	|	|	|	3.33
265.917	0.00	0.01	3.952	O	|	|	|	3.33
266.000	0.00	0.01	3.952	O	|	|	|	3.33
266.083	0.00	0.01	3.952	O	|	|	|	3.33
266.167	0.00	0.01	3.952	O	|	|	|	3.33
266.250	0.00	0.01	3.952	O	|	|	|	3.33
266.333	0.00	0.01	3.952	O	|	|	|	3.33
266.417	0.00	0.01	3.951	O	|	|	|	3.33
266.500	0.00	0.01	3.951	O	|	|	|	3.33
266.583	0.00	0.01	3.951	O	|	|	|	3.33
266.667	0.00	0.01	3.951	O	|	|	|	3.33
266.750	0.00	0.01	3.951	O	|	|	|	3.33
266.833	0.00	0.01	3.951	O	|	|	|	3.33
266.917	0.00	0.01	3.951	O	|	|	|	3.33
267.000	0.00	0.01	3.951	O	|	|	|	3.33
267.083	0.00	0.01	3.951	O	|	|	|	3.33
267.167	0.00	0.01	3.951	O	|	|	|	3.33
267.250	0.00	0.01	3.951	O	|	|	|	3.33
267.333	0.00	0.01	3.951	O	|	|	|	3.33
267.417	0.00	0.01	3.951	O	|	|	|	3.33
267.500	0.00	0.01	3.951	O	|	|	|	3.33
267.583	0.00	0.01	3.950	O	|	|	|	3.33
267.667	0.00	0.01	3.950	O	|	|	|	3.33
267.750	0.00	0.01	3.950	O	|	|	|	3.33
267.833	0.00	0.01	3.950	O	|	|	|	3.33
267.917	0.00	0.01	3.950	O	|	|	|	3.33
268.000	0.00	0.01	3.950	O	|	|	|	3.33
268.083	0.00	0.01	3.950	O	|	|	|	3.33
268.167	0.00	0.01	3.950	O	|	|	|	3.33
268.250	0.00	0.01	3.950	O	|	|	|	3.33
268.333	0.00	0.01	3.950	O	|	|	|	3.33
268.417	0.00	0.01	3.950	O	|	|	|	3.33
268.500	0.00	0.01	3.950	O	|	|	|	3.33
268.583	0.00	0.01	3.950	O	|	|	|	3.33
268.667	0.00	0.01	3.950	O	|	|	|	3.33
268.750	0.00	0.01	3.950	O	|	|	|	3.33

268.833	0.00	0.01	3.949	O	|	|	|	3.33
268.917	0.00	0.01	3.949	O	|	|	|	3.33
269.000	0.00	0.01	3.949	O	|	|	|	3.33
269.083	0.00	0.01	3.949	O	|	|	|	3.33
269.167	0.00	0.01	3.949	O	|	|	|	3.33
269.250	0.00	0.01	3.949	O	|	|	|	3.33
269.333	0.00	0.01	3.949	O	|	|	|	3.33
269.417	0.00	0.01	3.949	O	|	|	|	3.33
269.500	0.00	0.01	3.949	O	|	|	|	3.33
269.583	0.00	0.01	3.949	O	|	|	|	3.33
269.667	0.00	0.01	3.949	O	|	|	|	3.33
269.750	0.00	0.01	3.949	O	|	|	|	3.33
269.833	0.00	0.01	3.949	O	|	|	|	3.33
269.917	0.00	0.01	3.949	O	|	|	|	3.33
270.000	0.00	0.01	3.948	O	|	|	|	3.33
270.083	0.00	0.01	3.948	O	|	|	|	3.33
270.167	0.00	0.01	3.948	O	|	|	|	3.33
270.250	0.00	0.01	3.948	O	|	|	|	3.33
270.333	0.00	0.01	3.948	O	|	|	|	3.33
270.417	0.00	0.01	3.948	O	|	|	|	3.33
270.500	0.00	0.01	3.948	O	|	|	|	3.33
270.583	0.00	0.01	3.948	O	|	|	|	3.33
270.667	0.00	0.01	3.948	O	|	|	|	3.33
270.750	0.00	0.01	3.948	O	|	|	|	3.33
270.833	0.00	0.01	3.948	O	|	|	|	3.33
270.917	0.00	0.01	3.948	O	|	|	|	3.33
271.000	0.00	0.01	3.948	O	|	|	|	3.33
271.083	0.00	0.01	3.948	O	|	|	|	3.33
271.167	0.00	0.01	3.948	O	|	|	|	3.33
271.250	0.00	0.01	3.947	O	|	|	|	3.33
271.333	0.00	0.01	3.947	O	|	|	|	3.33
271.417	0.00	0.01	3.947	O	|	|	|	3.33
271.500	0.00	0.01	3.947	O	|	|	|	3.33
271.583	0.00	0.01	3.947	O	|	|	|	3.33
271.667	0.00	0.01	3.947	O	|	|	|	3.33
271.750	0.00	0.01	3.947	O	|	|	|	3.33
271.833	0.00	0.01	3.947	O	|	|	|	3.33
271.917	0.00	0.01	3.947	O	|	|	|	3.33
272.000	0.00	0.01	3.947	O	|	|	|	3.33
272.083	0.00	0.01	3.947	O	|	|	|	3.33
272.167	0.00	0.01	3.947	O	|	|	|	3.33
272.250	0.00	0.01	3.947	O	|	|	|	3.33
272.333	0.00	0.01	3.947	O	|	|	|	3.33
272.417	0.00	0.01	3.946	O	|	|	|	3.33
272.500	0.00	0.01	3.946	O	|	|	|	3.33
272.583	0.00	0.01	3.946	O	|	|	|	3.33
272.667	0.00	0.01	3.946	O	|	|	|	3.33
272.750	0.00	0.01	3.946	O	|	|	|	3.33
272.833	0.00	0.01	3.946	O	|	|	|	3.33
272.917	0.00	0.01	3.946	O	|	|	|	3.33

273.000	0.00	0.01	3.946	O				3.33
273.083	0.00	0.01	3.946	O				3.33
273.167	0.00	0.01	3.946	O				3.33
273.250	0.00	0.01	3.946	O				3.33
273.333	0.00	0.01	3.946	O				3.33
273.417	0.00	0.01	3.946	O				3.33
273.500	0.00	0.01	3.946	O				3.33
273.583	0.00	0.01	3.946	O				3.33
273.667	0.00	0.01	3.945	O				3.33
273.750	0.00	0.01	3.945	O				3.33
273.833	0.00	0.01	3.945	O				3.33
273.917	0.00	0.01	3.945	O				3.33
274.000	0.00	0.01	3.945	O				3.33
274.083	0.00	0.01	3.945	O				3.33
274.167	0.00	0.01	3.945	O				3.33
274.250	0.00	0.01	3.945	O				3.33
274.333	0.00	0.01	3.945	O				3.33
274.417	0.00	0.01	3.945	O				3.33
274.500	0.00	0.01	3.945	O				3.33
274.583	0.00	0.01	3.945	O				3.33
274.667	0.00	0.01	3.945	O				3.33
274.750	0.00	0.01	3.945	O				3.33
274.833	0.00	0.01	3.945	O				3.33
274.917	0.00	0.01	3.944	O				3.33
275.000	0.00	0.01	3.944	O				3.33
275.083	0.00	0.01	3.944	O				3.33
275.167	0.00	0.01	3.944	O				3.33
275.250	0.00	0.01	3.944	O				3.33
275.333	0.00	0.01	3.944	O				3.33
275.417	0.00	0.01	3.944	O				3.33
275.500	0.00	0.01	3.944	O				3.33
275.583	0.00	0.01	3.944	O				3.33
275.667	0.00	0.01	3.944	O				3.33
275.750	0.00	0.01	3.944	O				3.33
275.833	0.00	0.01	3.944	O				3.33
275.917	0.00	0.01	3.944	O				3.33
276.000	0.00	0.01	3.944	O				3.33
276.083	0.00	0.01	3.943	O				3.32
276.167	0.00	0.01	3.943	O				3.32
276.250	0.00	0.01	3.943	O				3.32
276.333	0.00	0.01	3.943	O				3.32
276.417	0.00	0.01	3.943	O				3.32
276.500	0.00	0.01	3.943	O				3.32
276.583	0.00	0.01	3.943	O				3.32
276.667	0.00	0.01	3.943	O				3.32
276.750	0.00	0.01	3.943	O				3.32
276.833	0.00	0.01	3.943	O				3.32
276.917	0.00	0.01	3.943	O				3.32
277.000	0.00	0.01	3.943	O				3.32
277.083	0.00	0.01	3.943	O				3.32

277.167	0.00	0.01	3.943	O				3.32
277.250	0.00	0.01	3.943	O				3.32
277.333	0.00	0.01	3.942	O				3.32
277.417	0.00	0.01	3.942	O				3.32
277.500	0.00	0.01	3.942	O				3.32
277.583	0.00	0.01	3.942	O				3.32
277.667	0.00	0.01	3.942	O				3.32
277.750	0.00	0.01	3.942	O				3.32
277.833	0.00	0.01	3.942	O				3.32
277.917	0.00	0.01	3.942	O				3.32
278.000	0.00	0.01	3.942	O				3.32
278.083	0.00	0.01	3.942	O				3.32
278.167	0.00	0.01	3.942	O				3.32
278.250	0.00	0.01	3.942	O				3.32
278.333	0.00	0.01	3.942	O				3.32
278.417	0.00	0.01	3.942	O				3.32
278.500	0.00	0.01	3.941	O				3.32
278.583	0.00	0.01	3.941	O				3.32
278.667	0.00	0.01	3.941	O				3.32
278.750	0.00	0.01	3.941	O				3.32
278.833	0.00	0.01	3.941	O				3.32
278.917	0.00	0.01	3.941	O				3.32
279.000	0.00	0.01	3.941	O				3.32
279.083	0.00	0.01	3.941	O				3.32
279.167	0.00	0.01	3.941	O				3.32
279.250	0.00	0.01	3.941	O				3.32
279.333	0.00	0.01	3.941	O				3.32
279.417	0.00	0.01	3.941	O				3.32
279.500	0.00	0.01	3.941	O				3.32
279.583	0.00	0.01	3.941	O				3.32
279.667	0.00	0.01	3.941	O				3.32
279.750	0.00	0.01	3.940	O				3.32
279.833	0.00	0.01	3.940	O				3.32
279.917	0.00	0.01	3.940	O				3.32
280.000	0.00	0.01	3.940	O				3.32
280.083	0.00	0.01	3.940	O				3.32
280.167	0.00	0.01	3.940	O				3.32
280.250	0.00	0.01	3.940	O				3.32
280.333	0.00	0.01	3.940	O				3.32
280.417	0.00	0.01	3.940	O				3.32
280.500	0.00	0.01	3.940	O				3.32
280.583	0.00	0.01	3.940	O				3.32
280.667	0.00	0.01	3.940	O				3.32
280.750	0.00	0.01	3.940	O				3.32
280.833	0.00	0.01	3.940	O				3.32
280.917	0.00	0.01	3.939	O				3.32
281.000	0.00	0.01	3.939	O				3.32
281.083	0.00	0.01	3.939	O				3.32
281.167	0.00	0.01	3.939	O				3.32
281.250	0.00	0.01	3.939	O				3.32

281.333	0.00	0.01	3.939	O				3.32
281.417	0.00	0.01	3.939	O				3.32
281.500	0.00	0.01	3.939	O				3.32
281.583	0.00	0.01	3.939	O				3.32
281.667	0.00	0.01	3.939	O				3.32
281.750	0.00	0.01	3.939	O				3.32
281.833	0.00	0.01	3.939	O				3.32
281.917	0.00	0.01	3.939	O				3.32
282.000	0.00	0.01	3.939	O				3.32
282.083	0.00	0.01	3.939	O				3.32
282.167	0.00	0.01	3.938	O				3.32
282.250	0.00	0.01	3.938	O				3.32
282.333	0.00	0.01	3.938	O				3.32
282.417	0.00	0.01	3.938	O				3.32
282.500	0.00	0.01	3.938	O				3.32
282.583	0.00	0.01	3.938	O				3.32
282.667	0.00	0.01	3.938	O				3.32
282.750	0.00	0.01	3.938	O				3.32
282.833	0.00	0.01	3.938	O				3.32
282.917	0.00	0.01	3.938	O				3.32
283.000	0.00	0.01	3.938	O				3.32
283.083	0.00	0.01	3.938	O				3.32
283.167	0.00	0.01	3.938	O				3.32
283.250	0.00	0.01	3.938	O				3.32
283.333	0.00	0.01	3.937	O				3.32
283.417	0.00	0.01	3.937	O				3.32
283.500	0.00	0.01	3.937	O				3.32
283.583	0.00	0.01	3.937	O				3.32
283.667	0.00	0.01	3.937	O				3.32
283.750	0.00	0.01	3.937	O				3.32
283.833	0.00	0.01	3.937	O				3.32
283.917	0.00	0.01	3.937	O				3.32
284.000	0.00	0.01	3.937	O				3.32
284.083	0.00	0.01	3.937	O				3.32
284.167	0.00	0.01	3.937	O				3.32
284.250	0.00	0.01	3.937	O				3.32
284.333	0.00	0.01	3.937	O				3.32
284.417	0.00	0.01	3.937	O				3.32
284.500	0.00	0.01	3.937	O				3.32
284.583	0.00	0.01	3.936	O				3.32
284.667	0.00	0.01	3.936	O				3.32
284.750	0.00	0.01	3.936	O				3.32
284.833	0.00	0.01	3.936	O				3.32
284.917	0.00	0.01	3.936	O				3.32
285.000	0.00	0.01	3.936	O				3.32
285.083	0.00	0.01	3.936	O				3.32
285.167	0.00	0.01	3.936	O				3.32
285.250	0.00	0.01	3.936	O				3.32
285.333	0.00	0.01	3.936	O				3.32
285.417	0.00	0.01	3.936	O				3.32

285.500	0.00	0.01	3.936	O					3.32
285.583	0.00	0.01	3.936	O					3.32
285.667	0.00	0.01	3.936	O					3.32
285.750	0.00	0.01	3.935	O					3.32
285.833	0.00	0.01	3.935	O					3.32
285.917	0.00	0.01	3.935	O					3.32
286.000	0.00	0.01	3.935	O					3.32
286.083	0.00	0.01	3.935	O					3.32
286.167	0.00	0.01	3.935	O					3.32
286.250	0.00	0.01	3.935	O					3.32
286.333	0.00	0.01	3.935	O					3.32
286.417	0.00	0.01	3.935	O					3.32
286.500	0.00	0.01	3.935	O					3.32
286.583	0.00	0.01	3.935	O					3.32
286.667	0.00	0.01	3.935	O					3.32
286.750	0.00	0.01	3.935	O					3.32
286.833	0.00	0.01	3.935	O					3.32
286.917	0.00	0.01	3.935	O					3.32
287.000	0.00	0.01	3.934	O					3.32
287.083	0.00	0.01	3.934	O					3.32
287.167	0.00	0.01	3.934	O					3.32
287.250	0.00	0.01	3.934	O					3.32
287.333	0.00	0.01	3.934	O					3.32
287.417	0.00	0.01	3.934	O					3.32
287.500	0.00	0.01	3.934	O					3.32
287.583	0.00	0.01	3.934	O					3.32
287.667	0.00	0.01	3.934	O					3.32
287.750	0.00	0.01	3.934	O					3.32
287.833	0.00	0.01	3.934	O					3.32
287.917	0.00	0.01	3.934	O					3.32
288.000	0.00	0.01	3.934	O					3.32
288.083	0.00	0.01	3.934	O					3.32
288.167	0.00	0.01	3.933	O					3.32
288.250	0.00	0.01	3.933	O					3.32
288.333	0.00	0.01	3.933	O					3.32
288.417	0.00	0.01	3.933	O					3.32
288.500	0.00	0.01	3.933	O					3.32
288.583	0.00	0.01	3.933	O					3.32
288.667	0.00	0.01	3.933	O					3.32
288.750	0.00	0.01	3.933	O					3.32
288.833	0.00	0.01	3.933	O					3.32
288.917	0.00	0.01	3.933	O					3.32
289.000	0.00	0.01	3.933	O					3.32
289.083	0.00	0.01	3.933	O					3.32
289.167	0.00	0.01	3.933	O					3.32
289.250	0.00	0.01	3.933	O					3.32
289.333	0.00	0.01	3.933	O					3.32
289.417	0.00	0.01	3.932	O					3.32
289.500	0.00	0.01	3.932	O					3.32
289.583	0.00	0.01	3.932	O					3.32

289.667	0.00	0.01	3.932	O	|	|	|	3.32
289.750	0.00	0.01	3.932	O	|	|	|	3.32
289.833	0.00	0.01	3.932	O	|	|	|	3.32
289.917	0.00	0.01	3.932	O	|	|	|	3.32
290.000	0.00	0.01	3.932	O	|	|	|	3.32
290.083	0.00	0.01	3.932	O	|	|	|	3.32
290.167	0.00	0.01	3.932	O	|	|	|	3.32
290.250	0.00	0.01	3.932	O	|	|	|	3.32
290.333	0.00	0.01	3.932	O	|	|	|	3.31
290.417	0.00	0.01	3.932	O	|	|	|	3.31
290.500	0.00	0.01	3.932	O	|	|	|	3.31
290.583	0.00	0.01	3.931	O	|	|	|	3.31
290.667	0.00	0.01	3.931	O	|	|	|	3.31
290.750	0.00	0.01	3.931	O	|	|	|	3.31
290.833	0.00	0.01	3.931	O	|	|	|	3.31
290.917	0.00	0.01	3.931	O	|	|	|	3.31
291.000	0.00	0.01	3.931	O	|	|	|	3.31
291.083	0.00	0.01	3.931	O	|	|	|	3.31
291.167	0.00	0.01	3.931	O	|	|	|	3.31
291.250	0.00	0.01	3.931	O	|	|	|	3.31
291.333	0.00	0.01	3.931	O	|	|	|	3.31
291.417	0.00	0.01	3.931	O	|	|	|	3.31
291.500	0.00	0.01	3.931	O	|	|	|	3.31
291.583	0.00	0.01	3.931	O	|	|	|	3.31
291.667	0.00	0.01	3.931	O	|	|	|	3.31
291.750	0.00	0.01	3.931	O	|	|	|	3.31
291.833	0.00	0.01	3.930	O	|	|	|	3.31
291.917	0.00	0.01	3.930	O	|	|	|	3.31
292.000	0.00	0.01	3.930	O	|	|	|	3.31
292.083	0.00	0.01	3.930	O	|	|	|	3.31
292.167	0.00	0.01	3.930	O	|	|	|	3.31
292.250	0.00	0.01	3.930	O	|	|	|	3.31
292.333	0.00	0.01	3.930	O	|	|	|	3.31
292.417	0.00	0.01	3.930	O	|	|	|	3.31
292.500	0.00	0.01	3.930	O	|	|	|	3.31
292.583	0.00	0.01	3.930	O	|	|	|	3.31
292.667	0.00	0.01	3.930	O	|	|	|	3.31
292.750	0.00	0.01	3.930	O	|	|	|	3.31
292.833	0.00	0.01	3.930	O	|	|	|	3.31
292.917	0.00	0.01	3.930	O	|	|	|	3.31
293.000	0.00	0.01	3.929	O	|	|	|	3.31
293.083	0.00	0.01	3.929	O	|	|	|	3.31
293.167	0.00	0.01	3.929	O	|	|	|	3.31
293.250	0.00	0.01	3.929	O	|	|	|	3.31
293.333	0.00	0.01	3.929	O	|	|	|	3.31
293.417	0.00	0.01	3.929	O	|	|	|	3.31
293.500	0.00	0.01	3.929	O	|	|	|	3.31
293.583	0.00	0.01	3.929	O	|	|	|	3.31
293.667	0.00	0.01	3.929	O	|	|	|	3.31
293.750	0.00	0.01	3.929	O	|	|	|	3.31

293.833	0.00	0.01	3.929	O				3.31
293.917	0.00	0.01	3.929	O				3.31
294.000	0.00	0.01	3.929	O				3.31
294.083	0.00	0.01	3.929	O				3.31
294.167	0.00	0.01	3.929	O				3.31
294.250	0.00	0.01	3.928	O				3.31
294.333	0.00	0.01	3.928	O				3.31
294.417	0.00	0.01	3.928	O				3.31
294.500	0.00	0.01	3.928	O				3.31
294.583	0.00	0.01	3.928	O				3.31
294.667	0.00	0.01	3.928	O				3.31
294.750	0.00	0.01	3.928	O				3.31
294.833	0.00	0.01	3.928	O				3.31
294.917	0.00	0.01	3.928	O				3.31
295.000	0.00	0.01	3.928	O				3.31
295.083	0.00	0.01	3.928	O				3.31
295.167	0.00	0.01	3.928	O				3.31
295.250	0.00	0.01	3.928	O				3.31
295.333	0.00	0.01	3.928	O				3.31
295.417	0.00	0.01	3.927	O				3.31
295.500	0.00	0.01	3.927	O				3.31
295.583	0.00	0.01	3.927	O				3.31
295.667	0.00	0.01	3.927	O				3.31
295.750	0.00	0.01	3.927	O				3.31
295.833	0.00	0.01	3.927	O				3.31
295.917	0.00	0.01	3.927	O				3.31
296.000	0.00	0.01	3.927	O				3.31
296.083	0.00	0.01	3.927	O				3.31
296.167	0.00	0.01	3.927	O				3.31
296.250	0.00	0.01	3.927	O				3.31
296.333	0.00	0.01	3.927	O				3.31
296.417	0.00	0.01	3.927	O				3.31
296.500	0.00	0.01	3.927	O				3.31
296.583	0.00	0.01	3.927	O				3.31
296.667	0.00	0.01	3.926	O				3.31
296.750	0.00	0.01	3.926	O				3.31
296.833	0.00	0.01	3.926	O				3.31
296.917	0.00	0.01	3.926	O				3.31
297.000	0.00	0.01	3.926	O				3.31
297.083	0.00	0.01	3.926	O				3.31
297.167	0.00	0.01	3.926	O				3.31
297.250	0.00	0.01	3.926	O				3.31
297.333	0.00	0.01	3.926	O				3.31
297.417	0.00	0.01	3.926	O				3.31
297.500	0.00	0.01	3.926	O				3.31
297.583	0.00	0.01	3.926	O				3.31
297.667	0.00	0.01	3.926	O				3.31
297.750	0.00	0.01	3.926	O				3.31
297.833	0.00	0.01	3.925	O				3.31
297.917	0.00	0.01	3.925	O				3.31

298.000	0.00	0.01	3.925	O				3.31
298.083	0.00	0.01	3.925	O				3.31
298.167	0.00	0.01	3.925	O				3.31
298.250	0.00	0.01	3.925	O				3.31
298.333	0.00	0.01	3.925	O				3.31
298.417	0.00	0.01	3.925	O				3.31
298.500	0.00	0.01	3.925	O				3.31
298.583	0.00	0.01	3.925	O				3.31
298.667	0.00	0.01	3.925	O				3.31
298.750	0.00	0.01	3.925	O				3.31
298.833	0.00	0.01	3.925	O				3.31
298.917	0.00	0.01	3.925	O				3.31
299.000	0.00	0.01	3.925	O				3.31
299.083	0.00	0.01	3.924	O				3.31
299.167	0.00	0.01	3.924	O				3.31
299.250	0.00	0.01	3.924	O				3.31
299.333	0.00	0.01	3.924	O				3.31
299.417	0.00	0.01	3.924	O				3.31
299.500	0.00	0.01	3.924	O				3.31
299.583	0.00	0.01	3.924	O				3.31
299.667	0.00	0.01	3.924	O				3.31
299.750	0.00	0.01	3.924	O				3.31
299.833	0.00	0.01	3.924	O				3.31
299.917	0.00	0.01	3.924	O				3.31
300.000	0.00	0.01	3.924	O				3.31
300.083	0.00	0.01	3.924	O				3.31
300.167	0.00	0.01	3.924	O				3.31
300.250	0.00	0.01	3.923	O				3.31
300.333	0.00	0.01	3.923	O				3.31
300.417	0.00	0.01	3.923	O				3.31
300.500	0.00	0.01	3.923	O				3.31
300.583	0.00	0.01	3.923	O				3.31
300.667	0.00	0.01	3.923	O				3.31
300.750	0.00	0.01	3.923	O				3.31
300.833	0.00	0.01	3.923	O				3.31
300.917	0.00	0.01	3.923	O				3.31
301.000	0.00	0.01	3.923	O				3.31
301.083	0.00	0.01	3.923	O				3.31
301.167	0.00	0.01	3.923	O				3.31
301.250	0.00	0.01	3.923	O				3.31
301.333	0.00	0.01	3.923	O				3.31
301.417	0.00	0.01	3.923	O				3.31
301.500	0.00	0.01	3.922	O				3.31
301.583	0.00	0.01	3.922	O				3.31
301.667	0.00	0.01	3.922	O				3.31
301.750	0.00	0.01	3.922	O				3.31
301.833	0.00	0.01	3.922	O				3.31
301.917	0.00	0.01	3.922	O				3.31
302.000	0.00	0.01	3.922	O				3.31
302.083	0.00	0.01	3.922	O				3.31

302.167	0.00	0.01	3.922	O	|	|	|	3.31
302.250	0.00	0.01	3.922	O	|	|	|	3.31
302.333	0.00	0.01	3.922	O	|	|	|	3.31
302.417	0.00	0.01	3.922	O	|	|	|	3.31
302.500	0.00	0.01	3.922	O	|	|	|	3.31
302.583	0.00	0.01	3.922	O	|	|	|	3.31
302.667	0.00	0.01	3.921	O	|	|	|	3.31
302.750	0.00	0.01	3.921	O	|	|	|	3.31
302.833	0.00	0.01	3.921	O	|	|	|	3.31
302.917	0.00	0.01	3.921	O	|	|	|	3.31
303.000	0.00	0.01	3.921	O	|	|	|	3.31
303.083	0.00	0.01	3.921	O	|	|	|	3.31
303.167	0.00	0.01	3.921	O	|	|	|	3.31
303.250	0.00	0.01	3.921	O	|	|	|	3.31
303.333	0.00	0.01	3.921	O	|	|	|	3.31
303.417	0.00	0.01	3.921	O	|	|	|	3.31
303.500	0.00	0.01	3.921	O	|	|	|	3.31
303.583	0.00	0.01	3.921	O	|	|	|	3.31
303.667	0.00	0.01	3.921	O	|	|	|	3.31
303.750	0.00	0.01	3.921	O	|	|	|	3.31
303.833	0.00	0.01	3.921	O	|	|	|	3.31
303.917	0.00	0.01	3.920	O	|	|	|	3.31
304.000	0.00	0.01	3.920	O	|	|	|	3.31
304.083	0.00	0.01	3.920	O	|	|	|	3.31
304.167	0.00	0.01	3.920	O	|	|	|	3.31
304.250	0.00	0.01	3.920	O	|	|	|	3.31
304.333	0.00	0.01	3.920	O	|	|	|	3.31
304.417	0.00	0.01	3.920	O	|	|	|	3.31
304.500	0.00	0.01	3.920	O	|	|	|	3.31
304.583	0.00	0.01	3.920	O	|	|	|	3.31
304.667	0.00	0.01	3.920	O	|	|	|	3.30
304.750	0.00	0.01	3.920	O	|	|	|	3.30
304.833	0.00	0.01	3.920	O	|	|	|	3.30
304.917	0.00	0.01	3.920	O	|	|	|	3.30
305.000	0.00	0.01	3.920	O	|	|	|	3.30
305.083	0.00	0.01	3.920	O	|	|	|	3.30
305.167	0.00	0.01	3.919	O	|	|	|	3.30
305.250	0.00	0.01	3.919	O	|	|	|	3.30
305.333	0.00	0.01	3.919	O	|	|	|	3.30
305.417	0.00	0.01	3.919	O	|	|	|	3.30
305.500	0.00	0.01	3.919	O	|	|	|	3.30
305.583	0.00	0.01	3.919	O	|	|	|	3.30
305.667	0.00	0.01	3.919	O	|	|	|	3.30
305.750	0.00	0.01	3.919	O	|	|	|	3.30
305.833	0.00	0.01	3.919	O	|	|	|	3.30
305.917	0.00	0.01	3.919	O	|	|	|	3.30
306.000	0.00	0.01	3.919	O	|	|	|	3.30
306.083	0.00	0.01	3.919	O	|	|	|	3.30
306.167	0.00	0.01	3.919	O	|	|	|	3.30
306.250	0.00	0.01	3.919	O	|	|	|	3.30

306.333	0.00	0.01	3.918	O				3.30
306.417	0.00	0.01	3.918	O				3.30
306.500	0.00	0.01	3.918	O				3.30
306.583	0.00	0.01	3.918	O				3.30
306.667	0.00	0.01	3.918	O				3.30
306.750	0.00	0.01	3.918	O				3.30
306.833	0.00	0.01	3.918	O				3.30
306.917	0.00	0.01	3.918	O				3.30
307.000	0.00	0.01	3.918	O				3.30
307.083	0.00	0.01	3.918	O				3.30
307.167	0.00	0.01	3.918	O				3.30
307.250	0.00	0.01	3.918	O				3.30
307.333	0.00	0.01	3.918	O				3.30
307.417	0.00	0.01	3.918	O				3.30
307.500	0.00	0.01	3.918	O				3.30
307.583	0.00	0.01	3.917	O				3.30
307.667	0.00	0.01	3.917	O				3.30
307.750	0.00	0.01	3.917	O				3.30
307.833	0.00	0.01	3.917	O				3.30
307.917	0.00	0.01	3.917	O				3.30
308.000	0.00	0.01	3.917	O				3.30
308.083	0.00	0.01	3.917	O				3.30
308.167	0.00	0.01	3.917	O				3.30
308.250	0.00	0.01	3.917	O				3.30
308.333	0.00	0.01	3.917	O				3.30
308.417	0.00	0.01	3.917	O				3.30
308.500	0.00	0.01	3.917	O				3.30
308.583	0.00	0.01	3.917	O				3.30
308.667	0.00	0.01	3.917	O				3.30
308.750	0.00	0.01	3.916	O				3.30
308.833	0.00	0.01	3.916	O				3.30
308.917	0.00	0.01	3.916	O				3.30
309.000	0.00	0.01	3.916	O				3.30
309.083	0.00	0.01	3.916	O				3.30
309.167	0.00	0.01	3.916	O				3.30
309.250	0.00	0.01	3.916	O				3.30
309.333	0.00	0.01	3.916	O				3.30
309.417	0.00	0.01	3.916	O				3.30
309.500	0.00	0.01	3.916	O				3.30
309.583	0.00	0.01	3.916	O				3.30
309.667	0.00	0.01	3.916	O				3.30
309.750	0.00	0.01	3.916	O				3.30
309.833	0.00	0.01	3.916	O				3.30
309.917	0.00	0.01	3.916	O				3.30
310.000	0.00	0.01	3.915	O				3.30
310.083	0.00	0.01	3.915	O				3.30
310.167	0.00	0.01	3.915	O				3.30
310.250	0.00	0.01	3.915	O				3.30
310.333	0.00	0.01	3.915	O				3.30
310.417	0.00	0.01	3.915	O				3.30

310.500	0.00	0.01	3.915	O	|	|	|	3.30
310.583	0.00	0.01	3.915	O	|	|	|	3.30
310.667	0.00	0.01	3.915	O	|	|	|	3.30
310.750	0.00	0.01	3.915	O	|	|	|	3.30
310.833	0.00	0.01	3.915	O	|	|	|	3.30
310.917	0.00	0.01	3.915	O	|	|	|	3.30
311.000	0.00	0.01	3.915	O	|	|	|	3.30
311.083	0.00	0.01	3.915	O	|	|	|	3.30
311.167	0.00	0.01	3.914	O	|	|	|	3.30
311.250	0.00	0.01	3.914	O	|	|	|	3.30
311.333	0.00	0.01	3.914	O	|	|	|	3.30
311.417	0.00	0.01	3.914	O	|	|	|	3.30
311.500	0.00	0.01	3.914	O	|	|	|	3.30
311.583	0.00	0.01	3.914	O	|	|	|	3.30
311.667	0.00	0.01	3.914	O	|	|	|	3.30
311.750	0.00	0.01	3.914	O	|	|	|	3.30
311.833	0.00	0.01	3.914	O	|	|	|	3.30
311.917	0.00	0.01	3.914	O	|	|	|	3.30
312.000	0.00	0.01	3.914	O	|	|	|	3.30
312.083	0.00	0.01	3.914	O	|	|	|	3.30
312.167	0.00	0.01	3.914	O	|	|	|	3.30
312.250	0.00	0.01	3.914	O	|	|	|	3.30
312.333	0.00	0.01	3.914	O	|	|	|	3.30
312.417	0.00	0.01	3.913	O	|	|	|	3.30
312.500	0.00	0.01	3.913	O	|	|	|	3.30
312.583	0.00	0.01	3.913	O	|	|	|	3.30
312.667	0.00	0.01	3.913	O	|	|	|	3.30
312.750	0.00	0.01	3.913	O	|	|	|	3.30
312.833	0.00	0.01	3.913	O	|	|	|	3.30
312.917	0.00	0.01	3.913	O	|	|	|	3.30
313.000	0.00	0.01	3.913	O	|	|	|	3.30
313.083	0.00	0.01	3.913	O	|	|	|	3.30
313.167	0.00	0.01	3.913	O	|	|	|	3.30
313.250	0.00	0.01	3.913	O	|	|	|	3.30
313.333	0.00	0.01	3.913	O	|	|	|	3.30
313.417	0.00	0.01	3.913	O	|	|	|	3.30
313.500	0.00	0.01	3.913	O	|	|	|	3.30
313.583	0.00	0.01	3.912	O	|	|	|	3.30
313.667	0.00	0.01	3.912	O	|	|	|	3.30
313.750	0.00	0.01	3.912	O	|	|	|	3.30
313.833	0.00	0.01	3.912	O	|	|	|	3.30
313.917	0.00	0.01	3.912	O	|	|	|	3.30
314.000	0.00	0.01	3.912	O	|	|	|	3.30
314.083	0.00	0.01	3.912	O	|	|	|	3.30
314.167	0.00	0.01	3.912	O	|	|	|	3.30
314.250	0.00	0.01	3.912	O	|	|	|	3.30
314.333	0.00	0.01	3.912	O	|	|	|	3.30
314.417	0.00	0.01	3.912	O	|	|	|	3.30
314.500	0.00	0.01	3.912	O	|	|	|	3.30
314.583	0.00	0.01	3.912	O	|	|	|	3.30

314.667	0.00	0.01	3.912	O				3.30
314.750	0.00	0.01	3.912	O				3.30
314.833	0.00	0.01	3.911	O				3.30
314.917	0.00	0.01	3.911	O				3.30
315.000	0.00	0.01	3.911	O				3.30
315.083	0.00	0.01	3.911	O				3.30
315.167	0.00	0.01	3.911	O				3.30
315.250	0.00	0.01	3.911	O				3.30
315.333	0.00	0.01	3.911	O				3.30
315.417	0.00	0.01	3.911	O				3.30
315.500	0.00	0.01	3.911	O				3.30
315.583	0.00	0.01	3.911	O				3.30
315.667	0.00	0.01	3.911	O				3.30
315.750	0.00	0.01	3.911	O				3.30
315.833	0.00	0.01	3.911	O				3.30
315.917	0.00	0.01	3.911	O				3.30
316.000	0.00	0.01	3.910	O				3.30
316.083	0.00	0.01	3.910	O				3.30
316.167	0.00	0.01	3.910	O				3.30
316.250	0.00	0.01	3.910	O				3.30
316.333	0.00	0.01	3.910	O				3.30
316.417	0.00	0.01	3.910	O				3.30
316.500	0.00	0.01	3.910	O				3.30
316.583	0.00	0.01	3.910	O				3.30
316.667	0.00	0.01	3.910	O				3.30
316.750	0.00	0.01	3.910	O				3.30
316.833	0.00	0.01	3.910	O				3.30
316.917	0.00	0.01	3.910	O				3.30
317.000	0.00	0.01	3.910	O				3.30
317.083	0.00	0.01	3.910	O				3.30
317.167	0.00	0.01	3.910	O				3.30
317.250	0.00	0.01	3.909	O				3.30
317.333	0.00	0.01	3.909	O				3.30
317.417	0.00	0.01	3.909	O				3.30
317.500	0.00	0.01	3.909	O				3.30
317.583	0.00	0.01	3.909	O				3.30
317.667	0.00	0.01	3.909	O				3.30
317.750	0.00	0.01	3.909	O				3.30
317.833	0.00	0.01	3.909	O				3.30
317.917	0.00	0.01	3.909	O				3.30
318.000	0.00	0.01	3.909	O				3.30
318.083	0.00	0.01	3.909	O				3.30
318.167	0.00	0.01	3.909	O				3.30
318.250	0.00	0.01	3.909	O				3.30
318.333	0.00	0.01	3.909	O				3.30
318.417	0.00	0.01	3.908	O				3.30
318.500	0.00	0.01	3.908	O				3.30
318.583	0.00	0.01	3.908	O				3.30
318.667	0.00	0.01	3.908	O				3.30
318.750	0.00	0.01	3.908	O				3.30

318.833	0.00	0.01	3.908	O				3.30
318.917	0.00	0.01	3.908	O				3.29
319.000	0.00	0.01	3.908	O				3.29
319.083	0.00	0.01	3.908	O				3.29
319.167	0.00	0.01	3.908	O				3.29
319.250	0.00	0.01	3.908	O				3.29
319.333	0.00	0.01	3.908	O				3.29
319.417	0.00	0.01	3.908	O				3.29
319.500	0.00	0.01	3.908	O				3.29
319.583	0.00	0.01	3.908	O				3.29
319.667	0.00	0.01	3.907	O				3.29
319.750	0.00	0.01	3.907	O				3.29
319.833	0.00	0.01	3.907	O				3.29
319.917	0.00	0.01	3.907	O				3.29
320.000	0.00	0.01	3.907	O				3.29
320.083	0.00	0.01	3.907	O				3.29
320.167	0.00	0.01	3.907	O				3.29
320.250	0.00	0.01	3.907	O				3.29
320.333	0.00	0.01	3.907	O				3.29
320.417	0.00	0.01	3.907	O				3.29
320.500	0.00	0.01	3.907	O				3.29
320.583	0.00	0.01	3.907	O				3.29
320.667	0.00	0.01	3.907	O				3.29
320.750	0.00	0.01	3.907	O				3.29
320.833	0.00	0.01	3.906	O				3.29
320.917	0.00	0.01	3.906	O				3.29
321.000	0.00	0.01	3.906	O				3.29
321.083	0.00	0.01	3.906	O				3.29
321.167	0.00	0.01	3.906	O				3.29
321.250	0.00	0.01	3.906	O				3.29
321.333	0.00	0.01	3.906	O				3.29
321.417	0.00	0.01	3.906	O				3.29
321.500	0.00	0.01	3.906	O				3.29
321.583	0.00	0.01	3.906	O				3.29
321.667	0.00	0.01	3.906	O				3.29
321.750	0.00	0.01	3.906	O				3.29
321.833	0.00	0.01	3.906	O				3.29
321.917	0.00	0.01	3.906	O				3.29
322.000	0.00	0.01	3.906	O				3.29
322.083	0.00	0.01	3.905	O				3.29
322.167	0.00	0.01	3.905	O				3.29
322.250	0.00	0.01	3.905	O				3.29
322.333	0.00	0.01	3.905	O				3.29
322.417	0.00	0.01	3.905	O				3.29
322.500	0.00	0.01	3.905	O				3.29
322.583	0.00	0.01	3.905	O				3.29
322.667	0.00	0.01	3.905	O				3.29
322.750	0.00	0.01	3.905	O				3.29
322.833	0.00	0.01	3.905	O				3.29
322.917	0.00	0.01	3.905	O				3.29

323.000	0.00	0.01	3.905	O	|	|	|	3.29
323.083	0.00	0.01	3.905	O	|	|	|	3.29
323.167	0.00	0.01	3.905	O	|	|	|	3.29
323.250	0.00	0.01	3.904	O	|	|	|	3.29
323.333	0.00	0.01	3.904	O	|	|	|	3.29
323.417	0.00	0.01	3.904	O	|	|	|	3.29
323.500	0.00	0.01	3.904	O	|	|	|	3.29
323.583	0.00	0.01	3.904	O	|	|	|	3.29
323.667	0.00	0.01	3.904	O	|	|	|	3.29
323.750	0.00	0.01	3.904	O	|	|	|	3.29
323.833	0.00	0.01	3.904	O	|	|	|	3.29
323.917	0.00	0.01	3.904	O	|	|	|	3.29
324.000	0.00	0.01	3.904	O	|	|	|	3.29
324.083	0.00	0.01	3.904	O	|	|	|	3.29
324.167	0.00	0.01	3.904	O	|	|	|	3.29
324.250	0.00	0.01	3.904	O	|	|	|	3.29
324.333	0.00	0.01	3.904	O	|	|	|	3.29
324.417	0.00	0.01	3.904	O	|	|	|	3.29
324.500	0.00	0.01	3.903	O	|	|	|	3.29
324.583	0.00	0.01	3.903	O	|	|	|	3.29
324.667	0.00	0.01	3.903	O	|	|	|	3.29
324.750	0.00	0.01	3.903	O	|	|	|	3.29
324.833	0.00	0.01	3.903	O	|	|	|	3.29
324.917	0.00	0.01	3.903	O	|	|	|	3.29
325.000	0.00	0.01	3.903	O	|	|	|	3.29
325.083	0.00	0.01	3.903	O	|	|	|	3.29
325.167	0.00	0.01	3.903	O	|	|	|	3.29
325.250	0.00	0.01	3.903	O	|	|	|	3.29
325.333	0.00	0.01	3.903	O	|	|	|	3.29
325.417	0.00	0.01	3.903	O	|	|	|	3.29
325.500	0.00	0.01	3.903	O	|	|	|	3.29
325.583	0.00	0.01	3.903	O	|	|	|	3.29
325.667	0.00	0.01	3.902	O	|	|	|	3.29
325.750	0.00	0.01	3.902	O	|	|	|	3.29
325.833	0.00	0.01	3.902	O	|	|	|	3.29
325.917	0.00	0.01	3.902	O	|	|	|	3.29
326.000	0.00	0.01	3.902	O	|	|	|	3.29
326.083	0.00	0.01	3.902	O	|	|	|	3.29
326.167	0.00	0.01	3.902	O	|	|	|	3.29
326.250	0.00	0.01	3.902	O	|	|	|	3.29
326.333	0.00	0.01	3.902	O	|	|	|	3.29
326.417	0.00	0.01	3.902	O	|	|	|	3.29
326.500	0.00	0.01	3.902	O	|	|	|	3.29
326.583	0.00	0.01	3.902	O	|	|	|	3.29
326.667	0.00	0.01	3.902	O	|	|	|	3.29
326.750	0.00	0.01	3.902	O	|	|	|	3.29
326.833	0.00	0.01	3.902	O	|	|	|	3.29
326.917	0.00	0.01	3.901	O	|	|	|	3.29
327.000	0.00	0.01	3.901	O	|	|	|	3.29
327.083	0.00	0.01	3.901	O	|	|	|	3.29

327.167	0.00	0.01	3.901	O	|	|	|	3.29
327.250	0.00	0.01	3.901	O	|	|	|	3.29
327.333	0.00	0.01	3.901	O	|	|	|	3.29
327.417	0.00	0.01	3.901	O	|	|	|	3.29
327.500	0.00	0.01	3.901	O	|	|	|	3.29
327.583	0.00	0.01	3.901	O	|	|	|	3.29
327.667	0.00	0.01	3.901	O	|	|	|	3.29
327.750	0.00	0.01	3.901	O	|	|	|	3.29
327.833	0.00	0.01	3.901	O	|	|	|	3.29
327.917	0.00	0.01	3.901	O	|	|	|	3.29
328.000	0.00	0.01	3.901	O	|	|	|	3.29
328.083	0.00	0.01	3.900	O	|	|	|	3.29
328.167	0.00	0.01	3.900	O	|	|	|	3.29
328.250	0.00	0.01	3.900	O	|	|	|	3.29
328.333	0.00	0.01	3.900	O	|	|	|	3.29
328.417	0.00	0.01	3.900	O	|	|	|	3.29
328.500	0.00	0.01	3.900	O	|	|	|	3.29
328.583	0.00	0.01	3.900	O	|	|	|	3.29
328.667	0.00	0.01	3.900	O	|	|	|	3.29
328.750	0.00	0.01	3.900	O	|	|	|	3.29
328.833	0.00	0.01	3.900	O	|	|	|	3.29
328.917	0.00	0.01	3.900	O	|	|	|	3.29
329.000	0.00	0.01	3.900	O	|	|	|	3.29
329.083	0.00	0.01	3.900	O	|	|	|	3.29
329.167	0.00	0.01	3.900	O	|	|	|	3.29
329.250	0.00	0.01	3.900	O	|	|	|	3.29
329.333	0.00	0.01	3.899	O	|	|	|	3.29
329.417	0.00	0.01	3.899	O	|	|	|	3.29
329.500	0.00	0.01	3.899	O	|	|	|	3.29
329.583	0.00	0.01	3.899	O	|	|	|	3.29
329.667	0.00	0.01	3.899	O	|	|	|	3.29
329.750	0.00	0.01	3.899	O	|	|	|	3.29
329.833	0.00	0.01	3.899	O	|	|	|	3.29
329.917	0.00	0.01	3.899	O	|	|	|	3.29
330.000	0.00	0.01	3.899	O	|	|	|	3.29
330.083	0.00	0.01	3.899	O	|	|	|	3.29
330.167	0.00	0.01	3.899	O	|	|	|	3.29
330.250	0.00	0.01	3.899	O	|	|	|	3.29
330.333	0.00	0.01	3.899	O	|	|	|	3.29
330.417	0.00	0.01	3.899	O	|	|	|	3.29
330.500	0.00	0.01	3.898	O	|	|	|	3.29
330.583	0.00	0.01	3.898	O	|	|	|	3.29
330.667	0.00	0.01	3.898	O	|	|	|	3.29
330.750	0.00	0.01	3.898	O	|	|	|	3.29
330.833	0.00	0.01	3.898	O	|	|	|	3.29
330.917	0.00	0.01	3.898	O	|	|	|	3.29
331.000	0.00	0.01	3.898	O	|	|	|	3.29
331.083	0.00	0.01	3.898	O	|	|	|	3.29
331.167	0.00	0.01	3.898	O	|	|	|	3.29
331.250	0.00	0.01	3.898	O	|	|	|	3.29

331.333	0.00	0.01	3.898	O	|	|	|	3.29
331.417	0.00	0.01	3.898	O	|	|	|	3.29
331.500	0.00	0.01	3.898	O	|	|	|	3.29
331.583	0.00	0.01	3.898	O	|	|	|	3.29
331.667	0.00	0.01	3.898	O	|	|	|	3.29
331.750	0.00	0.01	3.897	O	|	|	|	3.29
331.833	0.00	0.01	3.897	O	|	|	|	3.29
331.917	0.00	0.01	3.897	O	|	|	|	3.29
332.000	0.00	0.01	3.897	O	|	|	|	3.29
332.083	0.00	0.01	3.897	O	|	|	|	3.29
332.167	0.00	0.01	3.897	O	|	|	|	3.29
332.250	0.00	0.01	3.897	O	|	|	|	3.29
332.333	0.00	0.01	3.897	O	|	|	|	3.29
332.417	0.00	0.01	3.897	O	|	|	|	3.29
332.500	0.00	0.01	3.897	O	|	|	|	3.29
332.583	0.00	0.01	3.897	O	|	|	|	3.29
332.667	0.00	0.01	3.897	O	|	|	|	3.29
332.750	0.00	0.01	3.897	O	|	|	|	3.29
332.833	0.00	0.01	3.897	O	|	|	|	3.29
332.917	0.00	0.01	3.896	O	|	|	|	3.29
333.000	0.00	0.01	3.896	O	|	|	|	3.29
333.083	0.00	0.01	3.896	O	|	|	|	3.29
333.167	0.00	0.01	3.896	O	|	|	|	3.28
333.250	0.00	0.01	3.896	O	|	|	|	3.28
333.333	0.00	0.01	3.896	O	|	|	|	3.28
333.417	0.00	0.01	3.896	O	|	|	|	3.28
333.500	0.00	0.01	3.896	O	|	|	|	3.28
333.583	0.00	0.01	3.896	O	|	|	|	3.28
333.667	0.00	0.01	3.896	O	|	|	|	3.28
333.750	0.00	0.01	3.896	O	|	|	|	3.28
333.833	0.00	0.01	3.896	O	|	|	|	3.28
333.917	0.00	0.01	3.896	O	|	|	|	3.28
334.000	0.00	0.01	3.896	O	|	|	|	3.28
334.083	0.00	0.01	3.896	O	|	|	|	3.28
334.167	0.00	0.01	3.895	O	|	|	|	3.28
334.250	0.00	0.01	3.895	O	|	|	|	3.28
334.333	0.00	0.01	3.895	O	|	|	|	3.28
334.417	0.00	0.01	3.895	O	|	|	|	3.28
334.500	0.00	0.01	3.895	O	|	|	|	3.28
334.583	0.00	0.01	3.895	O	|	|	|	3.28
334.667	0.00	0.01	3.895	O	|	|	|	3.28
334.750	0.00	0.01	3.895	O	|	|	|	3.28
334.833	0.00	0.01	3.895	O	|	|	|	3.28
334.917	0.00	0.01	3.895	O	|	|	|	3.28
335.000	0.00	0.01	3.895	O	|	|	|	3.28
335.083	0.00	0.01	3.895	O	|	|	|	3.28
335.167	0.00	0.01	3.895	O	|	|	|	3.28
335.250	0.00	0.01	3.895	O	|	|	|	3.28
335.333	0.00	0.01	3.895	O	|	|	|	3.28
335.417	0.00	0.01	3.894	O	|	|	|	3.28

335.500	0.00	0.01	3.894	O				3.28
335.583	0.00	0.01	3.894	O				3.28
335.667	0.00	0.01	3.894	O				3.28
335.750	0.00	0.01	3.894	O				3.28
335.833	0.00	0.01	3.894	O				3.28
335.917	0.00	0.01	3.894	O				3.28
336.000	0.00	0.01	3.894	O				3.28
336.083	0.00	0.01	3.894	O				3.28
336.167	0.00	0.01	3.894	O				3.28
336.250	0.00	0.01	3.894	O				3.28
336.333	0.00	0.01	3.894	O				3.28
336.417	0.00	0.01	3.894	O				3.28
336.500	0.00	0.01	3.894	O				3.28
336.583	0.00	0.01	3.893	O				3.28
336.667	0.00	0.01	3.893	O				3.28
336.750	0.00	0.01	3.893	O				3.28
336.833	0.00	0.01	3.893	O				3.28
336.917	0.00	0.01	3.893	O				3.28
337.000	0.00	0.01	3.893	O				3.28
337.083	0.00	0.01	3.893	O				3.28
337.167	0.00	0.01	3.893	O				3.28
337.250	0.00	0.01	3.893	O				3.28
337.333	0.00	0.01	3.893	O				3.28
337.417	0.00	0.01	3.893	O				3.28
337.500	0.00	0.01	3.893	O				3.28
337.583	0.00	0.01	3.893	O				3.28
337.667	0.00	0.01	3.893	O				3.28
337.750	0.00	0.01	3.893	O				3.28
337.833	0.00	0.01	3.892	O				3.28
337.917	0.00	0.01	3.892	O				3.28
338.000	0.00	0.01	3.892	O				3.28
338.083	0.00	0.01	3.892	O				3.28
338.167	0.00	0.01	3.892	O				3.28
338.250	0.00	0.01	3.892	O				3.28
338.333	0.00	0.01	3.892	O				3.28
338.417	0.00	0.01	3.892	O				3.28
338.500	0.00	0.01	3.892	O				3.28
338.583	0.00	0.01	3.892	O				3.28
338.667	0.00	0.01	3.892	O				3.28
338.750	0.00	0.01	3.892	O				3.28
338.833	0.00	0.01	3.892	O				3.28
338.917	0.00	0.01	3.892	O				3.28
339.000	0.00	0.01	3.891	O				3.28
339.083	0.00	0.01	3.891	O				3.28
339.167	0.00	0.01	3.891	O				3.28
339.250	0.00	0.01	3.891	O				3.28
339.333	0.00	0.01	3.891	O				3.28
339.417	0.00	0.01	3.891	O				3.28
339.500	0.00	0.01	3.891	O				3.28
339.583	0.00	0.01	3.891	O				3.28

339.667	0.00	0.01	3.891	O				3.28
339.750	0.00	0.01	3.891	O				3.28
339.833	0.00	0.01	3.891	O				3.28
339.917	0.00	0.01	3.891	O				3.28
340.000	0.00	0.01	3.891	O				3.28
340.083	0.00	0.01	3.891	O				3.28
340.167	0.00	0.01	3.891	O				3.28
340.250	0.00	0.01	3.890	O				3.28
340.333	0.00	0.01	3.890	O				3.28
340.417	0.00	0.01	3.890	O				3.28
340.500	0.00	0.01	3.890	O				3.28
340.583	0.00	0.01	3.890	O				3.28
340.667	0.00	0.01	3.890	O				3.28
340.750	0.00	0.01	3.890	O				3.28
340.833	0.00	0.01	3.890	O				3.28
340.917	0.00	0.01	3.890	O				3.28
341.000	0.00	0.01	3.890	O				3.28
341.083	0.00	0.01	3.890	O				3.28
341.167	0.00	0.01	3.890	O				3.28
341.250	0.00	0.01	3.890	O				3.28
341.333	0.00	0.01	3.890	O				3.28
341.417	0.00	0.01	3.889	O				3.28
341.500	0.00	0.01	3.889	O				3.28
341.583	0.00	0.01	3.889	O				3.28
341.667	0.00	0.01	3.889	O				3.28
341.750	0.00	0.01	3.889	O				3.28
341.833	0.00	0.01	3.889	O				3.28
341.917	0.00	0.01	3.889	O				3.28
342.000	0.00	0.01	3.889	O				3.28
342.083	0.00	0.01	3.889	O				3.28
342.167	0.00	0.01	3.889	O				3.28
342.250	0.00	0.01	3.889	O				3.28
342.333	0.00	0.01	3.889	O				3.28
342.417	0.00	0.01	3.889	O				3.28
342.500	0.00	0.01	3.889	O				3.28
342.583	0.00	0.01	3.889	O				3.28
342.667	0.00	0.01	3.888	O				3.28
342.750	0.00	0.01	3.888	O				3.28
342.833	0.00	0.01	3.888	O				3.28
342.917	0.00	0.01	3.888	O				3.28
343.000	0.00	0.01	3.888	O				3.28
343.083	0.00	0.01	3.888	O				3.28
343.167	0.00	0.01	3.888	O				3.28
343.250	0.00	0.01	3.888	O				3.28
343.333	0.00	0.01	3.888	O				3.28
343.417	0.00	0.01	3.888	O				3.28
343.500	0.00	0.01	3.888	O				3.28
343.583	0.00	0.01	3.888	O				3.28
343.667	0.00	0.01	3.888	O				3.28
343.750	0.00	0.01	3.888	O				3.28

343.833	0.00	0.01	3.887	O				3.28
343.917	0.00	0.01	3.887	O				3.28
344.000	0.00	0.01	3.887	O				3.28
344.083	0.00	0.01	3.887	O				3.28
344.167	0.00	0.01	3.887	O				3.28
344.250	0.00	0.01	3.887	O				3.28
344.333	0.00	0.01	3.887	O				3.28
344.417	0.00	0.01	3.887	O				3.28
344.500	0.00	0.01	3.887	O				3.28
344.583	0.00	0.01	3.887	O				3.28
344.667	0.00	0.01	3.887	O				3.28
344.750	0.00	0.01	3.887	O				3.28
344.833	0.00	0.01	3.887	O				3.28
344.917	0.00	0.01	3.887	O				3.28
345.000	0.00	0.01	3.887	O				3.28
345.083	0.00	0.01	3.886	O				3.28
345.167	0.00	0.01	3.886	O				3.28
345.250	0.00	0.01	3.886	O				3.28
345.333	0.00	0.01	3.886	O				3.28
345.417	0.00	0.01	3.886	O				3.28
345.500	0.00	0.01	3.886	O				3.28
345.583	0.00	0.01	3.886	O				3.28
345.667	0.00	0.01	3.886	O				3.28
345.750	0.00	0.01	3.886	O				3.28
345.833	0.00	0.01	3.886	O				3.28
345.917	0.00	0.01	3.886	O				3.28
346.000	0.00	0.01	3.886	O				3.28
346.083	0.00	0.01	3.886	O				3.28
346.167	0.00	0.01	3.886	O				3.28
346.250	0.00	0.01	3.885	O				3.28
346.333	0.00	0.01	3.885	O				3.28
346.417	0.00	0.01	3.885	O				3.28
346.500	0.00	0.01	3.885	O				3.28
346.583	0.00	0.01	3.885	O				3.28
346.667	0.00	0.01	3.885	O				3.28
346.750	0.00	0.01	3.885	O				3.28
346.833	0.00	0.01	3.885	O				3.28
346.917	0.00	0.01	3.885	O				3.28
347.000	0.00	0.01	3.885	O				3.28
347.083	0.00	0.01	3.885	O				3.28
347.167	0.00	0.01	3.885	O				3.28
347.250	0.00	0.01	3.885	O				3.28
347.333	0.00	0.01	3.885	O				3.28
347.417	0.00	0.01	3.885	O				3.28
347.500	0.00	0.01	3.884	O				3.27
347.583	0.00	0.01	3.884	O				3.27
347.667	0.00	0.01	3.884	O				3.27
347.750	0.00	0.01	3.884	O				3.27
347.833	0.00	0.01	3.884	O				3.27
347.917	0.00	0.01	3.884	O				3.27

348.000	0.00	0.01	3.884	O					3.27
348.083	0.00	0.01	3.884	O					3.27
348.167	0.00	0.01	3.884	O					3.27
348.250	0.00	0.01	3.884	O					3.27
348.333	0.00	0.01	3.884	O					3.27
348.417	0.00	0.01	3.884	O					3.27
348.500	0.00	0.01	3.884	O					3.27
348.583	0.00	0.01	3.884	O					3.27
348.667	0.00	0.01	3.883	O					3.27
348.750	0.00	0.01	3.883	O					3.27
348.833	0.00	0.01	3.883	O					3.27
348.917	0.00	0.01	3.883	O					3.27
349.000	0.00	0.01	3.883	O					3.27
349.083	0.00	0.01	3.883	O					3.27
349.167	0.00	0.01	3.883	O					3.27
349.250	0.00	0.01	3.883	O					3.27
349.333	0.00	0.01	3.883	O					3.27
349.417	0.00	0.01	3.883	O					3.27
349.500	0.00	0.01	3.883	O					3.27
349.583	0.00	0.01	3.883	O					3.27
349.667	0.00	0.01	3.883	O					3.27
349.750	0.00	0.01	3.883	O					3.27
349.833	0.00	0.01	3.883	O					3.27
349.917	0.00	0.01	3.882	O					3.27
350.000	0.00	0.01	3.882	O					3.27
350.083	0.00	0.01	3.882	O					3.27
350.167	0.00	0.01	3.882	O					3.27
350.250	0.00	0.01	3.882	O					3.27
350.333	0.00	0.01	3.882	O					3.27
350.417	0.00	0.01	3.882	O					3.27
350.500	0.00	0.01	3.882	O					3.27
350.583	0.00	0.01	3.882	O					3.27
350.667	0.00	0.01	3.882	O					3.27
350.750	0.00	0.01	3.882	O					3.27
350.833	0.00	0.01	3.882	O					3.27
350.917	0.00	0.01	3.882	O					3.27
351.000	0.00	0.01	3.882	O					3.27
351.083	0.00	0.01	3.881	O					3.27
351.167	0.00	0.01	3.881	O					3.27
351.250	0.00	0.01	3.881	O					3.27
351.333	0.00	0.01	3.881	O					3.27
351.417	0.00	0.01	3.881	O					3.27
351.500	0.00	0.01	3.881	O					3.27
351.583	0.00	0.01	3.881	O					3.27
351.667	0.00	0.01	3.881	O					3.27
351.750	0.00	0.01	3.881	O					3.27
351.833	0.00	0.01	3.881	O					3.27
351.917	0.00	0.01	3.881	O					3.27
352.000	0.00	0.01	3.881	O					3.27
352.083	0.00	0.01	3.881	O					3.27

352.167	0.00	0.01	3.881	O				3.27
352.250	0.00	0.01	3.881	O				3.27
352.333	0.00	0.01	3.880	O				3.27
352.417	0.00	0.01	3.880	O				3.27
352.500	0.00	0.01	3.880	O				3.27
352.583	0.00	0.01	3.880	O				3.27
352.667	0.00	0.01	3.880	O				3.27
352.750	0.00	0.01	3.880	O				3.27
352.833	0.00	0.01	3.880	O				3.27
352.917	0.00	0.01	3.880	O				3.27
353.000	0.00	0.01	3.880	O				3.27
353.083	0.00	0.01	3.880	O				3.27
353.167	0.00	0.01	3.880	O				3.27
353.250	0.00	0.01	3.880	O				3.27
353.333	0.00	0.01	3.880	O				3.27
353.417	0.00	0.01	3.880	O				3.27
353.500	0.00	0.01	3.879	O				3.27
353.583	0.00	0.01	3.879	O				3.27
353.667	0.00	0.01	3.879	O				3.27
353.750	0.00	0.01	3.879	O				3.27
353.833	0.00	0.01	3.879	O				3.27
353.917	0.00	0.01	3.879	O				3.27
354.000	0.00	0.01	3.879	O				3.27
354.083	0.00	0.01	3.879	O				3.27
354.167	0.00	0.01	3.879	O				3.27
354.250	0.00	0.01	3.879	O				3.27
354.333	0.00	0.01	3.879	O				3.27
354.417	0.00	0.01	3.879	O				3.27
354.500	0.00	0.01	3.879	O				3.27
354.583	0.00	0.01	3.879	O				3.27
354.667	0.00	0.01	3.879	O				3.27
354.750	0.00	0.01	3.878	O				3.27
354.833	0.00	0.01	3.878	O				3.27
354.917	0.00	0.01	3.878	O				3.27
355.000	0.00	0.01	3.878	O				3.27
355.083	0.00	0.01	3.878	O				3.27
355.167	0.00	0.01	3.878	O				3.27
355.250	0.00	0.01	3.878	O				3.27
355.333	0.00	0.01	3.878	O				3.27
355.417	0.00	0.01	3.878	O				3.27
355.500	0.00	0.01	3.878	O				3.27
355.583	0.00	0.01	3.878	O				3.27
355.667	0.00	0.01	3.878	O				3.27
355.750	0.00	0.01	3.878	O				3.27
355.833	0.00	0.01	3.878	O				3.27
355.917	0.00	0.01	3.877	O				3.27
356.000	0.00	0.01	3.877	O				3.27
356.083	0.00	0.01	3.877	O				3.27
356.167	0.00	0.01	3.877	O				3.27
356.250	0.00	0.01	3.877	O				3.27

356.333	0.00	0.01	3.877	O				3.27
356.417	0.00	0.01	3.877	O				3.27
356.500	0.00	0.01	3.877	O				3.27
356.583	0.00	0.01	3.877	O				3.27
356.667	0.00	0.01	3.877	O				3.27
356.750	0.00	0.01	3.877	O				3.27
356.833	0.00	0.01	3.877	O				3.27
356.917	0.00	0.01	3.877	O				3.27
357.000	0.00	0.01	3.877	O				3.27
357.083	0.00	0.01	3.877	O				3.27
357.167	0.00	0.01	3.876	O				3.27
357.250	0.00	0.01	3.876	O				3.27
357.333	0.00	0.01	3.876	O				3.27
357.417	0.00	0.01	3.876	O				3.27
357.500	0.00	0.01	3.876	O				3.27
357.583	0.00	0.01	3.876	O				3.27
357.667	0.00	0.01	3.876	O				3.27
357.750	0.00	0.01	3.876	O				3.27
357.833	0.00	0.01	3.876	O				3.27
357.917	0.00	0.01	3.876	O				3.27
358.000	0.00	0.01	3.876	O				3.27
358.083	0.00	0.01	3.876	O				3.27
358.167	0.00	0.01	3.876	O				3.27
358.250	0.00	0.01	3.876	O				3.27
358.333	0.00	0.01	3.875	O				3.27
358.417	0.00	0.01	3.875	O				3.27
358.500	0.00	0.01	3.875	O				3.27
358.583	0.00	0.01	3.875	O				3.27
358.667	0.00	0.01	3.875	O				3.27
358.750	0.00	0.01	3.875	O				3.27
358.833	0.00	0.01	3.875	O				3.27
358.917	0.00	0.01	3.875	O				3.27
359.000	0.00	0.01	3.875	O				3.27
359.083	0.00	0.01	3.875	O				3.27
359.167	0.00	0.01	3.875	O				3.27
359.250	0.00	0.01	3.875	O				3.27
359.333	0.00	0.01	3.875	O				3.27
359.417	0.00	0.01	3.875	O				3.27
359.500	0.00	0.01	3.875	O				3.27
359.583	0.00	0.01	3.874	O				3.27
359.667	0.00	0.01	3.874	O				3.27
359.750	0.00	0.01	3.874	O				3.27
359.833	0.00	0.01	3.874	O				3.27
359.917	0.00	0.01	3.874	O				3.27
360.000	0.00	0.01	3.874	O				3.27
360.083	0.00	0.01	3.874	O				3.27
360.167	0.00	0.01	3.874	O				3.27
360.250	0.00	0.01	3.874	O				3.27
360.333	0.00	0.01	3.874	O				3.27
360.417	0.00	0.01	3.874	O				3.27

360.500	0.00	0.01	3.874	O					3.27
360.583	0.00	0.01	3.874	O					3.27
360.667	0.00	0.01	3.874	O					3.27
360.750	0.00	0.01	3.873	O					3.27
360.833	0.00	0.01	3.873	O					3.27
360.917	0.00	0.01	3.873	O					3.27
361.000	0.00	0.01	3.873	O					3.27
361.083	0.00	0.01	3.873	O					3.27
361.167	0.00	0.01	3.873	O					3.27
361.250	0.00	0.01	3.873	O					3.27
361.333	0.00	0.01	3.873	O					3.27
361.417	0.00	0.01	3.873	O					3.27
361.500	0.00	0.01	3.873	O					3.27
361.583	0.00	0.01	3.873	O					3.27
361.667	0.00	0.01	3.873	O					3.27
361.750	0.00	0.01	3.873	O					3.26
361.833	0.00	0.01	3.873	O					3.26
361.917	0.00	0.01	3.873	O					3.26
362.000	0.00	0.01	3.872	O					3.26
362.083	0.00	0.01	3.872	O					3.26
362.167	0.00	0.01	3.872	O					3.26
362.250	0.00	0.01	3.872	O					3.26
362.333	0.00	0.01	3.872	O					3.26
362.417	0.00	0.01	3.872	O					3.26
362.500	0.00	0.01	3.872	O					3.26
362.583	0.00	0.01	3.872	O					3.26
362.667	0.00	0.01	3.872	O					3.26
362.750	0.00	0.01	3.872	O					3.26
362.833	0.00	0.01	3.872	O					3.26
362.917	0.00	0.01	3.872	O					3.26
363.000	0.00	0.01	3.872	O					3.26
363.083	0.00	0.01	3.872	O					3.26
363.167	0.00	0.01	3.871	O					3.26
363.250	0.00	0.01	3.871	O					3.26
363.333	0.00	0.01	3.871	O					3.26
363.417	0.00	0.01	3.871	O					3.26
363.500	0.00	0.01	3.871	O					3.26
363.583	0.00	0.01	3.871	O					3.26
363.667	0.00	0.01	3.871	O					3.26
363.750	0.00	0.01	3.871	O					3.26
363.833	0.00	0.01	3.871	O					3.26
363.917	0.00	0.01	3.871	O					3.26
364.000	0.00	0.01	3.871	O					3.26
364.083	0.00	0.01	3.871	O					3.26
364.167	0.00	0.01	3.871	O					3.26
364.250	0.00	0.01	3.871	O					3.26
364.333	0.00	0.01	3.871	O					3.26
364.417	0.00	0.01	3.870	O					3.26
364.500	0.00	0.01	3.870	O					3.26
364.583	0.00	0.01	3.870	O					3.26

364.667	0.00	0.01	3.870	O				3.26
364.750	0.00	0.01	3.870	O				3.26
364.833	0.00	0.01	3.870	O				3.26
364.917	0.00	0.01	3.870	O				3.26
365.000	0.00	0.01	3.870	O				3.26
365.083	0.00	0.01	3.870	O				3.26
365.167	0.00	0.01	3.870	O				3.26
365.250	0.00	0.01	3.870	O				3.26
365.333	0.00	0.01	3.870	O				3.26
365.417	0.00	0.01	3.870	O				3.26
365.500	0.00	0.01	3.870	O				3.26
365.583	0.00	0.01	3.870	O				3.26
365.667	0.00	0.01	3.869	O				3.26
365.750	0.00	0.01	3.869	O				3.26
365.833	0.00	0.01	3.869	O				3.26
365.917	0.00	0.01	3.869	O				3.26
366.000	0.00	0.01	3.869	O				3.26
366.083	0.00	0.01	3.869	O				3.26
366.167	0.00	0.01	3.869	O				3.26
366.250	0.00	0.01	3.869	O				3.26
366.333	0.00	0.01	3.869	O				3.26
366.417	0.00	0.01	3.869	O				3.26
366.500	0.00	0.01	3.869	O				3.26
366.583	0.00	0.01	3.869	O				3.26
366.667	0.00	0.01	3.869	O				3.26
366.750	0.00	0.01	3.869	O				3.26
366.833	0.00	0.01	3.868	O				3.26
366.917	0.00	0.01	3.868	O				3.26
367.000	0.00	0.01	3.868	O				3.26
367.083	0.00	0.01	3.868	O				3.26
367.167	0.00	0.01	3.868	O				3.26
367.250	0.00	0.01	3.868	O				3.26
367.333	0.00	0.01	3.868	O				3.26
367.417	0.00	0.01	3.868	O				3.26
367.500	0.00	0.01	3.868	O				3.26
367.583	0.00	0.01	3.868	O				3.26
367.667	0.00	0.01	3.868	O				3.26
367.750	0.00	0.01	3.868	O				3.26
367.833	0.00	0.01	3.868	O				3.26
367.917	0.00	0.01	3.868	O				3.26
368.000	0.00	0.01	3.868	O				3.26
368.083	0.00	0.01	3.867	O				3.26
368.167	0.00	0.01	3.867	O				3.26
368.250	0.00	0.01	3.867	O				3.26
368.333	0.00	0.01	3.867	O				3.26
368.417	0.00	0.01	3.867	O				3.26
368.500	0.00	0.01	3.867	O				3.26
368.583	0.00	0.01	3.867	O				3.26
368.667	0.00	0.01	3.867	O				3.26
368.750	0.00	0.01	3.867	O				3.26

368.833	0.00	0.01	3.867	O	|	|	|	3.26
368.917	0.00	0.01	3.867	O	|	|	|	3.26
369.000	0.00	0.01	3.867	O	|	|	|	3.26
369.083	0.00	0.01	3.867	O	|	|	|	3.26
369.167	0.00	0.01	3.867	O	|	|	|	3.26
369.250	0.00	0.01	3.866	O	|	|	|	3.26
369.333	0.00	0.01	3.866	O	|	|	|	3.26
369.417	0.00	0.01	3.866	O	|	|	|	3.26
369.500	0.00	0.01	3.866	O	|	|	|	3.26
369.583	0.00	0.01	3.866	O	|	|	|	3.26
369.667	0.00	0.01	3.866	O	|	|	|	3.26
369.750	0.00	0.01	3.866	O	|	|	|	3.26
369.833	0.00	0.01	3.866	O	|	|	|	3.26
369.917	0.00	0.01	3.866	O	|	|	|	3.26
370.000	0.00	0.01	3.866	O	|	|	|	3.26
370.083	0.00	0.01	3.866	O	|	|	|	3.26
370.167	0.00	0.01	3.866	O	|	|	|	3.26
370.250	0.00	0.01	3.866	O	|	|	|	3.26
370.333	0.00	0.01	3.866	O	|	|	|	3.26
370.417	0.00	0.01	3.866	O	|	|	|	3.26
370.500	0.00	0.01	3.865	O	|	|	|	3.26
370.583	0.00	0.01	3.865	O	|	|	|	3.26
370.667	0.00	0.01	3.865	O	|	|	|	3.26
370.750	0.00	0.01	3.865	O	|	|	|	3.26
370.833	0.00	0.01	3.865	O	|	|	|	3.26
370.917	0.00	0.01	3.865	O	|	|	|	3.26
371.000	0.00	0.01	3.865	O	|	|	|	3.26
371.083	0.00	0.01	3.865	O	|	|	|	3.26
371.167	0.00	0.01	3.865	O	|	|	|	3.26
371.250	0.00	0.01	3.865	O	|	|	|	3.26
371.333	0.00	0.01	3.865	O	|	|	|	3.26
371.417	0.00	0.01	3.865	O	|	|	|	3.26
371.500	0.00	0.01	3.865	O	|	|	|	3.26
371.583	0.00	0.01	3.865	O	|	|	|	3.26
371.667	0.00	0.01	3.864	O	|	|	|	3.26
371.750	0.00	0.01	3.864	O	|	|	|	3.26
371.833	0.00	0.01	3.864	O	|	|	|	3.26
371.917	0.00	0.01	3.864	O	|	|	|	3.26
372.000	0.00	0.01	3.864	O	|	|	|	3.26
372.083	0.00	0.01	3.864	O	|	|	|	3.26
372.167	0.00	0.01	3.864	O	|	|	|	3.26
372.250	0.00	0.01	3.864	O	|	|	|	3.26
372.333	0.00	0.01	3.864	O	|	|	|	3.26
372.417	0.00	0.01	3.864	O	|	|	|	3.26
372.500	0.00	0.01	3.864	O	|	|	|	3.26
372.583	0.00	0.01	3.864	O	|	|	|	3.26
372.667	0.00	0.01	3.864	O	|	|	|	3.26
372.750	0.00	0.01	3.864	O	|	|	|	3.26
372.833	0.00	0.01	3.864	O	|	|	|	3.26
372.917	0.00	0.01	3.863	O	|	|	|	3.26

373.000	0.00	0.01	3.863	O				3.26
373.083	0.00	0.01	3.863	O				3.26
373.167	0.00	0.01	3.863	O				3.26
373.250	0.00	0.01	3.863	O				3.26
373.333	0.00	0.01	3.863	O				3.26
373.417	0.00	0.01	3.863	O				3.26
373.500	0.00	0.01	3.863	O				3.26
373.583	0.00	0.01	3.863	O				3.26
373.667	0.00	0.01	3.863	O				3.26
373.750	0.00	0.01	3.863	O				3.26
373.833	0.00	0.01	3.863	O				3.26
373.917	0.00	0.01	3.863	O				3.26
374.000	0.00	0.01	3.863	O				3.26
374.083	0.00	0.01	3.862	O				3.26
374.167	0.00	0.01	3.862	O				3.26
374.250	0.00	0.01	3.862	O				3.26
374.333	0.00	0.01	3.862	O				3.26
374.417	0.00	0.01	3.862	O				3.26
374.500	0.00	0.01	3.862	O				3.26
374.583	0.00	0.01	3.862	O				3.26
374.667	0.00	0.01	3.862	O				3.26
374.750	0.00	0.01	3.862	O				3.26
374.833	0.00	0.01	3.862	O				3.26
374.917	0.00	0.01	3.862	O				3.26
375.000	0.00	0.01	3.862	O				3.26
375.083	0.00	0.01	3.862	O				3.26
375.167	0.00	0.01	3.862	O				3.26
375.250	0.00	0.01	3.862	O				3.26
375.333	0.00	0.01	3.861	O				3.26
375.417	0.00	0.01	3.861	O				3.26
375.500	0.00	0.01	3.861	O				3.26
375.583	0.00	0.01	3.861	O				3.26
375.667	0.00	0.01	3.861	O				3.26
375.750	0.00	0.01	3.861	O				3.26
375.833	0.00	0.01	3.861	O				3.26
375.917	0.00	0.01	3.861	O				3.26
376.000	0.00	0.01	3.861	O				3.25
376.083	0.00	0.01	3.861	O				3.25
376.167	0.00	0.01	3.861	O				3.25
376.250	0.00	0.01	3.861	O				3.25
376.333	0.00	0.01	3.861	O				3.25
376.417	0.00	0.01	3.861	O				3.25
376.500	0.00	0.01	3.860	O				3.25
376.583	0.00	0.01	3.860	O				3.25
376.667	0.00	0.01	3.860	O				3.25
376.750	0.00	0.01	3.860	O				3.25
376.833	0.00	0.01	3.860	O				3.25
376.917	0.00	0.01	3.860	O				3.25
377.000	0.00	0.01	3.860	O				3.25
377.083	0.00	0.01	3.860	O				3.25

377.167	0.00	0.01	3.860	O				3.25
377.250	0.00	0.01	3.860	O				3.25
377.333	0.00	0.01	3.860	O				3.25
377.417	0.00	0.01	3.860	O				3.25
377.500	0.00	0.01	3.860	O				3.25
377.583	0.00	0.01	3.860	O				3.25
377.667	0.00	0.01	3.860	O				3.25
377.750	0.00	0.01	3.859	O				3.25
377.833	0.00	0.01	3.859	O				3.25
377.917	0.00	0.01	3.859	O				3.25
378.000	0.00	0.01	3.859	O				3.25
378.083	0.00	0.01	3.859	O				3.25
378.167	0.00	0.01	3.859	O				3.25
378.250	0.00	0.01	3.859	O				3.25
378.333	0.00	0.01	3.859	O				3.25
378.417	0.00	0.01	3.859	O				3.25
378.500	0.00	0.01	3.859	O				3.25
378.583	0.00	0.01	3.859	O				3.25
378.667	0.00	0.01	3.859	O				3.25
378.750	0.00	0.01	3.859	O				3.25
378.833	0.00	0.01	3.859	O				3.25
378.917	0.00	0.01	3.858	O				3.25
379.000	0.00	0.01	3.858	O				3.25
379.083	0.00	0.01	3.858	O				3.25
379.167	0.00	0.01	3.858	O				3.25
379.250	0.00	0.01	3.858	O				3.25
379.333	0.00	0.01	3.858	O				3.25
379.417	0.00	0.01	3.858	O				3.25
379.500	0.00	0.01	3.858	O				3.25
379.583	0.00	0.01	3.858	O				3.25
379.667	0.00	0.01	3.858	O				3.25
379.750	0.00	0.01	3.858	O				3.25
379.833	0.00	0.01	3.858	O				3.25
379.917	0.00	0.01	3.858	O				3.25
380.000	0.00	0.01	3.858	O				3.25
380.083	0.00	0.01	3.858	O				3.25
380.167	0.00	0.01	3.857	O				3.25
380.250	0.00	0.01	3.857	O				3.25
380.333	0.00	0.01	3.857	O				3.25
380.417	0.00	0.01	3.857	O				3.25
380.500	0.00	0.01	3.857	O				3.25
380.583	0.00	0.01	3.857	O				3.25
380.667	0.00	0.01	3.857	O				3.25
380.750	0.00	0.01	3.857	O				3.25
380.833	0.00	0.01	3.857	O				3.25
380.917	0.00	0.01	3.857	O				3.25
381.000	0.00	0.01	3.857	O				3.25
381.083	0.00	0.01	3.857	O				3.25
381.167	0.00	0.01	3.857	O				3.25
381.250	0.00	0.01	3.857	O				3.25

381.333	0.00	0.01	3.856	O				3.25
381.417	0.00	0.01	3.856	O				3.25
381.500	0.00	0.01	3.856	O				3.25
381.583	0.00	0.01	3.856	O				3.25
381.667	0.00	0.01	3.856	O				3.25
381.750	0.00	0.01	3.856	O				3.25
381.833	0.00	0.01	3.856	O				3.25
381.917	0.00	0.01	3.856	O				3.25
382.000	0.00	0.01	3.856	O				3.25
382.083	0.00	0.01	3.856	O				3.25
382.167	0.00	0.01	3.856	O				3.25
382.250	0.00	0.01	3.856	O				3.25
382.333	0.00	0.01	3.856	O				3.25
382.417	0.00	0.01	3.856	O				3.25
382.500	0.00	0.01	3.856	O				3.25
382.583	0.00	0.01	3.855	O				3.25
382.667	0.00	0.01	3.855	O				3.25
382.750	0.00	0.01	3.855	O				3.25
382.833	0.00	0.01	3.855	O				3.25
382.917	0.00	0.01	3.855	O				3.25
383.000	0.00	0.01	3.855	O				3.25
383.083	0.00	0.01	3.855	O				3.25
383.167	0.00	0.01	3.855	O				3.25
383.250	0.00	0.01	3.855	O				3.25
383.333	0.00	0.01	3.855	O				3.25
383.417	0.00	0.01	3.855	O				3.25
383.500	0.00	0.01	3.855	O				3.25
383.583	0.00	0.01	3.855	O				3.25
383.667	0.00	0.01	3.855	O				3.25
383.750	0.00	0.01	3.854	O				3.25
383.833	0.00	0.01	3.854	O				3.25
383.917	0.00	0.01	3.854	O				3.25
384.000	0.00	0.01	3.854	O				3.25
384.083	0.00	0.01	3.854	O				3.25
384.167	0.00	0.01	3.854	O				3.25
384.250	0.00	0.01	3.854	O				3.25
384.333	0.00	0.01	3.854	O				3.25
384.417	0.00	0.01	3.854	O				3.25
384.500	0.00	0.01	3.854	O				3.25
384.583	0.00	0.01	3.854	O				3.25
384.667	0.00	0.01	3.854	O				3.25
384.750	0.00	0.01	3.854	O				3.25
384.833	0.00	0.01	3.854	O				3.25
384.917	0.00	0.01	3.854	O				3.25
385.000	0.00	0.01	3.853	O				3.25
385.083	0.00	0.01	3.853	O				3.25
385.167	0.00	0.01	3.853	O				3.25
385.250	0.00	0.01	3.853	O				3.25
385.333	0.00	0.01	3.853	O				3.25
385.417	0.00	0.01	3.853	O				3.25

385.500	0.00	0.01	3.853	O					3.25
385.583	0.00	0.01	3.853	O					3.25
385.667	0.00	0.01	3.853	O					3.25
385.750	0.00	0.01	3.853	O					3.25
385.833	0.00	0.01	3.853	O					3.25
385.917	0.00	0.01	3.853	O					3.25
386.000	0.00	0.01	3.853	O					3.25
386.083	0.00	0.01	3.853	O					3.25
386.167	0.00	0.01	3.852	O					3.25
386.250	0.00	0.01	3.852	O					3.25
386.333	0.00	0.01	3.852	O					3.25
386.417	0.00	0.01	3.852	O					3.25
386.500	0.00	0.01	3.852	O					3.25
386.583	0.00	0.01	3.852	O					3.25
386.667	0.00	0.01	3.852	O					3.25
386.750	0.00	0.01	3.852	O					3.25
386.833	0.00	0.01	3.852	O					3.25
386.917	0.00	0.01	3.852	O					3.25
387.000	0.00	0.01	3.852	O					3.25
387.083	0.00	0.01	3.852	O					3.25
387.167	0.00	0.01	3.852	O					3.25
387.250	0.00	0.01	3.852	O					3.25
387.333	0.00	0.01	3.852	O					3.25
387.417	0.00	0.01	3.851	O					3.25
387.500	0.00	0.01	3.851	O					3.25
387.583	0.00	0.01	3.851	O					3.25
387.667	0.00	0.01	3.851	O					3.25
387.750	0.00	0.01	3.851	O					3.25
387.833	0.00	0.01	3.851	O					3.25
387.917	0.00	0.01	3.851	O					3.25
388.000	0.00	0.01	3.851	O					3.25
388.083	0.00	0.01	3.851	O					3.25
388.167	0.00	0.01	3.851	O					3.25
388.250	0.00	0.01	3.851	O					3.25
388.333	0.00	0.01	3.851	O					3.25
388.417	0.00	0.01	3.851	O					3.25
388.500	0.00	0.01	3.851	O					3.25
388.583	0.00	0.01	3.850	O					3.25
388.667	0.00	0.01	3.850	O					3.25
388.750	0.00	0.01	3.850	O					3.25
388.833	0.00	0.01	3.850	O					3.25
388.917	0.00	0.01	3.850	O					3.25
389.000	0.00	0.01	3.850	O					3.25
389.083	0.00	0.01	3.850	O					3.25
389.167	0.00	0.01	3.850	O					3.25
389.250	0.00	0.01	3.850	O					3.25
389.333	0.00	0.01	3.850	O					3.25
389.417	0.00	0.01	3.850	O					3.25
389.500	0.00	0.01	3.850	O					3.25
389.583	0.00	0.01	3.850	O					3.25

389.667	0.00	0.01	3.850	O				3.25
389.750	0.00	0.01	3.850	O				3.25
389.833	0.00	0.01	3.849	O				3.25
389.917	0.00	0.01	3.849	O				3.25
390.000	0.00	0.01	3.849	O				3.25
390.083	0.00	0.01	3.849	O				3.25
390.167	0.00	0.01	3.849	O				3.25
390.250	0.00	0.01	3.849	O				3.25
390.333	0.00	0.01	3.849	O				3.24
390.417	0.00	0.01	3.849	O				3.24
390.500	0.00	0.01	3.849	O				3.24
390.583	0.00	0.01	3.849	O				3.24
390.667	0.00	0.01	3.849	O				3.24
390.750	0.00	0.01	3.849	O				3.24
390.833	0.00	0.01	3.849	O				3.24
390.917	0.00	0.01	3.849	O				3.24
391.000	0.00	0.01	3.848	O				3.24
391.083	0.00	0.01	3.848	O				3.24
391.167	0.00	0.01	3.848	O				3.24
391.250	0.00	0.01	3.848	O				3.24
391.333	0.00	0.01	3.848	O				3.24
391.417	0.00	0.01	3.848	O				3.24
391.500	0.00	0.01	3.848	O				3.24
391.583	0.00	0.01	3.848	O				3.24
391.667	0.00	0.01	3.848	O				3.24
391.750	0.00	0.01	3.848	O				3.24
391.833	0.00	0.01	3.848	O				3.24
391.917	0.00	0.01	3.848	O				3.24
392.000	0.00	0.01	3.848	O				3.24
392.083	0.00	0.01	3.848	O				3.24
392.167	0.00	0.01	3.848	O				3.24
392.250	0.00	0.01	3.847	O				3.24
392.333	0.00	0.01	3.847	O				3.24
392.417	0.00	0.01	3.847	O				3.24
392.500	0.00	0.01	3.847	O				3.24
392.583	0.00	0.01	3.847	O				3.24
392.667	0.00	0.01	3.847	O				3.24
392.750	0.00	0.01	3.847	O				3.24
392.833	0.00	0.01	3.847	O				3.24
392.917	0.00	0.01	3.847	O				3.24
393.000	0.00	0.01	3.847	O				3.24
393.083	0.00	0.01	3.847	O				3.24
393.167	0.00	0.01	3.847	O				3.24
393.250	0.00	0.01	3.847	O				3.24
393.333	0.00	0.01	3.847	O				3.24
393.417	0.00	0.01	3.846	O				3.24
393.500	0.00	0.01	3.846	O				3.24
393.583	0.00	0.01	3.846	O				3.24
393.667	0.00	0.01	3.846	O				3.24
393.750	0.00	0.01	3.846	O				3.24

393.833	0.00	0.01	3.846	O				3.24
393.917	0.00	0.01	3.846	O				3.24
394.000	0.00	0.01	3.846	O				3.24
394.083	0.00	0.01	3.846	O				3.24
394.167	0.00	0.01	3.846	O				3.24
394.250	0.00	0.01	3.846	O				3.24
394.333	0.00	0.01	3.846	O				3.24
394.417	0.00	0.01	3.846	O				3.24
394.500	0.00	0.01	3.846	O				3.24
394.583	0.00	0.01	3.846	O				3.24
394.667	0.00	0.01	3.845	O				3.24
394.750	0.00	0.01	3.845	O				3.24
394.833	0.00	0.01	3.845	O				3.24
394.917	0.00	0.01	3.845	O				3.24
395.000	0.00	0.01	3.845	O				3.24
395.083	0.00	0.01	3.845	O				3.24
395.167	0.00	0.01	3.845	O				3.24
395.250	0.00	0.01	3.845	O				3.24
395.333	0.00	0.01	3.845	O				3.24
395.417	0.00	0.01	3.845	O				3.24
395.500	0.00	0.01	3.845	O				3.24
395.583	0.00	0.01	3.845	O				3.24
395.667	0.00	0.01	3.845	O				3.24
395.750	0.00	0.01	3.845	O				3.24
395.833	0.00	0.01	3.845	O				3.24
395.917	0.00	0.01	3.844	O				3.24
396.000	0.00	0.01	3.844	O				3.24
396.083	0.00	0.01	3.844	O				3.24
396.167	0.00	0.01	3.844	O				3.24
396.250	0.00	0.01	3.844	O				3.24
396.333	0.00	0.01	3.844	O				3.24
396.417	0.00	0.01	3.844	O				3.24
396.500	0.00	0.01	3.844	O				3.24
396.583	0.00	0.01	3.844	O				3.24
396.667	0.00	0.01	3.844	O				3.24
396.750	0.00	0.01	3.844	O				3.24
396.833	0.00	0.01	3.844	O				3.24
396.917	0.00	0.01	3.844	O				3.24
397.000	0.00	0.01	3.844	O				3.24
397.083	0.00	0.01	3.843	O				3.24
397.167	0.00	0.01	3.843	O				3.24
397.250	0.00	0.01	3.843	O				3.24
397.333	0.00	0.01	3.843	O				3.24
397.417	0.00	0.01	3.843	O				3.24
397.500	0.00	0.01	3.843	O				3.24
397.583	0.00	0.01	3.843	O				3.24
397.667	0.00	0.01	3.843	O				3.24
397.750	0.00	0.01	3.843	O				3.24
397.833	0.00	0.01	3.843	O				3.24
397.917	0.00	0.01	3.843	O				3.24

398.000	0.00	0.01	3.843	O				3.24
398.083	0.00	0.01	3.843	O				3.24
398.167	0.00	0.01	3.843	O				3.24
398.250	0.00	0.01	3.843	O				3.24
398.333	0.00	0.01	3.842	O				3.24
398.417	0.00	0.01	3.842	O				3.24
398.500	0.00	0.01	3.842	O				3.24
398.583	0.00	0.01	3.842	O				3.24
398.667	0.00	0.01	3.842	O				3.24
398.750	0.00	0.01	3.842	O				3.24
398.833	0.00	0.01	3.842	O				3.24
398.917	0.00	0.01	3.842	O				3.24
399.000	0.00	0.01	3.842	O				3.24
399.083	0.00	0.01	3.842	O				3.24
399.167	0.00	0.01	3.842	O				3.24
399.250	0.00	0.01	3.842	O				3.24
399.333	0.00	0.01	3.842	O				3.24
399.417	0.00	0.01	3.842	O				3.24
399.500	0.00	0.01	3.841	O				3.24
399.583	0.00	0.01	3.841	O				3.24
399.667	0.00	0.01	3.841	O				3.24
399.750	0.00	0.01	3.841	O				3.24
399.833	0.00	0.01	3.841	O				3.24
399.917	0.00	0.01	3.841	O				3.24
400.000	0.00	0.01	3.841	O				3.24
400.083	0.00	0.01	3.841	O				3.24
400.167	0.00	0.01	3.841	O				3.24
400.250	0.00	0.01	3.841	O				3.24
400.333	0.00	0.01	3.841	O				3.24
400.417	0.00	0.01	3.841	O				3.24
400.500	0.00	0.01	3.841	O				3.24
400.583	0.00	0.01	3.841	O				3.24
400.667	0.00	0.01	3.841	O				3.24
400.750	0.00	0.01	3.840	O				3.24
400.833	0.00	0.01	3.840	O				3.24
400.917	0.00	0.01	3.840	O				3.24
401.000	0.00	0.01	3.840	O				3.24
401.083	0.00	0.01	3.840	O				3.24
401.167	0.00	0.01	3.840	O				3.24
401.250	0.00	0.01	3.840	O				3.24
401.333	0.00	0.01	3.840	O				3.24
401.417	0.00	0.01	3.840	O				3.24
401.500	0.00	0.01	3.840	O				3.24
401.583	0.00	0.01	3.840	O				3.24
401.667	0.00	0.01	3.840	O				3.24
401.750	0.00	0.01	3.840	O				3.24
401.833	0.00	0.01	3.840	O				3.24
401.917	0.00	0.01	3.839	O				3.24
402.000	0.00	0.01	3.839	O				3.24
402.083	0.00	0.01	3.839	O				3.24

402.167	0.00	0.01	3.839	O	|	|	|	3.24
402.250	0.00	0.01	3.839	O	|	|	|	3.24
402.333	0.00	0.01	3.839	O	|	|	|	3.24
402.417	0.00	0.01	3.839	O	|	|	|	3.24
402.500	0.00	0.01	3.839	O	|	|	|	3.24
402.583	0.00	0.01	3.839	O	|	|	|	3.24
402.667	0.00	0.01	3.839	O	|	|	|	3.24
402.750	0.00	0.01	3.839	O	|	|	|	3.24
402.833	0.00	0.01	3.839	O	|	|	|	3.24
402.917	0.00	0.01	3.839	O	|	|	|	3.24
403.000	0.00	0.01	3.839	O	|	|	|	3.24
403.083	0.00	0.01	3.839	O	|	|	|	3.24
403.167	0.00	0.01	3.838	O	|	|	|	3.24
403.250	0.00	0.01	3.838	O	|	|	|	3.24
403.333	0.00	0.01	3.838	O	|	|	|	3.24
403.417	0.00	0.01	3.838	O	|	|	|	3.24
403.500	0.00	0.01	3.838	O	|	|	|	3.24
403.583	0.00	0.01	3.838	O	|	|	|	3.24
403.667	0.00	0.01	3.838	O	|	|	|	3.24
403.750	0.00	0.01	3.838	O	|	|	|	3.24
403.833	0.00	0.01	3.838	O	|	|	|	3.24
403.917	0.00	0.01	3.838	O	|	|	|	3.24
404.000	0.00	0.01	3.838	O	|	|	|	3.24
404.083	0.00	0.01	3.838	O	|	|	|	3.24
404.167	0.00	0.01	3.838	O	|	|	|	3.24
404.250	0.00	0.01	3.838	O	|	|	|	3.24
404.333	0.00	0.01	3.837	O	|	|	|	3.24
404.417	0.00	0.01	3.837	O	|	|	|	3.24
404.500	0.00	0.01	3.837	O	|	|	|	3.24
404.583	0.00	0.01	3.837	O	|	|	|	3.23
404.667	0.00	0.01	3.837	O	|	|	|	3.23
404.750	0.00	0.01	3.837	O	|	|	|	3.23
404.833	0.00	0.01	3.837	O	|	|	|	3.23
404.917	0.00	0.01	3.837	O	|	|	|	3.23
405.000	0.00	0.01	3.837	O	|	|	|	3.23
405.083	0.00	0.01	3.837	O	|	|	|	3.23
405.167	0.00	0.01	3.837	O	|	|	|	3.23
405.250	0.00	0.01	3.837	O	|	|	|	3.23
405.333	0.00	0.01	3.837	O	|	|	|	3.23
405.417	0.00	0.01	3.837	O	|	|	|	3.23
405.500	0.00	0.01	3.837	O	|	|	|	3.23
405.583	0.00	0.01	3.836	O	|	|	|	3.23
405.667	0.00	0.01	3.836	O	|	|	|	3.23
405.750	0.00	0.01	3.836	O	|	|	|	3.23
405.833	0.00	0.01	3.836	O	|	|	|	3.23
405.917	0.00	0.01	3.836	O	|	|	|	3.23
406.000	0.00	0.01	3.836	O	|	|	|	3.23
406.083	0.00	0.01	3.836	O	|	|	|	3.23
406.167	0.00	0.01	3.836	O	|	|	|	3.23
406.250	0.00	0.01	3.836	O	|	|	|	3.23

406.333	0.00	0.01	3.836	O				3.23
406.417	0.00	0.01	3.836	O				3.23
406.500	0.00	0.01	3.836	O				3.23
406.583	0.00	0.01	3.836	O				3.23
406.667	0.00	0.01	3.836	O				3.23
406.750	0.00	0.01	3.835	O				3.23
406.833	0.00	0.01	3.835	O				3.23
406.917	0.00	0.01	3.835	O				3.23
407.000	0.00	0.01	3.835	O				3.23
407.083	0.00	0.01	3.835	O				3.23
407.167	0.00	0.01	3.835	O				3.23
407.250	0.00	0.01	3.835	O				3.23
407.333	0.00	0.01	3.835	O				3.23
407.417	0.00	0.01	3.835	O				3.23
407.500	0.00	0.01	3.835	O				3.23
407.583	0.00	0.01	3.835	O				3.23
407.667	0.00	0.01	3.835	O				3.23
407.750	0.00	0.01	3.835	O				3.23
407.833	0.00	0.01	3.835	O				3.23
407.917	0.00	0.01	3.835	O				3.23
408.000	0.00	0.01	3.834	O				3.23
408.083	0.00	0.01	3.834	O				3.23
408.167	0.00	0.01	3.834	O				3.23
408.250	0.00	0.01	3.834	O				3.23
408.333	0.00	0.01	3.834	O				3.23
408.417	0.00	0.01	3.834	O				3.23
408.500	0.00	0.01	3.834	O				3.23
408.583	0.00	0.01	3.834	O				3.23
408.667	0.00	0.01	3.834	O				3.23
408.750	0.00	0.01	3.834	O				3.23
408.833	0.00	0.01	3.834	O				3.23
408.917	0.00	0.01	3.834	O				3.23
409.000	0.00	0.01	3.834	O				3.23
409.083	0.00	0.01	3.834	O				3.23
409.167	0.00	0.01	3.833	O				3.23
409.250	0.00	0.01	3.833	O				3.23
409.333	0.00	0.01	3.833	O				3.23
409.417	0.00	0.01	3.833	O				3.23
409.500	0.00	0.01	3.833	O				3.23
409.583	0.00	0.01	3.833	O				3.23
409.667	0.00	0.01	3.833	O				3.23
409.750	0.00	0.01	3.833	O				3.23
409.833	0.00	0.01	3.833	O				3.23
409.917	0.00	0.01	3.833	O				3.23
410.000	0.00	0.01	3.833	O				3.23
410.083	0.00	0.01	3.833	O				3.23
410.167	0.00	0.01	3.833	O				3.23
410.250	0.00	0.01	3.833	O				3.23
410.333	0.00	0.01	3.833	O				3.23
410.417	0.00	0.01	3.832	O				3.23

410.500	0.00	0.01	3.832	O				3.23
410.583	0.00	0.01	3.832	O				3.23
410.667	0.00	0.01	3.832	O				3.23
410.750	0.00	0.01	3.832	O				3.23
410.833	0.00	0.01	3.832	O				3.23
410.917	0.00	0.01	3.832	O				3.23
411.000	0.00	0.01	3.832	O				3.23
411.083	0.00	0.01	3.832	O				3.23
411.167	0.00	0.01	3.832	O				3.23
411.250	0.00	0.01	3.832	O				3.23
411.333	0.00	0.01	3.832	O				3.23
411.417	0.00	0.01	3.832	O				3.23
411.500	0.00	0.01	3.832	O				3.23
411.583	0.00	0.01	3.831	O				3.23
411.667	0.00	0.01	3.831	O				3.23
411.750	0.00	0.01	3.831	O				3.23
411.833	0.00	0.01	3.831	O				3.23
411.917	0.00	0.01	3.831	O				3.23
412.000	0.00	0.01	3.831	O				3.23
412.083	0.00	0.01	3.831	O				3.23
412.167	0.00	0.01	3.831	O				3.23
412.250	0.00	0.01	3.831	O				3.23
412.333	0.00	0.01	3.831	O				3.23
412.417	0.00	0.01	3.831	O				3.23
412.500	0.00	0.01	3.831	O				3.23
412.583	0.00	0.01	3.831	O				3.23
412.667	0.00	0.01	3.831	O				3.23
412.750	0.00	0.01	3.831	O				3.23
412.833	0.00	0.01	3.830	O				3.23
412.917	0.00	0.01	3.830	O				3.23
413.000	0.00	0.01	3.830	O				3.23
413.083	0.00	0.01	3.830	O				3.23
413.167	0.00	0.01	3.830	O				3.23
413.250	0.00	0.01	3.830	O				3.23
413.333	0.00	0.01	3.830	O				3.23
413.417	0.00	0.01	3.830	O				3.23
413.500	0.00	0.01	3.830	O				3.23
413.583	0.00	0.01	3.830	O				3.23
413.667	0.00	0.01	3.830	O				3.23
413.750	0.00	0.01	3.830	O				3.23
413.833	0.00	0.01	3.830	O				3.23
413.917	0.00	0.01	3.830	O				3.23
414.000	0.00	0.01	3.829	O				3.23
414.083	0.00	0.01	3.829	O				3.23
414.167	0.00	0.01	3.829	O				3.23
414.250	0.00	0.01	3.829	O				3.23
414.333	0.00	0.01	3.829	O				3.23
414.417	0.00	0.01	3.829	O				3.23
414.500	0.00	0.01	3.829	O				3.23
414.583	0.00	0.01	3.829	O				3.23

414.667	0.00	0.01	3.829	O	|	|	|	|	3.23
414.750	0.00	0.01	3.829	O	|	|	|	|	3.23
414.833	0.00	0.01	3.829	O	|	|	|	|	3.23
414.917	0.00	0.01	3.829	O	|	|	|	|	3.23
415.000	0.00	0.01	3.829	O	|	|	|	|	3.23
415.083	0.00	0.01	3.829	O	|	|	|	|	3.23
415.167	0.00	0.01	3.829	O	|	|	|	|	3.23
415.250	0.00	0.01	3.828	O	|	|	|	|	3.23
415.333	0.00	0.01	3.828	O	|	|	|	|	3.23
415.417	0.00	0.01	3.828	O	|	|	|	|	3.23
415.500	0.00	0.01	3.828	O	|	|	|	|	3.23
415.583	0.00	0.01	3.828	O	|	|	|	|	3.23
415.667	0.00	0.01	3.828	O	|	|	|	|	3.23
415.750	0.00	0.01	3.828	O	|	|	|	|	3.23
415.833	0.00	0.01	3.828	O	|	|	|	|	3.23
415.917	0.00	0.01	3.828	O	|	|	|	|	3.23
416.000	0.00	0.01	3.828	O	|	|	|	|	3.23
416.083	0.00	0.01	3.828	O	|	|	|	|	3.23
416.167	0.00	0.01	3.828	O	|	|	|	|	3.23
416.250	0.00	0.01	3.828	O	|	|	|	|	3.23
416.333	0.00	0.01	3.828	O	|	|	|	|	3.23
416.417	0.00	0.01	3.827	O	|	|	|	|	3.23
416.500	0.00	0.01	3.827	O	|	|	|	|	3.23
416.583	0.00	0.01	3.827	O	|	|	|	|	3.23
416.667	0.00	0.01	3.827	O	|	|	|	|	3.23

Remaining water in basin = 3.83 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 5001
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 20.172 (CFS)
Total volume = 3.290 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
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IENLC
Basin B
10-year

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: 10yrareaB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 304
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 64.409 (CFS)
Total volume = 7.209 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

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Process from Point/Station 10.000 to Point/Station 35.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 304
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)

Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.800	0.001	1.800	1.800
2.000	2.400	0.001	2.400	2.400
2.500	3.000	0.010	3.000	3.000
3.000	3.600	0.100	3.600	3.600
3.500	4.200	0.100	4.200	4.200
4.000	4.800	20.000	4.731	4.869
4.500	5.170	25.000	5.084	5.256
5.000	5.290	25.000	5.204	5.376

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 16.1 32.20 48.31 64.41	Depth (Ft.)
0.083	0.05	0.00	0.000	O | | | |	0.00
0.167	0.38	0.00	0.002	O | | | |	0.00
0.250	0.80	0.00	0.006	O | | | |	0.00
0.333	0.99	0.00	0.012	O | | | |	0.01
0.417	1.10	0.00	0.019	O | | | |	0.02
0.500	1.18	0.00	0.027	O | | | |	0.02
0.583	1.24	0.00	0.035	O | | | |	0.03
0.667	1.28	0.00	0.044	O | | | |	0.04
0.750	1.31	0.00	0.053	O | | | |	0.04
0.833	1.34	0.00	0.062	O | | | |	0.05
0.917	1.36	0.00	0.071	O | | | |	0.06
1.000	1.37	0.00	0.081	O | | | |	0.07
1.083	1.39	0.00	0.090	O | | | |	0.08
1.167	1.40	0.00	0.100	O | | | |	0.08
1.250	1.41	0.00	0.109	O | | | |	0.09
1.333	1.42	0.00	0.119	O | | | |	0.10
1.417	1.43	0.00	0.129	O | | | |	0.11
1.500	1.43	0.00	0.139	O | | | |	0.12
1.583	1.44	0.00	0.149	O | | | |	0.12
1.667	1.44	0.00	0.159	O | | | |	0.13
1.750	1.45	0.00	0.169	O | | | |	0.14
1.833	1.45	0.00	0.179	O | | | |	0.15
1.917	1.46	0.00	0.189	O | | | |	0.16
2.000	1.46	0.00	0.199	O | | | |	0.17
2.083	1.47	0.00	0.209	O | | | |	0.17
2.167	1.47	0.00	0.219	O | | | |	0.18

2.250	1.48	0.00	0.229	O	|	|	|	0.19
2.333	1.49	0.00	0.239	O	|	|	|	0.20
2.417	1.49	0.00	0.249	O	|	|	|	0.21
2.500	1.50	0.00	0.260	O	|	|	|	0.22
2.583	1.50	0.00	0.270	O	|	|	|	0.23
2.667	1.51	0.00	0.280	O	|	|	|	0.23
2.750	1.51	0.00	0.291	O	|	|	|	0.24
2.833	1.52	0.00	0.301	O	|	|	|	0.25
2.917	1.52	0.00	0.312	O	|	|	|	0.26
3.000	1.53	0.00	0.322	O	|	|	|	0.27
3.083	1.54	0.00	0.333	O	|	|	|	0.28
3.167	1.54	0.00	0.343	O	|	|	|	0.29
3.250	1.55	0.00	0.354	O	|	|	|	0.30
3.333	1.55	0.00	0.365	O	|	|	|	0.30
3.417	1.56	0.00	0.376	O	|	|	|	0.31
3.500	1.57	0.00	0.386	O	|	|	|	0.32
3.583	1.57	0.00	0.397	O	|	|	|	0.33
3.667	1.58	0.00	0.408	O	|	|	|	0.34
3.750	1.59	0.00	0.419	O	|	|	|	0.35
3.833	1.59	0.00	0.430	O	|	|	|	0.36
3.917	1.60	0.00	0.441	O	|	|	|	0.37
4.000	1.60	0.00	0.452	O	|	|	|	0.38
4.083	1.61	0.00	0.463	O	|	|	|	0.39
4.167	1.62	0.00	0.474	O	|	|	|	0.39
4.250	1.63	0.00	0.485	O	|	|	|	0.40
4.333	1.63	0.00	0.496	O	|	|	|	0.41
4.417	1.64	0.00	0.508	O	|	|	|	0.42
4.500	1.65	0.00	0.519	O	|	|	|	0.43
4.583	1.65	0.00	0.530	O	|	|	|	0.44
4.667	1.66	0.00	0.542	O	|	|	|	0.45
4.750	1.67	0.00	0.553	O	|	|	|	0.46
4.833	1.67	0.00	0.565	O	|	|	|	0.47
4.917	1.68	0.00	0.576	O	|	|	|	0.48
5.000	1.69	0.00	0.588	O	|	|	|	0.49
5.083	1.70	0.00	0.599	O	|	|	|	0.50
5.167	1.71	0.00	0.611	O	|	|	|	0.51
5.250	1.71	0.00	0.623	O	|	|	|	0.52
5.333	1.72	0.00	0.635	O	|	|	|	0.53
5.417	1.73	0.00	0.647	O	|	|	|	0.54
5.500	1.74	0.00	0.659	O	|	|	|	0.55
5.583	1.75	0.00	0.671	O	|	|	|	0.56
5.667	1.75	0.00	0.683	O	|	|	|	0.57
5.750	1.76	0.00	0.695	O	|	|	|	0.58
5.833	1.77	0.00	0.707	O	|	|	|	0.59
5.917	1.78	0.00	0.719	O	|	|	|	0.60
6.000	1.79	0.00	0.731	O	|	|	|	0.61
6.083	1.80	0.00	0.744	O	|	|	|	0.62
6.167	1.81	0.00	0.756	O	|	|	|	0.63
6.250	1.81	0.00	0.769	O	|	|	|	0.64
6.333	1.82	0.00	0.781	O	|	|	|	0.65

6.417	1.83	0.00	0.794	O				0.66
6.500	1.84	0.00	0.806	O				0.67
6.583	1.85	0.00	0.819	O				0.68
6.667	1.86	0.00	0.832	O				0.69
6.750	1.87	0.00	0.845	O				0.70
6.833	1.88	0.00	0.858	O				0.71
6.917	1.89	0.00	0.871	O				0.73
7.000	1.90	0.00	0.884	O				0.74
7.083	1.91	0.00	0.897	O				0.75
7.167	1.92	0.00	0.910	O				0.76
7.250	1.93	0.00	0.923	O				0.77
7.333	1.95	0.00	0.937	O				0.78
7.417	1.96	0.00	0.950	O				0.79
7.500	1.97	0.00	0.964	O				0.80
7.583	1.98	0.00	0.977	O				0.81
7.667	1.99	0.00	0.991	O				0.83
7.750	2.00	0.00	1.005	O				0.84
7.833	2.01	0.00	1.018	OI				0.85
7.917	2.03	0.00	1.032	OI				0.86
8.000	2.04	0.00	1.046	OI				0.87
8.083	2.05	0.00	1.060	OI				0.88
8.167	2.06	0.00	1.075	OI				0.90
8.250	2.08	0.00	1.089	OI				0.91
8.333	2.09	0.00	1.103	OI				0.92
8.417	2.10	0.00	1.118	OI				0.93
8.500	2.12	0.00	1.132	OI				0.94
8.583	2.13	0.00	1.147	OI				0.96
8.667	2.15	0.00	1.162	OI				0.97
8.750	2.16	0.00	1.176	OI				0.98
8.833	2.17	0.00	1.191	OI				0.99
8.917	2.19	0.00	1.206	OI				1.01
9.000	2.20	0.00	1.221	OI				1.02
9.083	2.22	0.00	1.237	OI				1.03
9.167	2.24	0.00	1.252	OI				1.04
9.250	2.25	0.00	1.267	OI				1.06
9.333	2.27	0.00	1.283	OI				1.07
9.417	2.28	0.00	1.299	OI				1.08
9.500	2.30	0.00	1.314	OI				1.10
9.583	2.32	0.00	1.330	OI				1.11
9.667	2.34	0.00	1.346	OI				1.12
9.750	2.35	0.00	1.363	OI				1.14
9.833	2.37	0.00	1.379	OI				1.15
9.917	2.39	0.00	1.395	OI				1.16
10.000	2.41	0.00	1.412	OI				1.18
10.083	2.43	0.00	1.428	OI				1.19
10.167	2.45	0.00	1.445	OI				1.20
10.250	2.47	0.00	1.462	OI				1.22
10.333	2.49	0.00	1.479	OI				1.23
10.417	2.51	0.00	1.497	OI				1.25
10.500	2.54	0.00	1.514	OI				1.26

10.583	2.56	0.00	1.531	OI				1.28
10.667	2.58	0.00	1.549	OI				1.29
10.750	2.60	0.00	1.567	OI				1.31
10.833	2.63	0.00	1.585	OI				1.32
10.917	2.65	0.00	1.603	OI				1.34
11.000	2.68	0.00	1.621	OI				1.35
11.083	2.70	0.00	1.640	OI				1.37
11.167	2.73	0.00	1.659	OI				1.38
11.250	2.76	0.00	1.678	OI				1.40
11.333	2.79	0.00	1.697	OI				1.41
11.417	2.81	0.00	1.716	OI				1.43
11.500	2.84	0.00	1.735	OI				1.45
11.583	2.87	0.00	1.755	OI				1.46
11.667	2.91	0.00	1.775	OI				1.48
11.750	2.94	0.00	1.795	OI				1.50
11.833	2.97	0.00	1.816	OI				1.51
11.917	3.01	0.00	1.836	OI				1.53
12.000	3.04	0.00	1.857	OI				1.55
12.083	3.08	0.00	1.878	OI				1.56
12.167	3.13	0.00	1.899	OI				1.58
12.250	3.19	0.00	1.921	OI				1.60
12.333	3.23	0.00	1.943	OI				1.62
12.417	3.28	0.00	1.966	OI				1.64
12.500	3.33	0.00	1.988	OI				1.66
12.583	3.37	0.00	2.011	OI				1.68
12.667	3.42	0.00	2.035	OI				1.70
12.750	3.47	0.00	2.059	OI				1.72
12.833	3.52	0.00	2.083	OI				1.74
12.917	3.57	0.00	2.107	OI				1.76
13.000	3.63	0.00	2.132	OI				1.78
13.083	3.68	0.00	2.157	OI				1.80
13.167	3.74	0.00	2.183	OI				1.82
13.250	3.81	0.00	2.209	OI				1.84
13.333	3.87	0.00	2.235	OI				1.86
13.417	3.94	0.00	2.262	OI				1.88
13.500	4.01	0.00	2.289	OI				1.91
13.583	4.08	0.00	2.317	O I				1.93
13.667	4.16	0.00	2.345	O I				1.95
13.750	4.24	0.00	2.374	O I				1.98
13.833	4.32	0.00	2.404	O I				2.00
13.917	4.41	0.00	2.434	O I				2.03
14.000	4.51	0.00	2.465	O I				2.05
14.083	4.61	0.00	2.496	O I				2.08
14.167	4.72	0.00	2.528	O I				2.11
14.250	4.85	0.00	2.561	O I				2.13
14.333	4.97	0.00	2.595	O I				2.16
14.417	5.11	0.00	2.629	O I				2.19
14.500	5.25	0.00	2.665	O I				2.22
14.583	5.40	0.01	2.702	O I				2.25
14.667	5.57	0.01	2.739	O I				2.28

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14.750    5.75    0.01      2.778  O I     |        |        |        |      2.32
14.833    5.94    0.01      2.819  O I     |        |        |        |      2.35
14.917    6.16    0.01      2.860  O  I    |        |        |        |      2.38
15.000    6.39    0.01      2.903  O  I    |        |        |        |      2.42
15.083    6.66    0.01      2.948  O  I    |        |        |        |      2.46
15.167    6.95    0.01      2.995  O  I    |        |        |        |      2.50
15.250    7.29    0.02      3.044  O  I    |        |        |        |      2.54
15.333    7.67    0.02      3.095  O  I    |        |        |        |      2.58
15.417    8.02    0.03      3.149  O  I    |        |        |        |      2.62
15.500    7.97    0.04      3.204  O  I    |        |        |        |      2.67
15.583    7.84    0.05      3.258  O  I    |        |        |        |      2.72
15.667    8.22    0.06      3.313  O   I   |        |        |        |      2.76
15.750    8.93    0.07      3.372  O   I   |        |        |        |      2.81
15.833   10.07    0.08      3.437  O    I  |        |        |        |      2.86
15.917   11.98    0.09      3.512  O    I  |        |        |        |      2.93
16.000   15.79    0.10      3.607  O      I|        |        |        |      3.01
16.083   26.75    0.10      3.753  O       |    I   |        |        |      3.13
16.167   57.47    0.10      4.042  O       |        |        |   I    |      3.37
16.250   64.41    7.88      4.434  |  O    |        |        |       I      3.70
16.333   37.18   16.67      4.700  |       O        | I      |        |      3.92
16.417   25.58   19.69      4.791  |       |O  I    |        |        |      3.99
16.500   19.83   20.13      4.810  |       |IO      |        |        |      4.01
16.583   16.61   19.91      4.797  |       IO       |        |        |      4.00
16.667   13.89   18.96      4.769  |     I |O       |        |        |      3.97
16.750   12.07   17.73      4.732  |    I  O        |        |        |      3.94
16.833   10.52   16.41      4.692  |    I  O        |        |        |      3.91
16.917    9.28   15.08      4.652  |   I  O|        |        |        |      3.88
17.000    8.16   13.77      4.612  |   I O |        |        |        |      3.84
17.083    7.21   12.53      4.575  |  I  O |        |        |        |      3.81
17.167    6.79   11.39      4.540  |  I O  |        |        |        |      3.78
17.250    6.42   10.41      4.511  |  I O  |        |        |        |      3.76
17.333    5.79    9.53      4.484  | I O   |        |        |        |      3.74
17.417    5.31    8.71      4.460  | I O   |        |        |        |      3.72
17.500    4.64    7.95      4.437  | IO    |        |        |        |      3.70
17.583    4.42    7.25      4.415  | IO    |        |        |        |      3.68
17.667    4.23    6.65      4.397  | IO    |        |        |        |      3.66
17.750    4.07    6.13      4.382  | IO    |        |        |        |      3.65
17.833    3.92    5.70      4.369  |IO     |        |        |        |      3.64
17.917    3.79    5.32      4.357  |IO     |        |        |        |      3.63
18.000    3.66    4.99      4.347  |IO     |        |        |        |      3.62
18.083    3.55    4.71      4.339  |IO     |        |        |        |      3.62
18.167    3.43    4.46      4.331  |IO     |        |        |        |      3.61
18.250    3.32    4.24      4.325  |IO     |        |        |        |      3.60
18.333    3.23    4.04      4.319  |IO     |        |        |        |      3.60
18.417    3.14    3.86      4.313  |O      |        |        |        |      3.59
18.500    3.06    3.71      4.309  |O      |        |        |        |      3.59
18.583    2.99    3.57      4.305  |O      |        |        |        |      3.59
18.667    2.92    3.44      4.301  |O      |        |        |        |      3.58
18.750    2.86    3.33      4.297  |O      |        |        |        |      3.58
18.833    2.80    3.23      4.294  |O      |        |        |        |      3.58
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18.917	2.74	3.13	4.291	|O	|	|	|	3.58
19.000	2.69	3.05	4.289	|O	|	|	|	3.57
19.083	2.63	2.97	4.286	|O	|	|	|	3.57
19.167	2.59	2.89	4.284	|O	|	|	|	3.57
19.250	2.54	2.83	4.282	|O	|	|	|	3.57
19.333	2.50	2.76	4.280	|O	|	|	|	3.57
19.417	2.45	2.70	4.279	|O	|	|	|	3.57
19.500	2.41	2.65	4.277	|O	|	|	|	3.56
19.583	2.38	2.60	4.275	|O	|	|	|	3.56
19.667	2.34	2.55	4.274	|O	|	|	|	3.56
19.750	2.30	2.50	4.272	|O	|	|	|	3.56
19.833	2.27	2.46	4.271	|O	|	|	|	3.56
19.917	2.24	2.42	4.270	|O	|	|	|	3.56
20.000	2.21	2.38	4.269	|O	|	|	|	3.56
20.083	2.18	2.34	4.267	|O	|	|	|	3.56
20.167	2.15	2.30	4.266	|O	|	|	|	3.56
20.250	2.12	2.27	4.265	|O	|	|	|	3.55
20.333	2.09	2.23	4.264	|O	|	|	|	3.55
20.417	2.07	2.20	4.263	|O	|	|	|	3.55
20.500	2.04	2.17	4.262	|O	|	|	|	3.55
20.583	2.02	2.14	4.262	|O	|	|	|	3.55
20.667	1.99	2.11	4.261	IO	|	|	|	3.55
20.750	1.97	2.09	4.260	IO	|	|	|	3.55
20.833	1.95	2.06	4.259	IO	|	|	|	3.55
20.917	1.92	2.03	4.258	IO	|	|	|	3.55
21.000	1.90	2.01	4.258	O	|	|	|	3.55
21.083	1.88	1.99	4.257	O	|	|	|	3.55
21.167	1.86	1.96	4.256	O	|	|	|	3.55
21.250	1.84	1.94	4.255	O	|	|	|	3.55
21.333	1.82	1.92	4.255	O	|	|	|	3.55
21.417	1.81	1.90	4.254	O	|	|	|	3.55
21.500	1.79	1.88	4.254	O	|	|	|	3.54
21.583	1.77	1.86	4.253	O	|	|	|	3.54
21.667	1.75	1.84	4.252	O	|	|	|	3.54
21.750	1.74	1.82	4.252	O	|	|	|	3.54
21.833	1.72	1.80	4.251	O	|	|	|	3.54
21.917	1.71	1.78	4.251	O	|	|	|	3.54
22.000	1.69	1.77	4.250	O	|	|	|	3.54
22.083	1.68	1.75	4.250	O	|	|	|	3.54
22.167	1.66	1.73	4.249	O	|	|	|	3.54
22.250	1.65	1.72	4.249	O	|	|	|	3.54
22.333	1.63	1.70	4.248	O	|	|	|	3.54
22.417	1.62	1.68	4.248	O	|	|	|	3.54
22.500	1.61	1.67	4.247	O	|	|	|	3.54
22.583	1.59	1.66	4.247	O	|	|	|	3.54
22.667	1.58	1.64	4.246	O	|	|	|	3.54
22.750	1.57	1.63	4.246	O	|	|	|	3.54
22.833	1.55	1.61	4.246	O	|	|	|	3.54
22.917	1.54	1.60	4.245	O	|	|	|	3.54
23.000	1.53	1.59	4.245	O	|	|	|	3.54

23.083	1.52	1.57	4.244	O				3.54
23.167	1.51	1.56	4.244	O				3.54
23.250	1.50	1.55	4.244	O				3.54
23.333	1.49	1.54	4.243	O				3.54
23.417	1.47	1.53	4.243	O				3.54
23.500	1.46	1.51	4.243	O				3.54
23.583	1.45	1.50	4.242	O				3.54
23.667	1.44	1.49	4.242	O				3.53
23.750	1.43	1.48	4.242	O				3.53
23.833	1.42	1.47	4.241	O				3.53
23.917	1.41	1.46	4.241	O				3.53
24.000	1.41	1.45	4.241	O				3.53
24.083	1.35	1.43	4.240	O				3.53
24.167	1.01	1.38	4.239	O				3.53
24.250	0.59	1.26	4.235	O				3.53
24.333	0.39	1.10	4.230	O				3.53
24.417	0.28	0.95	4.226	O				3.52
24.500	0.21	0.80	4.221	O				3.52
24.583	0.15	0.67	4.217	O				3.51
24.667	0.11	0.56	4.214	O				3.51
24.750	0.08	0.47	4.211	O				3.51
24.833	0.06	0.39	4.209	O				3.51
24.917	0.04	0.32	4.207	O				3.51
25.000	0.03	0.26	4.205	O				3.50
25.083	0.02	0.21	4.203	O				3.50
25.167	0.02	0.17	4.202	O				3.50
25.250	0.01	0.14	4.201	O				3.50
25.333	0.00	0.11	4.200	O				3.50
25.417	0.00	0.10	4.200	O				3.50
25.500	0.00	0.10	4.199	O				3.50
25.583	0.00	0.10	4.198	O				3.50
25.667	0.00	0.10	4.198	O				3.50
25.750	0.00	0.10	4.197	O				3.50
25.833	0.00	0.10	4.196	O				3.50
25.917	0.00	0.10	4.196	O				3.50
26.000	0.00	0.10	4.195	O				3.50
26.083	0.00	0.10	4.194	O				3.50
26.167	0.00	0.10	4.193	O				3.49
26.250	0.00	0.10	4.193	O				3.49
26.333	0.00	0.10	4.192	O				3.49
26.417	0.00	0.10	4.191	O				3.49
26.500	0.00	0.10	4.191	O				3.49
26.583	0.00	0.10	4.190	O				3.49
26.667	0.00	0.10	4.189	O				3.49
26.750	0.00	0.10	4.189	O				3.49
26.833	0.00	0.10	4.188	O				3.49
26.917	0.00	0.10	4.187	O				3.49
27.000	0.00	0.10	4.187	O				3.49
27.083	0.00	0.10	4.186	O				3.49
27.167	0.00	0.10	4.185	O				3.49

27.250	0.00	0.10	4.185	O				3.49
27.333	0.00	0.10	4.184	O				3.49
27.417	0.00	0.10	4.183	O				3.49
27.500	0.00	0.10	4.182	O				3.49
27.583	0.00	0.10	4.182	O				3.48
27.667	0.00	0.10	4.181	O				3.48
27.750	0.00	0.10	4.180	O				3.48
27.833	0.00	0.10	4.180	O				3.48
27.917	0.00	0.10	4.179	O				3.48
28.000	0.00	0.10	4.178	O				3.48
28.083	0.00	0.10	4.178	O				3.48
28.167	0.00	0.10	4.177	O				3.48
28.250	0.00	0.10	4.176	O				3.48
28.333	0.00	0.10	4.176	O				3.48
28.417	0.00	0.10	4.175	O				3.48
28.500	0.00	0.10	4.174	O				3.48
28.583	0.00	0.10	4.174	O				3.48
28.667	0.00	0.10	4.173	O				3.48
28.750	0.00	0.10	4.172	O				3.48
28.833	0.00	0.10	4.171	O				3.48
28.917	0.00	0.10	4.171	O				3.48
29.000	0.00	0.10	4.170	O				3.48
29.083	0.00	0.10	4.169	O				3.47
29.167	0.00	0.10	4.169	O				3.47
29.250	0.00	0.10	4.168	O				3.47
29.333	0.00	0.10	4.167	O				3.47
29.417	0.00	0.10	4.167	O				3.47
29.500	0.00	0.10	4.166	O				3.47
29.583	0.00	0.10	4.165	O				3.47
29.667	0.00	0.10	4.165	O				3.47
29.750	0.00	0.10	4.164	O				3.47
29.833	0.00	0.10	4.163	O				3.47
29.917	0.00	0.10	4.162	O				3.47
30.000	0.00	0.10	4.162	O				3.47
30.083	0.00	0.10	4.161	O				3.47
30.167	0.00	0.10	4.160	O				3.47
30.250	0.00	0.10	4.160	O				3.47
30.333	0.00	0.10	4.159	O				3.47
30.417	0.00	0.10	4.158	O				3.47
30.500	0.00	0.10	4.158	O				3.46
30.583	0.00	0.10	4.157	O				3.46
30.667	0.00	0.10	4.156	O				3.46
30.750	0.00	0.10	4.156	O				3.46
30.833	0.00	0.10	4.155	O				3.46
30.917	0.00	0.10	4.154	O				3.46
31.000	0.00	0.10	4.154	O				3.46
31.083	0.00	0.10	4.153	O				3.46
31.167	0.00	0.10	4.152	O				3.46
31.250	0.00	0.10	4.151	O				3.46
31.333	0.00	0.10	4.151	O				3.46

31.417	0.00	0.10	4.150	O				3.46
31.500	0.00	0.10	4.149	O				3.46
31.583	0.00	0.10	4.149	O				3.46
31.667	0.00	0.10	4.148	O				3.46
31.750	0.00	0.10	4.147	O				3.46
31.833	0.00	0.10	4.147	O				3.46
31.917	0.00	0.10	4.146	O				3.45
32.000	0.00	0.10	4.145	O				3.45
32.083	0.00	0.10	4.145	O				3.45
32.167	0.00	0.10	4.144	O				3.45
32.250	0.00	0.10	4.143	O				3.45
32.333	0.00	0.10	4.143	O				3.45
32.417	0.00	0.10	4.142	O				3.45
32.500	0.00	0.10	4.141	O				3.45
32.583	0.00	0.10	4.140	O				3.45
32.667	0.00	0.10	4.140	O				3.45
32.750	0.00	0.10	4.139	O				3.45
32.833	0.00	0.10	4.138	O				3.45
32.917	0.00	0.10	4.138	O				3.45
33.000	0.00	0.10	4.137	O				3.45
33.083	0.00	0.10	4.136	O				3.45
33.167	0.00	0.10	4.136	O				3.45
33.250	0.00	0.10	4.135	O				3.45
33.333	0.00	0.10	4.134	O				3.45
33.417	0.00	0.10	4.134	O				3.44
33.500	0.00	0.10	4.133	O				3.44
33.583	0.00	0.10	4.132	O				3.44
33.667	0.00	0.10	4.132	O				3.44
33.750	0.00	0.10	4.131	O				3.44
33.833	0.00	0.10	4.130	O				3.44
33.917	0.00	0.10	4.129	O				3.44
34.000	0.00	0.10	4.129	O				3.44
34.083	0.00	0.10	4.128	O				3.44
34.167	0.00	0.10	4.127	O				3.44
34.250	0.00	0.10	4.127	O				3.44
34.333	0.00	0.10	4.126	O				3.44
34.417	0.00	0.10	4.125	O				3.44
34.500	0.00	0.10	4.125	O				3.44
34.583	0.00	0.10	4.124	O				3.44
34.667	0.00	0.10	4.123	O				3.44
34.750	0.00	0.10	4.123	O				3.44
34.833	0.00	0.10	4.122	O				3.43
34.917	0.00	0.10	4.121	O				3.43
35.000	0.00	0.10	4.120	O				3.43
35.083	0.00	0.10	4.120	O				3.43
35.167	0.00	0.10	4.119	O				3.43
35.250	0.00	0.10	4.118	O				3.43
35.333	0.00	0.10	4.118	O				3.43
35.417	0.00	0.10	4.117	O				3.43
35.500	0.00	0.10	4.116	O				3.43

35.583	0.00	0.10	4.116	O				3.43
35.667	0.00	0.10	4.115	O				3.43
35.750	0.00	0.10	4.114	O				3.43
35.833	0.00	0.10	4.114	O				3.43
35.917	0.00	0.10	4.113	O				3.43
36.000	0.00	0.10	4.112	O				3.43
36.083	0.00	0.10	4.112	O				3.43
36.167	0.00	0.10	4.111	O				3.43
36.250	0.00	0.10	4.110	O				3.43
36.333	0.00	0.10	4.109	O				3.42
36.417	0.00	0.10	4.109	O				3.42
36.500	0.00	0.10	4.108	O				3.42
36.583	0.00	0.10	4.107	O				3.42
36.667	0.00	0.10	4.107	O				3.42
36.750	0.00	0.10	4.106	O				3.42
36.833	0.00	0.10	4.105	O				3.42
36.917	0.00	0.10	4.105	O				3.42
37.000	0.00	0.10	4.104	O				3.42
37.083	0.00	0.10	4.103	O				3.42
37.167	0.00	0.10	4.103	O				3.42
37.250	0.00	0.10	4.102	O				3.42
37.333	0.00	0.10	4.101	O				3.42
37.417	0.00	0.10	4.101	O				3.42
37.500	0.00	0.10	4.100	O				3.42
37.583	0.00	0.10	4.099	O				3.42
37.667	0.00	0.10	4.098	O				3.42
37.750	0.00	0.10	4.098	O				3.41
37.833	0.00	0.10	4.097	O				3.41
37.917	0.00	0.10	4.096	O				3.41
38.000	0.00	0.10	4.096	O				3.41
38.083	0.00	0.10	4.095	O				3.41
38.167	0.00	0.10	4.094	O				3.41
38.250	0.00	0.10	4.094	O				3.41
38.333	0.00	0.10	4.093	O				3.41
38.417	0.00	0.10	4.092	O				3.41
38.500	0.00	0.10	4.092	O				3.41
38.583	0.00	0.10	4.091	O				3.41
38.667	0.00	0.10	4.090	O				3.41
38.750	0.00	0.10	4.089	O				3.41
38.833	0.00	0.10	4.089	O				3.41
38.917	0.00	0.10	4.088	O				3.41
39.000	0.00	0.10	4.087	O				3.41
39.083	0.00	0.10	4.087	O				3.41
39.167	0.00	0.10	4.086	O				3.41
39.250	0.00	0.10	4.085	O				3.40
39.333	0.00	0.10	4.085	O				3.40
39.417	0.00	0.10	4.084	O				3.40
39.500	0.00	0.10	4.083	O				3.40
39.583	0.00	0.10	4.083	O				3.40
39.667	0.00	0.10	4.082	O				3.40

39.750	0.00	0.10	4.081	O				3.40
39.833	0.00	0.10	4.081	O				3.40
39.917	0.00	0.10	4.080	O				3.40
40.000	0.00	0.10	4.079	O				3.40
40.083	0.00	0.10	4.078	O				3.40
40.167	0.00	0.10	4.078	O				3.40
40.250	0.00	0.10	4.077	O				3.40
40.333	0.00	0.10	4.076	O				3.40
40.417	0.00	0.10	4.076	O				3.40
40.500	0.00	0.10	4.075	O				3.40
40.583	0.00	0.10	4.074	O				3.40
40.667	0.00	0.10	4.074	O				3.39
40.750	0.00	0.10	4.073	O				3.39
40.833	0.00	0.10	4.072	O				3.39
40.917	0.00	0.10	4.072	O				3.39
41.000	0.00	0.10	4.071	O				3.39
41.083	0.00	0.10	4.070	O				3.39
41.167	0.00	0.10	4.070	O				3.39
41.250	0.00	0.10	4.069	O				3.39
41.333	0.00	0.10	4.068	O				3.39
41.417	0.00	0.10	4.067	O				3.39
41.500	0.00	0.10	4.067	O				3.39
41.583	0.00	0.10	4.066	O				3.39
41.667	0.00	0.10	4.065	O				3.39
41.750	0.00	0.10	4.065	O				3.39
41.833	0.00	0.10	4.064	O				3.39
41.917	0.00	0.10	4.063	O				3.39
42.000	0.00	0.10	4.063	O				3.39
42.083	0.00	0.10	4.062	O				3.38
42.167	0.00	0.10	4.061	O				3.38
42.250	0.00	0.10	4.061	O				3.38
42.333	0.00	0.10	4.060	O				3.38
42.417	0.00	0.10	4.059	O				3.38
42.500	0.00	0.10	4.058	O				3.38
42.583	0.00	0.10	4.058	O				3.38
42.667	0.00	0.10	4.057	O				3.38
42.750	0.00	0.10	4.056	O				3.38
42.833	0.00	0.10	4.056	O				3.38
42.917	0.00	0.10	4.055	O				3.38
43.000	0.00	0.10	4.054	O				3.38
43.083	0.00	0.10	4.054	O				3.38
43.167	0.00	0.10	4.053	O				3.38
43.250	0.00	0.10	4.052	O				3.38
43.333	0.00	0.10	4.052	O				3.38
43.417	0.00	0.10	4.051	O				3.38
43.500	0.00	0.10	4.050	O				3.38
43.583	0.00	0.10	4.050	O				3.37
43.667	0.00	0.10	4.049	O				3.37
43.750	0.00	0.10	4.048	O				3.37
43.833	0.00	0.10	4.047	O				3.37

43.917	0.00	0.10	4.047	O				3.37
44.000	0.00	0.10	4.046	O				3.37
44.083	0.00	0.10	4.045	O				3.37
44.167	0.00	0.10	4.045	O				3.37
44.250	0.00	0.10	4.044	O				3.37
44.333	0.00	0.10	4.043	O				3.37
44.417	0.00	0.10	4.043	O				3.37
44.500	0.00	0.10	4.042	O				3.37
44.583	0.00	0.10	4.041	O				3.37
44.667	0.00	0.10	4.041	O				3.37
44.750	0.00	0.10	4.040	O				3.37
44.833	0.00	0.10	4.039	O				3.37
44.917	0.00	0.10	4.039	O				3.37
45.000	0.00	0.10	4.038	O				3.36
45.083	0.00	0.10	4.037	O				3.36
45.167	0.00	0.10	4.036	O				3.36
45.250	0.00	0.10	4.036	O				3.36
45.333	0.00	0.10	4.035	O				3.36
45.417	0.00	0.10	4.034	O				3.36
45.500	0.00	0.10	4.034	O				3.36
45.583	0.00	0.10	4.033	O				3.36
45.667	0.00	0.10	4.032	O				3.36
45.750	0.00	0.10	4.032	O				3.36
45.833	0.00	0.10	4.031	O				3.36
45.917	0.00	0.10	4.030	O				3.36
46.000	0.00	0.10	4.030	O				3.36
46.083	0.00	0.10	4.029	O				3.36
46.167	0.00	0.10	4.028	O				3.36
46.250	0.00	0.10	4.028	O				3.36
46.333	0.00	0.10	4.027	O				3.36
46.417	0.00	0.10	4.026	O				3.36
46.500	0.00	0.10	4.025	O				3.35
46.583	0.00	0.10	4.025	O				3.35
46.667	0.00	0.10	4.024	O				3.35
46.750	0.00	0.10	4.023	O				3.35
46.833	0.00	0.10	4.023	O				3.35
46.917	0.00	0.10	4.022	O				3.35
47.000	0.00	0.10	4.021	O				3.35
47.083	0.00	0.10	4.021	O				3.35
47.167	0.00	0.10	4.020	O				3.35
47.250	0.00	0.10	4.019	O				3.35
47.333	0.00	0.10	4.019	O				3.35
47.417	0.00	0.10	4.018	O				3.35
47.500	0.00	0.10	4.017	O				3.35
47.583	0.00	0.10	4.016	O				3.35
47.667	0.00	0.10	4.016	O				3.35
47.750	0.00	0.10	4.015	O				3.35
47.833	0.00	0.10	4.014	O				3.35
47.917	0.00	0.10	4.014	O				3.34
48.000	0.00	0.10	4.013	O				3.34

48.083	0.00	0.10	4.012	O				3.34
48.167	0.00	0.10	4.012	O				3.34
48.250	0.00	0.10	4.011	O				3.34
48.333	0.00	0.10	4.010	O				3.34
48.417	0.00	0.10	4.010	O				3.34
48.500	0.00	0.10	4.009	O				3.34
48.583	0.00	0.10	4.008	O				3.34
48.667	0.00	0.10	4.008	O				3.34
48.750	0.00	0.10	4.007	O				3.34
48.833	0.00	0.10	4.006	O				3.34
48.917	0.00	0.10	4.005	O				3.34
49.000	0.00	0.10	4.005	O				3.34
49.083	0.00	0.10	4.004	O				3.34
49.167	0.00	0.10	4.003	O				3.34
49.250	0.00	0.10	4.003	O				3.34
49.333	0.00	0.10	4.002	O				3.34
49.417	0.00	0.10	4.001	O				3.33
49.500	0.00	0.10	4.001	O				3.33
49.583	0.00	0.10	4.000	O				3.33
49.667	0.00	0.10	3.999	O				3.33
49.750	0.00	0.10	3.999	O				3.33
49.833	0.00	0.10	3.998	O				3.33
49.917	0.00	0.10	3.997	O				3.33
50.000	0.00	0.10	3.997	O				3.33
50.083	0.00	0.10	3.996	O				3.33
50.167	0.00	0.10	3.995	O				3.33
50.250	0.00	0.10	3.994	O				3.33
50.333	0.00	0.10	3.994	O				3.33
50.417	0.00	0.10	3.993	O				3.33
50.500	0.00	0.10	3.992	O				3.33
50.583	0.00	0.10	3.992	O				3.33
50.667	0.00	0.10	3.991	O				3.33
50.750	0.00	0.10	3.990	O				3.33
50.833	0.00	0.10	3.990	O				3.32
50.917	0.00	0.10	3.989	O				3.32
51.000	0.00	0.10	3.988	O				3.32
51.083	0.00	0.10	3.988	O				3.32
51.167	0.00	0.10	3.987	O				3.32
51.250	0.00	0.10	3.986	O				3.32
51.333	0.00	0.10	3.985	O				3.32
51.417	0.00	0.10	3.985	O				3.32
51.500	0.00	0.10	3.984	O				3.32
51.583	0.00	0.10	3.983	O				3.32
51.667	0.00	0.10	3.983	O				3.32
51.750	0.00	0.10	3.982	O				3.32
51.833	0.00	0.10	3.981	O				3.32
51.917	0.00	0.10	3.981	O				3.32
52.000	0.00	0.10	3.980	O				3.32
52.083	0.00	0.10	3.979	O				3.32
52.167	0.00	0.10	3.979	O				3.32

52.250	0.00	0.10	3.978	O				3.31
52.333	0.00	0.10	3.977	O				3.31
52.417	0.00	0.10	3.977	O				3.31
52.500	0.00	0.10	3.976	O				3.31
52.583	0.00	0.10	3.975	O				3.31
52.667	0.00	0.10	3.974	O				3.31
52.750	0.00	0.10	3.974	O				3.31
52.833	0.00	0.10	3.973	O				3.31
52.917	0.00	0.10	3.972	O				3.31
53.000	0.00	0.10	3.972	O				3.31
53.083	0.00	0.10	3.971	O				3.31
53.167	0.00	0.10	3.970	O				3.31
53.250	0.00	0.10	3.970	O				3.31
53.333	0.00	0.10	3.969	O				3.31
53.417	0.00	0.10	3.968	O				3.31
53.500	0.00	0.10	3.968	O				3.31
53.583	0.00	0.10	3.967	O				3.31
53.667	0.00	0.10	3.966	O				3.31
53.750	0.00	0.10	3.966	O				3.30
53.833	0.00	0.10	3.965	O				3.30
53.917	0.00	0.10	3.964	O				3.30
54.000	0.00	0.10	3.963	O				3.30
54.083	0.00	0.10	3.963	O				3.30
54.167	0.00	0.10	3.962	O				3.30
54.250	0.00	0.10	3.961	O				3.30
54.333	0.00	0.10	3.961	O				3.30
54.417	0.00	0.10	3.960	O				3.30
54.500	0.00	0.10	3.959	O				3.30
54.583	0.00	0.10	3.959	O				3.30
54.667	0.00	0.10	3.958	O				3.30
54.750	0.00	0.10	3.957	O				3.30
54.833	0.00	0.10	3.957	O				3.30
54.917	0.00	0.10	3.956	O				3.30
55.000	0.00	0.10	3.955	O				3.30
55.083	0.00	0.10	3.955	O				3.30
55.167	0.00	0.10	3.954	O				3.29
55.250	0.00	0.10	3.953	O				3.29
55.333	0.00	0.10	3.952	O				3.29
55.417	0.00	0.10	3.952	O				3.29
55.500	0.00	0.10	3.951	O				3.29
55.583	0.00	0.10	3.950	O				3.29
55.667	0.00	0.10	3.950	O				3.29
55.750	0.00	0.10	3.949	O				3.29
55.833	0.00	0.10	3.948	O				3.29
55.917	0.00	0.10	3.948	O				3.29
56.000	0.00	0.10	3.947	O				3.29
56.083	0.00	0.10	3.946	O				3.29
56.167	0.00	0.10	3.946	O				3.29
56.250	0.00	0.10	3.945	O				3.29
56.333	0.00	0.10	3.944	O				3.29

56.417	0.00	0.10	3.943	O				3.29
56.500	0.00	0.10	3.943	O				3.29
56.583	0.00	0.10	3.942	O				3.29
56.667	0.00	0.10	3.941	O				3.28
56.750	0.00	0.10	3.941	O				3.28
56.833	0.00	0.10	3.940	O				3.28
56.917	0.00	0.10	3.939	O				3.28
57.000	0.00	0.10	3.939	O				3.28
57.083	0.00	0.10	3.938	O				3.28
57.167	0.00	0.10	3.937	O				3.28
57.250	0.00	0.10	3.937	O				3.28
57.333	0.00	0.10	3.936	O				3.28
57.417	0.00	0.10	3.935	O				3.28
57.500	0.00	0.10	3.935	O				3.28
57.583	0.00	0.10	3.934	O				3.28
57.667	0.00	0.10	3.933	O				3.28
57.750	0.00	0.10	3.932	O				3.28
57.833	0.00	0.10	3.932	O				3.28
57.917	0.00	0.10	3.931	O				3.28
58.000	0.00	0.10	3.930	O				3.28
58.083	0.00	0.10	3.930	O				3.27
58.167	0.00	0.10	3.929	O				3.27
58.250	0.00	0.10	3.928	O				3.27
58.333	0.00	0.10	3.928	O				3.27
58.417	0.00	0.10	3.927	O				3.27
58.500	0.00	0.10	3.926	O				3.27
58.583	0.00	0.10	3.926	O				3.27
58.667	0.00	0.10	3.925	O				3.27
58.750	0.00	0.10	3.924	O				3.27
58.833	0.00	0.10	3.924	O				3.27
58.917	0.00	0.10	3.923	O				3.27
59.000	0.00	0.10	3.922	O				3.27
59.083	0.00	0.10	3.921	O				3.27
59.167	0.00	0.10	3.921	O				3.27
59.250	0.00	0.10	3.920	O				3.27
59.333	0.00	0.10	3.919	O				3.27
59.417	0.00	0.10	3.919	O				3.27
59.500	0.00	0.10	3.918	O				3.27
59.583	0.00	0.10	3.917	O				3.26
59.667	0.00	0.10	3.917	O				3.26
59.750	0.00	0.10	3.916	O				3.26
59.833	0.00	0.10	3.915	O				3.26
59.917	0.00	0.10	3.915	O				3.26
60.000	0.00	0.10	3.914	O				3.26
60.083	0.00	0.10	3.913	O				3.26
60.167	0.00	0.10	3.912	O				3.26
60.250	0.00	0.10	3.912	O				3.26
60.333	0.00	0.10	3.911	O				3.26
60.417	0.00	0.10	3.910	O				3.26
60.500	0.00	0.10	3.910	O				3.26

60.583	0.00	0.10	3.909	O					3.26
60.667	0.00	0.10	3.908	O					3.26
60.750	0.00	0.10	3.908	O					3.26
60.833	0.00	0.10	3.907	O					3.26
60.917	0.00	0.10	3.906	O					3.26
61.000	0.00	0.10	3.906	O					3.25
61.083	0.00	0.10	3.905	O					3.25
61.167	0.00	0.10	3.904	O					3.25
61.250	0.00	0.10	3.904	O					3.25
61.333	0.00	0.10	3.903	O					3.25
61.417	0.00	0.10	3.902	O					3.25
61.500	0.00	0.10	3.901	O					3.25
61.583	0.00	0.10	3.901	O					3.25
61.667	0.00	0.10	3.900	O					3.25
61.750	0.00	0.10	3.899	O					3.25
61.833	0.00	0.10	3.899	O					3.25
61.917	0.00	0.10	3.898	O					3.25
62.000	0.00	0.10	3.897	O					3.25
62.083	0.00	0.10	3.897	O					3.25
62.167	0.00	0.10	3.896	O					3.25
62.250	0.00	0.10	3.895	O					3.25
62.333	0.00	0.10	3.895	O					3.25
62.417	0.00	0.10	3.894	O					3.24
62.500	0.00	0.10	3.893	O					3.24
62.583	0.00	0.10	3.893	O					3.24
62.667	0.00	0.10	3.892	O					3.24
62.750	0.00	0.10	3.891	O					3.24
62.833	0.00	0.10	3.890	O					3.24
62.917	0.00	0.10	3.890	O					3.24
63.000	0.00	0.10	3.889	O					3.24
63.083	0.00	0.10	3.888	O					3.24
63.167	0.00	0.10	3.888	O					3.24
63.250	0.00	0.10	3.887	O					3.24
63.333	0.00	0.10	3.886	O					3.24
63.417	0.00	0.10	3.886	O					3.24
63.500	0.00	0.10	3.885	O					3.24
63.583	0.00	0.10	3.884	O					3.24
63.667	0.00	0.10	3.884	O					3.24
63.750	0.00	0.10	3.883	O					3.24
63.833	0.00	0.10	3.882	O					3.24
63.917	0.00	0.10	3.882	O					3.23
64.000	0.00	0.10	3.881	O					3.23
64.083	0.00	0.10	3.880	O					3.23
64.167	0.00	0.10	3.879	O					3.23
64.250	0.00	0.10	3.879	O					3.23
64.333	0.00	0.10	3.878	O					3.23
64.417	0.00	0.10	3.877	O					3.23
64.500	0.00	0.10	3.877	O					3.23
64.583	0.00	0.10	3.876	O					3.23
64.667	0.00	0.10	3.875	O					3.23

64.750	0.00	0.10	3.875	O	|	|	|	|	3.23
64.833	0.00	0.10	3.874	O	|	|	|	|	3.23
64.917	0.00	0.10	3.873	O	|	|	|	|	3.23
65.000	0.00	0.10	3.873	O	|	|	|	|	3.23
65.083	0.00	0.10	3.872	O	|	|	|	|	3.23
65.167	0.00	0.10	3.871	O	|	|	|	|	3.23
65.250	0.00	0.10	3.870	O	|	|	|	|	3.23
65.333	0.00	0.10	3.870	O	|	|	|	|	3.22
65.417	0.00	0.10	3.869	O	|	|	|	|	3.22
65.500	0.00	0.10	3.868	O	|	|	|	|	3.22
65.583	0.00	0.10	3.868	O	|	|	|	|	3.22
65.667	0.00	0.10	3.867	O	|	|	|	|	3.22
65.750	0.00	0.10	3.866	O	|	|	|	|	3.22
65.833	0.00	0.10	3.866	O	|	|	|	|	3.22
65.917	0.00	0.10	3.865	O	|	|	|	|	3.22
66.000	0.00	0.10	3.864	O	|	|	|	|	3.22
66.083	0.00	0.10	3.864	O	|	|	|	|	3.22
66.167	0.00	0.10	3.863	O	|	|	|	|	3.22
66.250	0.00	0.10	3.862	O	|	|	|	|	3.22
66.333	0.00	0.10	3.862	O	|	|	|	|	3.22
66.417	0.00	0.10	3.861	O	|	|	|	|	3.22
66.500	0.00	0.10	3.860	O	|	|	|	|	3.22
66.583	0.00	0.10	3.859	O	|	|	|	|	3.22
66.667	0.00	0.10	3.859	O	|	|	|	|	3.22
66.750	0.00	0.10	3.858	O	|	|	|	|	3.22
66.833	0.00	0.10	3.857	O	|	|	|	|	3.21
66.917	0.00	0.10	3.857	O	|	|	|	|	3.21
67.000	0.00	0.10	3.856	O	|	|	|	|	3.21
67.083	0.00	0.10	3.855	O	|	|	|	|	3.21
67.167	0.00	0.10	3.855	O	|	|	|	|	3.21
67.250	0.00	0.10	3.854	O	|	|	|	|	3.21
67.333	0.00	0.10	3.853	O	|	|	|	|	3.21
67.417	0.00	0.10	3.853	O	|	|	|	|	3.21
67.500	0.00	0.10	3.852	O	|	|	|	|	3.21
67.583	0.00	0.10	3.851	O	|	|	|	|	3.21
67.667	0.00	0.10	3.851	O	|	|	|	|	3.21
67.750	0.00	0.10	3.850	O	|	|	|	|	3.21
67.833	0.00	0.10	3.849	O	|	|	|	|	3.21
67.917	0.00	0.10	3.848	O	|	|	|	|	3.21
68.000	0.00	0.10	3.848	O	|	|	|	|	3.21
68.083	0.00	0.10	3.847	O	|	|	|	|	3.21
68.167	0.00	0.10	3.846	O	|	|	|	|	3.21
68.250	0.00	0.10	3.846	O	|	|	|	|	3.20
68.333	0.00	0.10	3.845	O	|	|	|	|	3.20
68.417	0.00	0.10	3.844	O	|	|	|	|	3.20
68.500	0.00	0.10	3.844	O	|	|	|	|	3.20
68.583	0.00	0.10	3.843	O	|	|	|	|	3.20
68.667	0.00	0.10	3.842	O	|	|	|	|	3.20
68.750	0.00	0.10	3.842	O	|	|	|	|	3.20
68.833	0.00	0.10	3.841	O	|	|	|	|	3.20

68.917	0.00	0.10	3.840	O				3.20
69.000	0.00	0.10	3.839	O				3.20
69.083	0.00	0.10	3.839	O				3.20
69.167	0.00	0.10	3.838	O				3.20
69.250	0.00	0.10	3.837	O				3.20
69.333	0.00	0.10	3.837	O				3.20
69.417	0.00	0.10	3.836	O				3.20
69.500	0.00	0.10	3.835	O				3.20
69.583	0.00	0.10	3.835	O				3.20
69.667	0.00	0.10	3.834	O				3.19
69.750	0.00	0.10	3.833	O				3.19
69.833	0.00	0.10	3.833	O				3.19
69.917	0.00	0.10	3.832	O				3.19
70.000	0.00	0.10	3.831	O				3.19
70.083	0.00	0.10	3.831	O				3.19
70.167	0.00	0.10	3.830	O				3.19
70.250	0.00	0.10	3.829	O				3.19
70.333	0.00	0.10	3.828	O				3.19
70.417	0.00	0.10	3.828	O				3.19
70.500	0.00	0.10	3.827	O				3.19
70.583	0.00	0.10	3.826	O				3.19
70.667	0.00	0.10	3.826	O				3.19
70.750	0.00	0.10	3.825	O				3.19
70.833	0.00	0.10	3.824	O				3.19
70.917	0.00	0.10	3.824	O				3.19
71.000	0.00	0.10	3.823	O				3.19
71.083	0.00	0.10	3.822	O				3.19
71.167	0.00	0.10	3.822	O				3.18
71.250	0.00	0.10	3.821	O				3.18
71.333	0.00	0.10	3.820	O				3.18
71.417	0.00	0.10	3.820	O				3.18
71.500	0.00	0.10	3.819	O				3.18
71.583	0.00	0.10	3.818	O				3.18
71.667	0.00	0.10	3.817	O				3.18
71.750	0.00	0.10	3.817	O				3.18
71.833	0.00	0.10	3.816	O				3.18
71.917	0.00	0.10	3.815	O				3.18
72.000	0.00	0.10	3.815	O				3.18
72.083	0.00	0.10	3.814	O				3.18
72.167	0.00	0.10	3.813	O				3.18
72.250	0.00	0.10	3.813	O				3.18
72.333	0.00	0.10	3.812	O				3.18
72.417	0.00	0.10	3.811	O				3.18
72.500	0.00	0.10	3.811	O				3.18
72.583	0.00	0.10	3.810	O				3.17
72.667	0.00	0.10	3.809	O				3.17
72.750	0.00	0.10	3.808	O				3.17
72.833	0.00	0.10	3.808	O				3.17
72.917	0.00	0.10	3.807	O				3.17
73.000	0.00	0.10	3.806	O				3.17

73.083	0.00	0.10	3.806	O				3.17
73.167	0.00	0.10	3.805	O				3.17
73.250	0.00	0.10	3.804	O				3.17
73.333	0.00	0.10	3.804	O				3.17
73.417	0.00	0.10	3.803	O				3.17
73.500	0.00	0.10	3.802	O				3.17
73.583	0.00	0.10	3.802	O				3.17
73.667	0.00	0.10	3.801	O				3.17
73.750	0.00	0.10	3.800	O				3.17
73.833	0.00	0.10	3.800	O				3.17
73.917	0.00	0.10	3.799	O				3.17
74.000	0.00	0.10	3.798	O				3.17
74.083	0.00	0.10	3.797	O				3.16
74.167	0.00	0.10	3.797	O				3.16
74.250	0.00	0.10	3.796	O				3.16
74.333	0.00	0.10	3.795	O				3.16
74.417	0.00	0.10	3.795	O				3.16
74.500	0.00	0.10	3.794	O				3.16
74.583	0.00	0.10	3.793	O				3.16
74.667	0.00	0.10	3.793	O				3.16
74.750	0.00	0.10	3.792	O				3.16
74.833	0.00	0.10	3.791	O				3.16
74.917	0.00	0.10	3.791	O				3.16
75.000	0.00	0.10	3.790	O				3.16
75.083	0.00	0.10	3.789	O				3.16
75.167	0.00	0.10	3.789	O				3.16
75.250	0.00	0.10	3.788	O				3.16
75.333	0.00	0.10	3.787	O				3.16
75.417	0.00	0.10	3.786	O				3.16
75.500	0.00	0.10	3.786	O				3.15
75.583	0.00	0.10	3.785	O				3.15
75.667	0.00	0.10	3.784	O				3.15
75.750	0.00	0.10	3.784	O				3.15
75.833	0.00	0.10	3.783	O				3.15
75.917	0.00	0.10	3.782	O				3.15
76.000	0.00	0.10	3.782	O				3.15
76.083	0.00	0.10	3.781	O				3.15
76.167	0.00	0.10	3.780	O				3.15
76.250	0.00	0.10	3.780	O				3.15
76.333	0.00	0.10	3.779	O				3.15
76.417	0.00	0.10	3.778	O				3.15
76.500	0.00	0.10	3.778	O				3.15
76.583	0.00	0.10	3.777	O				3.15
76.667	0.00	0.10	3.776	O				3.15
76.750	0.00	0.10	3.775	O				3.15
76.833	0.00	0.10	3.775	O				3.15
76.917	0.00	0.10	3.774	O				3.15
77.000	0.00	0.10	3.773	O				3.14
77.083	0.00	0.10	3.773	O				3.14
77.167	0.00	0.10	3.772	O				3.14

77.250	0.00	0.10	3.771	O	|	|	|	|	3.14
77.333	0.00	0.10	3.771	O	|	|	|	|	3.14
77.417	0.00	0.10	3.770	O	|	|	|	|	3.14
77.500	0.00	0.10	3.769	O	|	|	|	|	3.14
77.583	0.00	0.10	3.769	O	|	|	|	|	3.14
77.667	0.00	0.10	3.768	O	|	|	|	|	3.14
77.750	0.00	0.10	3.767	O	|	|	|	|	3.14
77.833	0.00	0.10	3.766	O	|	|	|	|	3.14
77.917	0.00	0.10	3.766	O	|	|	|	|	3.14
78.000	0.00	0.10	3.765	O	|	|	|	|	3.14
78.083	0.00	0.10	3.764	O	|	|	|	|	3.14
78.167	0.00	0.10	3.764	O	|	|	|	|	3.14
78.250	0.00	0.10	3.763	O	|	|	|	|	3.14
78.333	0.00	0.10	3.762	O	|	|	|	|	3.14
78.417	0.00	0.10	3.762	O	|	|	|	|	3.13
78.500	0.00	0.10	3.761	O	|	|	|	|	3.13
78.583	0.00	0.10	3.760	O	|	|	|	|	3.13
78.667	0.00	0.10	3.760	O	|	|	|	|	3.13
78.750	0.00	0.10	3.759	O	|	|	|	|	3.13
78.833	0.00	0.10	3.758	O	|	|	|	|	3.13
78.917	0.00	0.10	3.758	O	|	|	|	|	3.13
79.000	0.00	0.10	3.757	O	|	|	|	|	3.13
79.083	0.00	0.10	3.756	O	|	|	|	|	3.13
79.167	0.00	0.10	3.755	O	|	|	|	|	3.13
79.250	0.00	0.10	3.755	O	|	|	|	|	3.13
79.333	0.00	0.10	3.754	O	|	|	|	|	3.13
79.417	0.00	0.10	3.753	O	|	|	|	|	3.13
79.500	0.00	0.10	3.753	O	|	|	|	|	3.13
79.583	0.00	0.10	3.752	O	|	|	|	|	3.13
79.667	0.00	0.10	3.751	O	|	|	|	|	3.13
79.750	0.00	0.10	3.751	O	|	|	|	|	3.13
79.833	0.00	0.10	3.750	O	|	|	|	|	3.12
79.917	0.00	0.10	3.749	O	|	|	|	|	3.12
80.000	0.00	0.10	3.749	O	|	|	|	|	3.12
80.083	0.00	0.10	3.748	O	|	|	|	|	3.12
80.167	0.00	0.10	3.747	O	|	|	|	|	3.12
80.250	0.00	0.10	3.747	O	|	|	|	|	3.12
80.333	0.00	0.10	3.746	O	|	|	|	|	3.12
80.417	0.00	0.10	3.745	O	|	|	|	|	3.12
80.500	0.00	0.10	3.744	O	|	|	|	|	3.12
80.583	0.00	0.10	3.744	O	|	|	|	|	3.12
80.667	0.00	0.10	3.743	O	|	|	|	|	3.12
80.750	0.00	0.10	3.742	O	|	|	|	|	3.12
80.833	0.00	0.10	3.742	O	|	|	|	|	3.12
80.917	0.00	0.10	3.741	O	|	|	|	|	3.12
81.000	0.00	0.10	3.740	O	|	|	|	|	3.12
81.083	0.00	0.10	3.740	O	|	|	|	|	3.12
81.167	0.00	0.10	3.739	O	|	|	|	|	3.12
81.250	0.00	0.10	3.738	O	|	|	|	|	3.12
81.333	0.00	0.10	3.738	O	|	|	|	|	3.11

81.417	0.00	0.10	3.737	O	|	|	|	|	3.11
81.500	0.00	0.10	3.736	O	|	|	|	|	3.11
81.583	0.00	0.10	3.735	O	|	|	|	|	3.11
81.667	0.00	0.10	3.735	O	|	|	|	|	3.11
81.750	0.00	0.10	3.734	O	|	|	|	|	3.11
81.833	0.00	0.10	3.733	O	|	|	|	|	3.11
81.917	0.00	0.10	3.733	O	|	|	|	|	3.11
82.000	0.00	0.10	3.732	O	|	|	|	|	3.11
82.083	0.00	0.10	3.731	O	|	|	|	|	3.11
82.167	0.00	0.10	3.731	O	|	|	|	|	3.11
82.250	0.00	0.10	3.730	O	|	|	|	|	3.11
82.333	0.00	0.10	3.729	O	|	|	|	|	3.11
82.417	0.00	0.10	3.729	O	|	|	|	|	3.11
82.500	0.00	0.10	3.728	O	|	|	|	|	3.11
82.583	0.00	0.10	3.727	O	|	|	|	|	3.11
82.667	0.00	0.10	3.727	O	|	|	|	|	3.11
82.750	0.00	0.10	3.726	O	|	|	|	|	3.10
82.833	0.00	0.10	3.725	O	|	|	|	|	3.10
82.917	0.00	0.10	3.724	O	|	|	|	|	3.10
83.000	0.00	0.10	3.724	O	|	|	|	|	3.10
83.083	0.00	0.10	3.723	O	|	|	|	|	3.10
83.167	0.00	0.10	3.722	O	|	|	|	|	3.10
83.250	0.00	0.10	3.722	O	|	|	|	|	3.10
83.333	0.00	0.10	3.721	O	|	|	|	|	3.10
83.417	0.00	0.10	3.720	O	|	|	|	|	3.10
83.500	0.00	0.10	3.720	O	|	|	|	|	3.10
83.583	0.00	0.10	3.719	O	|	|	|	|	3.10
83.667	0.00	0.10	3.718	O	|	|	|	|	3.10
83.750	0.00	0.10	3.718	O	|	|	|	|	3.10
83.833	0.00	0.10	3.717	O	|	|	|	|	3.10
83.917	0.00	0.10	3.716	O	|	|	|	|	3.10
84.000	0.00	0.10	3.716	O	|	|	|	|	3.10
84.083	0.00	0.10	3.715	O	|	|	|	|	3.10
84.167	0.00	0.10	3.714	O	|	|	|	|	3.10
84.250	0.00	0.10	3.713	O	|	|	|	|	3.09
84.333	0.00	0.10	3.713	O	|	|	|	|	3.09
84.417	0.00	0.10	3.712	O	|	|	|	|	3.09
84.500	0.00	0.10	3.711	O	|	|	|	|	3.09
84.583	0.00	0.10	3.711	O	|	|	|	|	3.09
84.667	0.00	0.10	3.710	O	|	|	|	|	3.09
84.750	0.00	0.10	3.709	O	|	|	|	|	3.09
84.833	0.00	0.10	3.709	O	|	|	|	|	3.09
84.917	0.00	0.10	3.708	O	|	|	|	|	3.09
85.000	0.00	0.10	3.707	O	|	|	|	|	3.09
85.083	0.00	0.10	3.707	O	|	|	|	|	3.09
85.167	0.00	0.10	3.706	O	|	|	|	|	3.09
85.250	0.00	0.10	3.705	O	|	|	|	|	3.09
85.333	0.00	0.10	3.705	O	|	|	|	|	3.09
85.417	0.00	0.10	3.704	O	|	|	|	|	3.09
85.500	0.00	0.10	3.703	O	|	|	|	|	3.09

85.583	0.00	0.10	3.702	O	|	|	|	3.09
85.667	0.00	0.10	3.702	O	|	|	|	3.08
85.750	0.00	0.10	3.701	O	|	|	|	3.08
85.833	0.00	0.10	3.700	O	|	|	|	3.08
85.917	0.00	0.10	3.700	O	|	|	|	3.08
86.000	0.00	0.10	3.699	O	|	|	|	3.08
86.083	0.00	0.10	3.698	O	|	|	|	3.08
86.167	0.00	0.10	3.698	O	|	|	|	3.08
86.250	0.00	0.10	3.697	O	|	|	|	3.08
86.333	0.00	0.10	3.696	O	|	|	|	3.08
86.417	0.00	0.10	3.696	O	|	|	|	3.08
86.500	0.00	0.10	3.695	O	|	|	|	3.08
86.583	0.00	0.10	3.694	O	|	|	|	3.08
86.667	0.00	0.10	3.693	O	|	|	|	3.08
86.750	0.00	0.10	3.693	O	|	|	|	3.08
86.833	0.00	0.10	3.692	O	|	|	|	3.08
86.917	0.00	0.10	3.691	O	|	|	|	3.08
87.000	0.00	0.10	3.691	O	|	|	|	3.08
87.083	0.00	0.10	3.690	O	|	|	|	3.08
87.167	0.00	0.10	3.689	O	|	|	|	3.07
87.250	0.00	0.10	3.689	O	|	|	|	3.07
87.333	0.00	0.10	3.688	O	|	|	|	3.07
87.417	0.00	0.10	3.687	O	|	|	|	3.07
87.500	0.00	0.10	3.687	O	|	|	|	3.07
87.583	0.00	0.10	3.686	O	|	|	|	3.07
87.667	0.00	0.10	3.685	O	|	|	|	3.07
87.750	0.00	0.10	3.685	O	|	|	|	3.07
87.833	0.00	0.10	3.684	O	|	|	|	3.07
87.917	0.00	0.10	3.683	O	|	|	|	3.07
88.000	0.00	0.10	3.682	O	|	|	|	3.07
88.083	0.00	0.10	3.682	O	|	|	|	3.07
88.167	0.00	0.10	3.681	O	|	|	|	3.07
88.250	0.00	0.10	3.680	O	|	|	|	3.07
88.333	0.00	0.10	3.680	O	|	|	|	3.07
88.417	0.00	0.10	3.679	O	|	|	|	3.07
88.500	0.00	0.10	3.678	O	|	|	|	3.07
88.583	0.00	0.10	3.678	O	|	|	|	3.06
88.667	0.00	0.10	3.677	O	|	|	|	3.06
88.750	0.00	0.10	3.676	O	|	|	|	3.06
88.833	0.00	0.10	3.676	O	|	|	|	3.06
88.917	0.00	0.10	3.675	O	|	|	|	3.06
89.000	0.00	0.10	3.674	O	|	|	|	3.06
89.083	0.00	0.10	3.674	O	|	|	|	3.06
89.167	0.00	0.10	3.673	O	|	|	|	3.06
89.250	0.00	0.10	3.672	O	|	|	|	3.06
89.333	0.00	0.10	3.671	O	|	|	|	3.06
89.417	0.00	0.10	3.671	O	|	|	|	3.06
89.500	0.00	0.10	3.670	O	|	|	|	3.06
89.583	0.00	0.10	3.669	O	|	|	|	3.06
89.667	0.00	0.10	3.669	O	|	|	|	3.06

89.750	0.00	0.10	3.668	O				3.06
89.833	0.00	0.10	3.667	O				3.06
89.917	0.00	0.10	3.667	O				3.06
90.000	0.00	0.10	3.666	O				3.05
90.083	0.00	0.10	3.665	O				3.05
90.167	0.00	0.10	3.665	O				3.05
90.250	0.00	0.10	3.664	O				3.05
90.333	0.00	0.10	3.663	O				3.05
90.417	0.00	0.10	3.662	O				3.05
90.500	0.00	0.10	3.662	O				3.05
90.583	0.00	0.10	3.661	O				3.05
90.667	0.00	0.10	3.660	O				3.05
90.750	0.00	0.10	3.660	O				3.05
90.833	0.00	0.10	3.659	O				3.05
90.917	0.00	0.10	3.658	O				3.05
91.000	0.00	0.10	3.658	O				3.05
91.083	0.00	0.10	3.657	O				3.05
91.167	0.00	0.10	3.656	O				3.05
91.250	0.00	0.10	3.656	O				3.05
91.333	0.00	0.10	3.655	O				3.05
91.417	0.00	0.10	3.654	O				3.05
91.500	0.00	0.10	3.654	O				3.04
91.583	0.00	0.10	3.653	O				3.04
91.667	0.00	0.10	3.652	O				3.04
91.750	0.00	0.10	3.651	O				3.04
91.833	0.00	0.10	3.651	O				3.04
91.917	0.00	0.10	3.650	O				3.04
92.000	0.00	0.10	3.649	O				3.04
92.083	0.00	0.10	3.649	O				3.04
92.167	0.00	0.10	3.648	O				3.04
92.250	0.00	0.10	3.647	O				3.04
92.333	0.00	0.10	3.647	O				3.04
92.417	0.00	0.10	3.646	O				3.04
92.500	0.00	0.10	3.645	O				3.04
92.583	0.00	0.10	3.645	O				3.04
92.667	0.00	0.10	3.644	O				3.04
92.750	0.00	0.10	3.643	O				3.04
92.833	0.00	0.10	3.643	O				3.04
92.917	0.00	0.10	3.642	O				3.03
93.000	0.00	0.10	3.641	O				3.03
93.083	0.00	0.10	3.640	O				3.03
93.167	0.00	0.10	3.640	O				3.03
93.250	0.00	0.10	3.639	O				3.03
93.333	0.00	0.10	3.638	O				3.03
93.417	0.00	0.10	3.638	O				3.03
93.500	0.00	0.10	3.637	O				3.03
93.583	0.00	0.10	3.636	O				3.03
93.667	0.00	0.10	3.636	O				3.03
93.750	0.00	0.10	3.635	O				3.03
93.833	0.00	0.10	3.634	O				3.03

93.917	0.00	0.10	3.634	O				3.03
94.000	0.00	0.10	3.633	O				3.03
94.083	0.00	0.10	3.632	O				3.03
94.167	0.00	0.10	3.632	O				3.03
94.250	0.00	0.10	3.631	O				3.03
94.333	0.00	0.10	3.630	O				3.03
94.417	0.00	0.10	3.629	O				3.02
94.500	0.00	0.10	3.629	O				3.02
94.583	0.00	0.10	3.628	O				3.02
94.667	0.00	0.10	3.627	O				3.02
94.750	0.00	0.10	3.627	O				3.02
94.833	0.00	0.10	3.626	O				3.02
94.917	0.00	0.10	3.625	O				3.02
95.000	0.00	0.10	3.625	O				3.02
95.083	0.00	0.10	3.624	O				3.02
95.167	0.00	0.10	3.623	O				3.02
95.250	0.00	0.10	3.623	O				3.02
95.333	0.00	0.10	3.622	O				3.02
95.417	0.00	0.10	3.621	O				3.02
95.500	0.00	0.10	3.620	O				3.02
95.583	0.00	0.10	3.620	O				3.02
95.667	0.00	0.10	3.619	O				3.02
95.750	0.00	0.10	3.618	O				3.02
95.833	0.00	0.10	3.618	O				3.01
95.917	0.00	0.10	3.617	O				3.01
96.000	0.00	0.10	3.616	O				3.01
96.083	0.00	0.10	3.616	O				3.01
96.167	0.00	0.10	3.615	O				3.01
96.250	0.00	0.10	3.614	O				3.01
96.333	0.00	0.10	3.614	O				3.01
96.417	0.00	0.10	3.613	O				3.01
96.500	0.00	0.10	3.612	O				3.01
96.583	0.00	0.10	3.612	O				3.01
96.667	0.00	0.10	3.611	O				3.01
96.750	0.00	0.10	3.610	O				3.01
96.833	0.00	0.10	3.609	O				3.01
96.917	0.00	0.10	3.609	O				3.01
97.000	0.00	0.10	3.608	O				3.01
97.083	0.00	0.10	3.607	O				3.01
97.167	0.00	0.10	3.607	O				3.01
97.250	0.00	0.10	3.606	O				3.01
97.333	0.00	0.10	3.605	O				3.00
97.417	0.00	0.10	3.605	O				3.00
97.500	0.00	0.10	3.604	O				3.00
97.583	0.00	0.10	3.603	O				3.00
97.667	0.00	0.10	3.603	O				3.00
97.750	0.00	0.10	3.602	O				3.00
97.833	0.00	0.10	3.601	O				3.00
97.917	0.00	0.10	3.601	O				3.00
98.000	0.00	0.10	3.600	O				3.00

98.083	0.00	0.10	3.599	O				3.00
98.167	0.00	0.10	3.598	O				3.00
98.250	0.00	0.10	3.598	O				3.00
98.333	0.00	0.10	3.597	O				3.00
98.417	0.00	0.10	3.596	O				3.00
98.500	0.00	0.10	3.596	O				3.00
98.583	0.00	0.10	3.595	O				3.00
98.667	0.00	0.10	3.594	O				3.00
98.750	0.00	0.10	3.594	O				2.99
98.833	0.00	0.10	3.593	O				2.99
98.917	0.00	0.10	3.592	O				2.99
99.000	0.00	0.10	3.592	O				2.99
99.083	0.00	0.10	3.591	O				2.99
99.167	0.00	0.10	3.590	O				2.99
99.250	0.00	0.10	3.590	O				2.99
99.333	0.00	0.10	3.589	O				2.99
99.417	0.00	0.10	3.588	O				2.99
99.500	0.00	0.10	3.588	O				2.99
99.583	0.00	0.10	3.587	O				2.99
99.667	0.00	0.10	3.586	O				2.99
99.750	0.00	0.10	3.586	O				2.99
99.833	0.00	0.10	3.585	O				2.99
99.917	0.00	0.10	3.584	O				2.99
100.000	0.00	0.10	3.583	O				2.99
100.083	0.00	0.10	3.583	O				2.99
100.167	0.00	0.10	3.582	O				2.99
100.250	0.00	0.10	3.581	O				2.98
100.333	0.00	0.10	3.581	O				2.98
100.417	0.00	0.10	3.580	O				2.98
100.500	0.00	0.10	3.579	O				2.98
100.583	0.00	0.10	3.579	O				2.98
100.667	0.00	0.10	3.578	O				2.98
100.750	0.00	0.10	3.577	O				2.98
100.833	0.00	0.10	3.577	O				2.98
100.917	0.00	0.10	3.576	O				2.98
101.000	0.00	0.10	3.575	O				2.98
101.083	0.00	0.10	3.575	O				2.98
101.167	0.00	0.10	3.574	O				2.98
101.250	0.00	0.10	3.574	O				2.98
101.333	0.00	0.10	3.573	O				2.98
101.417	0.00	0.10	3.572	O				2.98
101.500	0.00	0.10	3.572	O				2.98
101.583	0.00	0.10	3.571	O				2.98
101.667	0.00	0.10	3.570	O				2.98
101.750	0.00	0.10	3.570	O				2.97
101.833	0.00	0.10	3.569	O				2.97
101.917	0.00	0.10	3.568	O				2.97
102.000	0.00	0.10	3.568	O				2.97
102.083	0.00	0.10	3.567	O				2.97
102.167	0.00	0.09	3.566	O				2.97

102.250	0.00	0.09	3.566	O				2.97
102.333	0.00	0.09	3.565	O				2.97
102.417	0.00	0.09	3.564	O				2.97
102.500	0.00	0.09	3.564	O				2.97
102.583	0.00	0.09	3.563	O				2.97
102.667	0.00	0.09	3.562	O				2.97
102.750	0.00	0.09	3.562	O				2.97
102.833	0.00	0.09	3.561	O				2.97
102.917	0.00	0.09	3.560	O				2.97
103.000	0.00	0.09	3.560	O				2.97
103.083	0.00	0.09	3.559	O				2.97
103.167	0.00	0.09	3.558	O				2.97
103.250	0.00	0.09	3.558	O				2.96
103.333	0.00	0.09	3.557	O				2.96
103.417	0.00	0.09	3.557	O				2.96
103.500	0.00	0.09	3.556	O				2.96
103.583	0.00	0.09	3.555	O				2.96
103.667	0.00	0.09	3.555	O				2.96
103.750	0.00	0.09	3.554	O				2.96
103.833	0.00	0.09	3.553	O				2.96
103.917	0.00	0.09	3.553	O				2.96
104.000	0.00	0.09	3.552	O				2.96
104.083	0.00	0.09	3.551	O				2.96
104.167	0.00	0.09	3.551	O				2.96
104.250	0.00	0.09	3.550	O				2.96
104.333	0.00	0.09	3.549	O				2.96
104.417	0.00	0.09	3.549	O				2.96
104.500	0.00	0.09	3.548	O				2.96
104.583	0.00	0.09	3.548	O				2.96
104.667	0.00	0.09	3.547	O				2.96
104.750	0.00	0.09	3.546	O				2.96
104.833	0.00	0.09	3.546	O				2.95
104.917	0.00	0.09	3.545	O				2.95
105.000	0.00	0.09	3.544	O				2.95
105.083	0.00	0.09	3.544	O				2.95
105.167	0.00	0.09	3.543	O				2.95
105.250	0.00	0.09	3.543	O				2.95
105.333	0.00	0.09	3.542	O				2.95
105.417	0.00	0.09	3.541	O				2.95
105.500	0.00	0.09	3.541	O				2.95
105.583	0.00	0.09	3.540	O				2.95
105.667	0.00	0.09	3.539	O				2.95
105.750	0.00	0.09	3.539	O				2.95
105.833	0.00	0.09	3.538	O				2.95
105.917	0.00	0.09	3.538	O				2.95
106.000	0.00	0.09	3.537	O				2.95
106.083	0.00	0.09	3.536	O				2.95
106.167	0.00	0.09	3.536	O				2.95
106.250	0.00	0.09	3.535	O				2.95
106.333	0.00	0.09	3.534	O				2.95

106.417	0.00	0.09	3.534	O				2.94
106.500	0.00	0.09	3.533	O				2.94
106.583	0.00	0.09	3.533	O				2.94
106.667	0.00	0.09	3.532	O				2.94
106.750	0.00	0.09	3.531	O				2.94
106.833	0.00	0.09	3.531	O				2.94
106.917	0.00	0.09	3.530	O				2.94
107.000	0.00	0.09	3.529	O				2.94
107.083	0.00	0.09	3.529	O				2.94
107.167	0.00	0.09	3.528	O				2.94
107.250	0.00	0.09	3.528	O				2.94
107.333	0.00	0.09	3.527	O				2.94
107.417	0.00	0.09	3.526	O				2.94
107.500	0.00	0.09	3.526	O				2.94
107.583	0.00	0.09	3.525	O				2.94
107.667	0.00	0.09	3.525	O				2.94
107.750	0.00	0.09	3.524	O				2.94
107.833	0.00	0.09	3.523	O				2.94
107.917	0.00	0.09	3.523	O				2.94
108.000	0.00	0.09	3.522	O				2.94
108.083	0.00	0.09	3.522	O				2.93
108.167	0.00	0.09	3.521	O				2.93
108.250	0.00	0.09	3.520	O				2.93
108.333	0.00	0.09	3.520	O				2.93
108.417	0.00	0.09	3.519	O				2.93
108.500	0.00	0.09	3.518	O				2.93
108.583	0.00	0.09	3.518	O				2.93
108.667	0.00	0.09	3.517	O				2.93
108.750	0.00	0.09	3.517	O				2.93
108.833	0.00	0.09	3.516	O				2.93
108.917	0.00	0.09	3.515	O				2.93
109.000	0.00	0.09	3.515	O				2.93
109.083	0.00	0.09	3.514	O				2.93
109.167	0.00	0.09	3.514	O				2.93
109.250	0.00	0.09	3.513	O				2.93
109.333	0.00	0.09	3.512	O				2.93
109.417	0.00	0.09	3.512	O				2.93
109.500	0.00	0.09	3.511	O				2.93
109.583	0.00	0.09	3.511	O				2.93
109.667	0.00	0.09	3.510	O				2.93
109.750	0.00	0.09	3.509	O				2.92
109.833	0.00	0.09	3.509	O				2.92
109.917	0.00	0.09	3.508	O				2.92
110.000	0.00	0.09	3.508	O				2.92
110.083	0.00	0.09	3.507	O				2.92
110.167	0.00	0.09	3.507	O				2.92
110.250	0.00	0.09	3.506	O				2.92
110.333	0.00	0.09	3.505	O				2.92
110.417	0.00	0.09	3.505	O				2.92
110.500	0.00	0.09	3.504	O				2.92

110.583	0.00	0.09	3.504	O	|	|	|	2.92
110.667	0.00	0.09	3.503	O	|	|	|	2.92
110.750	0.00	0.09	3.502	O	|	|	|	2.92
110.833	0.00	0.09	3.502	O	|	|	|	2.92
110.917	0.00	0.09	3.501	O	|	|	|	2.92
111.000	0.00	0.09	3.501	O	|	|	|	2.92
111.083	0.00	0.09	3.500	O	|	|	|	2.92
111.167	0.00	0.08	3.499	O	|	|	|	2.92
111.250	0.00	0.08	3.499	O	|	|	|	2.92
111.333	0.00	0.08	3.498	O	|	|	|	2.92
111.417	0.00	0.08	3.498	O	|	|	|	2.91
111.500	0.00	0.08	3.497	O	|	|	|	2.91
111.583	0.00	0.08	3.497	O	|	|	|	2.91
111.667	0.00	0.08	3.496	O	|	|	|	2.91
111.750	0.00	0.08	3.495	O	|	|	|	2.91
111.833	0.00	0.08	3.495	O	|	|	|	2.91
111.917	0.00	0.08	3.494	O	|	|	|	2.91
112.000	0.00	0.08	3.494	O	|	|	|	2.91
112.083	0.00	0.08	3.493	O	|	|	|	2.91
112.167	0.00	0.08	3.492	O	|	|	|	2.91
112.250	0.00	0.08	3.492	O	|	|	|	2.91
112.333	0.00	0.08	3.491	O	|	|	|	2.91
112.417	0.00	0.08	3.491	O	|	|	|	2.91
112.500	0.00	0.08	3.490	O	|	|	|	2.91
112.583	0.00	0.08	3.490	O	|	|	|	2.91
112.667	0.00	0.08	3.489	O	|	|	|	2.91
112.750	0.00	0.08	3.488	O	|	|	|	2.91
112.833	0.00	0.08	3.488	O	|	|	|	2.91
112.917	0.00	0.08	3.487	O	|	|	|	2.91
113.000	0.00	0.08	3.487	O	|	|	|	2.91
113.083	0.00	0.08	3.486	O	|	|	|	2.91
113.167	0.00	0.08	3.486	O	|	|	|	2.90
113.250	0.00	0.08	3.485	O	|	|	|	2.90
113.333	0.00	0.08	3.484	O	|	|	|	2.90
113.417	0.00	0.08	3.484	O	|	|	|	2.90
113.500	0.00	0.08	3.483	O	|	|	|	2.90
113.583	0.00	0.08	3.483	O	|	|	|	2.90
113.667	0.00	0.08	3.482	O	|	|	|	2.90
113.750	0.00	0.08	3.482	O	|	|	|	2.90
113.833	0.00	0.08	3.481	O	|	|	|	2.90
113.917	0.00	0.08	3.480	O	|	|	|	2.90
114.000	0.00	0.08	3.480	O	|	|	|	2.90
114.083	0.00	0.08	3.479	O	|	|	|	2.90
114.167	0.00	0.08	3.479	O	|	|	|	2.90
114.250	0.00	0.08	3.478	O	|	|	|	2.90
114.333	0.00	0.08	3.478	O	|	|	|	2.90
114.417	0.00	0.08	3.477	O	|	|	|	2.90
114.500	0.00	0.08	3.477	O	|	|	|	2.90
114.583	0.00	0.08	3.476	O	|	|	|	2.90
114.667	0.00	0.08	3.475	O	|	|	|	2.90

114.750	0.00	0.08	3.475	O				2.90
114.833	0.00	0.08	3.474	O				2.90
114.917	0.00	0.08	3.474	O				2.89
115.000	0.00	0.08	3.473	O				2.89
115.083	0.00	0.08	3.473	O				2.89
115.167	0.00	0.08	3.472	O				2.89
115.250	0.00	0.08	3.472	O				2.89
115.333	0.00	0.08	3.471	O				2.89
115.417	0.00	0.08	3.470	O				2.89
115.500	0.00	0.08	3.470	O				2.89
115.583	0.00	0.08	3.469	O				2.89
115.667	0.00	0.08	3.469	O				2.89
115.750	0.00	0.08	3.468	O				2.89
115.833	0.00	0.08	3.468	O				2.89
115.917	0.00	0.08	3.467	O				2.89
116.000	0.00	0.08	3.467	O				2.89
116.083	0.00	0.08	3.466	O				2.89
116.167	0.00	0.08	3.465	O				2.89
116.250	0.00	0.08	3.465	O				2.89
116.333	0.00	0.08	3.464	O				2.89
116.417	0.00	0.08	3.464	O				2.89
116.500	0.00	0.08	3.463	O				2.89
116.583	0.00	0.08	3.463	O				2.89
116.667	0.00	0.08	3.462	O				2.89
116.750	0.00	0.08	3.462	O				2.88
116.833	0.00	0.08	3.461	O				2.88
116.917	0.00	0.08	3.460	O				2.88
117.000	0.00	0.08	3.460	O				2.88
117.083	0.00	0.08	3.459	O				2.88
117.167	0.00	0.08	3.459	O				2.88
117.250	0.00	0.08	3.458	O				2.88
117.333	0.00	0.08	3.458	O				2.88
117.417	0.00	0.08	3.457	O				2.88
117.500	0.00	0.08	3.457	O				2.88
117.583	0.00	0.08	3.456	O				2.88
117.667	0.00	0.08	3.456	O				2.88
117.750	0.00	0.08	3.455	O				2.88
117.833	0.00	0.08	3.455	O				2.88
117.917	0.00	0.08	3.454	O				2.88
118.000	0.00	0.08	3.453	O				2.88
118.083	0.00	0.08	3.453	O				2.88
118.167	0.00	0.08	3.452	O				2.88
118.250	0.00	0.08	3.452	O				2.88
118.333	0.00	0.08	3.451	O				2.88
118.417	0.00	0.08	3.451	O				2.88
118.500	0.00	0.08	3.450	O				2.88
118.583	0.00	0.08	3.450	O				2.87
118.667	0.00	0.08	3.449	O				2.87
118.750	0.00	0.08	3.449	O				2.87
118.833	0.00	0.08	3.448	O				2.87

118.917	0.00	0.08	3.448	O					2.87
119.000	0.00	0.08	3.447	O					2.87
119.083	0.00	0.08	3.447	O					2.87
119.167	0.00	0.08	3.446	O					2.87
119.250	0.00	0.08	3.445	O					2.87
119.333	0.00	0.08	3.445	O					2.87
119.417	0.00	0.08	3.444	O					2.87
119.500	0.00	0.08	3.444	O					2.87
119.583	0.00	0.08	3.443	O					2.87
119.667	0.00	0.08	3.443	O					2.87
119.750	0.00	0.08	3.442	O					2.87
119.833	0.00	0.08	3.442	O					2.87
119.917	0.00	0.08	3.441	O					2.87
120.000	0.00	0.08	3.441	O					2.87
120.083	0.00	0.08	3.440	O					2.87
120.167	0.00	0.08	3.440	O					2.87
120.250	0.00	0.08	3.439	O					2.87
120.333	0.00	0.08	3.439	O					2.87
120.417	0.00	0.08	3.438	O					2.87
120.500	0.00	0.08	3.438	O					2.86
120.583	0.00	0.08	3.437	O					2.86
120.667	0.00	0.08	3.437	O					2.86
120.750	0.00	0.08	3.436	O					2.86
120.833	0.00	0.08	3.436	O					2.86
120.917	0.00	0.08	3.435	O					2.86
121.000	0.00	0.08	3.434	O					2.86
121.083	0.00	0.08	3.434	O					2.86
121.167	0.00	0.08	3.433	O					2.86
121.250	0.00	0.07	3.433	O					2.86
121.333	0.00	0.07	3.432	O					2.86
121.417	0.00	0.07	3.432	O					2.86
121.500	0.00	0.07	3.431	O					2.86
121.583	0.00	0.07	3.431	O					2.86
121.667	0.00	0.07	3.430	O					2.86
121.750	0.00	0.07	3.430	O					2.86
121.833	0.00	0.07	3.429	O					2.86
121.917	0.00	0.07	3.429	O					2.86
122.000	0.00	0.07	3.428	O					2.86
122.083	0.00	0.07	3.428	O					2.86
122.167	0.00	0.07	3.427	O					2.86
122.250	0.00	0.07	3.427	O					2.86
122.333	0.00	0.07	3.426	O					2.86
122.417	0.00	0.07	3.426	O					2.85
122.500	0.00	0.07	3.425	O					2.85
122.583	0.00	0.07	3.425	O					2.85
122.667	0.00	0.07	3.424	O					2.85
122.750	0.00	0.07	3.424	O					2.85
122.833	0.00	0.07	3.423	O					2.85
122.917	0.00	0.07	3.423	O					2.85
123.000	0.00	0.07	3.422	O					2.85

123.083	0.00	0.07	3.422	O				2.85
123.167	0.00	0.07	3.421	O				2.85
123.250	0.00	0.07	3.421	O				2.85
123.333	0.00	0.07	3.420	O				2.85
123.417	0.00	0.07	3.420	O				2.85
123.500	0.00	0.07	3.419	O				2.85
123.583	0.00	0.07	3.419	O				2.85
123.667	0.00	0.07	3.418	O				2.85
123.750	0.00	0.07	3.418	O				2.85
123.833	0.00	0.07	3.417	O				2.85
123.917	0.00	0.07	3.417	O				2.85
124.000	0.00	0.07	3.416	O				2.85
124.083	0.00	0.07	3.416	O				2.85
124.167	0.00	0.07	3.415	O				2.85
124.250	0.00	0.07	3.415	O				2.85
124.333	0.00	0.07	3.414	O				2.85
124.417	0.00	0.07	3.414	O				2.84
124.500	0.00	0.07	3.413	O				2.84
124.583	0.00	0.07	3.413	O				2.84
124.667	0.00	0.07	3.412	O				2.84
124.750	0.00	0.07	3.412	O				2.84
124.833	0.00	0.07	3.411	O				2.84
124.917	0.00	0.07	3.411	O				2.84
125.000	0.00	0.07	3.410	O				2.84
125.083	0.00	0.07	3.410	O				2.84
125.167	0.00	0.07	3.409	O				2.84
125.250	0.00	0.07	3.409	O				2.84
125.333	0.00	0.07	3.408	O				2.84
125.417	0.00	0.07	3.408	O				2.84
125.500	0.00	0.07	3.407	O				2.84
125.583	0.00	0.07	3.407	O				2.84
125.667	0.00	0.07	3.406	O				2.84
125.750	0.00	0.07	3.406	O				2.84
125.833	0.00	0.07	3.405	O				2.84
125.917	0.00	0.07	3.405	O				2.84
126.000	0.00	0.07	3.404	O				2.84
126.083	0.00	0.07	3.404	O				2.84
126.167	0.00	0.07	3.403	O				2.84
126.250	0.00	0.07	3.403	O				2.84
126.333	0.00	0.07	3.402	O				2.84
126.417	0.00	0.07	3.402	O				2.83
126.500	0.00	0.07	3.401	O				2.83
126.583	0.00	0.07	3.401	O				2.83
126.667	0.00	0.07	3.400	O				2.83
126.750	0.00	0.07	3.400	O				2.83
126.833	0.00	0.07	3.400	O				2.83
126.917	0.00	0.07	3.399	O				2.83
127.000	0.00	0.07	3.399	O				2.83
127.083	0.00	0.07	3.398	O				2.83
127.167	0.00	0.07	3.398	O				2.83

127.250	0.00	0.07	3.397	O				2.83
127.333	0.00	0.07	3.397	O				2.83
127.417	0.00	0.07	3.396	O				2.83
127.500	0.00	0.07	3.396	O				2.83
127.583	0.00	0.07	3.395	O				2.83
127.667	0.00	0.07	3.395	O				2.83
127.750	0.00	0.07	3.394	O				2.83
127.833	0.00	0.07	3.394	O				2.83
127.917	0.00	0.07	3.393	O				2.83
128.000	0.00	0.07	3.393	O				2.83
128.083	0.00	0.07	3.392	O				2.83
128.167	0.00	0.07	3.392	O				2.83
128.250	0.00	0.07	3.391	O				2.83
128.333	0.00	0.07	3.391	O				2.83
128.417	0.00	0.07	3.390	O				2.83
128.500	0.00	0.07	3.390	O				2.82
128.583	0.00	0.07	3.390	O				2.82
128.667	0.00	0.07	3.389	O				2.82
128.750	0.00	0.07	3.389	O				2.82
128.833	0.00	0.07	3.388	O				2.82
128.917	0.00	0.07	3.388	O				2.82
129.000	0.00	0.07	3.387	O				2.82
129.083	0.00	0.07	3.387	O				2.82
129.167	0.00	0.07	3.386	O				2.82
129.250	0.00	0.07	3.386	O				2.82
129.333	0.00	0.07	3.385	O				2.82
129.417	0.00	0.07	3.385	O				2.82
129.500	0.00	0.07	3.384	O				2.82
129.583	0.00	0.07	3.384	O				2.82
129.667	0.00	0.07	3.383	O				2.82
129.750	0.00	0.07	3.383	O				2.82
129.833	0.00	0.07	3.382	O				2.82
129.917	0.00	0.07	3.382	O				2.82
130.000	0.00	0.07	3.382	O				2.82
130.083	0.00	0.07	3.381	O				2.82
130.167	0.00	0.07	3.381	O				2.82
130.250	0.00	0.07	3.380	O				2.82
130.333	0.00	0.07	3.380	O				2.82
130.417	0.00	0.07	3.379	O				2.82
130.500	0.00	0.07	3.379	O				2.82
130.583	0.00	0.07	3.378	O				2.82
130.667	0.00	0.07	3.378	O				2.81
130.750	0.00	0.07	3.377	O				2.81
130.833	0.00	0.07	3.377	O				2.81
130.917	0.00	0.07	3.377	O				2.81
131.000	0.00	0.07	3.376	O				2.81
131.083	0.00	0.07	3.376	O				2.81
131.167	0.00	0.07	3.375	O				2.81
131.250	0.00	0.07	3.375	O				2.81
131.333	0.00	0.07	3.374	O				2.81

131.417	0.00	0.07	3.374	O				2.81
131.500	0.00	0.07	3.373	O				2.81
131.583	0.00	0.07	3.373	O				2.81
131.667	0.00	0.07	3.372	O				2.81
131.750	0.00	0.07	3.372	O				2.81
131.833	0.00	0.07	3.371	O				2.81
131.917	0.00	0.07	3.371	O				2.81
132.000	0.00	0.07	3.371	O				2.81
132.083	0.00	0.07	3.370	O				2.81
132.167	0.00	0.07	3.370	O				2.81
132.250	0.00	0.07	3.369	O				2.81
132.333	0.00	0.07	3.369	O				2.81
132.417	0.00	0.07	3.368	O				2.81
132.500	0.00	0.07	3.368	O				2.81
132.583	0.00	0.07	3.367	O				2.81
132.667	0.00	0.07	3.367	O				2.81
132.750	0.00	0.06	3.367	O				2.81
132.833	0.00	0.06	3.366	O				2.81
132.917	0.00	0.06	3.366	O				2.80
133.000	0.00	0.06	3.365	O				2.80
133.083	0.00	0.06	3.365	O				2.80
133.167	0.00	0.06	3.364	O				2.80
133.250	0.00	0.06	3.364	O				2.80
133.333	0.00	0.06	3.363	O				2.80
133.417	0.00	0.06	3.363	O				2.80
133.500	0.00	0.06	3.363	O				2.80
133.583	0.00	0.06	3.362	O				2.80
133.667	0.00	0.06	3.362	O				2.80
133.750	0.00	0.06	3.361	O				2.80
133.833	0.00	0.06	3.361	O				2.80
133.917	0.00	0.06	3.360	O				2.80
134.000	0.00	0.06	3.360	O				2.80
134.083	0.00	0.06	3.359	O				2.80
134.167	0.00	0.06	3.359	O				2.80
134.250	0.00	0.06	3.359	O				2.80
134.333	0.00	0.06	3.358	O				2.80
134.417	0.00	0.06	3.358	O				2.80
134.500	0.00	0.06	3.357	O				2.80
134.583	0.00	0.06	3.357	O				2.80
134.667	0.00	0.06	3.356	O				2.80
134.750	0.00	0.06	3.356	O				2.80
134.833	0.00	0.06	3.356	O				2.80
134.917	0.00	0.06	3.355	O				2.80
135.000	0.00	0.06	3.355	O				2.80
135.083	0.00	0.06	3.354	O				2.80
135.167	0.00	0.06	3.354	O				2.79
135.250	0.00	0.06	3.353	O				2.79
135.333	0.00	0.06	3.353	O				2.79
135.417	0.00	0.06	3.352	O				2.79
135.500	0.00	0.06	3.352	O				2.79

135.583	0.00	0.06	3.352	O				2.79
135.667	0.00	0.06	3.351	O				2.79
135.750	0.00	0.06	3.351	O				2.79
135.833	0.00	0.06	3.350	O				2.79
135.917	0.00	0.06	3.350	O				2.79
136.000	0.00	0.06	3.349	O				2.79
136.083	0.00	0.06	3.349	O				2.79
136.167	0.00	0.06	3.349	O				2.79
136.250	0.00	0.06	3.348	O				2.79
136.333	0.00	0.06	3.348	O				2.79
136.417	0.00	0.06	3.347	O				2.79
136.500	0.00	0.06	3.347	O				2.79
136.583	0.00	0.06	3.346	O				2.79
136.667	0.00	0.06	3.346	O				2.79
136.750	0.00	0.06	3.346	O				2.79
136.833	0.00	0.06	3.345	O				2.79
136.917	0.00	0.06	3.345	O				2.79
137.000	0.00	0.06	3.344	O				2.79
137.083	0.00	0.06	3.344	O				2.79
137.167	0.00	0.06	3.343	O				2.79
137.250	0.00	0.06	3.343	O				2.79
137.333	0.00	0.06	3.343	O				2.79
137.417	0.00	0.06	3.342	O				2.79
137.500	0.00	0.06	3.342	O				2.78
137.583	0.00	0.06	3.341	O				2.78
137.667	0.00	0.06	3.341	O				2.78
137.750	0.00	0.06	3.341	O				2.78
137.833	0.00	0.06	3.340	O				2.78
137.917	0.00	0.06	3.340	O				2.78
138.000	0.00	0.06	3.339	O				2.78
138.083	0.00	0.06	3.339	O				2.78
138.167	0.00	0.06	3.338	O				2.78
138.250	0.00	0.06	3.338	O				2.78
138.333	0.00	0.06	3.338	O				2.78
138.417	0.00	0.06	3.337	O				2.78
138.500	0.00	0.06	3.337	O				2.78
138.583	0.00	0.06	3.336	O				2.78
138.667	0.00	0.06	3.336	O				2.78
138.750	0.00	0.06	3.335	O				2.78
138.833	0.00	0.06	3.335	O				2.78
138.917	0.00	0.06	3.335	O				2.78
139.000	0.00	0.06	3.334	O				2.78
139.083	0.00	0.06	3.334	O				2.78
139.167	0.00	0.06	3.333	O				2.78
139.250	0.00	0.06	3.333	O				2.78
139.333	0.00	0.06	3.333	O				2.78
139.417	0.00	0.06	3.332	O				2.78
139.500	0.00	0.06	3.332	O				2.78
139.583	0.00	0.06	3.331	O				2.78
139.667	0.00	0.06	3.331	O				2.78

139.750	0.00	0.06	3.331	O	|	|	|	2.78
139.833	0.00	0.06	3.330	O	|	|	|	2.78
139.917	0.00	0.06	3.330	O	|	|	|	2.77
140.000	0.00	0.06	3.329	O	|	|	|	2.77
140.083	0.00	0.06	3.329	O	|	|	|	2.77
140.167	0.00	0.06	3.328	O	|	|	|	2.77
140.250	0.00	0.06	3.328	O	|	|	|	2.77
140.333	0.00	0.06	3.328	O	|	|	|	2.77
140.417	0.00	0.06	3.327	O	|	|	|	2.77
140.500	0.00	0.06	3.327	O	|	|	|	2.77
140.583	0.00	0.06	3.326	O	|	|	|	2.77
140.667	0.00	0.06	3.326	O	|	|	|	2.77
140.750	0.00	0.06	3.326	O	|	|	|	2.77
140.833	0.00	0.06	3.325	O	|	|	|	2.77
140.917	0.00	0.06	3.325	O	|	|	|	2.77
141.000	0.00	0.06	3.324	O	|	|	|	2.77
141.083	0.00	0.06	3.324	O	|	|	|	2.77
141.167	0.00	0.06	3.324	O	|	|	|	2.77
141.250	0.00	0.06	3.323	O	|	|	|	2.77
141.333	0.00	0.06	3.323	O	|	|	|	2.77
141.417	0.00	0.06	3.322	O	|	|	|	2.77
141.500	0.00	0.06	3.322	O	|	|	|	2.77
141.583	0.00	0.06	3.322	O	|	|	|	2.77
141.667	0.00	0.06	3.321	O	|	|	|	2.77
141.750	0.00	0.06	3.321	O	|	|	|	2.77
141.833	0.00	0.06	3.320	O	|	|	|	2.77
141.917	0.00	0.06	3.320	O	|	|	|	2.77
142.000	0.00	0.06	3.320	O	|	|	|	2.77
142.083	0.00	0.06	3.319	O	|	|	|	2.77
142.167	0.00	0.06	3.319	O	|	|	|	2.77
142.250	0.00	0.06	3.318	O	|	|	|	2.77
142.333	0.00	0.06	3.318	O	|	|	|	2.77
142.417	0.00	0.06	3.318	O	|	|	|	2.76
142.500	0.00	0.06	3.317	O	|	|	|	2.76
142.583	0.00	0.06	3.317	O	|	|	|	2.76
142.667	0.00	0.06	3.316	O	|	|	|	2.76
142.750	0.00	0.06	3.316	O	|	|	|	2.76
142.833	0.00	0.06	3.316	O	|	|	|	2.76
142.917	0.00	0.06	3.315	O	|	|	|	2.76
143.000	0.00	0.06	3.315	O	|	|	|	2.76
143.083	0.00	0.06	3.314	O	|	|	|	2.76
143.167	0.00	0.06	3.314	O	|	|	|	2.76
143.250	0.00	0.06	3.314	O	|	|	|	2.76
143.333	0.00	0.06	3.313	O	|	|	|	2.76
143.417	0.00	0.06	3.313	O	|	|	|	2.76
143.500	0.00	0.06	3.312	O	|	|	|	2.76
143.583	0.00	0.06	3.312	O	|	|	|	2.76
143.667	0.00	0.06	3.312	O	|	|	|	2.76
143.750	0.00	0.06	3.311	O	|	|	|	2.76
143.833	0.00	0.06	3.311	O	|	|	|	2.76

143.917	0.00	0.06	3.311	O				2.76
144.000	0.00	0.06	3.310	O				2.76
144.083	0.00	0.06	3.310	O				2.76
144.167	0.00	0.06	3.309	O				2.76
144.250	0.00	0.06	3.309	O				2.76
144.333	0.00	0.06	3.309	O				2.76
144.417	0.00	0.06	3.308	O				2.76
144.500	0.00	0.06	3.308	O				2.76
144.583	0.00	0.06	3.307	O				2.76
144.667	0.00	0.06	3.307	O				2.76
144.750	0.00	0.06	3.307	O				2.76
144.833	0.00	0.06	3.306	O				2.76
144.917	0.00	0.06	3.306	O				2.75
145.000	0.00	0.06	3.306	O				2.75
145.083	0.00	0.06	3.305	O				2.75
145.167	0.00	0.06	3.305	O				2.75
145.250	0.00	0.06	3.304	O				2.75
145.333	0.00	0.06	3.304	O				2.75
145.417	0.00	0.06	3.304	O				2.75
145.500	0.00	0.06	3.303	O				2.75
145.583	0.00	0.06	3.303	O				2.75
145.667	0.00	0.06	3.302	O				2.75
145.750	0.00	0.06	3.302	O				2.75
145.833	0.00	0.06	3.302	O				2.75
145.917	0.00	0.06	3.301	O				2.75
146.000	0.00	0.06	3.301	O				2.75
146.083	0.00	0.06	3.301	O				2.75
146.167	0.00	0.06	3.300	O				2.75
146.250	0.00	0.05	3.300	O				2.75
146.333	0.00	0.05	3.299	O				2.75
146.417	0.00	0.05	3.299	O				2.75
146.500	0.00	0.05	3.299	O				2.75
146.583	0.00	0.05	3.298	O				2.75
146.667	0.00	0.05	3.298	O				2.75
146.750	0.00	0.05	3.298	O				2.75
146.833	0.00	0.05	3.297	O				2.75
146.917	0.00	0.05	3.297	O				2.75
147.000	0.00	0.05	3.296	O				2.75
147.083	0.00	0.05	3.296	O				2.75
147.167	0.00	0.05	3.296	O				2.75
147.250	0.00	0.05	3.295	O				2.75
147.333	0.00	0.05	3.295	O				2.75
147.417	0.00	0.05	3.295	O				2.75
147.500	0.00	0.05	3.294	O				2.75
147.583	0.00	0.05	3.294	O				2.74
147.667	0.00	0.05	3.293	O				2.74
147.750	0.00	0.05	3.293	O				2.74
147.833	0.00	0.05	3.293	O				2.74
147.917	0.00	0.05	3.292	O				2.74
148.000	0.00	0.05	3.292	O				2.74

148.083	0.00	0.05	3.292	O				2.74
148.167	0.00	0.05	3.291	O				2.74
148.250	0.00	0.05	3.291	O				2.74
148.333	0.00	0.05	3.290	O				2.74
148.417	0.00	0.05	3.290	O				2.74
148.500	0.00	0.05	3.290	O				2.74
148.583	0.00	0.05	3.289	O				2.74
148.667	0.00	0.05	3.289	O				2.74
148.750	0.00	0.05	3.289	O				2.74
148.833	0.00	0.05	3.288	O				2.74
148.917	0.00	0.05	3.288	O				2.74
149.000	0.00	0.05	3.288	O				2.74
149.083	0.00	0.05	3.287	O				2.74
149.167	0.00	0.05	3.287	O				2.74
149.250	0.00	0.05	3.286	O				2.74
149.333	0.00	0.05	3.286	O				2.74
149.417	0.00	0.05	3.286	O				2.74
149.500	0.00	0.05	3.285	O				2.74
149.583	0.00	0.05	3.285	O				2.74
149.667	0.00	0.05	3.285	O				2.74
149.750	0.00	0.05	3.284	O				2.74
149.833	0.00	0.05	3.284	O				2.74
149.917	0.00	0.05	3.284	O				2.74
150.000	0.00	0.05	3.283	O				2.74
150.083	0.00	0.05	3.283	O				2.74
150.167	0.00	0.05	3.282	O				2.74
150.250	0.00	0.05	3.282	O				2.74
150.333	0.00	0.05	3.282	O				2.73
150.417	0.00	0.05	3.281	O				2.73
150.500	0.00	0.05	3.281	O				2.73
150.583	0.00	0.05	3.281	O				2.73
150.667	0.00	0.05	3.280	O				2.73
150.750	0.00	0.05	3.280	O				2.73
150.833	0.00	0.05	3.280	O				2.73
150.917	0.00	0.05	3.279	O				2.73
151.000	0.00	0.05	3.279	O				2.73
151.083	0.00	0.05	3.278	O				2.73
151.167	0.00	0.05	3.278	O				2.73
151.250	0.00	0.05	3.278	O				2.73
151.333	0.00	0.05	3.277	O				2.73
151.417	0.00	0.05	3.277	O				2.73
151.500	0.00	0.05	3.277	O				2.73
151.583	0.00	0.05	3.276	O				2.73
151.667	0.00	0.05	3.276	O				2.73
151.750	0.00	0.05	3.276	O				2.73
151.833	0.00	0.05	3.275	O				2.73
151.917	0.00	0.05	3.275	O				2.73
152.000	0.00	0.05	3.275	O				2.73
152.083	0.00	0.05	3.274	O				2.73
152.167	0.00	0.05	3.274	O				2.73

152.250	0.00	0.05	3.274	O				2.73
152.333	0.00	0.05	3.273	O				2.73
152.417	0.00	0.05	3.273	O				2.73
152.500	0.00	0.05	3.272	O				2.73
152.583	0.00	0.05	3.272	O				2.73
152.667	0.00	0.05	3.272	O				2.73
152.750	0.00	0.05	3.271	O				2.73
152.833	0.00	0.05	3.271	O				2.73
152.917	0.00	0.05	3.271	O				2.73
153.000	0.00	0.05	3.270	O				2.73
153.083	0.00	0.05	3.270	O				2.73
153.167	0.00	0.05	3.270	O				2.72
153.250	0.00	0.05	3.269	O				2.72
153.333	0.00	0.05	3.269	O				2.72
153.417	0.00	0.05	3.269	O				2.72
153.500	0.00	0.05	3.268	O				2.72
153.583	0.00	0.05	3.268	O				2.72
153.667	0.00	0.05	3.268	O				2.72
153.750	0.00	0.05	3.267	O				2.72
153.833	0.00	0.05	3.267	O				2.72
153.917	0.00	0.05	3.267	O				2.72
154.000	0.00	0.05	3.266	O				2.72
154.083	0.00	0.05	3.266	O				2.72
154.167	0.00	0.05	3.266	O				2.72
154.250	0.00	0.05	3.265	O				2.72
154.333	0.00	0.05	3.265	O				2.72
154.417	0.00	0.05	3.265	O				2.72
154.500	0.00	0.05	3.264	O				2.72
154.583	0.00	0.05	3.264	O				2.72
154.667	0.00	0.05	3.263	O				2.72
154.750	0.00	0.05	3.263	O				2.72
154.833	0.00	0.05	3.263	O				2.72
154.917	0.00	0.05	3.262	O				2.72
155.000	0.00	0.05	3.262	O				2.72
155.083	0.00	0.05	3.262	O				2.72
155.167	0.00	0.05	3.261	O				2.72
155.250	0.00	0.05	3.261	O				2.72
155.333	0.00	0.05	3.261	O				2.72
155.417	0.00	0.05	3.260	O				2.72
155.500	0.00	0.05	3.260	O				2.72
155.583	0.00	0.05	3.260	O				2.72
155.667	0.00	0.05	3.259	O				2.72
155.750	0.00	0.05	3.259	O				2.72
155.833	0.00	0.05	3.259	O				2.72
155.917	0.00	0.05	3.258	O				2.72
156.000	0.00	0.05	3.258	O				2.72
156.083	0.00	0.05	3.258	O				2.71
156.167	0.00	0.05	3.257	O				2.71
156.250	0.00	0.05	3.257	O				2.71
156.333	0.00	0.05	3.257	O				2.71

156.417	0.00	0.05	3.256	O				2.71
156.500	0.00	0.05	3.256	O				2.71
156.583	0.00	0.05	3.256	O				2.71
156.667	0.00	0.05	3.255	O				2.71
156.750	0.00	0.05	3.255	O				2.71
156.833	0.00	0.05	3.255	O				2.71
156.917	0.00	0.05	3.254	O				2.71
157.000	0.00	0.05	3.254	O				2.71
157.083	0.00	0.05	3.254	O				2.71
157.167	0.00	0.05	3.253	O				2.71
157.250	0.00	0.05	3.253	O				2.71
157.333	0.00	0.05	3.253	O				2.71
157.417	0.00	0.05	3.252	O				2.71
157.500	0.00	0.05	3.252	O				2.71
157.583	0.00	0.05	3.252	O				2.71
157.667	0.00	0.05	3.251	O				2.71
157.750	0.00	0.05	3.251	O				2.71
157.833	0.00	0.05	3.251	O				2.71
157.917	0.00	0.05	3.250	O				2.71
158.000	0.00	0.05	3.250	O				2.71
158.083	0.00	0.05	3.250	O				2.71
158.167	0.00	0.05	3.249	O				2.71
158.250	0.00	0.05	3.249	O				2.71
158.333	0.00	0.05	3.249	O				2.71
158.417	0.00	0.05	3.248	O				2.71
158.500	0.00	0.05	3.248	O				2.71
158.583	0.00	0.05	3.248	O				2.71
158.667	0.00	0.05	3.248	O				2.71
158.750	0.00	0.05	3.247	O				2.71
158.833	0.00	0.05	3.247	O				2.71
158.917	0.00	0.05	3.247	O				2.71
159.000	0.00	0.05	3.246	O				2.71
159.083	0.00	0.05	3.246	O				2.70
159.167	0.00	0.05	3.246	O				2.70
159.250	0.00	0.05	3.245	O				2.70
159.333	0.00	0.05	3.245	O				2.70
159.417	0.00	0.05	3.245	O				2.70
159.500	0.00	0.05	3.244	O				2.70
159.583	0.00	0.05	3.244	O				2.70
159.667	0.00	0.05	3.244	O				2.70
159.750	0.00	0.05	3.243	O				2.70
159.833	0.00	0.05	3.243	O				2.70
159.917	0.00	0.05	3.243	O				2.70
160.000	0.00	0.05	3.242	O				2.70
160.083	0.00	0.05	3.242	O				2.70
160.167	0.00	0.05	3.242	O				2.70
160.250	0.00	0.05	3.241	O				2.70
160.333	0.00	0.05	3.241	O				2.70
160.417	0.00	0.05	3.241	O				2.70
160.500	0.00	0.05	3.240	O				2.70

160.583	0.00	0.05	3.240	O				2.70
160.667	0.00	0.05	3.240	O				2.70
160.750	0.00	0.05	3.239	O				2.70
160.833	0.00	0.05	3.239	O				2.70
160.917	0.00	0.05	3.239	O				2.70
161.000	0.00	0.05	3.239	O				2.70
161.083	0.00	0.05	3.238	O				2.70
161.167	0.00	0.05	3.238	O				2.70
161.250	0.00	0.05	3.238	O				2.70
161.333	0.00	0.05	3.237	O				2.70
161.417	0.00	0.05	3.237	O				2.70
161.500	0.00	0.05	3.237	O				2.70
161.583	0.00	0.05	3.236	O				2.70
161.667	0.00	0.05	3.236	O				2.70
161.750	0.00	0.05	3.236	O				2.70
161.833	0.00	0.05	3.235	O				2.70
161.917	0.00	0.05	3.235	O				2.70
162.000	0.00	0.05	3.235	O				2.70
162.083	0.00	0.05	3.234	O				2.70
162.167	0.00	0.05	3.234	O				2.70
162.250	0.00	0.05	3.234	O				2.69
162.333	0.00	0.05	3.234	O				2.69
162.417	0.00	0.04	3.233	O				2.69
162.500	0.00	0.04	3.233	O				2.69
162.583	0.00	0.04	3.233	O				2.69
162.667	0.00	0.04	3.232	O				2.69
162.750	0.00	0.04	3.232	O				2.69
162.833	0.00	0.04	3.232	O				2.69
162.917	0.00	0.04	3.231	O				2.69
163.000	0.00	0.04	3.231	O				2.69
163.083	0.00	0.04	3.231	O				2.69
163.167	0.00	0.04	3.230	O				2.69
163.250	0.00	0.04	3.230	O				2.69
163.333	0.00	0.04	3.230	O				2.69
163.417	0.00	0.04	3.230	O				2.69
163.500	0.00	0.04	3.229	O				2.69
163.583	0.00	0.04	3.229	O				2.69
163.667	0.00	0.04	3.229	O				2.69
163.750	0.00	0.04	3.228	O				2.69
163.833	0.00	0.04	3.228	O				2.69
163.917	0.00	0.04	3.228	O				2.69
164.000	0.00	0.04	3.227	O				2.69
164.083	0.00	0.04	3.227	O				2.69
164.167	0.00	0.04	3.227	O				2.69
164.250	0.00	0.04	3.226	O				2.69
164.333	0.00	0.04	3.226	O				2.69
164.417	0.00	0.04	3.226	O				2.69
164.500	0.00	0.04	3.226	O				2.69
164.583	0.00	0.04	3.225	O				2.69
164.667	0.00	0.04	3.225	O				2.69

164.750	0.00	0.04	3.225	O				2.69
164.833	0.00	0.04	3.224	O				2.69
164.917	0.00	0.04	3.224	O				2.69
165.000	0.00	0.04	3.224	O				2.69
165.083	0.00	0.04	3.223	O				2.69
165.167	0.00	0.04	3.223	O				2.69
165.250	0.00	0.04	3.223	O				2.69
165.333	0.00	0.04	3.223	O				2.69
165.417	0.00	0.04	3.222	O				2.69
165.500	0.00	0.04	3.222	O				2.68
165.583	0.00	0.04	3.222	O				2.68
165.667	0.00	0.04	3.221	O				2.68
165.750	0.00	0.04	3.221	O				2.68
165.833	0.00	0.04	3.221	O				2.68
165.917	0.00	0.04	3.221	O				2.68
166.000	0.00	0.04	3.220	O				2.68
166.083	0.00	0.04	3.220	O				2.68
166.167	0.00	0.04	3.220	O				2.68
166.250	0.00	0.04	3.219	O				2.68
166.333	0.00	0.04	3.219	O				2.68
166.417	0.00	0.04	3.219	O				2.68
166.500	0.00	0.04	3.218	O				2.68
166.583	0.00	0.04	3.218	O				2.68
166.667	0.00	0.04	3.218	O				2.68
166.750	0.00	0.04	3.218	O				2.68
166.833	0.00	0.04	3.217	O				2.68
166.917	0.00	0.04	3.217	O				2.68
167.000	0.00	0.04	3.217	O				2.68
167.083	0.00	0.04	3.216	O				2.68
167.167	0.00	0.04	3.216	O				2.68
167.250	0.00	0.04	3.216	O				2.68
167.333	0.00	0.04	3.216	O				2.68
167.417	0.00	0.04	3.215	O				2.68
167.500	0.00	0.04	3.215	O				2.68
167.583	0.00	0.04	3.215	O				2.68
167.667	0.00	0.04	3.214	O				2.68
167.750	0.00	0.04	3.214	O				2.68
167.833	0.00	0.04	3.214	O				2.68
167.917	0.00	0.04	3.213	O				2.68
168.000	0.00	0.04	3.213	O				2.68
168.083	0.00	0.04	3.213	O				2.68
168.167	0.00	0.04	3.213	O				2.68
168.250	0.00	0.04	3.212	O				2.68
168.333	0.00	0.04	3.212	O				2.68
168.417	0.00	0.04	3.212	O				2.68
168.500	0.00	0.04	3.211	O				2.68
168.583	0.00	0.04	3.211	O				2.68
168.667	0.00	0.04	3.211	O				2.68
168.750	0.00	0.04	3.211	O				2.68
168.833	0.00	0.04	3.210	O				2.68

168.917	0.00	0.04	3.210	O				2.68
169.000	0.00	0.04	3.210	O				2.67
169.083	0.00	0.04	3.209	O				2.67
169.167	0.00	0.04	3.209	O				2.67
169.250	0.00	0.04	3.209	O				2.67
169.333	0.00	0.04	3.209	O				2.67
169.417	0.00	0.04	3.208	O				2.67
169.500	0.00	0.04	3.208	O				2.67
169.583	0.00	0.04	3.208	O				2.67
169.667	0.00	0.04	3.207	O				2.67
169.750	0.00	0.04	3.207	O				2.67
169.833	0.00	0.04	3.207	O				2.67
169.917	0.00	0.04	3.207	O				2.67
170.000	0.00	0.04	3.206	O				2.67
170.083	0.00	0.04	3.206	O				2.67
170.167	0.00	0.04	3.206	O				2.67
170.250	0.00	0.04	3.205	O				2.67
170.333	0.00	0.04	3.205	O				2.67
170.417	0.00	0.04	3.205	O				2.67
170.500	0.00	0.04	3.205	O				2.67
170.583	0.00	0.04	3.204	O				2.67
170.667	0.00	0.04	3.204	O				2.67
170.750	0.00	0.04	3.204	O				2.67
170.833	0.00	0.04	3.204	O				2.67
170.917	0.00	0.04	3.203	O				2.67
171.000	0.00	0.04	3.203	O				2.67
171.083	0.00	0.04	3.203	O				2.67
171.167	0.00	0.04	3.202	O				2.67
171.250	0.00	0.04	3.202	O				2.67
171.333	0.00	0.04	3.202	O				2.67
171.417	0.00	0.04	3.202	O				2.67
171.500	0.00	0.04	3.201	O				2.67
171.583	0.00	0.04	3.201	O				2.67
171.667	0.00	0.04	3.201	O				2.67
171.750	0.00	0.04	3.200	O				2.67
171.833	0.00	0.04	3.200	O				2.67
171.917	0.00	0.04	3.200	O				2.67
172.000	0.00	0.04	3.200	O				2.67
172.083	0.00	0.04	3.199	O				2.67
172.167	0.00	0.04	3.199	O				2.67
172.250	0.00	0.04	3.199	O				2.67
172.333	0.00	0.04	3.199	O				2.67
172.417	0.00	0.04	3.198	O				2.67
172.500	0.00	0.04	3.198	O				2.66
172.583	0.00	0.04	3.198	O				2.66
172.667	0.00	0.04	3.197	O				2.66
172.750	0.00	0.04	3.197	O				2.66
172.833	0.00	0.04	3.197	O				2.66
172.917	0.00	0.04	3.197	O				2.66
173.000	0.00	0.04	3.196	O				2.66

173.083	0.00	0.04	3.196	O				2.66
173.167	0.00	0.04	3.196	O				2.66
173.250	0.00	0.04	3.196	O				2.66
173.333	0.00	0.04	3.195	O				2.66
173.417	0.00	0.04	3.195	O				2.66
173.500	0.00	0.04	3.195	O				2.66
173.583	0.00	0.04	3.194	O				2.66
173.667	0.00	0.04	3.194	O				2.66
173.750	0.00	0.04	3.194	O				2.66
173.833	0.00	0.04	3.194	O				2.66
173.917	0.00	0.04	3.193	O				2.66
174.000	0.00	0.04	3.193	O				2.66
174.083	0.00	0.04	3.193	O				2.66
174.167	0.00	0.04	3.193	O				2.66
174.250	0.00	0.04	3.192	O				2.66
174.333	0.00	0.04	3.192	O				2.66
174.417	0.00	0.04	3.192	O				2.66
174.500	0.00	0.04	3.192	O				2.66
174.583	0.00	0.04	3.191	O				2.66
174.667	0.00	0.04	3.191	O				2.66
174.750	0.00	0.04	3.191	O				2.66
174.833	0.00	0.04	3.190	O				2.66
174.917	0.00	0.04	3.190	O				2.66
175.000	0.00	0.04	3.190	O				2.66
175.083	0.00	0.04	3.190	O				2.66
175.167	0.00	0.04	3.189	O				2.66
175.250	0.00	0.04	3.189	O				2.66
175.333	0.00	0.04	3.189	O				2.66
175.417	0.00	0.04	3.189	O				2.66
175.500	0.00	0.04	3.188	O				2.66
175.583	0.00	0.04	3.188	O				2.66
175.667	0.00	0.04	3.188	O				2.66
175.750	0.00	0.04	3.188	O				2.66
175.833	0.00	0.04	3.187	O				2.66
175.917	0.00	0.04	3.187	O				2.66
176.000	0.00	0.04	3.187	O				2.66
176.083	0.00	0.04	3.186	O				2.66
176.167	0.00	0.04	3.186	O				2.66
176.250	0.00	0.04	3.186	O				2.65
176.333	0.00	0.04	3.186	O				2.65
176.417	0.00	0.04	3.185	O				2.65
176.500	0.00	0.04	3.185	O				2.65
176.583	0.00	0.04	3.185	O				2.65
176.667	0.00	0.04	3.185	O				2.65
176.750	0.00	0.04	3.184	O				2.65
176.833	0.00	0.04	3.184	O				2.65
176.917	0.00	0.04	3.184	O				2.65
177.000	0.00	0.04	3.184	O				2.65
177.083	0.00	0.04	3.183	O				2.65
177.167	0.00	0.04	3.183	O				2.65

177.250	0.00	0.04	3.183	O				2.65
177.333	0.00	0.04	3.183	O				2.65
177.417	0.00	0.04	3.182	O				2.65
177.500	0.00	0.04	3.182	O				2.65
177.583	0.00	0.04	3.182	O				2.65
177.667	0.00	0.04	3.182	O				2.65
177.750	0.00	0.04	3.181	O				2.65
177.833	0.00	0.04	3.181	O				2.65
177.917	0.00	0.04	3.181	O				2.65
178.000	0.00	0.04	3.181	O				2.65
178.083	0.00	0.04	3.180	O				2.65
178.167	0.00	0.04	3.180	O				2.65
178.250	0.00	0.04	3.180	O				2.65
178.333	0.00	0.04	3.180	O				2.65
178.417	0.00	0.04	3.179	O				2.65
178.500	0.00	0.04	3.179	O				2.65
178.583	0.00	0.04	3.179	O				2.65
178.667	0.00	0.04	3.179	O				2.65
178.750	0.00	0.04	3.178	O				2.65
178.833	0.00	0.04	3.178	O				2.65
178.917	0.00	0.04	3.178	O				2.65
179.000	0.00	0.04	3.178	O				2.65
179.083	0.00	0.04	3.177	O				2.65
179.167	0.00	0.04	3.177	O				2.65
179.250	0.00	0.04	3.177	O				2.65
179.333	0.00	0.04	3.177	O				2.65
179.417	0.00	0.04	3.176	O				2.65
179.500	0.00	0.04	3.176	O				2.65
179.583	0.00	0.04	3.176	O				2.65
179.667	0.00	0.04	3.175	O				2.65
179.750	0.00	0.04	3.175	O				2.65
179.833	0.00	0.04	3.175	O				2.65
179.917	0.00	0.04	3.175	O				2.65
180.000	0.00	0.04	3.175	O				2.65
180.083	0.00	0.04	3.174	O				2.65
180.167	0.00	0.04	3.174	O				2.65
180.250	0.00	0.04	3.174	O				2.64
180.333	0.00	0.04	3.174	O				2.64
180.417	0.00	0.04	3.173	O				2.64
180.500	0.00	0.04	3.173	O				2.64
180.583	0.00	0.04	3.173	O				2.64
180.667	0.00	0.04	3.173	O				2.64
180.750	0.00	0.04	3.172	O				2.64
180.833	0.00	0.04	3.172	O				2.64
180.917	0.00	0.04	3.172	O				2.64
181.000	0.00	0.04	3.172	O				2.64
181.083	0.00	0.04	3.171	O				2.64
181.167	0.00	0.04	3.171	O				2.64
181.250	0.00	0.04	3.171	O				2.64
181.333	0.00	0.04	3.171	O				2.64

181.417	0.00	0.04	3.170	O				2.64
181.500	0.00	0.04	3.170	O				2.64
181.583	0.00	0.04	3.170	O				2.64
181.667	0.00	0.04	3.170	O				2.64
181.750	0.00	0.04	3.169	O				2.64
181.833	0.00	0.04	3.169	O				2.64
181.917	0.00	0.04	3.169	O				2.64
182.000	0.00	0.04	3.169	O				2.64
182.083	0.00	0.04	3.168	O				2.64
182.167	0.00	0.04	3.168	O				2.64
182.250	0.00	0.04	3.168	O				2.64
182.333	0.00	0.04	3.168	O				2.64
182.417	0.00	0.04	3.167	O				2.64
182.500	0.00	0.04	3.167	O				2.64
182.583	0.00	0.04	3.167	O				2.64
182.667	0.00	0.03	3.167	O				2.64
182.750	0.00	0.03	3.166	O				2.64
182.833	0.00	0.03	3.166	O				2.64
182.917	0.00	0.03	3.166	O				2.64
183.000	0.00	0.03	3.166	O				2.64
183.083	0.00	0.03	3.165	O				2.64
183.167	0.00	0.03	3.165	O				2.64
183.250	0.00	0.03	3.165	O				2.64
183.333	0.00	0.03	3.165	O				2.64
183.417	0.00	0.03	3.164	O				2.64
183.500	0.00	0.03	3.164	O				2.64
183.583	0.00	0.03	3.164	O				2.64
183.667	0.00	0.03	3.164	O				2.64
183.750	0.00	0.03	3.164	O				2.64
183.833	0.00	0.03	3.163	O				2.64
183.917	0.00	0.03	3.163	O				2.64
184.000	0.00	0.03	3.163	O				2.64
184.083	0.00	0.03	3.163	O				2.64
184.167	0.00	0.03	3.162	O				2.64
184.250	0.00	0.03	3.162	O				2.64
184.333	0.00	0.03	3.162	O				2.63
184.417	0.00	0.03	3.162	O				2.63
184.500	0.00	0.03	3.161	O				2.63
184.583	0.00	0.03	3.161	O				2.63
184.667	0.00	0.03	3.161	O				2.63
184.750	0.00	0.03	3.161	O				2.63
184.833	0.00	0.03	3.160	O				2.63
184.917	0.00	0.03	3.160	O				2.63
185.000	0.00	0.03	3.160	O				2.63
185.083	0.00	0.03	3.160	O				2.63
185.167	0.00	0.03	3.160	O				2.63
185.250	0.00	0.03	3.159	O				2.63
185.333	0.00	0.03	3.159	O				2.63
185.417	0.00	0.03	3.159	O				2.63
185.500	0.00	0.03	3.159	O				2.63

185.583	0.00	0.03	3.158	O				2.63
185.667	0.00	0.03	3.158	O				2.63
185.750	0.00	0.03	3.158	O				2.63
185.833	0.00	0.03	3.158	O				2.63
185.917	0.00	0.03	3.157	O				2.63
186.000	0.00	0.03	3.157	O				2.63
186.083	0.00	0.03	3.157	O				2.63
186.167	0.00	0.03	3.157	O				2.63
186.250	0.00	0.03	3.157	O				2.63
186.333	0.00	0.03	3.156	O				2.63
186.417	0.00	0.03	3.156	O				2.63
186.500	0.00	0.03	3.156	O				2.63
186.583	0.00	0.03	3.156	O				2.63
186.667	0.00	0.03	3.155	O				2.63
186.750	0.00	0.03	3.155	O				2.63
186.833	0.00	0.03	3.155	O				2.63
186.917	0.00	0.03	3.155	O				2.63
187.000	0.00	0.03	3.154	O				2.63
187.083	0.00	0.03	3.154	O				2.63
187.167	0.00	0.03	3.154	O				2.63
187.250	0.00	0.03	3.154	O				2.63
187.333	0.00	0.03	3.154	O				2.63
187.417	0.00	0.03	3.153	O				2.63
187.500	0.00	0.03	3.153	O				2.63
187.583	0.00	0.03	3.153	O				2.63
187.667	0.00	0.03	3.153	O				2.63
187.750	0.00	0.03	3.152	O				2.63
187.833	0.00	0.03	3.152	O				2.63
187.917	0.00	0.03	3.152	O				2.63
188.000	0.00	0.03	3.152	O				2.63
188.083	0.00	0.03	3.152	O				2.63
188.167	0.00	0.03	3.151	O				2.63
188.250	0.00	0.03	3.151	O				2.63
188.333	0.00	0.03	3.151	O				2.63
188.417	0.00	0.03	3.151	O				2.63
188.500	0.00	0.03	3.150	O				2.63
188.583	0.00	0.03	3.150	O				2.63
188.667	0.00	0.03	3.150	O				2.62
188.750	0.00	0.03	3.150	O				2.62
188.833	0.00	0.03	3.149	O				2.62
188.917	0.00	0.03	3.149	O				2.62
189.000	0.00	0.03	3.149	O				2.62
189.083	0.00	0.03	3.149	O				2.62
189.167	0.00	0.03	3.149	O				2.62
189.250	0.00	0.03	3.148	O				2.62
189.333	0.00	0.03	3.148	O				2.62
189.417	0.00	0.03	3.148	O				2.62
189.500	0.00	0.03	3.148	O				2.62
189.583	0.00	0.03	3.147	O				2.62
189.667	0.00	0.03	3.147	O				2.62

189.750	0.00	0.03	3.147	O				2.62
189.833	0.00	0.03	3.147	O				2.62
189.917	0.00	0.03	3.147	O				2.62
190.000	0.00	0.03	3.146	O				2.62
190.083	0.00	0.03	3.146	O				2.62
190.167	0.00	0.03	3.146	O				2.62
190.250	0.00	0.03	3.146	O				2.62
190.333	0.00	0.03	3.146	O				2.62
190.417	0.00	0.03	3.145	O				2.62
190.500	0.00	0.03	3.145	O				2.62
190.583	0.00	0.03	3.145	O				2.62
190.667	0.00	0.03	3.145	O				2.62
190.750	0.00	0.03	3.144	O				2.62
190.833	0.00	0.03	3.144	O				2.62
190.917	0.00	0.03	3.144	O				2.62
191.000	0.00	0.03	3.144	O				2.62
191.083	0.00	0.03	3.144	O				2.62
191.167	0.00	0.03	3.143	O				2.62
191.250	0.00	0.03	3.143	O				2.62
191.333	0.00	0.03	3.143	O				2.62
191.417	0.00	0.03	3.143	O				2.62
191.500	0.00	0.03	3.142	O				2.62
191.583	0.00	0.03	3.142	O				2.62
191.667	0.00	0.03	3.142	O				2.62
191.750	0.00	0.03	3.142	O				2.62
191.833	0.00	0.03	3.142	O				2.62
191.917	0.00	0.03	3.141	O				2.62
192.000	0.00	0.03	3.141	O				2.62
192.083	0.00	0.03	3.141	O				2.62
192.167	0.00	0.03	3.141	O				2.62
192.250	0.00	0.03	3.141	O				2.62
192.333	0.00	0.03	3.140	O				2.62
192.417	0.00	0.03	3.140	O				2.62
192.500	0.00	0.03	3.140	O				2.62
192.583	0.00	0.03	3.140	O				2.62
192.667	0.00	0.03	3.139	O				2.62
192.750	0.00	0.03	3.139	O				2.62
192.833	0.00	0.03	3.139	O				2.62
192.917	0.00	0.03	3.139	O				2.62
193.000	0.00	0.03	3.139	O				2.62
193.083	0.00	0.03	3.138	O				2.62
193.167	0.00	0.03	3.138	O				2.62
193.250	0.00	0.03	3.138	O				2.61
193.333	0.00	0.03	3.138	O				2.61
193.417	0.00	0.03	3.138	O				2.61
193.500	0.00	0.03	3.137	O				2.61
193.583	0.00	0.03	3.137	O				2.61
193.667	0.00	0.03	3.137	O				2.61
193.750	0.00	0.03	3.137	O				2.61
193.833	0.00	0.03	3.136	O				2.61

193.917	0.00	0.03	3.136	O	|	|	|	2.61
194.000	0.00	0.03	3.136	O	|	|	|	2.61
194.083	0.00	0.03	3.136	O	|	|	|	2.61
194.167	0.00	0.03	3.136	O	|	|	|	2.61
194.250	0.00	0.03	3.135	O	|	|	|	2.61
194.333	0.00	0.03	3.135	O	|	|	|	2.61
194.417	0.00	0.03	3.135	O	|	|	|	2.61
194.500	0.00	0.03	3.135	O	|	|	|	2.61
194.583	0.00	0.03	3.135	O	|	|	|	2.61
194.667	0.00	0.03	3.134	O	|	|	|	2.61
194.750	0.00	0.03	3.134	O	|	|	|	2.61
194.833	0.00	0.03	3.134	O	|	|	|	2.61
194.917	0.00	0.03	3.134	O	|	|	|	2.61
195.000	0.00	0.03	3.134	O	|	|	|	2.61
195.083	0.00	0.03	3.133	O	|	|	|	2.61
195.167	0.00	0.03	3.133	O	|	|	|	2.61
195.250	0.00	0.03	3.133	O	|	|	|	2.61
195.333	0.00	0.03	3.133	O	|	|	|	2.61
195.417	0.00	0.03	3.133	O	|	|	|	2.61
195.500	0.00	0.03	3.132	O	|	|	|	2.61
195.583	0.00	0.03	3.132	O	|	|	|	2.61
195.667	0.00	0.03	3.132	O	|	|	|	2.61
195.750	0.00	0.03	3.132	O	|	|	|	2.61
195.833	0.00	0.03	3.132	O	|	|	|	2.61
195.917	0.00	0.03	3.131	O	|	|	|	2.61
196.000	0.00	0.03	3.131	O	|	|	|	2.61
196.083	0.00	0.03	3.131	O	|	|	|	2.61
196.167	0.00	0.03	3.131	O	|	|	|	2.61
196.250	0.00	0.03	3.130	O	|	|	|	2.61
196.333	0.00	0.03	3.130	O	|	|	|	2.61
196.417	0.00	0.03	3.130	O	|	|	|	2.61
196.500	0.00	0.03	3.130	O	|	|	|	2.61
196.583	0.00	0.03	3.130	O	|	|	|	2.61
196.667	0.00	0.03	3.129	O	|	|	|	2.61
196.750	0.00	0.03	3.129	O	|	|	|	2.61
196.833	0.00	0.03	3.129	O	|	|	|	2.61
196.917	0.00	0.03	3.129	O	|	|	|	2.61
197.000	0.00	0.03	3.129	O	|	|	|	2.61
197.083	0.00	0.03	3.128	O	|	|	|	2.61
197.167	0.00	0.03	3.128	O	|	|	|	2.61
197.250	0.00	0.03	3.128	O	|	|	|	2.61
197.333	0.00	0.03	3.128	O	|	|	|	2.61
197.417	0.00	0.03	3.128	O	|	|	|	2.61
197.500	0.00	0.03	3.127	O	|	|	|	2.61
197.583	0.00	0.03	3.127	O	|	|	|	2.61
197.667	0.00	0.03	3.127	O	|	|	|	2.61
197.750	0.00	0.03	3.127	O	|	|	|	2.61
197.833	0.00	0.03	3.127	O	|	|	|	2.61
197.917	0.00	0.03	3.126	O	|	|	|	2.61
198.000	0.00	0.03	3.126	O	|	|	|	2.61

198.083	0.00	0.03	3.126	O				2.61
198.167	0.00	0.03	3.126	O				2.60
198.250	0.00	0.03	3.126	O				2.60
198.333	0.00	0.03	3.125	O				2.60
198.417	0.00	0.03	3.125	O				2.60
198.500	0.00	0.03	3.125	O				2.60
198.583	0.00	0.03	3.125	O				2.60
198.667	0.00	0.03	3.125	O				2.60
198.750	0.00	0.03	3.124	O				2.60
198.833	0.00	0.03	3.124	O				2.60
198.917	0.00	0.03	3.124	O				2.60
199.000	0.00	0.03	3.124	O				2.60
199.083	0.00	0.03	3.124	O				2.60
199.167	0.00	0.03	3.123	O				2.60
199.250	0.00	0.03	3.123	O				2.60
199.333	0.00	0.03	3.123	O				2.60
199.417	0.00	0.03	3.123	O				2.60
199.500	0.00	0.03	3.123	O				2.60
199.583	0.00	0.03	3.123	O				2.60
199.667	0.00	0.03	3.122	O				2.60
199.750	0.00	0.03	3.122	O				2.60
199.833	0.00	0.03	3.122	O				2.60
199.917	0.00	0.03	3.122	O				2.60
200.000	0.00	0.03	3.122	O				2.60
200.083	0.00	0.03	3.121	O				2.60
200.167	0.00	0.03	3.121	O				2.60
200.250	0.00	0.03	3.121	O				2.60
200.333	0.00	0.03	3.121	O				2.60
200.417	0.00	0.03	3.121	O				2.60
200.500	0.00	0.03	3.120	O				2.60
200.583	0.00	0.03	3.120	O				2.60
200.667	0.00	0.03	3.120	O				2.60
200.750	0.00	0.03	3.120	O				2.60
200.833	0.00	0.03	3.120	O				2.60
200.917	0.00	0.03	3.119	O				2.60
201.000	0.00	0.03	3.119	O				2.60
201.083	0.00	0.03	3.119	O				2.60
201.167	0.00	0.03	3.119	O				2.60
201.250	0.00	0.03	3.119	O				2.60
201.333	0.00	0.03	3.118	O				2.60
201.417	0.00	0.03	3.118	O				2.60
201.500	0.00	0.03	3.118	O				2.60
201.583	0.00	0.03	3.118	O				2.60
201.667	0.00	0.03	3.118	O				2.60
201.750	0.00	0.03	3.118	O				2.60
201.833	0.00	0.03	3.117	O				2.60
201.917	0.00	0.03	3.117	O				2.60
202.000	0.00	0.03	3.117	O				2.60
202.083	0.00	0.03	3.117	O				2.60
202.167	0.00	0.03	3.117	O				2.60

202.250	0.00	0.03	3.116	O				2.60
202.333	0.00	0.03	3.116	O				2.60
202.417	0.00	0.03	3.116	O				2.60
202.500	0.00	0.03	3.116	O				2.60
202.583	0.00	0.03	3.116	O				2.60
202.667	0.00	0.03	3.115	O				2.60
202.750	0.00	0.03	3.115	O				2.60
202.833	0.00	0.03	3.115	O				2.60
202.917	0.00	0.03	3.115	O				2.60
203.000	0.00	0.03	3.115	O				2.60
203.083	0.00	0.03	3.114	O				2.60
203.167	0.00	0.03	3.114	O				2.60
203.250	0.00	0.03	3.114	O				2.60
203.333	0.00	0.03	3.114	O				2.59
203.417	0.00	0.03	3.114	O				2.59
203.500	0.00	0.03	3.114	O				2.59
203.583	0.00	0.03	3.113	O				2.59
203.667	0.00	0.03	3.113	O				2.59
203.750	0.00	0.03	3.113	O				2.59
203.833	0.00	0.03	3.113	O				2.59
203.917	0.00	0.03	3.113	O				2.59
204.000	0.00	0.03	3.112	O				2.59
204.083	0.00	0.03	3.112	O				2.59
204.167	0.00	0.03	3.112	O				2.59
204.250	0.00	0.03	3.112	O				2.59
204.333	0.00	0.03	3.112	O				2.59
204.417	0.00	0.03	3.112	O				2.59
204.500	0.00	0.03	3.111	O				2.59
204.583	0.00	0.03	3.111	O				2.59
204.667	0.00	0.03	3.111	O				2.59
204.750	0.00	0.03	3.111	O				2.59
204.833	0.00	0.03	3.111	O				2.59
204.917	0.00	0.03	3.110	O				2.59
205.000	0.00	0.03	3.110	O				2.59
205.083	0.00	0.03	3.110	O				2.59
205.167	0.00	0.03	3.110	O				2.59
205.250	0.00	0.03	3.110	O				2.59
205.333	0.00	0.03	3.110	O				2.59
205.417	0.00	0.03	3.109	O				2.59
205.500	0.00	0.03	3.109	O				2.59
205.583	0.00	0.03	3.109	O				2.59
205.667	0.00	0.03	3.109	O				2.59
205.750	0.00	0.03	3.109	O				2.59
205.833	0.00	0.03	3.108	O				2.59
205.917	0.00	0.03	3.108	O				2.59
206.000	0.00	0.03	3.108	O				2.59
206.083	0.00	0.03	3.108	O				2.59
206.167	0.00	0.03	3.108	O				2.59
206.250	0.00	0.03	3.108	O				2.59
206.333	0.00	0.03	3.107	O				2.59

206.417	0.00	0.03	3.107	O					2.59
206.500	0.00	0.03	3.107	O					2.59
206.583	0.00	0.03	3.107	O					2.59
206.667	0.00	0.03	3.107	O					2.59
206.750	0.00	0.03	3.106	O					2.59
206.833	0.00	0.03	3.106	O					2.59
206.917	0.00	0.03	3.106	O					2.59
207.000	0.00	0.03	3.106	O					2.59
207.083	0.00	0.03	3.106	O					2.59
207.167	0.00	0.03	3.106	O					2.59
207.250	0.00	0.03	3.105	O					2.59
207.333	0.00	0.03	3.105	O					2.59
207.417	0.00	0.03	3.105	O					2.59
207.500	0.00	0.03	3.105	O					2.59
207.583	0.00	0.03	3.105	O					2.59
207.667	0.00	0.03	3.104	O					2.59
207.750	0.00	0.03	3.104	O					2.59
207.833	0.00	0.03	3.104	O					2.59
207.917	0.00	0.03	3.104	O					2.59
208.000	0.00	0.03	3.104	O					2.59
208.083	0.00	0.03	3.104	O					2.59
208.167	0.00	0.03	3.103	O					2.59
208.250	0.00	0.03	3.103	O					2.59
208.333	0.00	0.03	3.103	O					2.59
208.417	0.00	0.03	3.103	O					2.59
208.500	0.00	0.03	3.103	O					2.59
208.583	0.00	0.03	3.103	O					2.59
208.667	0.00	0.03	3.102	O					2.59
208.750	0.00	0.03	3.102	O					2.59
208.833	0.00	0.03	3.102	O					2.59
208.917	0.00	0.03	3.102	O					2.58
209.000	0.00	0.03	3.102	O					2.58
209.083	0.00	0.03	3.101	O					2.58
209.167	0.00	0.03	3.101	O					2.58
209.250	0.00	0.03	3.101	O					2.58
209.333	0.00	0.03	3.101	O					2.58
209.417	0.00	0.03	3.101	O					2.58
209.500	0.00	0.03	3.101	O					2.58
209.583	0.00	0.03	3.100	O					2.58
209.667	0.00	0.03	3.100	O					2.58
209.750	0.00	0.03	3.100	O					2.58
209.833	0.00	0.02	3.100	O					2.58
209.917	0.00	0.02	3.100	O					2.58
210.000	0.00	0.02	3.100	O					2.58
210.083	0.00	0.02	3.099	O					2.58
210.167	0.00	0.02	3.099	O					2.58
210.250	0.00	0.02	3.099	O					2.58
210.333	0.00	0.02	3.099	O					2.58
210.417	0.00	0.02	3.099	O					2.58
210.500	0.00	0.02	3.099	O					2.58

210.583	0.00	0.02	3.098	O	|	|	|	2.58
210.667	0.00	0.02	3.098	O	|	|	|	2.58
210.750	0.00	0.02	3.098	O	|	|	|	2.58
210.833	0.00	0.02	3.098	O	|	|	|	2.58
210.917	0.00	0.02	3.098	O	|	|	|	2.58
211.000	0.00	0.02	3.098	O	|	|	|	2.58
211.083	0.00	0.02	3.097	O	|	|	|	2.58
211.167	0.00	0.02	3.097	O	|	|	|	2.58
211.250	0.00	0.02	3.097	O	|	|	|	2.58
211.333	0.00	0.02	3.097	O	|	|	|	2.58
211.417	0.00	0.02	3.097	O	|	|	|	2.58
211.500	0.00	0.02	3.097	O	|	|	|	2.58
211.583	0.00	0.02	3.096	O	|	|	|	2.58
211.667	0.00	0.02	3.096	O	|	|	|	2.58
211.750	0.00	0.02	3.096	O	|	|	|	2.58
211.833	0.00	0.02	3.096	O	|	|	|	2.58
211.917	0.00	0.02	3.096	O	|	|	|	2.58
212.000	0.00	0.02	3.096	O	|	|	|	2.58
212.083	0.00	0.02	3.095	O	|	|	|	2.58
212.167	0.00	0.02	3.095	O	|	|	|	2.58
212.250	0.00	0.02	3.095	O	|	|	|	2.58
212.333	0.00	0.02	3.095	O	|	|	|	2.58
212.417	0.00	0.02	3.095	O	|	|	|	2.58
212.500	0.00	0.02	3.095	O	|	|	|	2.58
212.583	0.00	0.02	3.094	O	|	|	|	2.58
212.667	0.00	0.02	3.094	O	|	|	|	2.58
212.750	0.00	0.02	3.094	O	|	|	|	2.58
212.833	0.00	0.02	3.094	O	|	|	|	2.58
212.917	0.00	0.02	3.094	O	|	|	|	2.58
213.000	0.00	0.02	3.094	O	|	|	|	2.58
213.083	0.00	0.02	3.093	O	|	|	|	2.58
213.167	0.00	0.02	3.093	O	|	|	|	2.58
213.250	0.00	0.02	3.093	O	|	|	|	2.58
213.333	0.00	0.02	3.093	O	|	|	|	2.58
213.417	0.00	0.02	3.093	O	|	|	|	2.58
213.500	0.00	0.02	3.093	O	|	|	|	2.58
213.583	0.00	0.02	3.092	O	|	|	|	2.58
213.667	0.00	0.02	3.092	O	|	|	|	2.58
213.750	0.00	0.02	3.092	O	|	|	|	2.58
213.833	0.00	0.02	3.092	O	|	|	|	2.58
213.917	0.00	0.02	3.092	O	|	|	|	2.58
214.000	0.00	0.02	3.092	O	|	|	|	2.58
214.083	0.00	0.02	3.091	O	|	|	|	2.58
214.167	0.00	0.02	3.091	O	|	|	|	2.58
214.250	0.00	0.02	3.091	O	|	|	|	2.58
214.333	0.00	0.02	3.091	O	|	|	|	2.58
214.417	0.00	0.02	3.091	O	|	|	|	2.58
214.500	0.00	0.02	3.091	O	|	|	|	2.58
214.583	0.00	0.02	3.090	O	|	|	|	2.58
214.667	0.00	0.02	3.090	O	|	|	|	2.58

214.750	0.00	0.02	3.090	O	|	|	|	2.58
214.833	0.00	0.02	3.090	O	|	|	|	2.57
214.917	0.00	0.02	3.090	O	|	|	|	2.57
215.000	0.00	0.02	3.090	O	|	|	|	2.57
215.083	0.00	0.02	3.089	O	|	|	|	2.57
215.167	0.00	0.02	3.089	O	|	|	|	2.57
215.250	0.00	0.02	3.089	O	|	|	|	2.57
215.333	0.00	0.02	3.089	O	|	|	|	2.57
215.417	0.00	0.02	3.089	O	|	|	|	2.57
215.500	0.00	0.02	3.089	O	|	|	|	2.57
215.583	0.00	0.02	3.088	O	|	|	|	2.57
215.667	0.00	0.02	3.088	O	|	|	|	2.57
215.750	0.00	0.02	3.088	O	|	|	|	2.57
215.833	0.00	0.02	3.088	O	|	|	|	2.57
215.917	0.00	0.02	3.088	O	|	|	|	2.57
216.000	0.00	0.02	3.088	O	|	|	|	2.57
216.083	0.00	0.02	3.088	O	|	|	|	2.57
216.167	0.00	0.02	3.087	O	|	|	|	2.57
216.250	0.00	0.02	3.087	O	|	|	|	2.57
216.333	0.00	0.02	3.087	O	|	|	|	2.57
216.417	0.00	0.02	3.087	O	|	|	|	2.57
216.500	0.00	0.02	3.087	O	|	|	|	2.57
216.583	0.00	0.02	3.087	O	|	|	|	2.57
216.667	0.00	0.02	3.086	O	|	|	|	2.57
216.750	0.00	0.02	3.086	O	|	|	|	2.57
216.833	0.00	0.02	3.086	O	|	|	|	2.57
216.917	0.00	0.02	3.086	O	|	|	|	2.57
217.000	0.00	0.02	3.086	O	|	|	|	2.57
217.083	0.00	0.02	3.086	O	|	|	|	2.57
217.167	0.00	0.02	3.085	O	|	|	|	2.57
217.250	0.00	0.02	3.085	O	|	|	|	2.57
217.333	0.00	0.02	3.085	O	|	|	|	2.57
217.417	0.00	0.02	3.085	O	|	|	|	2.57
217.500	0.00	0.02	3.085	O	|	|	|	2.57
217.583	0.00	0.02	3.085	O	|	|	|	2.57
217.667	0.00	0.02	3.085	O	|	|	|	2.57
217.750	0.00	0.02	3.084	O	|	|	|	2.57
217.833	0.00	0.02	3.084	O	|	|	|	2.57
217.917	0.00	0.02	3.084	O	|	|	|	2.57
218.000	0.00	0.02	3.084	O	|	|	|	2.57
218.083	0.00	0.02	3.084	O	|	|	|	2.57
218.167	0.00	0.02	3.084	O	|	|	|	2.57
218.250	0.00	0.02	3.083	O	|	|	|	2.57
218.333	0.00	0.02	3.083	O	|	|	|	2.57
218.417	0.00	0.02	3.083	O	|	|	|	2.57
218.500	0.00	0.02	3.083	O	|	|	|	2.57
218.583	0.00	0.02	3.083	O	|	|	|	2.57
218.667	0.00	0.02	3.083	O	|	|	|	2.57
218.750	0.00	0.02	3.083	O	|	|	|	2.57
218.833	0.00	0.02	3.082	O	|	|	|	2.57

218.917	0.00	0.02	3.082	O				2.57
219.000	0.00	0.02	3.082	O				2.57
219.083	0.00	0.02	3.082	O				2.57
219.167	0.00	0.02	3.082	O				2.57
219.250	0.00	0.02	3.082	O				2.57
219.333	0.00	0.02	3.081	O				2.57
219.417	0.00	0.02	3.081	O				2.57
219.500	0.00	0.02	3.081	O				2.57
219.583	0.00	0.02	3.081	O				2.57
219.667	0.00	0.02	3.081	O				2.57
219.750	0.00	0.02	3.081	O				2.57
219.833	0.00	0.02	3.081	O				2.57
219.917	0.00	0.02	3.080	O				2.57
220.000	0.00	0.02	3.080	O				2.57
220.083	0.00	0.02	3.080	O				2.57
220.167	0.00	0.02	3.080	O				2.57
220.250	0.00	0.02	3.080	O				2.57
220.333	0.00	0.02	3.080	O				2.57
220.417	0.00	0.02	3.079	O				2.57
220.500	0.00	0.02	3.079	O				2.57
220.583	0.00	0.02	3.079	O				2.57
220.667	0.00	0.02	3.079	O				2.57
220.750	0.00	0.02	3.079	O				2.57
220.833	0.00	0.02	3.079	O				2.57
220.917	0.00	0.02	3.079	O				2.57
221.000	0.00	0.02	3.078	O				2.57
221.083	0.00	0.02	3.078	O				2.57
221.167	0.00	0.02	3.078	O				2.57
221.250	0.00	0.02	3.078	O				2.56
221.333	0.00	0.02	3.078	O				2.56
221.417	0.00	0.02	3.078	O				2.56
221.500	0.00	0.02	3.078	O				2.56
221.583	0.00	0.02	3.077	O				2.56
221.667	0.00	0.02	3.077	O				2.56
221.750	0.00	0.02	3.077	O				2.56
221.833	0.00	0.02	3.077	O				2.56
221.917	0.00	0.02	3.077	O				2.56
222.000	0.00	0.02	3.077	O				2.56
222.083	0.00	0.02	3.076	O				2.56
222.167	0.00	0.02	3.076	O				2.56
222.250	0.00	0.02	3.076	O				2.56
222.333	0.00	0.02	3.076	O				2.56
222.417	0.00	0.02	3.076	O				2.56
222.500	0.00	0.02	3.076	O				2.56
222.583	0.00	0.02	3.076	O				2.56
222.667	0.00	0.02	3.075	O				2.56
222.750	0.00	0.02	3.075	O				2.56
222.833	0.00	0.02	3.075	O				2.56
222.917	0.00	0.02	3.075	O				2.56
223.000	0.00	0.02	3.075	O				2.56

223.083	0.00	0.02	3.075	O				2.56
223.167	0.00	0.02	3.075	O				2.56
223.250	0.00	0.02	3.074	O				2.56
223.333	0.00	0.02	3.074	O				2.56
223.417	0.00	0.02	3.074	O				2.56
223.500	0.00	0.02	3.074	O				2.56
223.583	0.00	0.02	3.074	O				2.56
223.667	0.00	0.02	3.074	O				2.56
223.750	0.00	0.02	3.074	O				2.56
223.833	0.00	0.02	3.073	O				2.56
223.917	0.00	0.02	3.073	O				2.56
224.000	0.00	0.02	3.073	O				2.56
224.083	0.00	0.02	3.073	O				2.56
224.167	0.00	0.02	3.073	O				2.56
224.250	0.00	0.02	3.073	O				2.56
224.333	0.00	0.02	3.073	O				2.56
224.417	0.00	0.02	3.072	O				2.56
224.500	0.00	0.02	3.072	O				2.56
224.583	0.00	0.02	3.072	O				2.56
224.667	0.00	0.02	3.072	O				2.56
224.750	0.00	0.02	3.072	O				2.56
224.833	0.00	0.02	3.072	O				2.56
224.917	0.00	0.02	3.072	O				2.56
225.000	0.00	0.02	3.071	O				2.56
225.083	0.00	0.02	3.071	O				2.56
225.167	0.00	0.02	3.071	O				2.56
225.250	0.00	0.02	3.071	O				2.56
225.333	0.00	0.02	3.071	O				2.56
225.417	0.00	0.02	3.071	O				2.56
225.500	0.00	0.02	3.071	O				2.56
225.583	0.00	0.02	3.070	O				2.56
225.667	0.00	0.02	3.070	O				2.56
225.750	0.00	0.02	3.070	O				2.56
225.833	0.00	0.02	3.070	O				2.56
225.917	0.00	0.02	3.070	O				2.56
226.000	0.00	0.02	3.070	O				2.56
226.083	0.00	0.02	3.070	O				2.56
226.167	0.00	0.02	3.069	O				2.56
226.250	0.00	0.02	3.069	O				2.56
226.333	0.00	0.02	3.069	O				2.56
226.417	0.00	0.02	3.069	O				2.56
226.500	0.00	0.02	3.069	O				2.56
226.583	0.00	0.02	3.069	O				2.56
226.667	0.00	0.02	3.069	O				2.56
226.750	0.00	0.02	3.068	O				2.56
226.833	0.00	0.02	3.068	O				2.56
226.917	0.00	0.02	3.068	O				2.56
227.000	0.00	0.02	3.068	O				2.56
227.083	0.00	0.02	3.068	O				2.56
227.167	0.00	0.02	3.068	O				2.56

227.250	0.00	0.02	3.068	O				2.56
227.333	0.00	0.02	3.067	O				2.56
227.417	0.00	0.02	3.067	O				2.56
227.500	0.00	0.02	3.067	O				2.56
227.583	0.00	0.02	3.067	O				2.56
227.667	0.00	0.02	3.067	O				2.56
227.750	0.00	0.02	3.067	O				2.56
227.833	0.00	0.02	3.067	O				2.56
227.917	0.00	0.02	3.066	O				2.56
228.000	0.00	0.02	3.066	O				2.56
228.083	0.00	0.02	3.066	O				2.56
228.167	0.00	0.02	3.066	O				2.56
228.250	0.00	0.02	3.066	O				2.55
228.333	0.00	0.02	3.066	O				2.55
228.417	0.00	0.02	3.066	O				2.55
228.500	0.00	0.02	3.066	O				2.55
228.583	0.00	0.02	3.065	O				2.55
228.667	0.00	0.02	3.065	O				2.55
228.750	0.00	0.02	3.065	O				2.55
228.833	0.00	0.02	3.065	O				2.55
228.917	0.00	0.02	3.065	O				2.55
229.000	0.00	0.02	3.065	O				2.55
229.083	0.00	0.02	3.065	O				2.55
229.167	0.00	0.02	3.064	O				2.55
229.250	0.00	0.02	3.064	O				2.55
229.333	0.00	0.02	3.064	O				2.55
229.417	0.00	0.02	3.064	O				2.55
229.500	0.00	0.02	3.064	O				2.55
229.583	0.00	0.02	3.064	O				2.55
229.667	0.00	0.02	3.064	O				2.55
229.750	0.00	0.02	3.063	O				2.55
229.833	0.00	0.02	3.063	O				2.55
229.917	0.00	0.02	3.063	O				2.55
230.000	0.00	0.02	3.063	O				2.55
230.083	0.00	0.02	3.063	O				2.55
230.167	0.00	0.02	3.063	O				2.55
230.250	0.00	0.02	3.063	O				2.55
230.333	0.00	0.02	3.063	O				2.55
230.417	0.00	0.02	3.062	O				2.55
230.500	0.00	0.02	3.062	O				2.55
230.583	0.00	0.02	3.062	O				2.55
230.667	0.00	0.02	3.062	O				2.55
230.750	0.00	0.02	3.062	O				2.55
230.833	0.00	0.02	3.062	O				2.55
230.917	0.00	0.02	3.062	O				2.55
231.000	0.00	0.02	3.061	O				2.55
231.083	0.00	0.02	3.061	O				2.55
231.167	0.00	0.02	3.061	O				2.55
231.250	0.00	0.02	3.061	O				2.55
231.333	0.00	0.02	3.061	O				2.55

231.417	0.00	0.02	3.061	O	|	|	|	2.55
231.500	0.00	0.02	3.061	O	|	|	|	2.55
231.583	0.00	0.02	3.061	O	|	|	|	2.55
231.667	0.00	0.02	3.060	O	|	|	|	2.55
231.750	0.00	0.02	3.060	O	|	|	|	2.55
231.833	0.00	0.02	3.060	O	|	|	|	2.55
231.917	0.00	0.02	3.060	O	|	|	|	2.55
232.000	0.00	0.02	3.060	O	|	|	|	2.55
232.083	0.00	0.02	3.060	O	|	|	|	2.55
232.167	0.00	0.02	3.060	O	|	|	|	2.55
232.250	0.00	0.02	3.060	O	|	|	|	2.55
232.333	0.00	0.02	3.059	O	|	|	|	2.55
232.417	0.00	0.02	3.059	O	|	|	|	2.55
232.500	0.00	0.02	3.059	O	|	|	|	2.55
232.583	0.00	0.02	3.059	O	|	|	|	2.55
232.667	0.00	0.02	3.059	O	|	|	|	2.55
232.750	0.00	0.02	3.059	O	|	|	|	2.55
232.833	0.00	0.02	3.059	O	|	|	|	2.55
232.917	0.00	0.02	3.058	O	|	|	|	2.55
233.000	0.00	0.02	3.058	O	|	|	|	2.55
233.083	0.00	0.02	3.058	O	|	|	|	2.55
233.167	0.00	0.02	3.058	O	|	|	|	2.55
233.250	0.00	0.02	3.058	O	|	|	|	2.55
233.333	0.00	0.02	3.058	O	|	|	|	2.55
233.417	0.00	0.02	3.058	O	|	|	|	2.55
233.500	0.00	0.02	3.058	O	|	|	|	2.55
233.583	0.00	0.02	3.057	O	|	|	|	2.55
233.667	0.00	0.02	3.057	O	|	|	|	2.55
233.750	0.00	0.02	3.057	O	|	|	|	2.55
233.833	0.00	0.02	3.057	O	|	|	|	2.55
233.917	0.00	0.02	3.057	O	|	|	|	2.55
234.000	0.00	0.02	3.057	O	|	|	|	2.55
234.083	0.00	0.02	3.057	O	|	|	|	2.55
234.167	0.00	0.02	3.057	O	|	|	|	2.55
234.250	0.00	0.02	3.056	O	|	|	|	2.55
234.333	0.00	0.02	3.056	O	|	|	|	2.55
234.417	0.00	0.02	3.056	O	|	|	|	2.55
234.500	0.00	0.02	3.056	O	|	|	|	2.55
234.583	0.00	0.02	3.056	O	|	|	|	2.55
234.667	0.00	0.02	3.056	O	|	|	|	2.55
234.750	0.00	0.02	3.056	O	|	|	|	2.55
234.833	0.00	0.02	3.056	O	|	|	|	2.55
234.917	0.00	0.02	3.055	O	|	|	|	2.55
235.000	0.00	0.02	3.055	O	|	|	|	2.55
235.083	0.00	0.02	3.055	O	|	|	|	2.55
235.167	0.00	0.02	3.055	O	|	|	|	2.55
235.250	0.00	0.02	3.055	O	|	|	|	2.55
235.333	0.00	0.02	3.055	O	|	|	|	2.55
235.417	0.00	0.02	3.055	O	|	|	|	2.55
235.500	0.00	0.02	3.055	O	|	|	|	2.55

235.583	0.00	0.02	3.054	O				2.55
235.667	0.00	0.02	3.054	O				2.55
235.750	0.00	0.02	3.054	O				2.55
235.833	0.00	0.02	3.054	O				2.55
235.917	0.00	0.02	3.054	O				2.54
236.000	0.00	0.02	3.054	O				2.54
236.083	0.00	0.02	3.054	O				2.54
236.167	0.00	0.02	3.054	O				2.54
236.250	0.00	0.02	3.053	O				2.54
236.333	0.00	0.02	3.053	O				2.54
236.417	0.00	0.02	3.053	O				2.54
236.500	0.00	0.02	3.053	O				2.54
236.583	0.00	0.02	3.053	O				2.54
236.667	0.00	0.02	3.053	O				2.54
236.750	0.00	0.02	3.053	O				2.54
236.833	0.00	0.02	3.053	O				2.54
236.917	0.00	0.02	3.052	O				2.54
237.000	0.00	0.02	3.052	O				2.54
237.083	0.00	0.02	3.052	O				2.54
237.167	0.00	0.02	3.052	O				2.54
237.250	0.00	0.02	3.052	O				2.54
237.333	0.00	0.02	3.052	O				2.54
237.417	0.00	0.02	3.052	O				2.54
237.500	0.00	0.02	3.052	O				2.54
237.583	0.00	0.02	3.051	O				2.54
237.667	0.00	0.02	3.051	O				2.54
237.750	0.00	0.02	3.051	O				2.54
237.833	0.00	0.02	3.051	O				2.54
237.917	0.00	0.02	3.051	O				2.54
238.000	0.00	0.02	3.051	O				2.54
238.083	0.00	0.02	3.051	O				2.54
238.167	0.00	0.02	3.051	O				2.54
238.250	0.00	0.02	3.050	O				2.54
238.333	0.00	0.02	3.050	O				2.54
238.417	0.00	0.02	3.050	O				2.54
238.500	0.00	0.02	3.050	O				2.54
238.583	0.00	0.02	3.050	O				2.54
238.667	0.00	0.02	3.050	O				2.54
238.750	0.00	0.02	3.050	O				2.54
238.833	0.00	0.02	3.050	O				2.54
238.917	0.00	0.02	3.050	O				2.54
239.000	0.00	0.02	3.049	O				2.54
239.083	0.00	0.02	3.049	O				2.54
239.167	0.00	0.02	3.049	O				2.54
239.250	0.00	0.02	3.049	O				2.54
239.333	0.00	0.02	3.049	O				2.54
239.417	0.00	0.02	3.049	O				2.54
239.500	0.00	0.02	3.049	O				2.54
239.583	0.00	0.02	3.049	O				2.54
239.667	0.00	0.02	3.048	O				2.54

239.750	0.00	0.02	3.048	O	|	|	|	2.54
239.833	0.00	0.02	3.048	O	|	|	|	2.54
239.917	0.00	0.02	3.048	O	|	|	|	2.54
240.000	0.00	0.02	3.048	O	|	|	|	2.54
240.083	0.00	0.02	3.048	O	|	|	|	2.54
240.167	0.00	0.02	3.048	O	|	|	|	2.54
240.250	0.00	0.02	3.048	O	|	|	|	2.54
240.333	0.00	0.02	3.047	O	|	|	|	2.54
240.417	0.00	0.02	3.047	O	|	|	|	2.54
240.500	0.00	0.02	3.047	O	|	|	|	2.54
240.583	0.00	0.02	3.047	O	|	|	|	2.54
240.667	0.00	0.02	3.047	O	|	|	|	2.54
240.750	0.00	0.02	3.047	O	|	|	|	2.54
240.833	0.00	0.02	3.047	O	|	|	|	2.54
240.917	0.00	0.02	3.047	O	|	|	|	2.54
241.000	0.00	0.02	3.047	O	|	|	|	2.54
241.083	0.00	0.02	3.046	O	|	|	|	2.54
241.167	0.00	0.02	3.046	O	|	|	|	2.54
241.250	0.00	0.02	3.046	O	|	|	|	2.54
241.333	0.00	0.02	3.046	O	|	|	|	2.54
241.417	0.00	0.02	3.046	O	|	|	|	2.54
241.500	0.00	0.02	3.046	O	|	|	|	2.54
241.583	0.00	0.02	3.046	O	|	|	|	2.54
241.667	0.00	0.02	3.046	O	|	|	|	2.54
241.750	0.00	0.02	3.046	O	|	|	|	2.54
241.833	0.00	0.02	3.045	O	|	|	|	2.54
241.917	0.00	0.02	3.045	O	|	|	|	2.54
242.000	0.00	0.02	3.045	O	|	|	|	2.54
242.083	0.00	0.02	3.045	O	|	|	|	2.54
242.167	0.00	0.02	3.045	O	|	|	|	2.54
242.250	0.00	0.02	3.045	O	|	|	|	2.54
242.333	0.00	0.02	3.045	O	|	|	|	2.54
242.417	0.00	0.02	3.045	O	|	|	|	2.54
242.500	0.00	0.02	3.044	O	|	|	|	2.54
242.583	0.00	0.02	3.044	O	|	|	|	2.54
242.667	0.00	0.02	3.044	O	|	|	|	2.54
242.750	0.00	0.02	3.044	O	|	|	|	2.54
242.833	0.00	0.02	3.044	O	|	|	|	2.54
242.917	0.00	0.02	3.044	O	|	|	|	2.54
243.000	0.00	0.02	3.044	O	|	|	|	2.54
243.083	0.00	0.02	3.044	O	|	|	|	2.54
243.167	0.00	0.02	3.044	O	|	|	|	2.54
243.250	0.00	0.02	3.043	O	|	|	|	2.54
243.333	0.00	0.02	3.043	O	|	|	|	2.54
243.417	0.00	0.02	3.043	O	|	|	|	2.54
243.500	0.00	0.02	3.043	O	|	|	|	2.54
243.583	0.00	0.02	3.043	O	|	|	|	2.54
243.667	0.00	0.02	3.043	O	|	|	|	2.54
243.750	0.00	0.02	3.043	O	|	|	|	2.54
243.833	0.00	0.02	3.043	O	|	|	|	2.54

243.917	0.00	0.02	3.043	O	|	|	|	2.54
244.000	0.00	0.02	3.042	O	|	|	|	2.54
244.083	0.00	0.02	3.042	O	|	|	|	2.54
244.167	0.00	0.02	3.042	O	|	|	|	2.54
244.250	0.00	0.02	3.042	O	|	|	|	2.54
244.333	0.00	0.02	3.042	O	|	|	|	2.53
244.417	0.00	0.02	3.042	O	|	|	|	2.53
244.500	0.00	0.02	3.042	O	|	|	|	2.53
244.583	0.00	0.02	3.042	O	|	|	|	2.53
244.667	0.00	0.02	3.042	O	|	|	|	2.53
244.750	0.00	0.02	3.041	O	|	|	|	2.53
244.833	0.00	0.02	3.041	O	|	|	|	2.53
244.917	0.00	0.02	3.041	O	|	|	|	2.53
245.000	0.00	0.02	3.041	O	|	|	|	2.53
245.083	0.00	0.02	3.041	O	|	|	|	2.53
245.167	0.00	0.02	3.041	O	|	|	|	2.53
245.250	0.00	0.02	3.041	O	|	|	|	2.53
245.333	0.00	0.02	3.041	O	|	|	|	2.53
245.417	0.00	0.02	3.041	O	|	|	|	2.53
245.500	0.00	0.02	3.040	O	|	|	|	2.53
245.583	0.00	0.02	3.040	O	|	|	|	2.53
245.667	0.00	0.02	3.040	O	|	|	|	2.53
245.750	0.00	0.02	3.040	O	|	|	|	2.53
245.833	0.00	0.02	3.040	O	|	|	|	2.53
245.917	0.00	0.02	3.040	O	|	|	|	2.53
246.000	0.00	0.02	3.040	O	|	|	|	2.53
246.083	0.00	0.02	3.040	O	|	|	|	2.53
246.167	0.00	0.02	3.040	O	|	|	|	2.53
246.250	0.00	0.02	3.039	O	|	|	|	2.53
246.333	0.00	0.02	3.039	O	|	|	|	2.53
246.417	0.00	0.02	3.039	O	|	|	|	2.53
246.500	0.00	0.02	3.039	O	|	|	|	2.53
246.583	0.00	0.02	3.039	O	|	|	|	2.53
246.667	0.00	0.02	3.039	O	|	|	|	2.53
246.750	0.00	0.02	3.039	O	|	|	|	2.53
246.833	0.00	0.02	3.039	O	|	|	|	2.53
246.917	0.00	0.02	3.039	O	|	|	|	2.53
247.000	0.00	0.02	3.038	O	|	|	|	2.53
247.083	0.00	0.02	3.038	O	|	|	|	2.53
247.167	0.00	0.02	3.038	O	|	|	|	2.53
247.250	0.00	0.02	3.038	O	|	|	|	2.53
247.333	0.00	0.02	3.038	O	|	|	|	2.53
247.417	0.00	0.02	3.038	O	|	|	|	2.53
247.500	0.00	0.02	3.038	O	|	|	|	2.53
247.583	0.00	0.02	3.038	O	|	|	|	2.53
247.667	0.00	0.02	3.038	O	|	|	|	2.53
247.750	0.00	0.02	3.037	O	|	|	|	2.53
247.833	0.00	0.02	3.037	O	|	|	|	2.53
247.917	0.00	0.02	3.037	O	|	|	|	2.53
248.000	0.00	0.02	3.037	O	|	|	|	2.53

248.083	0.00	0.02	3.037	O				2.53
248.167	0.00	0.02	3.037	O				2.53
248.250	0.00	0.02	3.037	O				2.53
248.333	0.00	0.02	3.037	O				2.53
248.417	0.00	0.02	3.037	O				2.53
248.500	0.00	0.02	3.036	O				2.53
248.583	0.00	0.02	3.036	O				2.53
248.667	0.00	0.02	3.036	O				2.53
248.750	0.00	0.02	3.036	O				2.53
248.833	0.00	0.02	3.036	O				2.53
248.917	0.00	0.02	3.036	O				2.53
249.000	0.00	0.02	3.036	O				2.53
249.083	0.00	0.02	3.036	O				2.53
249.167	0.00	0.02	3.036	O				2.53
249.250	0.00	0.02	3.036	O				2.53
249.333	0.00	0.02	3.035	O				2.53
249.417	0.00	0.02	3.035	O				2.53
249.500	0.00	0.02	3.035	O				2.53
249.583	0.00	0.02	3.035	O				2.53
249.667	0.00	0.02	3.035	O				2.53
249.750	0.00	0.02	3.035	O				2.53
249.833	0.00	0.02	3.035	O				2.53
249.917	0.00	0.02	3.035	O				2.53
250.000	0.00	0.02	3.035	O				2.53
250.083	0.00	0.02	3.034	O				2.53
250.167	0.00	0.02	3.034	O				2.53
250.250	0.00	0.02	3.034	O				2.53
250.333	0.00	0.02	3.034	O				2.53
250.417	0.00	0.02	3.034	O				2.53
250.500	0.00	0.02	3.034	O				2.53
250.583	0.00	0.02	3.034	O				2.53
250.667	0.00	0.02	3.034	O				2.53
250.750	0.00	0.02	3.034	O				2.53
250.833	0.00	0.02	3.034	O				2.53
250.917	0.00	0.02	3.033	O				2.53
251.000	0.00	0.02	3.033	O				2.53
251.083	0.00	0.01	3.033	O				2.53
251.167	0.00	0.01	3.033	O				2.53
251.250	0.00	0.01	3.033	O				2.53
251.333	0.00	0.01	3.033	O				2.53
251.417	0.00	0.01	3.033	O				2.53
251.500	0.00	0.01	3.033	O				2.53
251.583	0.00	0.01	3.033	O				2.53
251.667	0.00	0.01	3.033	O				2.53
251.750	0.00	0.01	3.032	O				2.53
251.833	0.00	0.01	3.032	O				2.53
251.917	0.00	0.01	3.032	O				2.53
252.000	0.00	0.01	3.032	O				2.53
252.083	0.00	0.01	3.032	O				2.53
252.167	0.00	0.01	3.032	O				2.53

252.250	0.00	0.01	3.032	O				2.53
252.333	0.00	0.01	3.032	O				2.53
252.417	0.00	0.01	3.032	O				2.53
252.500	0.00	0.01	3.032	O				2.53
252.583	0.00	0.01	3.031	O				2.53
252.667	0.00	0.01	3.031	O				2.53
252.750	0.00	0.01	3.031	O				2.53
252.833	0.00	0.01	3.031	O				2.53
252.917	0.00	0.01	3.031	O				2.53
253.000	0.00	0.01	3.031	O				2.53
253.083	0.00	0.01	3.031	O				2.53
253.167	0.00	0.01	3.031	O				2.53
253.250	0.00	0.01	3.031	O				2.53
253.333	0.00	0.01	3.030	O				2.53
253.417	0.00	0.01	3.030	O				2.53
253.500	0.00	0.01	3.030	O				2.53
253.583	0.00	0.01	3.030	O				2.53
253.667	0.00	0.01	3.030	O				2.53
253.750	0.00	0.01	3.030	O				2.52
253.833	0.00	0.01	3.030	O				2.52
253.917	0.00	0.01	3.030	O				2.52
254.000	0.00	0.01	3.030	O				2.52
254.083	0.00	0.01	3.030	O				2.52
254.167	0.00	0.01	3.029	O				2.52
254.250	0.00	0.01	3.029	O				2.52
254.333	0.00	0.01	3.029	O				2.52
254.417	0.00	0.01	3.029	O				2.52
254.500	0.00	0.01	3.029	O				2.52
254.583	0.00	0.01	3.029	O				2.52
254.667	0.00	0.01	3.029	O				2.52
254.750	0.00	0.01	3.029	O				2.52
254.833	0.00	0.01	3.029	O				2.52
254.917	0.00	0.01	3.029	O				2.52
255.000	0.00	0.01	3.029	O				2.52
255.083	0.00	0.01	3.028	O				2.52
255.167	0.00	0.01	3.028	O				2.52
255.250	0.00	0.01	3.028	O				2.52
255.333	0.00	0.01	3.028	O				2.52
255.417	0.00	0.01	3.028	O				2.52
255.500	0.00	0.01	3.028	O				2.52
255.583	0.00	0.01	3.028	O				2.52
255.667	0.00	0.01	3.028	O				2.52
255.750	0.00	0.01	3.028	O				2.52
255.833	0.00	0.01	3.028	O				2.52
255.917	0.00	0.01	3.027	O				2.52
256.000	0.00	0.01	3.027	O				2.52
256.083	0.00	0.01	3.027	O				2.52
256.167	0.00	0.01	3.027	O				2.52
256.250	0.00	0.01	3.027	O				2.52
256.333	0.00	0.01	3.027	O				2.52

256.417	0.00	0.01	3.027	O	|	|	|	2.52
256.500	0.00	0.01	3.027	O	|	|	|	2.52
256.583	0.00	0.01	3.027	O	|	|	|	2.52
256.667	0.00	0.01	3.027	O	|	|	|	2.52
256.750	0.00	0.01	3.026	O	|	|	|	2.52
256.833	0.00	0.01	3.026	O	|	|	|	2.52
256.917	0.00	0.01	3.026	O	|	|	|	2.52
257.000	0.00	0.01	3.026	O	|	|	|	2.52
257.083	0.00	0.01	3.026	O	|	|	|	2.52
257.167	0.00	0.01	3.026	O	|	|	|	2.52
257.250	0.00	0.01	3.026	O	|	|	|	2.52
257.333	0.00	0.01	3.026	O	|	|	|	2.52
257.417	0.00	0.01	3.026	O	|	|	|	2.52
257.500	0.00	0.01	3.026	O	|	|	|	2.52
257.583	0.00	0.01	3.026	O	|	|	|	2.52
257.667	0.00	0.01	3.025	O	|	|	|	2.52
257.750	0.00	0.01	3.025	O	|	|	|	2.52
257.833	0.00	0.01	3.025	O	|	|	|	2.52
257.917	0.00	0.01	3.025	O	|	|	|	2.52
258.000	0.00	0.01	3.025	O	|	|	|	2.52
258.083	0.00	0.01	3.025	O	|	|	|	2.52
258.167	0.00	0.01	3.025	O	|	|	|	2.52
258.250	0.00	0.01	3.025	O	|	|	|	2.52
258.333	0.00	0.01	3.025	O	|	|	|	2.52
258.417	0.00	0.01	3.025	O	|	|	|	2.52
258.500	0.00	0.01	3.024	O	|	|	|	2.52
258.583	0.00	0.01	3.024	O	|	|	|	2.52
258.667	0.00	0.01	3.024	O	|	|	|	2.52
258.750	0.00	0.01	3.024	O	|	|	|	2.52
258.833	0.00	0.01	3.024	O	|	|	|	2.52
258.917	0.00	0.01	3.024	O	|	|	|	2.52
259.000	0.00	0.01	3.024	O	|	|	|	2.52
259.083	0.00	0.01	3.024	O	|	|	|	2.52
259.167	0.00	0.01	3.024	O	|	|	|	2.52
259.250	0.00	0.01	3.024	O	|	|	|	2.52
259.333	0.00	0.01	3.024	O	|	|	|	2.52
259.417	0.00	0.01	3.023	O	|	|	|	2.52
259.500	0.00	0.01	3.023	O	|	|	|	2.52
259.583	0.00	0.01	3.023	O	|	|	|	2.52
259.667	0.00	0.01	3.023	O	|	|	|	2.52
259.750	0.00	0.01	3.023	O	|	|	|	2.52
259.833	0.00	0.01	3.023	O	|	|	|	2.52
259.917	0.00	0.01	3.023	O	|	|	|	2.52
260.000	0.00	0.01	3.023	O	|	|	|	2.52
260.083	0.00	0.01	3.023	O	|	|	|	2.52
260.167	0.00	0.01	3.023	O	|	|	|	2.52
260.250	0.00	0.01	3.023	O	|	|	|	2.52
260.333	0.00	0.01	3.022	O	|	|	|	2.52
260.417	0.00	0.01	3.022	O	|	|	|	2.52
260.500	0.00	0.01	3.022	O	|	|	|	2.52

260.583	0.00	0.01	3.022	O	|	|	|	2.52
260.667	0.00	0.01	3.022	O	|	|	|	2.52
260.750	0.00	0.01	3.022	O	|	|	|	2.52
260.833	0.00	0.01	3.022	O	|	|	|	2.52
260.917	0.00	0.01	3.022	O	|	|	|	2.52
261.000	0.00	0.01	3.022	O	|	|	|	2.52
261.083	0.00	0.01	3.022	O	|	|	|	2.52
261.167	0.00	0.01	3.022	O	|	|	|	2.52
261.250	0.00	0.01	3.021	O	|	|	|	2.52
261.333	0.00	0.01	3.021	O	|	|	|	2.52
261.417	0.00	0.01	3.021	O	|	|	|	2.52
261.500	0.00	0.01	3.021	O	|	|	|	2.52
261.583	0.00	0.01	3.021	O	|	|	|	2.52
261.667	0.00	0.01	3.021	O	|	|	|	2.52
261.750	0.00	0.01	3.021	O	|	|	|	2.52
261.833	0.00	0.01	3.021	O	|	|	|	2.52
261.917	0.00	0.01	3.021	O	|	|	|	2.52
262.000	0.00	0.01	3.021	O	|	|	|	2.52
262.083	0.00	0.01	3.021	O	|	|	|	2.52
262.167	0.00	0.01	3.020	O	|	|	|	2.52
262.250	0.00	0.01	3.020	O	|	|	|	2.52
262.333	0.00	0.01	3.020	O	|	|	|	2.52
262.417	0.00	0.01	3.020	O	|	|	|	2.52
262.500	0.00	0.01	3.020	O	|	|	|	2.52
262.583	0.00	0.01	3.020	O	|	|	|	2.52
262.667	0.00	0.01	3.020	O	|	|	|	2.52
262.750	0.00	0.01	3.020	O	|	|	|	2.52
262.833	0.00	0.01	3.020	O	|	|	|	2.52
262.917	0.00	0.01	3.020	O	|	|	|	2.52
263.000	0.00	0.01	3.020	O	|	|	|	2.52
263.083	0.00	0.01	3.019	O	|	|	|	2.52
263.167	0.00	0.01	3.019	O	|	|	|	2.52
263.250	0.00	0.01	3.019	O	|	|	|	2.52
263.333	0.00	0.01	3.019	O	|	|	|	2.52
263.417	0.00	0.01	3.019	O	|	|	|	2.52
263.500	0.00	0.01	3.019	O	|	|	|	2.52
263.583	0.00	0.01	3.019	O	|	|	|	2.52
263.667	0.00	0.01	3.019	O	|	|	|	2.52
263.750	0.00	0.01	3.019	O	|	|	|	2.52
263.833	0.00	0.01	3.019	O	|	|	|	2.52
263.917	0.00	0.01	3.019	O	|	|	|	2.52
264.000	0.00	0.01	3.018	O	|	|	|	2.52
264.083	0.00	0.01	3.018	O	|	|	|	2.52
264.167	0.00	0.01	3.018	O	|	|	|	2.52
264.250	0.00	0.01	3.018	O	|	|	|	2.52
264.333	0.00	0.01	3.018	O	|	|	|	2.52
264.417	0.00	0.01	3.018	O	|	|	|	2.52
264.500	0.00	0.01	3.018	O	|	|	|	2.51
264.583	0.00	0.01	3.018	O	|	|	|	2.51
264.667	0.00	0.01	3.018	O	|	|	|	2.51

264.750	0.00	0.01	3.018	O				2.51
264.833	0.00	0.01	3.018	O				2.51
264.917	0.00	0.01	3.018	O				2.51
265.000	0.00	0.01	3.017	O				2.51
265.083	0.00	0.01	3.017	O				2.51
265.167	0.00	0.01	3.017	O				2.51
265.250	0.00	0.01	3.017	O				2.51
265.333	0.00	0.01	3.017	O				2.51
265.417	0.00	0.01	3.017	O				2.51
265.500	0.00	0.01	3.017	O				2.51
265.583	0.00	0.01	3.017	O				2.51
265.667	0.00	0.01	3.017	O				2.51
265.750	0.00	0.01	3.017	O				2.51
265.833	0.00	0.01	3.017	O				2.51
265.917	0.00	0.01	3.016	O				2.51
266.000	0.00	0.01	3.016	O				2.51
266.083	0.00	0.01	3.016	O				2.51
266.167	0.00	0.01	3.016	O				2.51
266.250	0.00	0.01	3.016	O				2.51
266.333	0.00	0.01	3.016	O				2.51
266.417	0.00	0.01	3.016	O				2.51
266.500	0.00	0.01	3.016	O				2.51
266.583	0.00	0.01	3.016	O				2.51
266.667	0.00	0.01	3.016	O				2.51
266.750	0.00	0.01	3.016	O				2.51
266.833	0.00	0.01	3.016	O				2.51
266.917	0.00	0.01	3.015	O				2.51
267.000	0.00	0.01	3.015	O				2.51
267.083	0.00	0.01	3.015	O				2.51
267.167	0.00	0.01	3.015	O				2.51
267.250	0.00	0.01	3.015	O				2.51
267.333	0.00	0.01	3.015	O				2.51
267.417	0.00	0.01	3.015	O				2.51
267.500	0.00	0.01	3.015	O				2.51
267.583	0.00	0.01	3.015	O				2.51
267.667	0.00	0.01	3.015	O				2.51
267.750	0.00	0.01	3.015	O				2.51
267.833	0.00	0.01	3.015	O				2.51
267.917	0.00	0.01	3.014	O				2.51
268.000	0.00	0.01	3.014	O				2.51
268.083	0.00	0.01	3.014	O				2.51
268.167	0.00	0.01	3.014	O				2.51
268.250	0.00	0.01	3.014	O				2.51
268.333	0.00	0.01	3.014	O				2.51
268.417	0.00	0.01	3.014	O				2.51
268.500	0.00	0.01	3.014	O				2.51
268.583	0.00	0.01	3.014	O				2.51
268.667	0.00	0.01	3.014	O				2.51
268.750	0.00	0.01	3.014	O				2.51
268.833	0.00	0.01	3.014	O				2.51

268.917	0.00	0.01	3.013	O	|	|	|	2.51
269.000	0.00	0.01	3.013	O	|	|	|	2.51
269.083	0.00	0.01	3.013	O	|	|	|	2.51
269.167	0.00	0.01	3.013	O	|	|	|	2.51
269.250	0.00	0.01	3.013	O	|	|	|	2.51
269.333	0.00	0.01	3.013	O	|	|	|	2.51
269.417	0.00	0.01	3.013	O	|	|	|	2.51
269.500	0.00	0.01	3.013	O	|	|	|	2.51
269.583	0.00	0.01	3.013	O	|	|	|	2.51
269.667	0.00	0.01	3.013	O	|	|	|	2.51
269.750	0.00	0.01	3.013	O	|	|	|	2.51
269.833	0.00	0.01	3.013	O	|	|	|	2.51
269.917	0.00	0.01	3.012	O	|	|	|	2.51
270.000	0.00	0.01	3.012	O	|	|	|	2.51
270.083	0.00	0.01	3.012	O	|	|	|	2.51
270.167	0.00	0.01	3.012	O	|	|	|	2.51
270.250	0.00	0.01	3.012	O	|	|	|	2.51
270.333	0.00	0.01	3.012	O	|	|	|	2.51
270.417	0.00	0.01	3.012	O	|	|	|	2.51
270.500	0.00	0.01	3.012	O	|	|	|	2.51
270.583	0.00	0.01	3.012	O	|	|	|	2.51
270.667	0.00	0.01	3.012	O	|	|	|	2.51
270.750	0.00	0.01	3.012	O	|	|	|	2.51
270.833	0.00	0.01	3.012	O	|	|	|	2.51
270.917	0.00	0.01	3.011	O	|	|	|	2.51
271.000	0.00	0.01	3.011	O	|	|	|	2.51
271.083	0.00	0.01	3.011	O	|	|	|	2.51
271.167	0.00	0.01	3.011	O	|	|	|	2.51
271.250	0.00	0.01	3.011	O	|	|	|	2.51
271.333	0.00	0.01	3.011	O	|	|	|	2.51
271.417	0.00	0.01	3.011	O	|	|	|	2.51
271.500	0.00	0.01	3.011	O	|	|	|	2.51
271.583	0.00	0.01	3.011	O	|	|	|	2.51
271.667	0.00	0.01	3.011	O	|	|	|	2.51
271.750	0.00	0.01	3.011	O	|	|	|	2.51
271.833	0.00	0.01	3.011	O	|	|	|	2.51
271.917	0.00	0.01	3.011	O	|	|	|	2.51
272.000	0.00	0.01	3.010	O	|	|	|	2.51
272.083	0.00	0.01	3.010	O	|	|	|	2.51
272.167	0.00	0.01	3.010	O	|	|	|	2.51
272.250	0.00	0.01	3.010	O	|	|	|	2.51
272.333	0.00	0.01	3.010	O	|	|	|	2.51
272.417	0.00	0.01	3.010	O	|	|	|	2.51
272.500	0.00	0.01	3.010	O	|	|	|	2.51
272.583	0.00	0.01	3.010	O	|	|	|	2.51
272.667	0.00	0.01	3.010	O	|	|	|	2.51
272.750	0.00	0.01	3.010	O	|	|	|	2.51
272.833	0.00	0.01	3.010	O	|	|	|	2.51
272.917	0.00	0.01	3.010	O	|	|	|	2.51
273.000	0.00	0.01	3.009	O	|	|	|	2.51

273.083	0.00	0.01	3.009	O				2.51
273.167	0.00	0.01	3.009	O				2.51
273.250	0.00	0.01	3.009	O				2.51
273.333	0.00	0.01	3.009	O				2.51
273.417	0.00	0.01	3.009	O				2.51
273.500	0.00	0.01	3.009	O				2.51
273.583	0.00	0.01	3.009	O				2.51
273.667	0.00	0.01	3.009	O				2.51
273.750	0.00	0.01	3.009	O				2.51
273.833	0.00	0.01	3.009	O				2.51
273.917	0.00	0.01	3.009	O				2.51
274.000	0.00	0.01	3.009	O				2.51
274.083	0.00	0.01	3.008	O				2.51
274.167	0.00	0.01	3.008	O				2.51
274.250	0.00	0.01	3.008	O				2.51
274.333	0.00	0.01	3.008	O				2.51
274.417	0.00	0.01	3.008	O				2.51
274.500	0.00	0.01	3.008	O				2.51
274.583	0.00	0.01	3.008	O				2.51
274.667	0.00	0.01	3.008	O				2.51
274.750	0.00	0.01	3.008	O				2.51
274.833	0.00	0.01	3.008	O				2.51
274.917	0.00	0.01	3.008	O				2.51
275.000	0.00	0.01	3.008	O				2.51
275.083	0.00	0.01	3.008	O				2.51
275.167	0.00	0.01	3.007	O				2.51
275.250	0.00	0.01	3.007	O				2.51
275.333	0.00	0.01	3.007	O				2.51
275.417	0.00	0.01	3.007	O				2.51
275.500	0.00	0.01	3.007	O				2.51
275.583	0.00	0.01	3.007	O				2.51
275.667	0.00	0.01	3.007	O				2.51
275.750	0.00	0.01	3.007	O				2.51
275.833	0.00	0.01	3.007	O				2.51
275.917	0.00	0.01	3.007	O				2.51
276.000	0.00	0.01	3.007	O				2.51
276.083	0.00	0.01	3.007	O				2.51
276.167	0.00	0.01	3.007	O				2.51
276.250	0.00	0.01	3.006	O				2.51
276.333	0.00	0.01	3.006	O				2.51
276.417	0.00	0.01	3.006	O				2.51
276.500	0.00	0.01	3.006	O				2.51
276.583	0.00	0.01	3.006	O				2.51
276.667	0.00	0.01	3.006	O				2.51
276.750	0.00	0.01	3.006	O				2.51
276.833	0.00	0.01	3.006	O				2.50
276.917	0.00	0.01	3.006	O				2.50
277.000	0.00	0.01	3.006	O				2.50
277.083	0.00	0.01	3.006	O				2.50
277.167	0.00	0.01	3.006	O				2.50

277.250	0.00	0.01	3.006	O	|	|	|	|	2.50
277.333	0.00	0.01	3.005	O	|	|	|	|	2.50
277.417	0.00	0.01	3.005	O	|	|	|	|	2.50
277.500	0.00	0.01	3.005	O	|	|	|	|	2.50
277.583	0.00	0.01	3.005	O	|	|	|	|	2.50
277.667	0.00	0.01	3.005	O	|	|	|	|	2.50
277.750	0.00	0.01	3.005	O	|	|	|	|	2.50
277.833	0.00	0.01	3.005	O	|	|	|	|	2.50
277.917	0.00	0.01	3.005	O	|	|	|	|	2.50
278.000	0.00	0.01	3.005	O	|	|	|	|	2.50
278.083	0.00	0.01	3.005	O	|	|	|	|	2.50
278.167	0.00	0.01	3.005	O	|	|	|	|	2.50
278.250	0.00	0.01	3.005	O	|	|	|	|	2.50
278.333	0.00	0.01	3.005	O	|	|	|	|	2.50
278.417	0.00	0.01	3.005	O	|	|	|	|	2.50
278.500	0.00	0.01	3.004	O	|	|	|	|	2.50
278.583	0.00	0.01	3.004	O	|	|	|	|	2.50
278.667	0.00	0.01	3.004	O	|	|	|	|	2.50
278.750	0.00	0.01	3.004	O	|	|	|	|	2.50
278.833	0.00	0.01	3.004	O	|	|	|	|	2.50
278.917	0.00	0.01	3.004	O	|	|	|	|	2.50
279.000	0.00	0.01	3.004	O	|	|	|	|	2.50
279.083	0.00	0.01	3.004	O	|	|	|	|	2.50
279.167	0.00	0.01	3.004	O	|	|	|	|	2.50
279.250	0.00	0.01	3.004	O	|	|	|	|	2.50
279.333	0.00	0.01	3.004	O	|	|	|	|	2.50
279.417	0.00	0.01	3.004	O	|	|	|	|	2.50
279.500	0.00	0.01	3.004	O	|	|	|	|	2.50
279.583	0.00	0.01	3.004	O	|	|	|	|	2.50
279.667	0.00	0.01	3.003	O	|	|	|	|	2.50
279.750	0.00	0.01	3.003	O	|	|	|	|	2.50
279.833	0.00	0.01	3.003	O	|	|	|	|	2.50
279.917	0.00	0.01	3.003	O	|	|	|	|	2.50
280.000	0.00	0.01	3.003	O	|	|	|	|	2.50
280.083	0.00	0.01	3.003	O	|	|	|	|	2.50
280.167	0.00	0.01	3.003	O	|	|	|	|	2.50
280.250	0.00	0.01	3.003	O	|	|	|	|	2.50
280.333	0.00	0.01	3.003	O	|	|	|	|	2.50
280.417	0.00	0.01	3.003	O	|	|	|	|	2.50
280.500	0.00	0.01	3.003	O	|	|	|	|	2.50
280.583	0.00	0.01	3.003	O	|	|	|	|	2.50
280.667	0.00	0.01	3.003	O	|	|	|	|	2.50
280.750	0.00	0.01	3.003	O	|	|	|	|	2.50
280.833	0.00	0.01	3.002	O	|	|	|	|	2.50
280.917	0.00	0.01	3.002	O	|	|	|	|	2.50
281.000	0.00	0.01	3.002	O	|	|	|	|	2.50
281.083	0.00	0.01	3.002	O	|	|	|	|	2.50
281.167	0.00	0.01	3.002	O	|	|	|	|	2.50
281.250	0.00	0.01	3.002	O	|	|	|	|	2.50
281.333	0.00	0.01	3.002	O	|	|	|	|	2.50

281.417	0.00	0.01	3.002	O	|	|	|	|	2.50
281.500	0.00	0.01	3.002	O	|	|	|	|	2.50
281.583	0.00	0.01	3.002	O	|	|	|	|	2.50
281.667	0.00	0.01	3.002	O	|	|	|	|	2.50
281.750	0.00	0.01	3.002	O	|	|	|	|	2.50
281.833	0.00	0.01	3.002	O	|	|	|	|	2.50
281.917	0.00	0.01	3.002	O	|	|	|	|	2.50
282.000	0.00	0.01	3.001	O	|	|	|	|	2.50
282.083	0.00	0.01	3.001	O	|	|	|	|	2.50
282.167	0.00	0.01	3.001	O	|	|	|	|	2.50
282.250	0.00	0.01	3.001	O	|	|	|	|	2.50
282.333	0.00	0.01	3.001	O	|	|	|	|	2.50
282.417	0.00	0.01	3.001	O	|	|	|	|	2.50
282.500	0.00	0.01	3.001	O	|	|	|	|	2.50
282.583	0.00	0.01	3.001	O	|	|	|	|	2.50
282.667	0.00	0.01	3.001	O	|	|	|	|	2.50
282.750	0.00	0.01	3.001	O	|	|	|	|	2.50
282.833	0.00	0.01	3.001	O	|	|	|	|	2.50
282.917	0.00	0.01	3.001	O	|	|	|	|	2.50
283.000	0.00	0.01	3.001	O	|	|	|	|	2.50
283.083	0.00	0.01	3.001	O	|	|	|	|	2.50
283.167	0.00	0.01	3.000	O	|	|	|	|	2.50
283.250	0.00	0.01	3.000	O	|	|	|	|	2.50
283.333	0.00	0.01	3.000	O	|	|	|	|	2.50
283.417	0.00	0.01	3.000	O	|	|	|	|	2.50
283.500	0.00	0.01	3.000	O	|	|	|	|	2.50
283.583	0.00	0.01	3.000	O	|	|	|	|	2.50
283.667	0.00	0.01	3.000	O	|	|	|	|	2.50
283.750	0.00	0.01	3.000	O	|	|	|	|	2.50
283.833	0.00	0.01	3.000	O	|	|	|	|	2.50
283.917	0.00	0.01	3.000	O	|	|	|	|	2.50
284.000	0.00	0.01	3.000	O	|	|	|	|	2.50
284.083	0.00	0.01	3.000	O	|	|	|	|	2.50
284.167	0.00	0.01	3.000	O	|	|	|	|	2.50
284.250	0.00	0.01	3.000	O	|	|	|	|	2.50
284.333	0.00	0.01	2.999	O	|	|	|	|	2.50
284.417	0.00	0.01	2.999	O	|	|	|	|	2.50
284.500	0.00	0.01	2.999	O	|	|	|	|	2.50
284.583	0.00	0.01	2.999	O	|	|	|	|	2.50
284.667	0.00	0.01	2.999	O	|	|	|	|	2.50
284.750	0.00	0.01	2.999	O	|	|	|	|	2.50
284.833	0.00	0.01	2.999	O	|	|	|	|	2.50
284.917	0.00	0.01	2.999	O	|	|	|	|	2.50
285.000	0.00	0.01	2.999	O	|	|	|	|	2.50
285.083	0.00	0.01	2.999	O	|	|	|	|	2.50
285.167	0.00	0.01	2.999	O	|	|	|	|	2.50
285.250	0.00	0.01	2.999	O	|	|	|	|	2.50
285.333	0.00	0.01	2.999	O	|	|	|	|	2.50
285.417	0.00	0.01	2.999	O	|	|	|	|	2.50
285.500	0.00	0.01	2.999	O	|	|	|	|	2.50

285.583	0.00	0.01	2.998	O				2.50
285.667	0.00	0.01	2.998	O				2.50
285.750	0.00	0.01	2.998	O				2.50
285.833	0.00	0.01	2.998	O				2.50
285.917	0.00	0.01	2.998	O				2.50
286.000	0.00	0.01	2.998	O				2.50
286.083	0.00	0.01	2.998	O				2.50
286.167	0.00	0.01	2.998	O				2.50
286.250	0.00	0.01	2.998	O				2.50
286.333	0.00	0.01	2.998	O				2.50
286.417	0.00	0.01	2.998	O				2.50
286.500	0.00	0.01	2.998	O				2.50
286.583	0.00	0.01	2.998	O				2.50
286.667	0.00	0.01	2.998	O				2.50
286.750	0.00	0.01	2.998	O				2.50
286.833	0.00	0.01	2.997	O				2.50
286.917	0.00	0.01	2.997	O				2.50
287.000	0.00	0.01	2.997	O				2.50
287.083	0.00	0.01	2.997	O				2.50
287.167	0.00	0.01	2.997	O				2.50
287.250	0.00	0.01	2.997	O				2.50
287.333	0.00	0.01	2.997	O				2.50
287.417	0.00	0.01	2.997	O				2.50
287.500	0.00	0.01	2.997	O				2.50
287.583	0.00	0.01	2.997	O				2.50
287.667	0.00	0.01	2.997	O				2.50
287.750	0.00	0.01	2.997	O				2.50
287.833	0.00	0.01	2.997	O				2.50
287.917	0.00	0.01	2.997	O				2.50
288.000	0.00	0.01	2.996	O				2.50
288.083	0.00	0.01	2.996	O				2.50
288.167	0.00	0.01	2.996	O				2.50
288.250	0.00	0.01	2.996	O				2.50
288.333	0.00	0.01	2.996	O				2.50
288.417	0.00	0.01	2.996	O				2.50
288.500	0.00	0.01	2.996	O				2.50
288.583	0.00	0.01	2.996	O				2.50
288.667	0.00	0.01	2.996	O				2.50
288.750	0.00	0.01	2.996	O				2.50
288.833	0.00	0.01	2.996	O				2.50
288.917	0.00	0.01	2.996	O				2.50
289.000	0.00	0.01	2.996	O				2.50
289.083	0.00	0.01	2.996	O				2.50
289.167	0.00	0.01	2.996	O				2.50
289.250	0.00	0.01	2.995	O				2.50
289.333	0.00	0.01	2.995	O				2.50
289.417	0.00	0.01	2.995	O				2.50
289.500	0.00	0.01	2.995	O				2.50
289.583	0.00	0.01	2.995	O				2.50
289.667	0.00	0.01	2.995	O				2.50

289.750	0.00	0.01	2.995	O				2.50
289.833	0.00	0.01	2.995	O				2.50
289.917	0.00	0.01	2.995	O				2.50
290.000	0.00	0.01	2.995	O				2.50
290.083	0.00	0.01	2.995	O				2.50
290.167	0.00	0.01	2.995	O				2.50
290.250	0.00	0.01	2.995	O				2.50
290.333	0.00	0.01	2.995	O				2.50
290.417	0.00	0.01	2.994	O				2.50
290.500	0.00	0.01	2.994	O				2.50
290.583	0.00	0.01	2.994	O				2.50
290.667	0.00	0.01	2.994	O				2.50
290.750	0.00	0.01	2.994	O				2.50
290.833	0.00	0.01	2.994	O				2.50
290.917	0.00	0.01	2.994	O				2.50
291.000	0.00	0.01	2.994	O				2.50
291.083	0.00	0.01	2.994	O				2.49
291.167	0.00	0.01	2.994	O				2.49
291.250	0.00	0.01	2.994	O				2.49
291.333	0.00	0.01	2.994	O				2.49
291.417	0.00	0.01	2.994	O				2.49
291.500	0.00	0.01	2.994	O				2.49
291.583	0.00	0.01	2.994	O				2.49
291.667	0.00	0.01	2.993	O				2.49
291.750	0.00	0.01	2.993	O				2.49
291.833	0.00	0.01	2.993	O				2.49
291.917	0.00	0.01	2.993	O				2.49
292.000	0.00	0.01	2.993	O				2.49
292.083	0.00	0.01	2.993	O				2.49
292.167	0.00	0.01	2.993	O				2.49
292.250	0.00	0.01	2.993	O				2.49
292.333	0.00	0.01	2.993	O				2.49
292.417	0.00	0.01	2.993	O				2.49
292.500	0.00	0.01	2.993	O				2.49
292.583	0.00	0.01	2.993	O				2.49
292.667	0.00	0.01	2.993	O				2.49
292.750	0.00	0.01	2.993	O				2.49
292.833	0.00	0.01	2.993	O				2.49
292.917	0.00	0.01	2.992	O				2.49
293.000	0.00	0.01	2.992	O				2.49
293.083	0.00	0.01	2.992	O				2.49
293.167	0.00	0.01	2.992	O				2.49
293.250	0.00	0.01	2.992	O				2.49
293.333	0.00	0.01	2.992	O				2.49
293.417	0.00	0.01	2.992	O				2.49
293.500	0.00	0.01	2.992	O				2.49
293.583	0.00	0.01	2.992	O				2.49
293.667	0.00	0.01	2.992	O				2.49
293.750	0.00	0.01	2.992	O				2.49
293.833	0.00	0.01	2.992	O				2.49

293.917	0.00	0.01	2.992	O					2.49
294.000	0.00	0.01	2.992	O					2.49
294.083	0.00	0.01	2.991	O					2.49
294.167	0.00	0.01	2.991	O					2.49
294.250	0.00	0.01	2.991	O					2.49
294.333	0.00	0.01	2.991	O					2.49
294.417	0.00	0.01	2.991	O					2.49
294.500	0.00	0.01	2.991	O					2.49
294.583	0.00	0.01	2.991	O					2.49
294.667	0.00	0.01	2.991	O					2.49
294.750	0.00	0.01	2.991	O					2.49
294.833	0.00	0.01	2.991	O					2.49
294.917	0.00	0.01	2.991	O					2.49
295.000	0.00	0.01	2.991	O					2.49
295.083	0.00	0.01	2.991	O					2.49
295.167	0.00	0.01	2.991	O					2.49
295.250	0.00	0.01	2.991	O					2.49
295.333	0.00	0.01	2.990	O					2.49
295.417	0.00	0.01	2.990	O					2.49
295.500	0.00	0.01	2.990	O					2.49
295.583	0.00	0.01	2.990	O					2.49
295.667	0.00	0.01	2.990	O					2.49
295.750	0.00	0.01	2.990	O					2.49
295.833	0.00	0.01	2.990	O					2.49
295.917	0.00	0.01	2.990	O					2.49
296.000	0.00	0.01	2.990	O					2.49
296.083	0.00	0.01	2.990	O					2.49
296.167	0.00	0.01	2.990	O					2.49
296.250	0.00	0.01	2.990	O					2.49
296.333	0.00	0.01	2.990	O					2.49
296.417	0.00	0.01	2.990	O					2.49
296.500	0.00	0.01	2.990	O					2.49
296.583	0.00	0.01	2.989	O					2.49
296.667	0.00	0.01	2.989	O					2.49
296.750	0.00	0.01	2.989	O					2.49
296.833	0.00	0.01	2.989	O					2.49
296.917	0.00	0.01	2.989	O					2.49
297.000	0.00	0.01	2.989	O					2.49
297.083	0.00	0.01	2.989	O					2.49
297.167	0.00	0.01	2.989	O					2.49
297.250	0.00	0.01	2.989	O					2.49
297.333	0.00	0.01	2.989	O					2.49
297.417	0.00	0.01	2.989	O					2.49
297.500	0.00	0.01	2.989	O					2.49
297.583	0.00	0.01	2.989	O					2.49
297.667	0.00	0.01	2.989	O					2.49
297.750	0.00	0.01	2.989	O					2.49
297.833	0.00	0.01	2.988	O					2.49
297.917	0.00	0.01	2.988	O					2.49
298.000	0.00	0.01	2.988	O					2.49

298.083	0.00	0.01	2.988	O				2.49
298.167	0.00	0.01	2.988	O				2.49
298.250	0.00	0.01	2.988	O				2.49
298.333	0.00	0.01	2.988	O				2.49
298.417	0.00	0.01	2.988	O				2.49
298.500	0.00	0.01	2.988	O				2.49
298.583	0.00	0.01	2.988	O				2.49
298.667	0.00	0.01	2.988	O				2.49
298.750	0.00	0.01	2.988	O				2.49
298.833	0.00	0.01	2.988	O				2.49
298.917	0.00	0.01	2.988	O				2.49
299.000	0.00	0.01	2.987	O				2.49
299.083	0.00	0.01	2.987	O				2.49
299.167	0.00	0.01	2.987	O				2.49
299.250	0.00	0.01	2.987	O				2.49
299.333	0.00	0.01	2.987	O				2.49
299.417	0.00	0.01	2.987	O				2.49
299.500	0.00	0.01	2.987	O				2.49
299.583	0.00	0.01	2.987	O				2.49
299.667	0.00	0.01	2.987	O				2.49
299.750	0.00	0.01	2.987	O				2.49
299.833	0.00	0.01	2.987	O				2.49
299.917	0.00	0.01	2.987	O				2.49
300.000	0.00	0.01	2.987	O				2.49
300.083	0.00	0.01	2.987	O				2.49
300.167	0.00	0.01	2.987	O				2.49
300.250	0.00	0.01	2.986	O				2.49
300.333	0.00	0.01	2.986	O				2.49
300.417	0.00	0.01	2.986	O				2.49
300.500	0.00	0.01	2.986	O				2.49
300.583	0.00	0.01	2.986	O				2.49
300.667	0.00	0.01	2.986	O				2.49
300.750	0.00	0.01	2.986	O				2.49
300.833	0.00	0.01	2.986	O				2.49
300.917	0.00	0.01	2.986	O				2.49
301.000	0.00	0.01	2.986	O				2.49
301.083	0.00	0.01	2.986	O				2.49
301.167	0.00	0.01	2.986	O				2.49
301.250	0.00	0.01	2.986	O				2.49
301.333	0.00	0.01	2.986	O				2.49
301.417	0.00	0.01	2.986	O				2.49
301.500	0.00	0.01	2.985	O				2.49
301.583	0.00	0.01	2.985	O				2.49
301.667	0.00	0.01	2.985	O				2.49
301.750	0.00	0.01	2.985	O				2.49
301.833	0.00	0.01	2.985	O				2.49
301.917	0.00	0.01	2.985	O				2.49
302.000	0.00	0.01	2.985	O				2.49
302.083	0.00	0.01	2.985	O				2.49
302.167	0.00	0.01	2.985	O				2.49

302.250	0.00	0.01	2.985	O				2.49
302.333	0.00	0.01	2.985	O				2.49
302.417	0.00	0.01	2.985	O				2.49
302.500	0.00	0.01	2.985	O				2.49
302.583	0.00	0.01	2.985	O				2.49
302.667	0.00	0.01	2.985	O				2.49
302.750	0.00	0.01	2.984	O				2.49
302.833	0.00	0.01	2.984	O				2.49
302.917	0.00	0.01	2.984	O				2.49
303.000	0.00	0.01	2.984	O				2.49
303.083	0.00	0.01	2.984	O				2.49
303.167	0.00	0.01	2.984	O				2.49
303.250	0.00	0.01	2.984	O				2.49
303.333	0.00	0.01	2.984	O				2.49
303.417	0.00	0.01	2.984	O				2.49
303.500	0.00	0.01	2.984	O				2.49
303.583	0.00	0.01	2.984	O				2.49
303.667	0.00	0.01	2.984	O				2.49
303.750	0.00	0.01	2.984	O				2.49
303.833	0.00	0.01	2.984	O				2.49
303.917	0.00	0.01	2.984	O				2.49
304.000	0.00	0.01	2.983	O				2.49
304.083	0.00	0.01	2.983	O				2.49
304.167	0.00	0.01	2.983	O				2.49
304.250	0.00	0.01	2.983	O				2.49
304.333	0.00	0.01	2.983	O				2.49
304.417	0.00	0.01	2.983	O				2.49
304.500	0.00	0.01	2.983	O				2.49
304.583	0.00	0.01	2.983	O				2.49
304.667	0.00	0.01	2.983	O				2.49
304.750	0.00	0.01	2.983	O				2.49
304.833	0.00	0.01	2.983	O				2.49
304.917	0.00	0.01	2.983	O				2.49
305.000	0.00	0.01	2.983	O				2.49
305.083	0.00	0.01	2.983	O				2.49
305.167	0.00	0.01	2.983	O				2.49
305.250	0.00	0.01	2.982	O				2.49
305.333	0.00	0.01	2.982	O				2.49
305.417	0.00	0.01	2.982	O				2.49
305.500	0.00	0.01	2.982	O				2.49
305.583	0.00	0.01	2.982	O				2.49
305.667	0.00	0.01	2.982	O				2.49
305.750	0.00	0.01	2.982	O				2.49
305.833	0.00	0.01	2.982	O				2.48
305.917	0.00	0.01	2.982	O				2.48
306.000	0.00	0.01	2.982	O				2.48
306.083	0.00	0.01	2.982	O				2.48
306.167	0.00	0.01	2.982	O				2.48
306.250	0.00	0.01	2.982	O				2.48
306.333	0.00	0.01	2.982	O				2.48

306.417	0.00	0.01	2.982	O	|	|	|	2.48
306.500	0.00	0.01	2.981	O	|	|	|	2.48
306.583	0.00	0.01	2.981	O	|	|	|	2.48
306.667	0.00	0.01	2.981	O	|	|	|	2.48
306.750	0.00	0.01	2.981	O	|	|	|	2.48
306.833	0.00	0.01	2.981	O	|	|	|	2.48
306.917	0.00	0.01	2.981	O	|	|	|	2.48
307.000	0.00	0.01	2.981	O	|	|	|	2.48
307.083	0.00	0.01	2.981	O	|	|	|	2.48
307.167	0.00	0.01	2.981	O	|	|	|	2.48
307.250	0.00	0.01	2.981	O	|	|	|	2.48
307.333	0.00	0.01	2.981	O	|	|	|	2.48
307.417	0.00	0.01	2.981	O	|	|	|	2.48
307.500	0.00	0.01	2.981	O	|	|	|	2.48
307.583	0.00	0.01	2.981	O	|	|	|	2.48
307.667	0.00	0.01	2.981	O	|	|	|	2.48
307.750	0.00	0.01	2.980	O	|	|	|	2.48
307.833	0.00	0.01	2.980	O	|	|	|	2.48
307.917	0.00	0.01	2.980	O	|	|	|	2.48
308.000	0.00	0.01	2.980	O	|	|	|	2.48
308.083	0.00	0.01	2.980	O	|	|	|	2.48
308.167	0.00	0.01	2.980	O	|	|	|	2.48
308.250	0.00	0.01	2.980	O	|	|	|	2.48
308.333	0.00	0.01	2.980	O	|	|	|	2.48
308.417	0.00	0.01	2.980	O	|	|	|	2.48
308.500	0.00	0.01	2.980	O	|	|	|	2.48
308.583	0.00	0.01	2.980	O	|	|	|	2.48
308.667	0.00	0.01	2.980	O	|	|	|	2.48
308.750	0.00	0.01	2.980	O	|	|	|	2.48
308.833	0.00	0.01	2.980	O	|	|	|	2.48
308.917	0.00	0.01	2.979	O	|	|	|	2.48
309.000	0.00	0.01	2.979	O	|	|	|	2.48
309.083	0.00	0.01	2.979	O	|	|	|	2.48
309.167	0.00	0.01	2.979	O	|	|	|	2.48
309.250	0.00	0.01	2.979	O	|	|	|	2.48
309.333	0.00	0.01	2.979	O	|	|	|	2.48
309.417	0.00	0.01	2.979	O	|	|	|	2.48
309.500	0.00	0.01	2.979	O	|	|	|	2.48
309.583	0.00	0.01	2.979	O	|	|	|	2.48
309.667	0.00	0.01	2.979	O	|	|	|	2.48
309.750	0.00	0.01	2.979	O	|	|	|	2.48
309.833	0.00	0.01	2.979	O	|	|	|	2.48
309.917	0.00	0.01	2.979	O	|	|	|	2.48
310.000	0.00	0.01	2.979	O	|	|	|	2.48
310.083	0.00	0.01	2.979	O	|	|	|	2.48
310.167	0.00	0.01	2.978	O	|	|	|	2.48
310.250	0.00	0.01	2.978	O	|	|	|	2.48
310.333	0.00	0.01	2.978	O	|	|	|	2.48
310.417	0.00	0.01	2.978	O	|	|	|	2.48
310.500	0.00	0.01	2.978	O	|	|	|	2.48

310.583	0.00	0.01	2.978	O				2.48
310.667	0.00	0.01	2.978	O				2.48
310.750	0.00	0.01	2.978	O				2.48
310.833	0.00	0.01	2.978	O				2.48
310.917	0.00	0.01	2.978	O				2.48
311.000	0.00	0.01	2.978	O				2.48
311.083	0.00	0.01	2.978	O				2.48
311.167	0.00	0.01	2.978	O				2.48
311.250	0.00	0.01	2.978	O				2.48
311.333	0.00	0.01	2.978	O				2.48
311.417	0.00	0.01	2.977	O				2.48
311.500	0.00	0.01	2.977	O				2.48
311.583	0.00	0.01	2.977	O				2.48
311.667	0.00	0.01	2.977	O				2.48
311.750	0.00	0.01	2.977	O				2.48
311.833	0.00	0.01	2.977	O				2.48
311.917	0.00	0.01	2.977	O				2.48
312.000	0.00	0.01	2.977	O				2.48
312.083	0.00	0.01	2.977	O				2.48
312.167	0.00	0.01	2.977	O				2.48
312.250	0.00	0.01	2.977	O				2.48
312.333	0.00	0.01	2.977	O				2.48
312.417	0.00	0.01	2.977	O				2.48
312.500	0.00	0.01	2.977	O				2.48
312.583	0.00	0.01	2.977	O				2.48
312.667	0.00	0.01	2.977	O				2.48
312.750	0.00	0.01	2.976	O				2.48
312.833	0.00	0.01	2.976	O				2.48
312.917	0.00	0.01	2.976	O				2.48
313.000	0.00	0.01	2.976	O				2.48
313.083	0.00	0.01	2.976	O				2.48
313.167	0.00	0.01	2.976	O				2.48
313.250	0.00	0.01	2.976	O				2.48
313.333	0.00	0.01	2.976	O				2.48
313.417	0.00	0.01	2.976	O				2.48
313.500	0.00	0.01	2.976	O				2.48
313.583	0.00	0.01	2.976	O				2.48
313.667	0.00	0.01	2.976	O				2.48
313.750	0.00	0.01	2.976	O				2.48
313.833	0.00	0.01	2.976	O				2.48
313.917	0.00	0.01	2.976	O				2.48
314.000	0.00	0.01	2.975	O				2.48
314.083	0.00	0.01	2.975	O				2.48
314.167	0.00	0.01	2.975	O				2.48
314.250	0.00	0.01	2.975	O				2.48
314.333	0.00	0.01	2.975	O				2.48
314.417	0.00	0.01	2.975	O				2.48
314.500	0.00	0.01	2.975	O				2.48
314.583	0.00	0.01	2.975	O				2.48
314.667	0.00	0.01	2.975	O				2.48

314.750	0.00	0.01	2.975	O	|	|	|	2.48
314.833	0.00	0.01	2.975	O	|	|	|	2.48
314.917	0.00	0.01	2.975	O	|	|	|	2.48
315.000	0.00	0.01	2.975	O	|	|	|	2.48
315.083	0.00	0.01	2.975	O	|	|	|	2.48
315.167	0.00	0.01	2.975	O	|	|	|	2.48
315.250	0.00	0.01	2.974	O	|	|	|	2.48
315.333	0.00	0.01	2.974	O	|	|	|	2.48
315.417	0.00	0.01	2.974	O	|	|	|	2.48
315.500	0.00	0.01	2.974	O	|	|	|	2.48
315.583	0.00	0.01	2.974	O	|	|	|	2.48
315.667	0.00	0.01	2.974	O	|	|	|	2.48
315.750	0.00	0.01	2.974	O	|	|	|	2.48
315.833	0.00	0.01	2.974	O	|	|	|	2.48
315.917	0.00	0.01	2.974	O	|	|	|	2.48
316.000	0.00	0.01	2.974	O	|	|	|	2.48
316.083	0.00	0.01	2.974	O	|	|	|	2.48
316.167	0.00	0.01	2.974	O	|	|	|	2.48
316.250	0.00	0.01	2.974	O	|	|	|	2.48
316.333	0.00	0.01	2.974	O	|	|	|	2.48
316.417	0.00	0.01	2.974	O	|	|	|	2.48
316.500	0.00	0.01	2.973	O	|	|	|	2.48
316.583	0.00	0.01	2.973	O	|	|	|	2.48
316.667	0.00	0.01	2.973	O	|	|	|	2.48
316.750	0.00	0.01	2.973	O	|	|	|	2.48
316.833	0.00	0.01	2.973	O	|	|	|	2.48
316.917	0.00	0.01	2.973	O	|	|	|	2.48
317.000	0.00	0.01	2.973	O	|	|	|	2.48
317.083	0.00	0.01	2.973	O	|	|	|	2.48
317.167	0.00	0.01	2.973	O	|	|	|	2.48
317.250	0.00	0.01	2.973	O	|	|	|	2.48
317.333	0.00	0.01	2.973	O	|	|	|	2.48
317.417	0.00	0.01	2.973	O	|	|	|	2.48
317.500	0.00	0.01	2.973	O	|	|	|	2.48
317.583	0.00	0.01	2.973	O	|	|	|	2.48
317.667	0.00	0.01	2.973	O	|	|	|	2.48
317.750	0.00	0.01	2.972	O	|	|	|	2.48
317.833	0.00	0.01	2.972	O	|	|	|	2.48
317.917	0.00	0.01	2.972	O	|	|	|	2.48
318.000	0.00	0.01	2.972	O	|	|	|	2.48
318.083	0.00	0.01	2.972	O	|	|	|	2.48
318.167	0.00	0.01	2.972	O	|	|	|	2.48
318.250	0.00	0.01	2.972	O	|	|	|	2.48
318.333	0.00	0.01	2.972	O	|	|	|	2.48
318.417	0.00	0.01	2.972	O	|	|	|	2.48
318.500	0.00	0.01	2.972	O	|	|	|	2.48
318.583	0.00	0.01	2.972	O	|	|	|	2.48
318.667	0.00	0.01	2.972	O	|	|	|	2.48
318.750	0.00	0.01	2.972	O	|	|	|	2.48
318.833	0.00	0.01	2.972	O	|	|	|	2.48

318.917	0.00	0.01	2.972	O				2.48
319.000	0.00	0.01	2.971	O				2.48
319.083	0.00	0.01	2.971	O				2.48
319.167	0.00	0.01	2.971	O				2.48
319.250	0.00	0.01	2.971	O				2.48
319.333	0.00	0.01	2.971	O				2.48
319.417	0.00	0.01	2.971	O				2.48
319.500	0.00	0.01	2.971	O				2.48
319.583	0.00	0.01	2.971	O				2.48
319.667	0.00	0.01	2.971	O				2.48
319.750	0.00	0.01	2.971	O				2.48
319.833	0.00	0.01	2.971	O				2.48
319.917	0.00	0.01	2.971	O				2.48
320.000	0.00	0.01	2.971	O				2.48
320.083	0.00	0.01	2.971	O				2.48
320.167	0.00	0.01	2.971	O				2.48
320.250	0.00	0.01	2.970	O				2.48
320.333	0.00	0.01	2.970	O				2.48
320.417	0.00	0.01	2.970	O				2.48
320.500	0.00	0.01	2.970	O				2.48
320.583	0.00	0.01	2.970	O				2.48
320.667	0.00	0.01	2.970	O				2.48
320.750	0.00	0.01	2.970	O				2.48
320.833	0.00	0.01	2.970	O				2.48
320.917	0.00	0.01	2.970	O				2.47
321.000	0.00	0.01	2.970	O				2.47
321.083	0.00	0.01	2.970	O				2.47
321.167	0.00	0.01	2.970	O				2.47
321.250	0.00	0.01	2.970	O				2.47
321.333	0.00	0.01	2.970	O				2.47
321.417	0.00	0.01	2.970	O				2.47
321.500	0.00	0.01	2.969	O				2.47
321.583	0.00	0.01	2.969	O				2.47
321.667	0.00	0.01	2.969	O				2.47
321.750	0.00	0.01	2.969	O				2.47
321.833	0.00	0.01	2.969	O				2.47
321.917	0.00	0.01	2.969	O				2.47
322.000	0.00	0.01	2.969	O				2.47
322.083	0.00	0.01	2.969	O				2.47
322.167	0.00	0.01	2.969	O				2.47
322.250	0.00	0.01	2.969	O				2.47
322.333	0.00	0.01	2.969	O				2.47
322.417	0.00	0.01	2.969	O				2.47
322.500	0.00	0.01	2.969	O				2.47
322.583	0.00	0.01	2.969	O				2.47
322.667	0.00	0.01	2.969	O				2.47
322.750	0.00	0.01	2.969	O				2.47
322.833	0.00	0.01	2.968	O				2.47
322.917	0.00	0.01	2.968	O				2.47
323.000	0.00	0.01	2.968	O				2.47

323.083	0.00	0.01	2.968	O				2.47
323.167	0.00	0.01	2.968	O				2.47
323.250	0.00	0.01	2.968	O				2.47
323.333	0.00	0.01	2.968	O				2.47
323.417	0.00	0.01	2.968	O				2.47
323.500	0.00	0.01	2.968	O				2.47
323.583	0.00	0.01	2.968	O				2.47
323.667	0.00	0.01	2.968	O				2.47
323.750	0.00	0.01	2.968	O				2.47
323.833	0.00	0.01	2.968	O				2.47
323.917	0.00	0.01	2.968	O				2.47
324.000	0.00	0.01	2.968	O				2.47
324.083	0.00	0.01	2.967	O				2.47
324.167	0.00	0.01	2.967	O				2.47
324.250	0.00	0.01	2.967	O				2.47
324.333	0.00	0.01	2.967	O				2.47
324.417	0.00	0.01	2.967	O				2.47
324.500	0.00	0.01	2.967	O				2.47
324.583	0.00	0.01	2.967	O				2.47
324.667	0.00	0.01	2.967	O				2.47
324.750	0.00	0.01	2.967	O				2.47
324.833	0.00	0.01	2.967	O				2.47
324.917	0.00	0.01	2.967	O				2.47
325.000	0.00	0.01	2.967	O				2.47
325.083	0.00	0.01	2.967	O				2.47
325.167	0.00	0.01	2.967	O				2.47
325.250	0.00	0.01	2.967	O				2.47
325.333	0.00	0.01	2.966	O				2.47
325.417	0.00	0.01	2.966	O				2.47
325.500	0.00	0.01	2.966	O				2.47
325.583	0.00	0.01	2.966	O				2.47
325.667	0.00	0.01	2.966	O				2.47
325.750	0.00	0.01	2.966	O				2.47
325.833	0.00	0.01	2.966	O				2.47
325.917	0.00	0.01	2.966	O				2.47
326.000	0.00	0.01	2.966	O				2.47
326.083	0.00	0.01	2.966	O				2.47
326.167	0.00	0.01	2.966	O				2.47
326.250	0.00	0.01	2.966	O				2.47
326.333	0.00	0.01	2.966	O				2.47
326.417	0.00	0.01	2.966	O				2.47
326.500	0.00	0.01	2.966	O				2.47
326.583	0.00	0.01	2.966	O				2.47
326.667	0.00	0.01	2.965	O				2.47
326.750	0.00	0.01	2.965	O				2.47
326.833	0.00	0.01	2.965	O				2.47
326.917	0.00	0.01	2.965	O				2.47
327.000	0.00	0.01	2.965	O				2.47
327.083	0.00	0.01	2.965	O				2.47
327.167	0.00	0.01	2.965	O				2.47

327.250	0.00	0.01	2.965	O				2.47
327.333	0.00	0.01	2.965	O				2.47
327.417	0.00	0.01	2.965	O				2.47
327.500	0.00	0.01	2.965	O				2.47
327.583	0.00	0.01	2.965	O				2.47
327.667	0.00	0.01	2.965	O				2.47
327.750	0.00	0.01	2.965	O				2.47
327.833	0.00	0.01	2.965	O				2.47
327.917	0.00	0.01	2.964	O				2.47
328.000	0.00	0.01	2.964	O				2.47
328.083	0.00	0.01	2.964	O				2.47
328.167	0.00	0.01	2.964	O				2.47
328.250	0.00	0.01	2.964	O				2.47
328.333	0.00	0.01	2.964	O				2.47
328.417	0.00	0.01	2.964	O				2.47
328.500	0.00	0.01	2.964	O				2.47
328.583	0.00	0.01	2.964	O				2.47
328.667	0.00	0.01	2.964	O				2.47
328.750	0.00	0.01	2.964	O				2.47
328.833	0.00	0.01	2.964	O				2.47
328.917	0.00	0.01	2.964	O				2.47
329.000	0.00	0.01	2.964	O				2.47
329.083	0.00	0.01	2.964	O				2.47
329.167	0.00	0.01	2.963	O				2.47
329.250	0.00	0.01	2.963	O				2.47
329.333	0.00	0.01	2.963	O				2.47
329.417	0.00	0.01	2.963	O				2.47
329.500	0.00	0.01	2.963	O				2.47
329.583	0.00	0.01	2.963	O				2.47
329.667	0.00	0.01	2.963	O				2.47
329.750	0.00	0.01	2.963	O				2.47
329.833	0.00	0.01	2.963	O				2.47
329.917	0.00	0.01	2.963	O				2.47
330.000	0.00	0.01	2.963	O				2.47
330.083	0.00	0.01	2.963	O				2.47
330.167	0.00	0.01	2.963	O				2.47
330.250	0.00	0.01	2.963	O				2.47
330.333	0.00	0.01	2.963	O				2.47
330.417	0.00	0.01	2.963	O				2.47
330.500	0.00	0.01	2.962	O				2.47
330.583	0.00	0.01	2.962	O				2.47
330.667	0.00	0.01	2.962	O				2.47
330.750	0.00	0.01	2.962	O				2.47
330.833	0.00	0.01	2.962	O				2.47
330.917	0.00	0.01	2.962	O				2.47
331.000	0.00	0.01	2.962	O				2.47
331.083	0.00	0.01	2.962	O				2.47
331.167	0.00	0.01	2.962	O				2.47
331.250	0.00	0.01	2.962	O				2.47
331.333	0.00	0.01	2.962	O				2.47

331.417	0.00	0.01	2.962	O					2.47
331.500	0.00	0.01	2.962	O					2.47
331.583	0.00	0.01	2.962	O					2.47
331.667	0.00	0.01	2.962	O					2.47
331.750	0.00	0.01	2.961	O					2.47
331.833	0.00	0.01	2.961	O					2.47
331.917	0.00	0.01	2.961	O					2.47
332.000	0.00	0.01	2.961	O					2.47
332.083	0.00	0.01	2.961	O					2.47
332.167	0.00	0.01	2.961	O					2.47
332.250	0.00	0.01	2.961	O					2.47
332.333	0.00	0.01	2.961	O					2.47
332.417	0.00	0.01	2.961	O					2.47
332.500	0.00	0.01	2.961	O					2.47
332.583	0.00	0.01	2.961	O					2.47
332.667	0.00	0.01	2.961	O					2.47
332.750	0.00	0.01	2.961	O					2.47
332.833	0.00	0.01	2.961	O					2.47
332.917	0.00	0.01	2.961	O					2.47
333.000	0.00	0.01	2.960	O					2.47
333.083	0.00	0.01	2.960	O					2.47
333.167	0.00	0.01	2.960	O					2.47
333.250	0.00	0.01	2.960	O					2.47
333.333	0.00	0.01	2.960	O					2.47
333.417	0.00	0.01	2.960	O					2.47
333.500	0.00	0.01	2.960	O					2.47
333.583	0.00	0.01	2.960	O					2.47
333.667	0.00	0.01	2.960	O					2.47
333.750	0.00	0.01	2.960	O					2.47
333.833	0.00	0.01	2.960	O					2.47
333.917	0.00	0.01	2.960	O					2.47
334.000	0.00	0.01	2.960	O					2.47
334.083	0.00	0.01	2.960	O					2.47
334.167	0.00	0.01	2.960	O					2.47
334.250	0.00	0.01	2.960	O					2.47
334.333	0.00	0.01	2.959	O					2.47
334.417	0.00	0.01	2.959	O					2.47
334.500	0.00	0.01	2.959	O					2.47
334.583	0.00	0.01	2.959	O					2.47
334.667	0.00	0.01	2.959	O					2.47
334.750	0.00	0.01	2.959	O					2.47
334.833	0.00	0.01	2.959	O					2.47
334.917	0.00	0.01	2.959	O					2.47
335.000	0.00	0.01	2.959	O					2.47
335.083	0.00	0.01	2.959	O					2.47
335.167	0.00	0.01	2.959	O					2.47
335.250	0.00	0.01	2.959	O					2.47
335.333	0.00	0.01	2.959	O					2.47
335.417	0.00	0.01	2.959	O					2.47
335.500	0.00	0.01	2.959	O					2.47

335.583	0.00	0.01	2.958	O				2.47
335.667	0.00	0.01	2.958	O				2.47
335.750	0.00	0.01	2.958	O				2.47
335.833	0.00	0.01	2.958	O				2.47
335.917	0.00	0.01	2.958	O				2.47
336.000	0.00	0.01	2.958	O				2.47
336.083	0.00	0.01	2.958	O				2.47
336.167	0.00	0.01	2.958	O				2.47
336.250	0.00	0.01	2.958	O				2.46
336.333	0.00	0.01	2.958	O				2.46
336.417	0.00	0.01	2.958	O				2.46
336.500	0.00	0.01	2.958	O				2.46
336.583	0.00	0.01	2.958	O				2.46
336.667	0.00	0.01	2.958	O				2.46
336.750	0.00	0.01	2.958	O				2.46
336.833	0.00	0.01	2.958	O				2.46
336.917	0.00	0.01	2.957	O				2.46
337.000	0.00	0.01	2.957	O				2.46
337.083	0.00	0.01	2.957	O				2.46
337.167	0.00	0.01	2.957	O				2.46
337.250	0.00	0.01	2.957	O				2.46
337.333	0.00	0.01	2.957	O				2.46
337.417	0.00	0.01	2.957	O				2.46
337.500	0.00	0.01	2.957	O				2.46
337.583	0.00	0.01	2.957	O				2.46
337.667	0.00	0.01	2.957	O				2.46
337.750	0.00	0.01	2.957	O				2.46
337.833	0.00	0.01	2.957	O				2.46
337.917	0.00	0.01	2.957	O				2.46
338.000	0.00	0.01	2.957	O				2.46
338.083	0.00	0.01	2.957	O				2.46
338.167	0.00	0.01	2.956	O				2.46
338.250	0.00	0.01	2.956	O				2.46
338.333	0.00	0.01	2.956	O				2.46
338.417	0.00	0.01	2.956	O				2.46
338.500	0.00	0.01	2.956	O				2.46
338.583	0.00	0.01	2.956	O				2.46
338.667	0.00	0.01	2.956	O				2.46
338.750	0.00	0.01	2.956	O				2.46
338.833	0.00	0.01	2.956	O				2.46
338.917	0.00	0.01	2.956	O				2.46
339.000	0.00	0.01	2.956	O				2.46
339.083	0.00	0.01	2.956	O				2.46
339.167	0.00	0.01	2.956	O				2.46
339.250	0.00	0.01	2.956	O				2.46
339.333	0.00	0.01	2.956	O				2.46
339.417	0.00	0.01	2.956	O				2.46
339.500	0.00	0.01	2.955	O				2.46
339.583	0.00	0.01	2.955	O				2.46
339.667	0.00	0.01	2.955	O				2.46

339.750	0.00	0.01	2.955	O	|	|	|	2.46
339.833	0.00	0.01	2.955	O	|	|	|	2.46
339.917	0.00	0.01	2.955	O	|	|	|	2.46
340.000	0.00	0.01	2.955	O	|	|	|	2.46
340.083	0.00	0.01	2.955	O	|	|	|	2.46
340.167	0.00	0.01	2.955	O	|	|	|	2.46
340.250	0.00	0.01	2.955	O	|	|	|	2.46
340.333	0.00	0.01	2.955	O	|	|	|	2.46
340.417	0.00	0.01	2.955	O	|	|	|	2.46
340.500	0.00	0.01	2.955	O	|	|	|	2.46
340.583	0.00	0.01	2.955	O	|	|	|	2.46
340.667	0.00	0.01	2.955	O	|	|	|	2.46
340.750	0.00	0.01	2.954	O	|	|	|	2.46
340.833	0.00	0.01	2.954	O	|	|	|	2.46
340.917	0.00	0.01	2.954	O	|	|	|	2.46
341.000	0.00	0.01	2.954	O	|	|	|	2.46
341.083	0.00	0.01	2.954	O	|	|	|	2.46
341.167	0.00	0.01	2.954	O	|	|	|	2.46
341.250	0.00	0.01	2.954	O	|	|	|	2.46
341.333	0.00	0.01	2.954	O	|	|	|	2.46
341.417	0.00	0.01	2.954	O	|	|	|	2.46
341.500	0.00	0.01	2.954	O	|	|	|	2.46
341.583	0.00	0.01	2.954	O	|	|	|	2.46
341.667	0.00	0.01	2.954	O	|	|	|	2.46
341.750	0.00	0.01	2.954	O	|	|	|	2.46
341.833	0.00	0.01	2.954	O	|	|	|	2.46
341.917	0.00	0.01	2.954	O	|	|	|	2.46
342.000	0.00	0.01	2.954	O	|	|	|	2.46
342.083	0.00	0.01	2.953	O	|	|	|	2.46
342.167	0.00	0.01	2.953	O	|	|	|	2.46
342.250	0.00	0.01	2.953	O	|	|	|	2.46
342.333	0.00	0.01	2.953	O	|	|	|	2.46
342.417	0.00	0.01	2.953	O	|	|	|	2.46
342.500	0.00	0.01	2.953	O	|	|	|	2.46
342.583	0.00	0.01	2.953	O	|	|	|	2.46
342.667	0.00	0.01	2.953	O	|	|	|	2.46
342.750	0.00	0.01	2.953	O	|	|	|	2.46
342.833	0.00	0.01	2.953	O	|	|	|	2.46
342.917	0.00	0.01	2.953	O	|	|	|	2.46
343.000	0.00	0.01	2.953	O	|	|	|	2.46
343.083	0.00	0.01	2.953	O	|	|	|	2.46
343.167	0.00	0.01	2.953	O	|	|	|	2.46
343.250	0.00	0.01	2.953	O	|	|	|	2.46
343.333	0.00	0.01	2.953	O	|	|	|	2.46
343.417	0.00	0.01	2.952	O	|	|	|	2.46
343.500	0.00	0.01	2.952	O	|	|	|	2.46
343.583	0.00	0.01	2.952	O	|	|	|	2.46
343.667	0.00	0.01	2.952	O	|	|	|	2.46
343.750	0.00	0.01	2.952	O	|	|	|	2.46
343.833	0.00	0.01	2.952	O	|	|	|	2.46

343.917	0.00	0.01	2.952	O					2.46
344.000	0.00	0.01	2.952	O					2.46
344.083	0.00	0.01	2.952	O					2.46
344.167	0.00	0.01	2.952	O					2.46
344.250	0.00	0.01	2.952	O					2.46
344.333	0.00	0.01	2.952	O					2.46
344.417	0.00	0.01	2.952	O					2.46
344.500	0.00	0.01	2.952	O					2.46
344.583	0.00	0.01	2.952	O					2.46
344.667	0.00	0.01	2.951	O					2.46
344.750	0.00	0.01	2.951	O					2.46
344.833	0.00	0.01	2.951	O					2.46
344.917	0.00	0.01	2.951	O					2.46
345.000	0.00	0.01	2.951	O					2.46
345.083	0.00	0.01	2.951	O					2.46
345.167	0.00	0.01	2.951	O					2.46
345.250	0.00	0.01	2.951	O					2.46
345.333	0.00	0.01	2.951	O					2.46
345.417	0.00	0.01	2.951	O					2.46
345.500	0.00	0.01	2.951	O					2.46
345.583	0.00	0.01	2.951	O					2.46
345.667	0.00	0.01	2.951	O					2.46
345.750	0.00	0.01	2.951	O					2.46
345.833	0.00	0.01	2.951	O					2.46
345.917	0.00	0.01	2.951	O					2.46
346.000	0.00	0.01	2.950	O					2.46
346.083	0.00	0.01	2.950	O					2.46
346.167	0.00	0.01	2.950	O					2.46
346.250	0.00	0.01	2.950	O					2.46
346.333	0.00	0.01	2.950	O					2.46
346.417	0.00	0.01	2.950	O					2.46
346.500	0.00	0.01	2.950	O					2.46
346.583	0.00	0.01	2.950	O					2.46
346.667	0.00	0.01	2.950	O					2.46
346.750	0.00	0.01	2.950	O					2.46
346.833	0.00	0.01	2.950	O					2.46
346.917	0.00	0.01	2.950	O					2.46
347.000	0.00	0.01	2.950	O					2.46
347.083	0.00	0.01	2.950	O					2.46
347.167	0.00	0.01	2.950	O					2.46
347.250	0.00	0.01	2.950	O					2.46
347.333	0.00	0.01	2.949	O					2.46
347.417	0.00	0.01	2.949	O					2.46
347.500	0.00	0.01	2.949	O					2.46
347.583	0.00	0.01	2.949	O					2.46
347.667	0.00	0.01	2.949	O					2.46
347.750	0.00	0.01	2.949	O					2.46
347.833	0.00	0.01	2.949	O					2.46
347.917	0.00	0.01	2.949	O					2.46
348.000	0.00	0.01	2.949	O					2.46

348.083	0.00	0.01	2.949	O	|	|	|	2.46
348.167	0.00	0.01	2.949	O	|	|	|	2.46
348.250	0.00	0.01	2.949	O	|	|	|	2.46
348.333	0.00	0.01	2.949	O	|	|	|	2.46
348.417	0.00	0.01	2.949	O	|	|	|	2.46
348.500	0.00	0.01	2.949	O	|	|	|	2.46
348.583	0.00	0.01	2.948	O	|	|	|	2.46
348.667	0.00	0.01	2.948	O	|	|	|	2.46
348.750	0.00	0.01	2.948	O	|	|	|	2.46
348.833	0.00	0.01	2.948	O	|	|	|	2.46
348.917	0.00	0.01	2.948	O	|	|	|	2.46
349.000	0.00	0.01	2.948	O	|	|	|	2.46
349.083	0.00	0.01	2.948	O	|	|	|	2.46
349.167	0.00	0.01	2.948	O	|	|	|	2.46
349.250	0.00	0.01	2.948	O	|	|	|	2.46
349.333	0.00	0.01	2.948	O	|	|	|	2.46
349.417	0.00	0.01	2.948	O	|	|	|	2.46
349.500	0.00	0.01	2.948	O	|	|	|	2.46
349.583	0.00	0.01	2.948	O	|	|	|	2.46
349.667	0.00	0.01	2.948	O	|	|	|	2.46
349.750	0.00	0.01	2.948	O	|	|	|	2.46
349.833	0.00	0.01	2.948	O	|	|	|	2.46
349.917	0.00	0.01	2.947	O	|	|	|	2.46
350.000	0.00	0.01	2.947	O	|	|	|	2.46
350.083	0.00	0.01	2.947	O	|	|	|	2.46
350.167	0.00	0.01	2.947	O	|	|	|	2.46
350.250	0.00	0.01	2.947	O	|	|	|	2.46
350.333	0.00	0.01	2.947	O	|	|	|	2.46
350.417	0.00	0.01	2.947	O	|	|	|	2.46
350.500	0.00	0.01	2.947	O	|	|	|	2.46
350.583	0.00	0.01	2.947	O	|	|	|	2.46
350.667	0.00	0.01	2.947	O	|	|	|	2.46
350.750	0.00	0.01	2.947	O	|	|	|	2.46
350.833	0.00	0.01	2.947	O	|	|	|	2.46
350.917	0.00	0.01	2.947	O	|	|	|	2.46
351.000	0.00	0.01	2.947	O	|	|	|	2.46
351.083	0.00	0.01	2.947	O	|	|	|	2.46
351.167	0.00	0.01	2.947	O	|	|	|	2.46
351.250	0.00	0.01	2.946	O	|	|	|	2.46
351.333	0.00	0.01	2.946	O	|	|	|	2.46
351.417	0.00	0.01	2.946	O	|	|	|	2.46
351.500	0.00	0.01	2.946	O	|	|	|	2.46
351.583	0.00	0.01	2.946	O	|	|	|	2.46
351.667	0.00	0.01	2.946	O	|	|	|	2.46
351.750	0.00	0.01	2.946	O	|	|	|	2.46
351.833	0.00	0.01	2.946	O	|	|	|	2.46
351.917	0.00	0.01	2.946	O	|	|	|	2.45
352.000	0.00	0.01	2.946	O	|	|	|	2.45
352.083	0.00	0.01	2.946	O	|	|	|	2.45
352.167	0.00	0.01	2.946	O	|	|	|	2.45

352.250	0.00	0.01	2.946	O	|	|	|	2.45
352.333	0.00	0.01	2.946	O	|	|	|	2.45
352.417	0.00	0.01	2.946	O	|	|	|	2.45
352.500	0.00	0.01	2.946	O	|	|	|	2.45
352.583	0.00	0.01	2.945	O	|	|	|	2.45
352.667	0.00	0.01	2.945	O	|	|	|	2.45
352.750	0.00	0.01	2.945	O	|	|	|	2.45
352.833	0.00	0.01	2.945	O	|	|	|	2.45
352.917	0.00	0.01	2.945	O	|	|	|	2.45
353.000	0.00	0.01	2.945	O	|	|	|	2.45
353.083	0.00	0.01	2.945	O	|	|	|	2.45
353.167	0.00	0.01	2.945	O	|	|	|	2.45
353.250	0.00	0.01	2.945	O	|	|	|	2.45
353.333	0.00	0.01	2.945	O	|	|	|	2.45
353.417	0.00	0.01	2.945	O	|	|	|	2.45
353.500	0.00	0.01	2.945	O	|	|	|	2.45
353.583	0.00	0.01	2.945	O	|	|	|	2.45
353.667	0.00	0.01	2.945	O	|	|	|	2.45
353.750	0.00	0.01	2.945	O	|	|	|	2.45
353.833	0.00	0.01	2.945	O	|	|	|	2.45
353.917	0.00	0.01	2.944	O	|	|	|	2.45
354.000	0.00	0.01	2.944	O	|	|	|	2.45
354.083	0.00	0.01	2.944	O	|	|	|	2.45
354.167	0.00	0.01	2.944	O	|	|	|	2.45
354.250	0.00	0.01	2.944	O	|	|	|	2.45
354.333	0.00	0.01	2.944	O	|	|	|	2.45
354.417	0.00	0.01	2.944	O	|	|	|	2.45
354.500	0.00	0.01	2.944	O	|	|	|	2.45
354.583	0.00	0.01	2.944	O	|	|	|	2.45
354.667	0.00	0.01	2.944	O	|	|	|	2.45
354.750	0.00	0.01	2.944	O	|	|	|	2.45
354.833	0.00	0.01	2.944	O	|	|	|	2.45
354.917	0.00	0.01	2.944	O	|	|	|	2.45
355.000	0.00	0.01	2.944	O	|	|	|	2.45
355.083	0.00	0.01	2.944	O	|	|	|	2.45
355.167	0.00	0.01	2.943	O	|	|	|	2.45
355.250	0.00	0.01	2.943	O	|	|	|	2.45
355.333	0.00	0.01	2.943	O	|	|	|	2.45
355.417	0.00	0.01	2.943	O	|	|	|	2.45
355.500	0.00	0.01	2.943	O	|	|	|	2.45
355.583	0.00	0.01	2.943	O	|	|	|	2.45
355.667	0.00	0.01	2.943	O	|	|	|	2.45
355.750	0.00	0.01	2.943	O	|	|	|	2.45
355.833	0.00	0.01	2.943	O	|	|	|	2.45
355.917	0.00	0.01	2.943	O	|	|	|	2.45
356.000	0.00	0.01	2.943	O	|	|	|	2.45
356.083	0.00	0.01	2.943	O	|	|	|	2.45
356.167	0.00	0.01	2.943	O	|	|	|	2.45
356.250	0.00	0.01	2.943	O	|	|	|	2.45
356.333	0.00	0.01	2.943	O	|	|	|	2.45

356.417	0.00	0.01	2.943	O					2.45
356.500	0.00	0.01	2.942	O					2.45
356.583	0.00	0.01	2.942	O					2.45
356.667	0.00	0.01	2.942	O					2.45
356.750	0.00	0.01	2.942	O					2.45
356.833	0.00	0.01	2.942	O					2.45
356.917	0.00	0.01	2.942	O					2.45
357.000	0.00	0.01	2.942	O					2.45
357.083	0.00	0.01	2.942	O					2.45
357.167	0.00	0.01	2.942	O					2.45
357.250	0.00	0.01	2.942	O					2.45
357.333	0.00	0.01	2.942	O					2.45
357.417	0.00	0.01	2.942	O					2.45
357.500	0.00	0.01	2.942	O					2.45
357.583	0.00	0.01	2.942	O					2.45
357.667	0.00	0.01	2.942	O					2.45
357.750	0.00	0.01	2.942	O					2.45
357.833	0.00	0.01	2.941	O					2.45
357.917	0.00	0.01	2.941	O					2.45
358.000	0.00	0.01	2.941	O					2.45
358.083	0.00	0.01	2.941	O					2.45
358.167	0.00	0.01	2.941	O					2.45
358.250	0.00	0.01	2.941	O					2.45
358.333	0.00	0.01	2.941	O					2.45
358.417	0.00	0.01	2.941	O					2.45
358.500	0.00	0.01	2.941	O					2.45
358.583	0.00	0.01	2.941	O					2.45
358.667	0.00	0.01	2.941	O					2.45
358.750	0.00	0.01	2.941	O					2.45
358.833	0.00	0.01	2.941	O					2.45
358.917	0.00	0.01	2.941	O					2.45
359.000	0.00	0.01	2.941	O					2.45
359.083	0.00	0.01	2.941	O					2.45
359.167	0.00	0.01	2.940	O					2.45
359.250	0.00	0.01	2.940	O					2.45
359.333	0.00	0.01	2.940	O					2.45
359.417	0.00	0.01	2.940	O					2.45
359.500	0.00	0.01	2.940	O					2.45
359.583	0.00	0.01	2.940	O					2.45
359.667	0.00	0.01	2.940	O					2.45
359.750	0.00	0.01	2.940	O					2.45
359.833	0.00	0.01	2.940	O					2.45
359.917	0.00	0.01	2.940	O					2.45
360.000	0.00	0.01	2.940	O					2.45
360.083	0.00	0.01	2.940	O					2.45
360.167	0.00	0.01	2.940	O					2.45
360.250	0.00	0.01	2.940	O					2.45
360.333	0.00	0.01	2.940	O					2.45
360.417	0.00	0.01	2.940	O					2.45
360.500	0.00	0.01	2.939	O					2.45

360.583	0.00	0.01	2.939	O				2.45
360.667	0.00	0.01	2.939	O				2.45
360.750	0.00	0.01	2.939	O				2.45
360.833	0.00	0.01	2.939	O				2.45
360.917	0.00	0.01	2.939	O				2.45
361.000	0.00	0.01	2.939	O				2.45
361.083	0.00	0.01	2.939	O				2.45
361.167	0.00	0.01	2.939	O				2.45
361.250	0.00	0.01	2.939	O				2.45
361.333	0.00	0.01	2.939	O				2.45
361.417	0.00	0.01	2.939	O				2.45
361.500	0.00	0.01	2.939	O				2.45
361.583	0.00	0.01	2.939	O				2.45
361.667	0.00	0.01	2.939	O				2.45
361.750	0.00	0.01	2.939	O				2.45
361.833	0.00	0.01	2.938	O				2.45
361.917	0.00	0.01	2.938	O				2.45
362.000	0.00	0.01	2.938	O				2.45
362.083	0.00	0.01	2.938	O				2.45
362.167	0.00	0.01	2.938	O				2.45
362.250	0.00	0.01	2.938	O				2.45
362.333	0.00	0.01	2.938	O				2.45
362.417	0.00	0.01	2.938	O				2.45
362.500	0.00	0.01	2.938	O				2.45
362.583	0.00	0.01	2.938	O				2.45
362.667	0.00	0.01	2.938	O				2.45
362.750	0.00	0.01	2.938	O				2.45
362.833	0.00	0.01	2.938	O				2.45
362.917	0.00	0.01	2.938	O				2.45
363.000	0.00	0.01	2.938	O				2.45
363.083	0.00	0.01	2.938	O				2.45
363.167	0.00	0.01	2.937	O				2.45
363.250	0.00	0.01	2.937	O				2.45
363.333	0.00	0.01	2.937	O				2.45
363.417	0.00	0.01	2.937	O				2.45
363.500	0.00	0.01	2.937	O				2.45
363.583	0.00	0.01	2.937	O				2.45
363.667	0.00	0.01	2.937	O				2.45
363.750	0.00	0.01	2.937	O				2.45
363.833	0.00	0.01	2.937	O				2.45
363.917	0.00	0.01	2.937	O				2.45
364.000	0.00	0.01	2.937	O				2.45
364.083	0.00	0.01	2.937	O				2.45
364.167	0.00	0.01	2.937	O				2.45
364.250	0.00	0.01	2.937	O				2.45
364.333	0.00	0.01	2.937	O				2.45
364.417	0.00	0.01	2.937	O				2.45
364.500	0.00	0.01	2.936	O				2.45
364.583	0.00	0.01	2.936	O				2.45
364.667	0.00	0.01	2.936	O				2.45

364.750	0.00	0.01	2.936	O				2.45
364.833	0.00	0.01	2.936	O				2.45
364.917	0.00	0.01	2.936	O				2.45
365.000	0.00	0.01	2.936	O				2.45
365.083	0.00	0.01	2.936	O				2.45
365.167	0.00	0.01	2.936	O				2.45
365.250	0.00	0.01	2.936	O				2.45
365.333	0.00	0.01	2.936	O				2.45
365.417	0.00	0.01	2.936	O				2.45
365.500	0.00	0.01	2.936	O				2.45
365.583	0.00	0.01	2.936	O				2.45
365.667	0.00	0.01	2.936	O				2.45
365.750	0.00	0.01	2.936	O				2.45
365.833	0.00	0.01	2.935	O				2.45
365.917	0.00	0.01	2.935	O				2.45
366.000	0.00	0.01	2.935	O				2.45
366.083	0.00	0.01	2.935	O				2.45
366.167	0.00	0.01	2.935	O				2.45
366.250	0.00	0.01	2.935	O				2.45
366.333	0.00	0.01	2.935	O				2.45
366.417	0.00	0.01	2.935	O				2.45
366.500	0.00	0.01	2.935	O				2.45
366.583	0.00	0.01	2.935	O				2.45
366.667	0.00	0.01	2.935	O				2.45
366.750	0.00	0.01	2.935	O				2.45
366.833	0.00	0.01	2.935	O				2.45
366.917	0.00	0.01	2.935	O				2.45
367.000	0.00	0.01	2.935	O				2.45
367.083	0.00	0.01	2.935	O				2.45
367.167	0.00	0.01	2.934	O				2.45
367.250	0.00	0.01	2.934	O				2.45
367.333	0.00	0.01	2.934	O				2.45
367.417	0.00	0.01	2.934	O				2.45
367.500	0.00	0.01	2.934	O				2.45
367.583	0.00	0.01	2.934	O				2.45
367.667	0.00	0.01	2.934	O				2.45
367.750	0.00	0.01	2.934	O				2.45
367.833	0.00	0.01	2.934	O				2.44
367.917	0.00	0.01	2.934	O				2.44
368.000	0.00	0.01	2.934	O				2.44
368.083	0.00	0.01	2.934	O				2.44
368.167	0.00	0.01	2.934	O				2.44
368.250	0.00	0.01	2.934	O				2.44
368.333	0.00	0.01	2.934	O				2.44
368.417	0.00	0.01	2.934	O				2.44
368.500	0.00	0.01	2.933	O				2.44
368.583	0.00	0.01	2.933	O				2.44
368.667	0.00	0.01	2.933	O				2.44
368.750	0.00	0.01	2.933	O				2.44
368.833	0.00	0.01	2.933	O				2.44

368.917	0.00	0.01	2.933	O					2.44
369.000	0.00	0.01	2.933	O					2.44
369.083	0.00	0.01	2.933	O					2.44
369.167	0.00	0.01	2.933	O					2.44
369.250	0.00	0.01	2.933	O					2.44
369.333	0.00	0.01	2.933	O					2.44
369.417	0.00	0.01	2.933	O					2.44
369.500	0.00	0.01	2.933	O					2.44
369.583	0.00	0.01	2.933	O					2.44
369.667	0.00	0.01	2.933	O					2.44
369.750	0.00	0.01	2.933	O					2.44
369.833	0.00	0.01	2.932	O					2.44
369.917	0.00	0.01	2.932	O					2.44
370.000	0.00	0.01	2.932	O					2.44
370.083	0.00	0.01	2.932	O					2.44
370.167	0.00	0.01	2.932	O					2.44
370.250	0.00	0.01	2.932	O					2.44
370.333	0.00	0.01	2.932	O					2.44
370.417	0.00	0.01	2.932	O					2.44
370.500	0.00	0.01	2.932	O					2.44
370.583	0.00	0.01	2.932	O					2.44
370.667	0.00	0.01	2.932	O					2.44
370.750	0.00	0.01	2.932	O					2.44
370.833	0.00	0.01	2.932	O					2.44
370.917	0.00	0.01	2.932	O					2.44
371.000	0.00	0.01	2.932	O					2.44
371.083	0.00	0.01	2.932	O					2.44
371.167	0.00	0.01	2.932	O					2.44
371.250	0.00	0.01	2.931	O					2.44
371.333	0.00	0.01	2.931	O					2.44
371.417	0.00	0.01	2.931	O					2.44
371.500	0.00	0.01	2.931	O					2.44
371.583	0.00	0.01	2.931	O					2.44
371.667	0.00	0.01	2.931	O					2.44
371.750	0.00	0.01	2.931	O					2.44
371.833	0.00	0.01	2.931	O					2.44
371.917	0.00	0.01	2.931	O					2.44
372.000	0.00	0.01	2.931	O					2.44
372.083	0.00	0.01	2.931	O					2.44
372.167	0.00	0.01	2.931	O					2.44
372.250	0.00	0.01	2.931	O					2.44
372.333	0.00	0.01	2.931	O					2.44
372.417	0.00	0.01	2.931	O					2.44
372.500	0.00	0.01	2.931	O					2.44
372.583	0.00	0.01	2.930	O					2.44
372.667	0.00	0.01	2.930	O					2.44
372.750	0.00	0.01	2.930	O					2.44
372.833	0.00	0.01	2.930	O					2.44
372.917	0.00	0.01	2.930	O					2.44
373.000	0.00	0.01	2.930	O					2.44

373.083	0.00	0.01	2.930	O				2.44
373.167	0.00	0.01	2.930	O				2.44
373.250	0.00	0.01	2.930	O				2.44
373.333	0.00	0.01	2.930	O				2.44
373.417	0.00	0.01	2.930	O				2.44
373.500	0.00	0.01	2.930	O				2.44
373.583	0.00	0.01	2.930	O				2.44
373.667	0.00	0.01	2.930	O				2.44
373.750	0.00	0.01	2.930	O				2.44
373.833	0.00	0.01	2.930	O				2.44
373.917	0.00	0.01	2.929	O				2.44
374.000	0.00	0.01	2.929	O				2.44
374.083	0.00	0.01	2.929	O				2.44
374.167	0.00	0.01	2.929	O				2.44
374.250	0.00	0.01	2.929	O				2.44
374.333	0.00	0.01	2.929	O				2.44
374.417	0.00	0.01	2.929	O				2.44
374.500	0.00	0.01	2.929	O				2.44
374.583	0.00	0.01	2.929	O				2.44
374.667	0.00	0.01	2.929	O				2.44
374.750	0.00	0.01	2.929	O				2.44
374.833	0.00	0.01	2.929	O				2.44
374.917	0.00	0.01	2.929	O				2.44
375.000	0.00	0.01	2.929	O				2.44
375.083	0.00	0.01	2.929	O				2.44
375.167	0.00	0.01	2.929	O				2.44
375.250	0.00	0.01	2.928	O				2.44
375.333	0.00	0.01	2.928	O				2.44
375.417	0.00	0.01	2.928	O				2.44
375.500	0.00	0.01	2.928	O				2.44
375.583	0.00	0.01	2.928	O				2.44
375.667	0.00	0.01	2.928	O				2.44
375.750	0.00	0.01	2.928	O				2.44
375.833	0.00	0.01	2.928	O				2.44
375.917	0.00	0.01	2.928	O				2.44
376.000	0.00	0.01	2.928	O				2.44
376.083	0.00	0.01	2.928	O				2.44
376.167	0.00	0.01	2.928	O				2.44
376.250	0.00	0.01	2.928	O				2.44
376.333	0.00	0.01	2.928	O				2.44
376.417	0.00	0.01	2.928	O				2.44
376.500	0.00	0.01	2.928	O				2.44
376.583	0.00	0.01	2.928	O				2.44
376.667	0.00	0.01	2.927	O				2.44
376.750	0.00	0.01	2.927	O				2.44
376.833	0.00	0.01	2.927	O				2.44
376.917	0.00	0.01	2.927	O				2.44
377.000	0.00	0.01	2.927	O				2.44
377.083	0.00	0.01	2.927	O				2.44
377.167	0.00	0.01	2.927	O				2.44

377.250	0.00	0.01	2.927	O				2.44
377.333	0.00	0.01	2.927	O				2.44
377.417	0.00	0.01	2.927	O				2.44
377.500	0.00	0.01	2.927	O				2.44
377.583	0.00	0.01	2.927	O				2.44
377.667	0.00	0.01	2.927	O				2.44
377.750	0.00	0.01	2.927	O				2.44
377.833	0.00	0.01	2.927	O				2.44
377.917	0.00	0.01	2.927	O				2.44
378.000	0.00	0.01	2.926	O				2.44
378.083	0.00	0.01	2.926	O				2.44
378.167	0.00	0.01	2.926	O				2.44
378.250	0.00	0.01	2.926	O				2.44
378.333	0.00	0.01	2.926	O				2.44
378.417	0.00	0.01	2.926	O				2.44
378.500	0.00	0.01	2.926	O				2.44
378.583	0.00	0.01	2.926	O				2.44
378.667	0.00	0.01	2.926	O				2.44
378.750	0.00	0.01	2.926	O				2.44
378.833	0.00	0.01	2.926	O				2.44
378.917	0.00	0.01	2.926	O				2.44
379.000	0.00	0.01	2.926	O				2.44
379.083	0.00	0.01	2.926	O				2.44
379.167	0.00	0.01	2.926	O				2.44
379.250	0.00	0.01	2.926	O				2.44
379.333	0.00	0.01	2.925	O				2.44
379.417	0.00	0.01	2.925	O				2.44
379.500	0.00	0.01	2.925	O				2.44
379.583	0.00	0.01	2.925	O				2.44
379.667	0.00	0.01	2.925	O				2.44
379.750	0.00	0.01	2.925	O				2.44
379.833	0.00	0.01	2.925	O				2.44
379.917	0.00	0.01	2.925	O				2.44
380.000	0.00	0.01	2.925	O				2.44
380.083	0.00	0.01	2.925	O				2.44
380.167	0.00	0.01	2.925	O				2.44
380.250	0.00	0.01	2.925	O				2.44
380.333	0.00	0.01	2.925	O				2.44
380.417	0.00	0.01	2.925	O				2.44
380.500	0.00	0.01	2.925	O				2.44
380.583	0.00	0.01	2.925	O				2.44
380.667	0.00	0.01	2.925	O				2.44
380.750	0.00	0.01	2.924	O				2.44
380.833	0.00	0.01	2.924	O				2.44
380.917	0.00	0.01	2.924	O				2.44
381.000	0.00	0.01	2.924	O				2.44
381.083	0.00	0.01	2.924	O				2.44
381.167	0.00	0.01	2.924	O				2.44
381.250	0.00	0.01	2.924	O				2.44
381.333	0.00	0.01	2.924	O				2.44

381.417	0.00	0.01	2.924	O	|	|	|	2.44
381.500	0.00	0.01	2.924	O	|	|	|	2.44
381.583	0.00	0.01	2.924	O	|	|	|	2.44
381.667	0.00	0.01	2.924	O	|	|	|	2.44
381.750	0.00	0.01	2.924	O	|	|	|	2.44
381.833	0.00	0.01	2.924	O	|	|	|	2.44
381.917	0.00	0.01	2.924	O	|	|	|	2.44
382.000	0.00	0.01	2.924	O	|	|	|	2.44
382.083	0.00	0.01	2.923	O	|	|	|	2.44
382.167	0.00	0.01	2.923	O	|	|	|	2.44
382.250	0.00	0.01	2.923	O	|	|	|	2.44
382.333	0.00	0.01	2.923	O	|	|	|	2.44
382.417	0.00	0.01	2.923	O	|	|	|	2.44
382.500	0.00	0.01	2.923	O	|	|	|	2.44
382.583	0.00	0.01	2.923	O	|	|	|	2.44
382.667	0.00	0.01	2.923	O	|	|	|	2.44
382.750	0.00	0.01	2.923	O	|	|	|	2.44
382.833	0.00	0.01	2.923	O	|	|	|	2.44
382.917	0.00	0.01	2.923	O	|	|	|	2.44
383.000	0.00	0.01	2.923	O	|	|	|	2.44
383.083	0.00	0.01	2.923	O	|	|	|	2.44
383.167	0.00	0.01	2.923	O	|	|	|	2.44
383.250	0.00	0.01	2.923	O	|	|	|	2.44
383.333	0.00	0.01	2.923	O	|	|	|	2.44
383.417	0.00	0.01	2.922	O	|	|	|	2.44
383.500	0.00	0.01	2.922	O	|	|	|	2.44
383.583	0.00	0.01	2.922	O	|	|	|	2.44
383.667	0.00	0.01	2.922	O	|	|	|	2.44
383.750	0.00	0.01	2.922	O	|	|	|	2.44
383.833	0.00	0.01	2.922	O	|	|	|	2.44
383.917	0.00	0.01	2.922	O	|	|	|	2.44
384.000	0.00	0.01	2.922	O	|	|	|	2.44
384.083	0.00	0.01	2.922	O	|	|	|	2.44
384.167	0.00	0.01	2.922	O	|	|	|	2.43
384.250	0.00	0.01	2.922	O	|	|	|	2.43
384.333	0.00	0.01	2.922	O	|	|	|	2.43
384.417	0.00	0.01	2.922	O	|	|	|	2.43
384.500	0.00	0.01	2.922	O	|	|	|	2.43
384.583	0.00	0.01	2.922	O	|	|	|	2.43
384.667	0.00	0.01	2.922	O	|	|	|	2.43
384.750	0.00	0.01	2.922	O	|	|	|	2.43
384.833	0.00	0.01	2.921	O	|	|	|	2.43
384.917	0.00	0.01	2.921	O	|	|	|	2.43
385.000	0.00	0.01	2.921	O	|	|	|	2.43
385.083	0.00	0.01	2.921	O	|	|	|	2.43
385.167	0.00	0.01	2.921	O	|	|	|	2.43
385.250	0.00	0.01	2.921	O	|	|	|	2.43
385.333	0.00	0.01	2.921	O	|	|	|	2.43
385.417	0.00	0.01	2.921	O	|	|	|	2.43
385.500	0.00	0.01	2.921	O	|	|	|	2.43

385.583	0.00	0.01	2.921	O				2.43
385.667	0.00	0.01	2.921	O				2.43
385.750	0.00	0.01	2.921	O				2.43
385.833	0.00	0.01	2.921	O				2.43
385.917	0.00	0.01	2.921	O				2.43
386.000	0.00	0.01	2.921	O				2.43
386.083	0.00	0.01	2.921	O				2.43
386.167	0.00	0.01	2.920	O				2.43
386.250	0.00	0.01	2.920	O				2.43
386.333	0.00	0.01	2.920	O				2.43
386.417	0.00	0.01	2.920	O				2.43
386.500	0.00	0.01	2.920	O				2.43
386.583	0.00	0.01	2.920	O				2.43
386.667	0.00	0.01	2.920	O				2.43
386.750	0.00	0.01	2.920	O				2.43
386.833	0.00	0.01	2.920	O				2.43
386.917	0.00	0.01	2.920	O				2.43
387.000	0.00	0.01	2.920	O				2.43
387.083	0.00	0.01	2.920	O				2.43
387.167	0.00	0.01	2.920	O				2.43
387.250	0.00	0.01	2.920	O				2.43
387.333	0.00	0.01	2.920	O				2.43
387.417	0.00	0.01	2.920	O				2.43
387.500	0.00	0.01	2.920	O				2.43
387.583	0.00	0.01	2.919	O				2.43
387.667	0.00	0.01	2.919	O				2.43
387.750	0.00	0.01	2.919	O				2.43
387.833	0.00	0.01	2.919	O				2.43
387.917	0.00	0.01	2.919	O				2.43
388.000	0.00	0.01	2.919	O				2.43
388.083	0.00	0.01	2.919	O				2.43
388.167	0.00	0.01	2.919	O				2.43
388.250	0.00	0.01	2.919	O				2.43
388.333	0.00	0.01	2.919	O				2.43
388.417	0.00	0.01	2.919	O				2.43
388.500	0.00	0.01	2.919	O				2.43
388.583	0.00	0.01	2.919	O				2.43
388.667	0.00	0.01	2.919	O				2.43
388.750	0.00	0.01	2.919	O				2.43
388.833	0.00	0.01	2.919	O				2.43
388.917	0.00	0.01	2.918	O				2.43
389.000	0.00	0.01	2.918	O				2.43
389.083	0.00	0.01	2.918	O				2.43
389.167	0.00	0.01	2.918	O				2.43
389.250	0.00	0.01	2.918	O				2.43
389.333	0.00	0.01	2.918	O				2.43
389.417	0.00	0.01	2.918	O				2.43
389.500	0.00	0.01	2.918	O				2.43
389.583	0.00	0.01	2.918	O				2.43
389.667	0.00	0.01	2.918	O				2.43

389.750	0.00	0.01	2.918	O				2.43
389.833	0.00	0.01	2.918	O				2.43
389.917	0.00	0.01	2.918	O				2.43
390.000	0.00	0.01	2.918	O				2.43
390.083	0.00	0.01	2.918	O				2.43
390.167	0.00	0.01	2.918	O				2.43
390.250	0.00	0.01	2.918	O				2.43
390.333	0.00	0.01	2.917	O				2.43
390.417	0.00	0.01	2.917	O				2.43
390.500	0.00	0.01	2.917	O				2.43
390.583	0.00	0.01	2.917	O				2.43
390.667	0.00	0.01	2.917	O				2.43
390.750	0.00	0.01	2.917	O				2.43
390.833	0.00	0.01	2.917	O				2.43
390.917	0.00	0.01	2.917	O				2.43
391.000	0.00	0.01	2.917	O				2.43
391.083	0.00	0.01	2.917	O				2.43
391.167	0.00	0.01	2.917	O				2.43
391.250	0.00	0.01	2.917	O				2.43
391.333	0.00	0.01	2.917	O				2.43
391.417	0.00	0.01	2.917	O				2.43
391.500	0.00	0.01	2.917	O				2.43
391.583	0.00	0.01	2.917	O				2.43
391.667	0.00	0.01	2.916	O				2.43
391.750	0.00	0.01	2.916	O				2.43
391.833	0.00	0.01	2.916	O				2.43
391.917	0.00	0.01	2.916	O				2.43
392.000	0.00	0.01	2.916	O				2.43
392.083	0.00	0.01	2.916	O				2.43
392.167	0.00	0.01	2.916	O				2.43
392.250	0.00	0.01	2.916	O				2.43
392.333	0.00	0.01	2.916	O				2.43
392.417	0.00	0.01	2.916	O				2.43
392.500	0.00	0.01	2.916	O				2.43
392.583	0.00	0.01	2.916	O				2.43
392.667	0.00	0.01	2.916	O				2.43
392.750	0.00	0.01	2.916	O				2.43
392.833	0.00	0.01	2.916	O				2.43
392.917	0.00	0.01	2.916	O				2.43
393.000	0.00	0.01	2.916	O				2.43
393.083	0.00	0.01	2.915	O				2.43
393.167	0.00	0.01	2.915	O				2.43
393.250	0.00	0.01	2.915	O				2.43
393.333	0.00	0.01	2.915	O				2.43
393.417	0.00	0.01	2.915	O				2.43
393.500	0.00	0.01	2.915	O				2.43
393.583	0.00	0.01	2.915	O				2.43
393.667	0.00	0.01	2.915	O				2.43
393.750	0.00	0.01	2.915	O				2.43
393.833	0.00	0.01	2.915	O				2.43

393.917	0.00	0.01	2.915	O					2.43
394.000	0.00	0.01	2.915	O					2.43
394.083	0.00	0.01	2.915	O					2.43
394.167	0.00	0.01	2.915	O					2.43
394.250	0.00	0.01	2.915	O					2.43
394.333	0.00	0.01	2.915	O					2.43
394.417	0.00	0.01	2.915	O					2.43
394.500	0.00	0.01	2.914	O					2.43
394.583	0.00	0.01	2.914	O					2.43
394.667	0.00	0.01	2.914	O					2.43
394.750	0.00	0.01	2.914	O					2.43
394.833	0.00	0.01	2.914	O					2.43
394.917	0.00	0.01	2.914	O					2.43
395.000	0.00	0.01	2.914	O					2.43
395.083	0.00	0.01	2.914	O					2.43
395.167	0.00	0.01	2.914	O					2.43
395.250	0.00	0.01	2.914	O					2.43
395.333	0.00	0.01	2.914	O					2.43
395.417	0.00	0.01	2.914	O					2.43
395.500	0.00	0.01	2.914	O					2.43
395.583	0.00	0.01	2.914	O					2.43
395.667	0.00	0.01	2.914	O					2.43
395.750	0.00	0.01	2.914	O					2.43
395.833	0.00	0.01	2.913	O					2.43
395.917	0.00	0.01	2.913	O					2.43
396.000	0.00	0.01	2.913	O					2.43
396.083	0.00	0.01	2.913	O					2.43
396.167	0.00	0.01	2.913	O					2.43
396.250	0.00	0.01	2.913	O					2.43
396.333	0.00	0.01	2.913	O					2.43
396.417	0.00	0.01	2.913	O					2.43
396.500	0.00	0.01	2.913	O					2.43
396.583	0.00	0.01	2.913	O					2.43
396.667	0.00	0.01	2.913	O					2.43
396.750	0.00	0.01	2.913	O					2.43
396.833	0.00	0.01	2.913	O					2.43
396.917	0.00	0.01	2.913	O					2.43
397.000	0.00	0.01	2.913	O					2.43
397.083	0.00	0.01	2.913	O					2.43
397.167	0.00	0.01	2.913	O					2.43
397.250	0.00	0.01	2.912	O					2.43
397.333	0.00	0.01	2.912	O					2.43
397.417	0.00	0.01	2.912	O					2.43
397.500	0.00	0.01	2.912	O					2.43
397.583	0.00	0.01	2.912	O					2.43
397.667	0.00	0.01	2.912	O					2.43
397.750	0.00	0.01	2.912	O					2.43
397.833	0.00	0.01	2.912	O					2.43
397.917	0.00	0.01	2.912	O					2.43
398.000	0.00	0.01	2.912	O					2.43

398.083	0.00	0.01	2.912	O				2.43
398.167	0.00	0.01	2.912	O				2.43
398.250	0.00	0.01	2.912	O				2.43
398.333	0.00	0.01	2.912	O				2.43
398.417	0.00	0.01	2.912	O				2.43
398.500	0.00	0.01	2.912	O				2.43
398.583	0.00	0.01	2.912	O				2.43
398.667	0.00	0.01	2.911	O				2.43
398.750	0.00	0.01	2.911	O				2.43
398.833	0.00	0.01	2.911	O				2.43
398.917	0.00	0.01	2.911	O				2.43
399.000	0.00	0.01	2.911	O				2.43
399.083	0.00	0.01	2.911	O				2.43
399.167	0.00	0.01	2.911	O				2.43
399.250	0.00	0.01	2.911	O				2.43
399.333	0.00	0.01	2.911	O				2.43
399.417	0.00	0.01	2.911	O				2.43
399.500	0.00	0.01	2.911	O				2.43
399.583	0.00	0.01	2.911	O				2.43
399.667	0.00	0.01	2.911	O				2.43
399.750	0.00	0.01	2.911	O				2.43
399.833	0.00	0.01	2.911	O				2.43
399.917	0.00	0.01	2.911	O				2.43
400.000	0.00	0.01	2.911	O				2.43
400.083	0.00	0.01	2.910	O				2.43
400.167	0.00	0.01	2.910	O				2.43
400.250	0.00	0.01	2.910	O				2.43
400.333	0.00	0.01	2.910	O				2.43
400.417	0.00	0.01	2.910	O				2.43
400.500	0.00	0.01	2.910	O				2.43
400.583	0.00	0.01	2.910	O				2.43
400.667	0.00	0.01	2.910	O				2.43
400.750	0.00	0.01	2.910	O				2.42
400.833	0.00	0.01	2.910	O				2.42
400.917	0.00	0.01	2.910	O				2.42
401.000	0.00	0.01	2.910	O				2.42
401.083	0.00	0.01	2.910	O				2.42
401.167	0.00	0.01	2.910	O				2.42
401.250	0.00	0.01	2.910	O				2.42
401.333	0.00	0.01	2.910	O				2.42
401.417	0.00	0.01	2.909	O				2.42
401.500	0.00	0.01	2.909	O				2.42
401.583	0.00	0.01	2.909	O				2.42
401.667	0.00	0.01	2.909	O				2.42
401.750	0.00	0.01	2.909	O				2.42
401.833	0.00	0.01	2.909	O				2.42
401.917	0.00	0.01	2.909	O				2.42
402.000	0.00	0.01	2.909	O				2.42
402.083	0.00	0.01	2.909	O				2.42
402.167	0.00	0.01	2.909	O				2.42

402.250	0.00	0.01	2.909	O				2.42
402.333	0.00	0.01	2.909	O				2.42
402.417	0.00	0.01	2.909	O				2.42
402.500	0.00	0.01	2.909	O				2.42
402.583	0.00	0.01	2.909	O				2.42
402.667	0.00	0.01	2.909	O				2.42
402.750	0.00	0.01	2.909	O				2.42
402.833	0.00	0.01	2.908	O				2.42
402.917	0.00	0.01	2.908	O				2.42
403.000	0.00	0.01	2.908	O				2.42
403.083	0.00	0.01	2.908	O				2.42
403.167	0.00	0.01	2.908	O				2.42
403.250	0.00	0.01	2.908	O				2.42
403.333	0.00	0.01	2.908	O				2.42
403.417	0.00	0.01	2.908	O				2.42
403.500	0.00	0.01	2.908	O				2.42
403.583	0.00	0.01	2.908	O				2.42
403.667	0.00	0.01	2.908	O				2.42
403.750	0.00	0.01	2.908	O				2.42
403.833	0.00	0.01	2.908	O				2.42
403.917	0.00	0.01	2.908	O				2.42
404.000	0.00	0.01	2.908	O				2.42
404.083	0.00	0.01	2.908	O				2.42
404.167	0.00	0.01	2.908	O				2.42
404.250	0.00	0.01	2.907	O				2.42
404.333	0.00	0.01	2.907	O				2.42
404.417	0.00	0.01	2.907	O				2.42
404.500	0.00	0.01	2.907	O				2.42
404.583	0.00	0.01	2.907	O				2.42
404.667	0.00	0.01	2.907	O				2.42
404.750	0.00	0.01	2.907	O				2.42
404.833	0.00	0.01	2.907	O				2.42
404.917	0.00	0.01	2.907	O				2.42
405.000	0.00	0.01	2.907	O				2.42
405.083	0.00	0.01	2.907	O				2.42
405.167	0.00	0.01	2.907	O				2.42
405.250	0.00	0.01	2.907	O				2.42
405.333	0.00	0.01	2.907	O				2.42
405.417	0.00	0.01	2.907	O				2.42
405.500	0.00	0.01	2.907	O				2.42
405.583	0.00	0.01	2.907	O				2.42
405.667	0.00	0.01	2.906	O				2.42
405.750	0.00	0.01	2.906	O				2.42
405.833	0.00	0.01	2.906	O				2.42
405.917	0.00	0.01	2.906	O				2.42
406.000	0.00	0.01	2.906	O				2.42
406.083	0.00	0.01	2.906	O				2.42
406.167	0.00	0.01	2.906	O				2.42
406.250	0.00	0.01	2.906	O				2.42
406.333	0.00	0.01	2.906	O				2.42

406.417	0.00	0.01	2.906	O				2.42
406.500	0.00	0.01	2.906	O				2.42
406.583	0.00	0.01	2.906	O				2.42
406.667	0.00	0.01	2.906	O				2.42
406.750	0.00	0.01	2.906	O				2.42
406.833	0.00	0.01	2.906	O				2.42
406.917	0.00	0.01	2.906	O				2.42
407.000	0.00	0.01	2.906	O				2.42
407.083	0.00	0.01	2.905	O				2.42
407.167	0.00	0.01	2.905	O				2.42
407.250	0.00	0.01	2.905	O				2.42
407.333	0.00	0.01	2.905	O				2.42
407.417	0.00	0.01	2.905	O				2.42
407.500	0.00	0.01	2.905	O				2.42
407.583	0.00	0.01	2.905	O				2.42
407.667	0.00	0.01	2.905	O				2.42
407.750	0.00	0.01	2.905	O				2.42
407.833	0.00	0.01	2.905	O				2.42
407.917	0.00	0.01	2.905	O				2.42
408.000	0.00	0.01	2.905	O				2.42
408.083	0.00	0.01	2.905	O				2.42
408.167	0.00	0.01	2.905	O				2.42
408.250	0.00	0.01	2.905	O				2.42
408.333	0.00	0.01	2.905	O				2.42
408.417	0.00	0.01	2.905	O				2.42
408.500	0.00	0.01	2.904	O				2.42
408.583	0.00	0.01	2.904	O				2.42
408.667	0.00	0.01	2.904	O				2.42
408.750	0.00	0.01	2.904	O				2.42
408.833	0.00	0.01	2.904	O				2.42
408.917	0.00	0.01	2.904	O				2.42
409.000	0.00	0.01	2.904	O				2.42
409.083	0.00	0.01	2.904	O				2.42
409.167	0.00	0.01	2.904	O				2.42
409.250	0.00	0.01	2.904	O				2.42
409.333	0.00	0.01	2.904	O				2.42
409.417	0.00	0.01	2.904	O				2.42
409.500	0.00	0.01	2.904	O				2.42
409.583	0.00	0.01	2.904	O				2.42
409.667	0.00	0.01	2.904	O				2.42
409.750	0.00	0.01	2.904	O				2.42
409.833	0.00	0.01	2.904	O				2.42
409.917	0.00	0.01	2.903	O				2.42
410.000	0.00	0.01	2.903	O				2.42
410.083	0.00	0.01	2.903	O				2.42
410.167	0.00	0.01	2.903	O				2.42
410.250	0.00	0.01	2.903	O				2.42
410.333	0.00	0.01	2.903	O				2.42
410.417	0.00	0.01	2.903	O				2.42
410.500	0.00	0.01	2.903	O				2.42

410.583	0.00	0.01	2.903	O	|	|	|	2.42
410.667	0.00	0.01	2.903	O	|	|	|	2.42
410.750	0.00	0.01	2.903	O	|	|	|	2.42
410.833	0.00	0.01	2.903	O	|	|	|	2.42
410.917	0.00	0.01	2.903	O	|	|	|	2.42
411.000	0.00	0.01	2.903	O	|	|	|	2.42
411.083	0.00	0.01	2.903	O	|	|	|	2.42
411.167	0.00	0.01	2.903	O	|	|	|	2.42
411.250	0.00	0.01	2.903	O	|	|	|	2.42
411.333	0.00	0.01	2.902	O	|	|	|	2.42
411.417	0.00	0.01	2.902	O	|	|	|	2.42
411.500	0.00	0.01	2.902	O	|	|	|	2.42
411.583	0.00	0.01	2.902	O	|	|	|	2.42
411.667	0.00	0.01	2.902	O	|	|	|	2.42
411.750	0.00	0.01	2.902	O	|	|	|	2.42
411.833	0.00	0.01	2.902	O	|	|	|	2.42
411.917	0.00	0.01	2.902	O	|	|	|	2.42
412.000	0.00	0.01	2.902	O	|	|	|	2.42
412.083	0.00	0.01	2.902	O	|	|	|	2.42
412.167	0.00	0.01	2.902	O	|	|	|	2.42
412.250	0.00	0.01	2.902	O	|	|	|	2.42
412.333	0.00	0.01	2.902	O	|	|	|	2.42
412.417	0.00	0.01	2.902	O	|	|	|	2.42
412.500	0.00	0.01	2.902	O	|	|	|	2.42
412.583	0.00	0.01	2.902	O	|	|	|	2.42
412.667	0.00	0.01	2.902	O	|	|	|	2.42
412.750	0.00	0.01	2.901	O	|	|	|	2.42
412.833	0.00	0.01	2.901	O	|	|	|	2.42
412.917	0.00	0.01	2.901	O	|	|	|	2.42
413.000	0.00	0.01	2.901	O	|	|	|	2.42
413.083	0.00	0.01	2.901	O	|	|	|	2.42
413.167	0.00	0.01	2.901	O	|	|	|	2.42
413.250	0.00	0.01	2.901	O	|	|	|	2.42
413.333	0.00	0.01	2.901	O	|	|	|	2.42
413.417	0.00	0.01	2.901	O	|	|	|	2.42
413.500	0.00	0.01	2.901	O	|	|	|	2.42
413.583	0.00	0.01	2.901	O	|	|	|	2.42
413.667	0.00	0.01	2.901	O	|	|	|	2.42
413.750	0.00	0.01	2.901	O	|	|	|	2.42
413.833	0.00	0.01	2.901	O	|	|	|	2.42
413.917	0.00	0.01	2.901	O	|	|	|	2.42
414.000	0.00	0.01	2.901	O	|	|	|	2.42
414.083	0.00	0.01	2.901	O	|	|	|	2.42
414.167	0.00	0.01	2.900	O	|	|	|	2.42
414.250	0.00	0.01	2.900	O	|	|	|	2.42
414.333	0.00	0.01	2.900	O	|	|	|	2.42
414.417	0.00	0.01	2.900	O	|	|	|	2.42
414.500	0.00	0.01	2.900	O	|	|	|	2.42
414.583	0.00	0.01	2.900	O	|	|	|	2.42
414.667	0.00	0.01	2.900	O	|	|	|	2.42

414.750	0.00	0.01	2.900	O	|	|	|	2.42
414.833	0.00	0.01	2.900	O	|	|	|	2.42
414.917	0.00	0.01	2.900	O	|	|	|	2.42
415.000	0.00	0.01	2.900	O	|	|	|	2.42
415.083	0.00	0.01	2.900	O	|	|	|	2.42
415.167	0.00	0.01	2.900	O	|	|	|	2.42
415.250	0.00	0.01	2.900	O	|	|	|	2.42
415.333	0.00	0.01	2.900	O	|	|	|	2.42
415.417	0.00	0.01	2.900	O	|	|	|	2.42
415.500	0.00	0.01	2.900	O	|	|	|	2.42
415.583	0.00	0.01	2.899	O	|	|	|	2.42
415.667	0.00	0.01	2.899	O	|	|	|	2.42
415.750	0.00	0.01	2.899	O	|	|	|	2.42
415.833	0.00	0.01	2.899	O	|	|	|	2.42
415.917	0.00	0.01	2.899	O	|	|	|	2.42
416.000	0.00	0.01	2.899	O	|	|	|	2.42
416.083	0.00	0.01	2.899	O	|	|	|	2.42
416.167	0.00	0.01	2.899	O	|	|	|	2.42
416.250	0.00	0.01	2.899	O	|	|	|	2.42
416.333	0.00	0.01	2.899	O	|	|	|	2.42
416.417	0.00	0.01	2.899	O	|	|	|	2.42
416.500	0.00	0.01	2.899	O	|	|	|	2.42
416.583	0.00	0.01	2.899	O	|	|	|	2.42
416.667	0.00	0.01	2.899	O	|	|	|	2.42

Remaining water in basin = 2.90 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 5001
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 20.133 (CFS)
Total volume = 4.310 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 08/07/22

IENLC
Basin D
10-year

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: 10yrareaC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 303
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 51.008 (CFS)
Total volume = 5.791 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

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Process from Point/Station 100.000 to Point/Station 103.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 303
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)

Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.450	0.001	1.450	1.450
2.000	1.940	0.010	1.940	1.940
2.500	2.420	0.100	2.420	2.420
3.000	2.910	0.100	2.910	2.910
3.500	3.390	0.100	3.390	3.390
4.000	3.880	10.000	3.846	3.914
4.500	4.170	20.000	4.101	4.239
5.000	4.250	20.000	4.181	4.319

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 12.8 25.50 38.26 51.01	Depth (Ft.)
0.083	0.04	0.00	0.000	O | | | |	0.00
0.167	0.34	0.00	0.001	O | | | |	0.00
0.250	0.67	0.00	0.005	O | | | |	0.01
0.333	0.82	0.00	0.010	O | | | |	0.01
0.417	0.90	0.00	0.016	O | | | |	0.02
0.500	0.96	0.00	0.022	O | | | |	0.02
0.583	1.00	0.00	0.029	O | | | |	0.03
0.667	1.04	0.00	0.036	O | | | |	0.04
0.750	1.06	0.00	0.043	O | | | |	0.04
0.833	1.08	0.00	0.051	O | | | |	0.05
0.917	1.10	0.00	0.058	O | | | |	0.06
1.000	1.11	0.00	0.066	O | | | |	0.07
1.083	1.12	0.00	0.074	O | | | |	0.08
1.167	1.13	0.00	0.081	O | | | |	0.08
1.250	1.14	0.00	0.089	O | | | |	0.09
1.333	1.14	0.00	0.097	O | | | |	0.10
1.417	1.15	0.00	0.105	O | | | |	0.11
1.500	1.15	0.00	0.113	O | | | |	0.12
1.583	1.16	0.00	0.121	O | | | |	0.12
1.667	1.16	0.00	0.129	O | | | |	0.13
1.750	1.16	0.00	0.137	O | | | |	0.14
1.833	1.17	0.00	0.145	O | | | |	0.15
1.917	1.17	0.00	0.153	O | | | |	0.16
2.000	1.18	0.00	0.161	O | | | |	0.17
2.083	1.18	0.00	0.169	O | | | |	0.17
2.167	1.19	0.00	0.177	O | | | |	0.18

2.250	1.19	0.00	0.185	O	|	|	|	0.19
2.333	1.19	0.00	0.194	O	|	|	|	0.20
2.417	1.20	0.00	0.202	O	|	|	|	0.21
2.500	1.20	0.00	0.210	O	|	|	|	0.22
2.583	1.21	0.00	0.218	O	|	|	|	0.23
2.667	1.21	0.00	0.227	O	|	|	|	0.23
2.750	1.22	0.00	0.235	O	|	|	|	0.24
2.833	1.22	0.00	0.243	O	|	|	|	0.25
2.917	1.23	0.00	0.252	O	|	|	|	0.26
3.000	1.23	0.00	0.260	O	|	|	|	0.27
3.083	1.23	0.00	0.269	O	|	|	|	0.28
3.167	1.24	0.00	0.277	O	|	|	|	0.29
3.250	1.24	0.00	0.286	O	|	|	|	0.30
3.333	1.25	0.00	0.294	O	|	|	|	0.30
3.417	1.25	0.00	0.303	O	|	|	|	0.31
3.500	1.26	0.00	0.312	O	|	|	|	0.32
3.583	1.26	0.00	0.320	O	|	|	|	0.33
3.667	1.27	0.00	0.329	O	|	|	|	0.34
3.750	1.27	0.00	0.338	O	|	|	|	0.35
3.833	1.28	0.00	0.347	O	|	|	|	0.36
3.917	1.28	0.00	0.355	O	|	|	|	0.37
4.000	1.29	0.00	0.364	O	|	|	|	0.38
4.083	1.30	0.00	0.373	O	|	|	|	0.39
4.167	1.30	0.00	0.382	O	|	|	|	0.40
4.250	1.31	0.00	0.391	O	|	|	|	0.40
4.333	1.31	0.00	0.400	O	|	|	|	0.41
4.417	1.32	0.00	0.409	O	|	|	|	0.42
4.500	1.32	0.00	0.418	O	|	|	|	0.43
4.583	1.33	0.00	0.427	O	|	|	|	0.44
4.667	1.33	0.00	0.437	O	|	|	|	0.45
4.750	1.34	0.00	0.446	O	|	|	|	0.46
4.833	1.35	0.00	0.455	O	|	|	|	0.47
4.917	1.35	0.00	0.464	O	|	|	|	0.48
5.000	1.36	0.00	0.474	O	|	|	|	0.49
5.083	1.36	0.00	0.483	O	|	|	|	0.50
5.167	1.37	0.00	0.492	O	|	|	|	0.51
5.250	1.38	0.00	0.502	O	|	|	|	0.52
5.333	1.38	0.00	0.511	O	|	|	|	0.53
5.417	1.39	0.00	0.521	O	|	|	|	0.54
5.500	1.40	0.00	0.531	O	|	|	|	0.55
5.583	1.40	0.00	0.540	O	|	|	|	0.56
5.667	1.41	0.00	0.550	O	|	|	|	0.57
5.750	1.42	0.00	0.560	O	|	|	|	0.58
5.833	1.42	0.00	0.569	O	|	|	|	0.59
5.917	1.43	0.00	0.579	O	|	|	|	0.60
6.000	1.44	0.00	0.589	O	|	|	|	0.61
6.083	1.44	0.00	0.599	O	|	|	|	0.62
6.167	1.45	0.00	0.609	O	|	|	|	0.63
6.250	1.46	0.00	0.619	O	|	|	|	0.64
6.333	1.47	0.00	0.629	O	|	|	|	0.65

6.417	1.47	0.00	0.639	O				0.66
6.500	1.48	0.00	0.649	O				0.67
6.583	1.49	0.00	0.660	O				0.68
6.667	1.50	0.00	0.670	O				0.69
6.750	1.50	0.00	0.680	O				0.70
6.833	1.51	0.00	0.691	O				0.71
6.917	1.52	0.00	0.701	O				0.73
7.000	1.53	0.00	0.712	O				0.74
7.083	1.54	0.00	0.722	O				0.75
7.167	1.55	0.00	0.733	O				0.76
7.250	1.56	0.00	0.743	O				0.77
7.333	1.56	0.00	0.754	O				0.78
7.417	1.57	0.00	0.765	O				0.79
7.500	1.58	0.00	0.776	O				0.80
7.583	1.59	0.00	0.787	O				0.81
7.667	1.60	0.00	0.798	OI				0.83
7.750	1.61	0.00	0.809	OI				0.84
7.833	1.62	0.00	0.820	OI				0.85
7.917	1.63	0.00	0.831	OI				0.86
8.000	1.64	0.00	0.842	OI				0.87
8.083	1.65	0.00	0.854	OI				0.88
8.167	1.66	0.00	0.865	OI				0.89
8.250	1.67	0.00	0.876	OI				0.91
8.333	1.68	0.00	0.888	OI				0.92
8.417	1.69	0.00	0.900	OI				0.93
8.500	1.70	0.00	0.911	OI				0.94
8.583	1.71	0.00	0.923	OI				0.95
8.667	1.73	0.00	0.935	OI				0.97
8.750	1.74	0.00	0.947	OI				0.98
8.833	1.75	0.00	0.959	OI				0.99
8.917	1.76	0.00	0.971	OI				1.00
9.000	1.77	0.00	0.983	OI				1.02
9.083	1.78	0.00	0.995	OI				1.03
9.167	1.80	0.00	1.008	OI				1.04
9.250	1.81	0.00	1.020	OI				1.06
9.333	1.82	0.00	1.033	OI				1.07
9.417	1.84	0.00	1.045	OI				1.08
9.500	1.85	0.00	1.058	OI				1.09
9.583	1.86	0.00	1.071	OI				1.11
9.667	1.88	0.00	1.083	OI				1.12
9.750	1.89	0.00	1.096	OI				1.13
9.833	1.91	0.00	1.110	OI				1.15
9.917	1.92	0.00	1.123	OI				1.16
10.000	1.94	0.00	1.136	OI				1.18
10.083	1.95	0.00	1.149	OI				1.19
10.167	1.97	0.00	1.163	OI				1.20
10.250	1.99	0.00	1.177	OI				1.22
10.333	2.00	0.00	1.190	OI				1.23
10.417	2.02	0.00	1.204	OI				1.25
10.500	2.04	0.00	1.218	OI				1.26

10.583	2.06	0.00	1.232	OI	|	|	|	1.27
10.667	2.08	0.00	1.246	OI	|	|	|	1.29
10.750	2.09	0.00	1.261	OI	|	|	|	1.30
10.833	2.11	0.00	1.275	OI	|	|	|	1.32
10.917	2.13	0.00	1.290	OI	|	|	|	1.33
11.000	2.15	0.00	1.305	OI	|	|	|	1.35
11.083	2.18	0.00	1.320	OI	|	|	|	1.37
11.167	2.20	0.00	1.335	OI	|	|	|	1.38
11.250	2.22	0.00	1.350	OI	|	|	|	1.40
11.333	2.24	0.00	1.365	OI	|	|	|	1.41
11.417	2.26	0.00	1.381	OI	|	|	|	1.43
11.500	2.29	0.00	1.396	OI	|	|	|	1.44
11.583	2.31	0.00	1.412	OI	|	|	|	1.46
11.667	2.34	0.00	1.428	OI	|	|	|	1.48
11.750	2.36	0.00	1.444	OI	|	|	|	1.49
11.833	2.39	0.00	1.461	OI	|	|	|	1.51
11.917	2.42	0.00	1.477	OI	|	|	|	1.53
12.000	2.45	0.00	1.494	OI	|	|	|	1.54
12.083	2.48	0.00	1.511	OI	|	|	|	1.56
12.167	2.52	0.00	1.528	OI	|	|	|	1.58
12.250	2.56	0.00	1.546	OI	|	|	|	1.60
12.333	2.60	0.00	1.564	OI	|	|	|	1.62
12.417	2.64	0.00	1.582	OI	|	|	|	1.63
12.500	2.68	0.00	1.600	OI	|	|	|	1.65
12.583	2.71	0.00	1.618	OI	|	|	|	1.67
12.667	2.75	0.00	1.637	OI	|	|	|	1.69
12.750	2.79	0.00	1.656	OI	|	|	|	1.71
12.833	2.83	0.01	1.676	OI	|	|	|	1.73
12.917	2.88	0.01	1.695	OI	|	|	|	1.75
13.000	2.92	0.01	1.715	OI	|	|	|	1.77
13.083	2.97	0.01	1.735	OI	|	|	|	1.79
13.167	3.01	0.01	1.756	OI	|	|	|	1.81
13.250	3.06	0.01	1.777	OI	|	|	|	1.83
13.333	3.12	0.01	1.798	OI	|	|	|	1.86
13.417	3.17	0.01	1.820	OI	|	|	|	1.88
13.500	3.23	0.01	1.842	O I	|	|	|	1.90
13.583	3.29	0.01	1.864	O I	|	|	|	1.92
13.667	3.35	0.01	1.887	O I	|	|	|	1.95
13.750	3.41	0.01	1.910	O I	|	|	|	1.97
13.833	3.48	0.01	1.934	O I	|	|	|	1.99
13.917	3.56	0.01	1.958	O I	|	|	|	2.02
14.000	3.63	0.02	1.982	O I	|	|	|	2.04
14.083	3.72	0.02	2.008	O I	|	|	|	2.07
14.167	3.81	0.03	2.033	O I	|	|	|	2.10
14.250	3.90	0.03	2.060	O I	|	|	|	2.12
14.333	4.01	0.04	2.087	O I	|	|	|	2.15
14.417	4.11	0.04	2.114	O I	|	|	|	2.18
14.500	4.23	0.05	2.143	O I	|	|	|	2.21
14.583	4.35	0.05	2.172	O I	|	|	|	2.24
14.667	4.49	0.06	2.202	O I	|	|	|	2.27

14.750	4.63	0.06	2.233	O I	|	|	|	2.31
14.833	4.79	0.07	2.265	O I	|	|	|	2.34
14.917	4.97	0.08	2.298	O I	|	|	|	2.37
15.000	5.16	0.08	2.332	O I	|	|	|	2.41
15.083	5.37	0.09	2.368	O I	|	|	|	2.45
15.167	5.62	0.10	2.405	O I	|	|	|	2.48
15.250	5.89	0.10	2.444	O I	|	|	|	2.52
15.333	6.20	0.10	2.485	O I	|	|	|	2.57
15.417	6.48	0.10	2.528	O I	|	|	|	2.61
15.500	6.40	0.10	2.572	O I	|	|	|	2.66
15.583	6.31	0.10	2.615	O I	|	|	|	2.70
15.667	6.65	0.10	2.659	O I	|	|	|	2.74
15.750	7.23	0.10	2.706	O I	|	|	|	2.79
15.833	8.21	0.10	2.759	O I	|	|	|	2.85
15.917	9.79	0.10	2.820	O I	|	|	|	2.91
16.000	13.07	0.10	2.898	O I	|	|	|	2.99
16.083	22.43	0.10	3.019	O | I	|	|	|	3.11
16.167	49.48	0.10	3.266	O |	|	|	I|	3.37
16.250	51.01	4.29	3.597	| O	|	|	I	3.71
16.333	28.95	8.93	3.827	| O	|	I |	|	3.95
16.417	19.94	11.55	3.925	| O|	I |	|	|	4.08
16.500	15.61	12.87	3.963	| OI	|	|	|	4.14
16.583	12.92	13.17	3.972	| O	|	|	|	4.16
16.667	10.91	12.90	3.964	| I O	|	|	|	4.15
16.750	9.41	12.32	3.947	| I O|	|	|	|	4.12
16.833	8.20	11.57	3.926	| I O|	|	|	|	4.08
16.917	7.17	10.75	3.902	| I O |	|	|	|	4.04
17.000	6.26	9.93	3.877	| I O |	|	|	|	4.00
17.083	5.72	9.42	3.851	| I O |	|	|	|	3.97
17.167	5.43	8.92	3.827	| I O |	|	|	|	3.95
17.250	4.93	8.43	3.802	| I O |	|	|	|	3.92
17.333	4.49	7.95	3.779	| I O |	|	|	|	3.90
17.417	3.87	7.46	3.754	| I O |	|	|	|	3.87
17.500	3.67	6.98	3.730	| I O |	|	|	|	3.85
17.583	3.51	6.54	3.709	| I O |	|	|	|	3.83
17.667	3.37	6.13	3.689	| IO |	|	|	|	3.80
17.750	3.24	5.77	3.670	| IO |	|	|	|	3.79
17.833	3.12	5.43	3.654	|I O |	|	|	|	3.77
17.917	3.02	5.12	3.639	|I O |	|	|	|	3.75
18.000	2.92	4.84	3.625	|I O |	|	|	|	3.74
18.083	2.83	4.59	3.612	|IO |	|	|	|	3.73
18.167	2.74	4.35	3.600	|IO |	|	|	|	3.71
18.250	2.65	4.14	3.590	|IO |	|	|	|	3.70
18.333	2.58	3.94	3.580	|IO |	|	|	|	3.69
18.417	2.51	3.76	3.571	|IO |	|	|	|	3.68
18.500	2.45	3.59	3.563	|IO |	|	|	|	3.68
18.583	2.39	3.44	3.555	|IO |	|	|	|	3.67
18.667	2.34	3.30	3.548	|IO |	|	|	|	3.66
18.750	2.28	3.17	3.542	|O |	|	|	|	3.66
18.833	2.24	3.05	3.536	|O |	|	|	|	3.65

18.917	2.19	2.94	3.531	|O	|	|	|	3.64
19.000	2.15	2.84	3.526	|O	|	|	|	3.64
19.083	2.11	2.75	3.521	|O	|	|	|	3.63
19.167	2.07	2.66	3.517	|O	|	|	|	3.63
19.250	2.03	2.58	3.513	|O	|	|	|	3.63
19.333	2.00	2.51	3.509	|O	|	|	|	3.62
19.417	1.97	2.44	3.506	|O	|	|	|	3.62
19.500	1.93	2.38	3.503	|O	|	|	|	3.62
19.583	1.90	2.32	3.500	|O	|	|	|	3.61
19.667	1.87	2.26	3.497	|O	|	|	|	3.61
19.750	1.85	2.21	3.494	|O	|	|	|	3.61
19.833	1.82	2.16	3.492	|O	|	|	|	3.60
19.917	1.79	2.11	3.490	|O	|	|	|	3.60
20.000	1.77	2.07	3.488	|O	|	|	|	3.60
20.083	1.74	2.03	3.486	|O	|	|	|	3.60
20.167	1.72	1.99	3.484	|O	|	|	|	3.60
20.250	1.70	1.95	3.482	|O	|	|	|	3.59
20.333	1.68	1.92	3.480	|O	|	|	|	3.59
20.417	1.66	1.89	3.478	|O	|	|	|	3.59
20.500	1.63	1.86	3.477	|O	|	|	|	3.59
20.583	1.62	1.83	3.475	|O	|	|	|	3.59
20.667	1.60	1.80	3.474	|O	|	|	|	3.59
20.750	1.58	1.77	3.473	IO	|	|	|	3.58
20.833	1.56	1.74	3.471	IO	|	|	|	3.58
20.917	1.54	1.72	3.470	IO	|	|	|	3.58
21.000	1.53	1.69	3.469	IO	|	|	|	3.58
21.083	1.51	1.67	3.468	IO	|	|	|	3.58
21.167	1.49	1.65	3.467	IO	|	|	|	3.58
21.250	1.48	1.63	3.466	IO	|	|	|	3.58
21.333	1.46	1.61	3.465	IO	|	|	|	3.58
21.417	1.45	1.59	3.464	O	|	|	|	3.58
21.500	1.43	1.57	3.463	O	|	|	|	3.57
21.583	1.42	1.55	3.462	O	|	|	|	3.57
21.667	1.41	1.53	3.461	O	|	|	|	3.57
21.750	1.39	1.52	3.460	O	|	|	|	3.57
21.833	1.38	1.50	3.459	O	|	|	|	3.57
21.917	1.37	1.48	3.458	O	|	|	|	3.57
22.000	1.36	1.47	3.458	O	|	|	|	3.57
22.083	1.34	1.45	3.457	O	|	|	|	3.57
22.167	1.33	1.44	3.456	O	|	|	|	3.57
22.250	1.32	1.42	3.455	O	|	|	|	3.57
22.333	1.31	1.41	3.455	O	|	|	|	3.57
22.417	1.30	1.39	3.454	O	|	|	|	3.57
22.500	1.29	1.38	3.453	O	|	|	|	3.56
22.583	1.28	1.37	3.453	O	|	|	|	3.56
22.667	1.27	1.36	3.452	O	|	|	|	3.56
22.750	1.26	1.34	3.452	O	|	|	|	3.56
22.833	1.25	1.33	3.451	O	|	|	|	3.56
22.917	1.24	1.32	3.450	O	|	|	|	3.56
23.000	1.23	1.31	3.450	O	|	|	|	3.56

23.083	1.22	1.30	3.449	O				3.56
23.167	1.21	1.29	3.449	O				3.56
23.250	1.20	1.28	3.448	O				3.56
23.333	1.19	1.27	3.448	O				3.56
23.417	1.18	1.26	3.447	O				3.56
23.500	1.17	1.25	3.447	O				3.56
23.583	1.17	1.24	3.446	O				3.56
23.667	1.16	1.23	3.446	O				3.56
23.750	1.15	1.22	3.445	O				3.56
23.833	1.14	1.21	3.445	O				3.56
23.917	1.13	1.20	3.444	O				3.56
24.000	1.13	1.19	3.444	O				3.56
24.083	1.08	1.18	3.443	O				3.55
24.167	0.78	1.15	3.442	O				3.55
24.250	0.44	1.08	3.438	O				3.55
24.333	0.29	0.98	3.434	O				3.54
24.417	0.21	0.89	3.429	O				3.54
24.500	0.15	0.80	3.424	O				3.54
24.583	0.11	0.71	3.420	O				3.53
24.667	0.08	0.63	3.416	O				3.53
24.750	0.06	0.56	3.413	O				3.52
24.833	0.04	0.49	3.409	O				3.52
24.917	0.03	0.43	3.406	O				3.52
25.000	0.02	0.38	3.404	O				3.51
25.083	0.02	0.33	3.401	O				3.51
25.167	0.01	0.29	3.399	O				3.51
25.250	0.00	0.25	3.398	O				3.51
25.333	0.00	0.22	3.396	O				3.51
25.417	0.00	0.19	3.395	O				3.50
25.500	0.00	0.17	3.393	O				3.50
25.583	0.00	0.15	3.392	O				3.50
25.667	0.00	0.13	3.391	O				3.50
25.750	0.00	0.11	3.390	O				3.50
25.833	0.00	0.10	3.390	O				3.50
25.917	0.00	0.10	3.389	O				3.50
26.000	0.00	0.10	3.388	O				3.50
26.083	0.00	0.10	3.388	O				3.50
26.167	0.00	0.10	3.387	O				3.50
26.250	0.00	0.10	3.386	O				3.50
26.333	0.00	0.10	3.386	O				3.50
26.417	0.00	0.10	3.385	O				3.49
26.500	0.00	0.10	3.384	O				3.49
26.583	0.00	0.10	3.384	O				3.49
26.667	0.00	0.10	3.383	O				3.49
26.750	0.00	0.10	3.382	O				3.49
26.833	0.00	0.10	3.382	O				3.49
26.917	0.00	0.10	3.381	O				3.49
27.000	0.00	0.10	3.380	O				3.49
27.083	0.00	0.10	3.379	O				3.49
27.167	0.00	0.10	3.379	O				3.49

27.250	0.00	0.10	3.378	O				3.49
27.333	0.00	0.10	3.377	O				3.49
27.417	0.00	0.10	3.377	O				3.49
27.500	0.00	0.10	3.376	O				3.49
27.583	0.00	0.10	3.375	O				3.48
27.667	0.00	0.10	3.375	O				3.48
27.750	0.00	0.10	3.374	O				3.48
27.833	0.00	0.10	3.373	O				3.48
27.917	0.00	0.10	3.373	O				3.48
28.000	0.00	0.10	3.372	O				3.48
28.083	0.00	0.10	3.371	O				3.48
28.167	0.00	0.10	3.370	O				3.48
28.250	0.00	0.10	3.370	O				3.48
28.333	0.00	0.10	3.369	O				3.48
28.417	0.00	0.10	3.368	O				3.48
28.500	0.00	0.10	3.368	O				3.48
28.583	0.00	0.10	3.367	O				3.48
28.667	0.00	0.10	3.366	O				3.48
28.750	0.00	0.10	3.366	O				3.47
28.833	0.00	0.10	3.365	O				3.47
28.917	0.00	0.10	3.364	O				3.47
29.000	0.00	0.10	3.364	O				3.47
29.083	0.00	0.10	3.363	O				3.47
29.167	0.00	0.10	3.362	O				3.47
29.250	0.00	0.10	3.362	O				3.47
29.333	0.00	0.10	3.361	O				3.47
29.417	0.00	0.10	3.360	O				3.47
29.500	0.00	0.10	3.359	O				3.47
29.583	0.00	0.10	3.359	O				3.47
29.667	0.00	0.10	3.358	O				3.47
29.750	0.00	0.10	3.357	O				3.47
29.833	0.00	0.10	3.357	O				3.47
29.917	0.00	0.10	3.356	O				3.46
30.000	0.00	0.10	3.355	O				3.46
30.083	0.00	0.10	3.355	O				3.46
30.167	0.00	0.10	3.354	O				3.46
30.250	0.00	0.10	3.353	O				3.46
30.333	0.00	0.10	3.353	O				3.46
30.417	0.00	0.10	3.352	O				3.46
30.500	0.00	0.10	3.351	O				3.46
30.583	0.00	0.10	3.351	O				3.46
30.667	0.00	0.10	3.350	O				3.46
30.750	0.00	0.10	3.349	O				3.46
30.833	0.00	0.10	3.348	O				3.46
30.917	0.00	0.10	3.348	O				3.46
31.000	0.00	0.10	3.347	O				3.46
31.083	0.00	0.10	3.346	O				3.45
31.167	0.00	0.10	3.346	O				3.45
31.250	0.00	0.10	3.345	O				3.45
31.333	0.00	0.10	3.344	O				3.45

31.417	0.00	0.10	3.344	O					3.45
31.500	0.00	0.10	3.343	O					3.45
31.583	0.00	0.10	3.342	O					3.45
31.667	0.00	0.10	3.342	O					3.45
31.750	0.00	0.10	3.341	O					3.45
31.833	0.00	0.10	3.340	O					3.45
31.917	0.00	0.10	3.339	O					3.45
32.000	0.00	0.10	3.339	O					3.45
32.083	0.00	0.10	3.338	O					3.45
32.167	0.00	0.10	3.337	O					3.45
32.250	0.00	0.10	3.337	O					3.44
32.333	0.00	0.10	3.336	O					3.44
32.417	0.00	0.10	3.335	O					3.44
32.500	0.00	0.10	3.335	O					3.44
32.583	0.00	0.10	3.334	O					3.44
32.667	0.00	0.10	3.333	O					3.44
32.750	0.00	0.10	3.333	O					3.44
32.833	0.00	0.10	3.332	O					3.44
32.917	0.00	0.10	3.331	O					3.44
33.000	0.00	0.10	3.331	O					3.44
33.083	0.00	0.10	3.330	O					3.44
33.167	0.00	0.10	3.329	O					3.44
33.250	0.00	0.10	3.328	O					3.44
33.333	0.00	0.10	3.328	O					3.44
33.417	0.00	0.10	3.327	O					3.43
33.500	0.00	0.10	3.326	O					3.43
33.583	0.00	0.10	3.326	O					3.43
33.667	0.00	0.10	3.325	O					3.43
33.750	0.00	0.10	3.324	O					3.43
33.833	0.00	0.10	3.324	O					3.43
33.917	0.00	0.10	3.323	O					3.43
34.000	0.00	0.10	3.322	O					3.43
34.083	0.00	0.10	3.322	O					3.43
34.167	0.00	0.10	3.321	O					3.43
34.250	0.00	0.10	3.320	O					3.43
34.333	0.00	0.10	3.320	O					3.43
34.417	0.00	0.10	3.319	O					3.43
34.500	0.00	0.10	3.318	O					3.43
34.583	0.00	0.10	3.317	O					3.42
34.667	0.00	0.10	3.317	O					3.42
34.750	0.00	0.10	3.316	O					3.42
34.833	0.00	0.10	3.315	O					3.42
34.917	0.00	0.10	3.315	O					3.42
35.000	0.00	0.10	3.314	O					3.42
35.083	0.00	0.10	3.313	O					3.42
35.167	0.00	0.10	3.313	O					3.42
35.250	0.00	0.10	3.312	O					3.42
35.333	0.00	0.10	3.311	O					3.42
35.417	0.00	0.10	3.311	O					3.42
35.500	0.00	0.10	3.310	O					3.42

35.583	0.00	0.10	3.309	O				3.42
35.667	0.00	0.10	3.309	O				3.42
35.750	0.00	0.10	3.308	O				3.41
35.833	0.00	0.10	3.307	O				3.41
35.917	0.00	0.10	3.306	O				3.41
36.000	0.00	0.10	3.306	O				3.41
36.083	0.00	0.10	3.305	O				3.41
36.167	0.00	0.10	3.304	O				3.41
36.250	0.00	0.10	3.304	O				3.41
36.333	0.00	0.10	3.303	O				3.41
36.417	0.00	0.10	3.302	O				3.41
36.500	0.00	0.10	3.302	O				3.41
36.583	0.00	0.10	3.301	O				3.41
36.667	0.00	0.10	3.300	O				3.41
36.750	0.00	0.10	3.300	O				3.41
36.833	0.00	0.10	3.299	O				3.41
36.917	0.00	0.10	3.298	O				3.40
37.000	0.00	0.10	3.297	O				3.40
37.083	0.00	0.10	3.297	O				3.40
37.167	0.00	0.10	3.296	O				3.40
37.250	0.00	0.10	3.295	O				3.40
37.333	0.00	0.10	3.295	O				3.40
37.417	0.00	0.10	3.294	O				3.40
37.500	0.00	0.10	3.293	O				3.40
37.583	0.00	0.10	3.293	O				3.40
37.667	0.00	0.10	3.292	O				3.40
37.750	0.00	0.10	3.291	O				3.40
37.833	0.00	0.10	3.291	O				3.40
37.917	0.00	0.10	3.290	O				3.40
38.000	0.00	0.10	3.289	O				3.40
38.083	0.00	0.10	3.289	O				3.39
38.167	0.00	0.10	3.288	O				3.39
38.250	0.00	0.10	3.287	O				3.39
38.333	0.00	0.10	3.286	O				3.39
38.417	0.00	0.10	3.286	O				3.39
38.500	0.00	0.10	3.285	O				3.39
38.583	0.00	0.10	3.284	O				3.39
38.667	0.00	0.10	3.284	O				3.39
38.750	0.00	0.10	3.283	O				3.39
38.833	0.00	0.10	3.282	O				3.39
38.917	0.00	0.10	3.282	O				3.39
39.000	0.00	0.10	3.281	O				3.39
39.083	0.00	0.10	3.280	O				3.39
39.167	0.00	0.10	3.280	O				3.38
39.250	0.00	0.10	3.279	O				3.38
39.333	0.00	0.10	3.278	O				3.38
39.417	0.00	0.10	3.278	O				3.38
39.500	0.00	0.10	3.277	O				3.38
39.583	0.00	0.10	3.276	O				3.38
39.667	0.00	0.10	3.275	O				3.38

39.750	0.00	0.10	3.275	O				3.38
39.833	0.00	0.10	3.274	O				3.38
39.917	0.00	0.10	3.273	O				3.38
40.000	0.00	0.10	3.273	O				3.38
40.083	0.00	0.10	3.272	O				3.38
40.167	0.00	0.10	3.271	O				3.38
40.250	0.00	0.10	3.271	O				3.38
40.333	0.00	0.10	3.270	O				3.37
40.417	0.00	0.10	3.269	O				3.37
40.500	0.00	0.10	3.269	O				3.37
40.583	0.00	0.10	3.268	O				3.37
40.667	0.00	0.10	3.267	O				3.37
40.750	0.00	0.10	3.266	O				3.37
40.833	0.00	0.10	3.266	O				3.37
40.917	0.00	0.10	3.265	O				3.37
41.000	0.00	0.10	3.264	O				3.37
41.083	0.00	0.10	3.264	O				3.37
41.167	0.00	0.10	3.263	O				3.37
41.250	0.00	0.10	3.262	O				3.37
41.333	0.00	0.10	3.262	O				3.37
41.417	0.00	0.10	3.261	O				3.37
41.500	0.00	0.10	3.260	O				3.36
41.583	0.00	0.10	3.260	O				3.36
41.667	0.00	0.10	3.259	O				3.36
41.750	0.00	0.10	3.258	O				3.36
41.833	0.00	0.10	3.258	O				3.36
41.917	0.00	0.10	3.257	O				3.36
42.000	0.00	0.10	3.256	O				3.36
42.083	0.00	0.10	3.255	O				3.36
42.167	0.00	0.10	3.255	O				3.36
42.250	0.00	0.10	3.254	O				3.36
42.333	0.00	0.10	3.253	O				3.36
42.417	0.00	0.10	3.253	O				3.36
42.500	0.00	0.10	3.252	O				3.36
42.583	0.00	0.10	3.251	O				3.36
42.667	0.00	0.10	3.251	O				3.35
42.750	0.00	0.10	3.250	O				3.35
42.833	0.00	0.10	3.249	O				3.35
42.917	0.00	0.10	3.249	O				3.35
43.000	0.00	0.10	3.248	O				3.35
43.083	0.00	0.10	3.247	O				3.35
43.167	0.00	0.10	3.247	O				3.35
43.250	0.00	0.10	3.246	O				3.35
43.333	0.00	0.10	3.245	O				3.35
43.417	0.00	0.10	3.244	O				3.35
43.500	0.00	0.10	3.244	O				3.35
43.583	0.00	0.10	3.243	O				3.35
43.667	0.00	0.10	3.242	O				3.35
43.750	0.00	0.10	3.242	O				3.35
43.833	0.00	0.10	3.241	O				3.34

43.917	0.00	0.10	3.240	O					3.34
44.000	0.00	0.10	3.240	O					3.34
44.083	0.00	0.10	3.239	O					3.34
44.167	0.00	0.10	3.238	O					3.34
44.250	0.00	0.10	3.238	O					3.34
44.333	0.00	0.10	3.237	O					3.34
44.417	0.00	0.10	3.236	O					3.34
44.500	0.00	0.10	3.235	O					3.34
44.583	0.00	0.10	3.235	O					3.34
44.667	0.00	0.10	3.234	O					3.34
44.750	0.00	0.10	3.233	O					3.34
44.833	0.00	0.10	3.233	O					3.34
44.917	0.00	0.10	3.232	O					3.34
45.000	0.00	0.10	3.231	O					3.33
45.083	0.00	0.10	3.231	O					3.33
45.167	0.00	0.10	3.230	O					3.33
45.250	0.00	0.10	3.229	O					3.33
45.333	0.00	0.10	3.229	O					3.33
45.417	0.00	0.10	3.228	O					3.33
45.500	0.00	0.10	3.227	O					3.33
45.583	0.00	0.10	3.227	O					3.33
45.667	0.00	0.10	3.226	O					3.33
45.750	0.00	0.10	3.225	O					3.33
45.833	0.00	0.10	3.224	O					3.33
45.917	0.00	0.10	3.224	O					3.33
46.000	0.00	0.10	3.223	O					3.33
46.083	0.00	0.10	3.222	O					3.33
46.167	0.00	0.10	3.222	O					3.32
46.250	0.00	0.10	3.221	O					3.32
46.333	0.00	0.10	3.220	O					3.32
46.417	0.00	0.10	3.220	O					3.32
46.500	0.00	0.10	3.219	O					3.32
46.583	0.00	0.10	3.218	O					3.32
46.667	0.00	0.10	3.218	O					3.32
46.750	0.00	0.10	3.217	O					3.32
46.833	0.00	0.10	3.216	O					3.32
46.917	0.00	0.10	3.216	O					3.32
47.000	0.00	0.10	3.215	O					3.32
47.083	0.00	0.10	3.214	O					3.32
47.167	0.00	0.10	3.213	O					3.32
47.250	0.00	0.10	3.213	O					3.32
47.333	0.00	0.10	3.212	O					3.31
47.417	0.00	0.10	3.211	O					3.31
47.500	0.00	0.10	3.211	O					3.31
47.583	0.00	0.10	3.210	O					3.31
47.667	0.00	0.10	3.209	O					3.31
47.750	0.00	0.10	3.209	O					3.31
47.833	0.00	0.10	3.208	O					3.31
47.917	0.00	0.10	3.207	O					3.31
48.000	0.00	0.10	3.207	O					3.31

48.083	0.00	0.10	3.206	O				3.31
48.167	0.00	0.10	3.205	O				3.31
48.250	0.00	0.10	3.205	O				3.31
48.333	0.00	0.10	3.204	O				3.31
48.417	0.00	0.10	3.203	O				3.31
48.500	0.00	0.10	3.202	O				3.30
48.583	0.00	0.10	3.202	O				3.30
48.667	0.00	0.10	3.201	O				3.30
48.750	0.00	0.10	3.200	O				3.30
48.833	0.00	0.10	3.200	O				3.30
48.917	0.00	0.10	3.199	O				3.30
49.000	0.00	0.10	3.198	O				3.30
49.083	0.00	0.10	3.198	O				3.30
49.167	0.00	0.10	3.197	O				3.30
49.250	0.00	0.10	3.196	O				3.30
49.333	0.00	0.10	3.196	O				3.30
49.417	0.00	0.10	3.195	O				3.30
49.500	0.00	0.10	3.194	O				3.30
49.583	0.00	0.10	3.193	O				3.30
49.667	0.00	0.10	3.193	O				3.29
49.750	0.00	0.10	3.192	O				3.29
49.833	0.00	0.10	3.191	O				3.29
49.917	0.00	0.10	3.191	O				3.29
50.000	0.00	0.10	3.190	O				3.29
50.083	0.00	0.10	3.189	O				3.29
50.167	0.00	0.10	3.189	O				3.29
50.250	0.00	0.10	3.188	O				3.29
50.333	0.00	0.10	3.187	O				3.29
50.417	0.00	0.10	3.187	O				3.29
50.500	0.00	0.10	3.186	O				3.29
50.583	0.00	0.10	3.185	O				3.29
50.667	0.00	0.10	3.185	O				3.29
50.750	0.00	0.10	3.184	O				3.29
50.833	0.00	0.10	3.183	O				3.28
50.917	0.00	0.10	3.182	O				3.28
51.000	0.00	0.10	3.182	O				3.28
51.083	0.00	0.10	3.181	O				3.28
51.167	0.00	0.10	3.180	O				3.28
51.250	0.00	0.10	3.180	O				3.28
51.333	0.00	0.10	3.179	O				3.28
51.417	0.00	0.10	3.178	O				3.28
51.500	0.00	0.10	3.178	O				3.28
51.583	0.00	0.10	3.177	O				3.28
51.667	0.00	0.10	3.176	O				3.28
51.750	0.00	0.10	3.176	O				3.28
51.833	0.00	0.10	3.175	O				3.28
51.917	0.00	0.10	3.174	O				3.28
52.000	0.00	0.10	3.174	O				3.27
52.083	0.00	0.10	3.173	O				3.27
52.167	0.00	0.10	3.172	O				3.27

52.250	0.00	0.10	3.171	O	|	|	|	3.27
52.333	0.00	0.10	3.171	O	|	|	|	3.27
52.417	0.00	0.10	3.170	O	|	|	|	3.27
52.500	0.00	0.10	3.169	O	|	|	|	3.27
52.583	0.00	0.10	3.169	O	|	|	|	3.27
52.667	0.00	0.10	3.168	O	|	|	|	3.27
52.750	0.00	0.10	3.167	O	|	|	|	3.27
52.833	0.00	0.10	3.167	O	|	|	|	3.27
52.917	0.00	0.10	3.166	O	|	|	|	3.27
53.000	0.00	0.10	3.165	O	|	|	|	3.27
53.083	0.00	0.10	3.165	O	|	|	|	3.27
53.167	0.00	0.10	3.164	O	|	|	|	3.26
53.250	0.00	0.10	3.163	O	|	|	|	3.26
53.333	0.00	0.10	3.162	O	|	|	|	3.26
53.417	0.00	0.10	3.162	O	|	|	|	3.26
53.500	0.00	0.10	3.161	O	|	|	|	3.26
53.583	0.00	0.10	3.160	O	|	|	|	3.26
53.667	0.00	0.10	3.160	O	|	|	|	3.26
53.750	0.00	0.10	3.159	O	|	|	|	3.26
53.833	0.00	0.10	3.158	O	|	|	|	3.26
53.917	0.00	0.10	3.158	O	|	|	|	3.26
54.000	0.00	0.10	3.157	O	|	|	|	3.26
54.083	0.00	0.10	3.156	O	|	|	|	3.26
54.167	0.00	0.10	3.156	O	|	|	|	3.26
54.250	0.00	0.10	3.155	O	|	|	|	3.26
54.333	0.00	0.10	3.154	O	|	|	|	3.25
54.417	0.00	0.10	3.154	O	|	|	|	3.25
54.500	0.00	0.10	3.153	O	|	|	|	3.25
54.583	0.00	0.10	3.152	O	|	|	|	3.25
54.667	0.00	0.10	3.151	O	|	|	|	3.25
54.750	0.00	0.10	3.151	O	|	|	|	3.25
54.833	0.00	0.10	3.150	O	|	|	|	3.25
54.917	0.00	0.10	3.149	O	|	|	|	3.25
55.000	0.00	0.10	3.149	O	|	|	|	3.25
55.083	0.00	0.10	3.148	O	|	|	|	3.25
55.167	0.00	0.10	3.147	O	|	|	|	3.25
55.250	0.00	0.10	3.147	O	|	|	|	3.25
55.333	0.00	0.10	3.146	O	|	|	|	3.25
55.417	0.00	0.10	3.145	O	|	|	|	3.25
55.500	0.00	0.10	3.145	O	|	|	|	3.24
55.583	0.00	0.10	3.144	O	|	|	|	3.24
55.667	0.00	0.10	3.143	O	|	|	|	3.24
55.750	0.00	0.10	3.143	O	|	|	|	3.24
55.833	0.00	0.10	3.142	O	|	|	|	3.24
55.917	0.00	0.10	3.141	O	|	|	|	3.24
56.000	0.00	0.10	3.140	O	|	|	|	3.24
56.083	0.00	0.10	3.140	O	|	|	|	3.24
56.167	0.00	0.10	3.139	O	|	|	|	3.24
56.250	0.00	0.10	3.138	O	|	|	|	3.24
56.333	0.00	0.10	3.138	O	|	|	|	3.24

56.417	0.00	0.10	3.137	O					3.24
56.500	0.00	0.10	3.136	O					3.24
56.583	0.00	0.10	3.136	O					3.24
56.667	0.00	0.10	3.135	O					3.23
56.750	0.00	0.10	3.134	O					3.23
56.833	0.00	0.10	3.134	O					3.23
56.917	0.00	0.10	3.133	O					3.23
57.000	0.00	0.10	3.132	O					3.23
57.083	0.00	0.10	3.132	O					3.23
57.167	0.00	0.10	3.131	O					3.23
57.250	0.00	0.10	3.130	O					3.23
57.333	0.00	0.10	3.129	O					3.23
57.417	0.00	0.10	3.129	O					3.23
57.500	0.00	0.10	3.128	O					3.23
57.583	0.00	0.10	3.127	O					3.23
57.667	0.00	0.10	3.127	O					3.23
57.750	0.00	0.10	3.126	O					3.22
57.833	0.00	0.10	3.125	O					3.22
57.917	0.00	0.10	3.125	O					3.22
58.000	0.00	0.10	3.124	O					3.22
58.083	0.00	0.10	3.123	O					3.22
58.167	0.00	0.10	3.123	O					3.22
58.250	0.00	0.10	3.122	O					3.22
58.333	0.00	0.10	3.121	O					3.22
58.417	0.00	0.10	3.120	O					3.22
58.500	0.00	0.10	3.120	O					3.22
58.583	0.00	0.10	3.119	O					3.22
58.667	0.00	0.10	3.118	O					3.22
58.750	0.00	0.10	3.118	O					3.22
58.833	0.00	0.10	3.117	O					3.22
58.917	0.00	0.10	3.116	O					3.21
59.000	0.00	0.10	3.116	O					3.21
59.083	0.00	0.10	3.115	O					3.21
59.167	0.00	0.10	3.114	O					3.21
59.250	0.00	0.10	3.114	O					3.21
59.333	0.00	0.10	3.113	O					3.21
59.417	0.00	0.10	3.112	O					3.21
59.500	0.00	0.10	3.112	O					3.21
59.583	0.00	0.10	3.111	O					3.21
59.667	0.00	0.10	3.110	O					3.21
59.750	0.00	0.10	3.109	O					3.21
59.833	0.00	0.10	3.109	O					3.21
59.917	0.00	0.10	3.108	O					3.21
60.000	0.00	0.10	3.107	O					3.21
60.083	0.00	0.10	3.107	O					3.20
60.167	0.00	0.10	3.106	O					3.20
60.250	0.00	0.10	3.105	O					3.20
60.333	0.00	0.10	3.105	O					3.20
60.417	0.00	0.10	3.104	O					3.20
60.500	0.00	0.10	3.103	O					3.20

60.583	0.00	0.10	3.103	O					3.20
60.667	0.00	0.10	3.102	O					3.20
60.750	0.00	0.10	3.101	O					3.20
60.833	0.00	0.10	3.101	O					3.20
60.917	0.00	0.10	3.100	O					3.20
61.000	0.00	0.10	3.099	O					3.20
61.083	0.00	0.10	3.098	O					3.20
61.167	0.00	0.10	3.098	O					3.20
61.250	0.00	0.10	3.097	O					3.19
61.333	0.00	0.10	3.096	O					3.19
61.417	0.00	0.10	3.096	O					3.19
61.500	0.00	0.10	3.095	O					3.19
61.583	0.00	0.10	3.094	O					3.19
61.667	0.00	0.10	3.094	O					3.19
61.750	0.00	0.10	3.093	O					3.19
61.833	0.00	0.10	3.092	O					3.19
61.917	0.00	0.10	3.092	O					3.19
62.000	0.00	0.10	3.091	O					3.19
62.083	0.00	0.10	3.090	O					3.19
62.167	0.00	0.10	3.089	O					3.19
62.250	0.00	0.10	3.089	O					3.19
62.333	0.00	0.10	3.088	O					3.19
62.417	0.00	0.10	3.087	O					3.18
62.500	0.00	0.10	3.087	O					3.18
62.583	0.00	0.10	3.086	O					3.18
62.667	0.00	0.10	3.085	O					3.18
62.750	0.00	0.10	3.085	O					3.18
62.833	0.00	0.10	3.084	O					3.18
62.917	0.00	0.10	3.083	O					3.18
63.000	0.00	0.10	3.083	O					3.18
63.083	0.00	0.10	3.082	O					3.18
63.167	0.00	0.10	3.081	O					3.18
63.250	0.00	0.10	3.081	O					3.18
63.333	0.00	0.10	3.080	O					3.18
63.417	0.00	0.10	3.079	O					3.18
63.500	0.00	0.10	3.078	O					3.18
63.583	0.00	0.10	3.078	O					3.17
63.667	0.00	0.10	3.077	O					3.17
63.750	0.00	0.10	3.076	O					3.17
63.833	0.00	0.10	3.076	O					3.17
63.917	0.00	0.10	3.075	O					3.17
64.000	0.00	0.10	3.074	O					3.17
64.083	0.00	0.10	3.074	O					3.17
64.167	0.00	0.10	3.073	O					3.17
64.250	0.00	0.10	3.072	O					3.17
64.333	0.00	0.10	3.072	O					3.17
64.417	0.00	0.10	3.071	O					3.17
64.500	0.00	0.10	3.070	O					3.17
64.583	0.00	0.10	3.070	O					3.17
64.667	0.00	0.10	3.069	O					3.17

64.750	0.00	0.10	3.068	O	|	|	|	3.16
64.833	0.00	0.10	3.067	O	|	|	|	3.16
64.917	0.00	0.10	3.067	O	|	|	|	3.16
65.000	0.00	0.10	3.066	O	|	|	|	3.16
65.083	0.00	0.10	3.065	O	|	|	|	3.16
65.167	0.00	0.10	3.065	O	|	|	|	3.16
65.250	0.00	0.10	3.064	O	|	|	|	3.16
65.333	0.00	0.10	3.063	O	|	|	|	3.16
65.417	0.00	0.10	3.063	O	|	|	|	3.16
65.500	0.00	0.10	3.062	O	|	|	|	3.16
65.583	0.00	0.10	3.061	O	|	|	|	3.16
65.667	0.00	0.10	3.061	O	|	|	|	3.16
65.750	0.00	0.10	3.060	O	|	|	|	3.16
65.833	0.00	0.10	3.059	O	|	|	|	3.16
65.917	0.00	0.10	3.059	O	|	|	|	3.15
66.000	0.00	0.10	3.058	O	|	|	|	3.15
66.083	0.00	0.10	3.057	O	|	|	|	3.15
66.167	0.00	0.10	3.056	O	|	|	|	3.15
66.250	0.00	0.10	3.056	O	|	|	|	3.15
66.333	0.00	0.10	3.055	O	|	|	|	3.15
66.417	0.00	0.10	3.054	O	|	|	|	3.15
66.500	0.00	0.10	3.054	O	|	|	|	3.15
66.583	0.00	0.10	3.053	O	|	|	|	3.15
66.667	0.00	0.10	3.052	O	|	|	|	3.15
66.750	0.00	0.10	3.052	O	|	|	|	3.15
66.833	0.00	0.10	3.051	O	|	|	|	3.15
66.917	0.00	0.10	3.050	O	|	|	|	3.15
67.000	0.00	0.10	3.050	O	|	|	|	3.15
67.083	0.00	0.10	3.049	O	|	|	|	3.14
67.167	0.00	0.10	3.048	O	|	|	|	3.14
67.250	0.00	0.10	3.047	O	|	|	|	3.14
67.333	0.00	0.10	3.047	O	|	|	|	3.14
67.417	0.00	0.10	3.046	O	|	|	|	3.14
67.500	0.00	0.10	3.045	O	|	|	|	3.14
67.583	0.00	0.10	3.045	O	|	|	|	3.14
67.667	0.00	0.10	3.044	O	|	|	|	3.14
67.750	0.00	0.10	3.043	O	|	|	|	3.14
67.833	0.00	0.10	3.043	O	|	|	|	3.14
67.917	0.00	0.10	3.042	O	|	|	|	3.14
68.000	0.00	0.10	3.041	O	|	|	|	3.14
68.083	0.00	0.10	3.041	O	|	|	|	3.14
68.167	0.00	0.10	3.040	O	|	|	|	3.14
68.250	0.00	0.10	3.039	O	|	|	|	3.13
68.333	0.00	0.10	3.039	O	|	|	|	3.13
68.417	0.00	0.10	3.038	O	|	|	|	3.13
68.500	0.00	0.10	3.037	O	|	|	|	3.13
68.583	0.00	0.10	3.036	O	|	|	|	3.13
68.667	0.00	0.10	3.036	O	|	|	|	3.13
68.750	0.00	0.10	3.035	O	|	|	|	3.13
68.833	0.00	0.10	3.034	O	|	|	|	3.13

68.917	0.00	0.10	3.034	O	|	|	|	|	3.13
69.000	0.00	0.10	3.033	O	|	|	|	|	3.13
69.083	0.00	0.10	3.032	O	|	|	|	|	3.13
69.167	0.00	0.10	3.032	O	|	|	|	|	3.13
69.250	0.00	0.10	3.031	O	|	|	|	|	3.13
69.333	0.00	0.10	3.030	O	|	|	|	|	3.13
69.417	0.00	0.10	3.030	O	|	|	|	|	3.12
69.500	0.00	0.10	3.029	O	|	|	|	|	3.12
69.583	0.00	0.10	3.028	O	|	|	|	|	3.12
69.667	0.00	0.10	3.028	O	|	|	|	|	3.12
69.750	0.00	0.10	3.027	O	|	|	|	|	3.12
69.833	0.00	0.10	3.026	O	|	|	|	|	3.12
69.917	0.00	0.10	3.025	O	|	|	|	|	3.12
70.000	0.00	0.10	3.025	O	|	|	|	|	3.12
70.083	0.00	0.10	3.024	O	|	|	|	|	3.12
70.167	0.00	0.10	3.023	O	|	|	|	|	3.12
70.250	0.00	0.10	3.023	O	|	|	|	|	3.12
70.333	0.00	0.10	3.022	O	|	|	|	|	3.12
70.417	0.00	0.10	3.021	O	|	|	|	|	3.12
70.500	0.00	0.10	3.021	O	|	|	|	|	3.12
70.583	0.00	0.10	3.020	O	|	|	|	|	3.11
70.667	0.00	0.10	3.019	O	|	|	|	|	3.11
70.750	0.00	0.10	3.019	O	|	|	|	|	3.11
70.833	0.00	0.10	3.018	O	|	|	|	|	3.11
70.917	0.00	0.10	3.017	O	|	|	|	|	3.11
71.000	0.00	0.10	3.016	O	|	|	|	|	3.11
71.083	0.00	0.10	3.016	O	|	|	|	|	3.11
71.167	0.00	0.10	3.015	O	|	|	|	|	3.11
71.250	0.00	0.10	3.014	O	|	|	|	|	3.11
71.333	0.00	0.10	3.014	O	|	|	|	|	3.11
71.417	0.00	0.10	3.013	O	|	|	|	|	3.11
71.500	0.00	0.10	3.012	O	|	|	|	|	3.11
71.583	0.00	0.10	3.012	O	|	|	|	|	3.11
71.667	0.00	0.10	3.011	O	|	|	|	|	3.11
71.750	0.00	0.10	3.010	O	|	|	|	|	3.10
71.833	0.00	0.10	3.010	O	|	|	|	|	3.10
71.917	0.00	0.10	3.009	O	|	|	|	|	3.10
72.000	0.00	0.10	3.008	O	|	|	|	|	3.10
72.083	0.00	0.10	3.008	O	|	|	|	|	3.10
72.167	0.00	0.10	3.007	O	|	|	|	|	3.10
72.250	0.00	0.10	3.006	O	|	|	|	|	3.10
72.333	0.00	0.10	3.005	O	|	|	|	|	3.10
72.417	0.00	0.10	3.005	O	|	|	|	|	3.10
72.500	0.00	0.10	3.004	O	|	|	|	|	3.10
72.583	0.00	0.10	3.003	O	|	|	|	|	3.10
72.667	0.00	0.10	3.003	O	|	|	|	|	3.10
72.750	0.00	0.10	3.002	O	|	|	|	|	3.10
72.833	0.00	0.10	3.001	O	|	|	|	|	3.10
72.917	0.00	0.10	3.001	O	|	|	|	|	3.09
73.000	0.00	0.10	3.000	O	|	|	|	|	3.09

73.083	0.00	0.10	2.999	O				3.09
73.167	0.00	0.10	2.999	O				3.09
73.250	0.00	0.10	2.998	O				3.09
73.333	0.00	0.10	2.997	O				3.09
73.417	0.00	0.10	2.997	O				3.09
73.500	0.00	0.10	2.996	O				3.09
73.583	0.00	0.10	2.995	O				3.09
73.667	0.00	0.10	2.994	O				3.09
73.750	0.00	0.10	2.994	O				3.09
73.833	0.00	0.10	2.993	O				3.09
73.917	0.00	0.10	2.992	O				3.09
74.000	0.00	0.10	2.992	O				3.09
74.083	0.00	0.10	2.991	O				3.08
74.167	0.00	0.10	2.990	O				3.08
74.250	0.00	0.10	2.990	O				3.08
74.333	0.00	0.10	2.989	O				3.08
74.417	0.00	0.10	2.988	O				3.08
74.500	0.00	0.10	2.988	O				3.08
74.583	0.00	0.10	2.987	O				3.08
74.667	0.00	0.10	2.986	O				3.08
74.750	0.00	0.10	2.985	O				3.08
74.833	0.00	0.10	2.985	O				3.08
74.917	0.00	0.10	2.984	O				3.08
75.000	0.00	0.10	2.983	O				3.08
75.083	0.00	0.10	2.983	O				3.08
75.167	0.00	0.10	2.982	O				3.08
75.250	0.00	0.10	2.981	O				3.07
75.333	0.00	0.10	2.981	O				3.07
75.417	0.00	0.10	2.980	O				3.07
75.500	0.00	0.10	2.979	O				3.07
75.583	0.00	0.10	2.979	O				3.07
75.667	0.00	0.10	2.978	O				3.07
75.750	0.00	0.10	2.977	O				3.07
75.833	0.00	0.10	2.977	O				3.07
75.917	0.00	0.10	2.976	O				3.07
76.000	0.00	0.10	2.975	O				3.07
76.083	0.00	0.10	2.974	O				3.07
76.167	0.00	0.10	2.974	O				3.07
76.250	0.00	0.10	2.973	O				3.07
76.333	0.00	0.10	2.972	O				3.07
76.417	0.00	0.10	2.972	O				3.06
76.500	0.00	0.10	2.971	O				3.06
76.583	0.00	0.10	2.970	O				3.06
76.667	0.00	0.10	2.970	O				3.06
76.750	0.00	0.10	2.969	O				3.06
76.833	0.00	0.10	2.968	O				3.06
76.917	0.00	0.10	2.968	O				3.06
77.000	0.00	0.10	2.967	O				3.06
77.083	0.00	0.10	2.966	O				3.06
77.167	0.00	0.10	2.966	O				3.06

77.250	0.00	0.10	2.965	O				3.06
77.333	0.00	0.10	2.964	O				3.06
77.417	0.00	0.10	2.963	O				3.06
77.500	0.00	0.10	2.963	O				3.05
77.583	0.00	0.10	2.962	O				3.05
77.667	0.00	0.10	2.961	O				3.05
77.750	0.00	0.10	2.961	O				3.05
77.833	0.00	0.10	2.960	O				3.05
77.917	0.00	0.10	2.959	O				3.05
78.000	0.00	0.10	2.959	O				3.05
78.083	0.00	0.10	2.958	O				3.05
78.167	0.00	0.10	2.957	O				3.05
78.250	0.00	0.10	2.957	O				3.05
78.333	0.00	0.10	2.956	O				3.05
78.417	0.00	0.10	2.955	O				3.05
78.500	0.00	0.10	2.955	O				3.05
78.583	0.00	0.10	2.954	O				3.05
78.667	0.00	0.10	2.953	O				3.04
78.750	0.00	0.10	2.952	O				3.04
78.833	0.00	0.10	2.952	O				3.04
78.917	0.00	0.10	2.951	O				3.04
79.000	0.00	0.10	2.950	O				3.04
79.083	0.00	0.10	2.950	O				3.04
79.167	0.00	0.10	2.949	O				3.04
79.250	0.00	0.10	2.948	O				3.04
79.333	0.00	0.10	2.948	O				3.04
79.417	0.00	0.10	2.947	O				3.04
79.500	0.00	0.10	2.946	O				3.04
79.583	0.00	0.10	2.946	O				3.04
79.667	0.00	0.10	2.945	O				3.04
79.750	0.00	0.10	2.944	O				3.04
79.833	0.00	0.10	2.943	O				3.03
79.917	0.00	0.10	2.943	O				3.03
80.000	0.00	0.10	2.942	O				3.03
80.083	0.00	0.10	2.941	O				3.03
80.167	0.00	0.10	2.941	O				3.03
80.250	0.00	0.10	2.940	O				3.03
80.333	0.00	0.10	2.939	O				3.03
80.417	0.00	0.10	2.939	O				3.03
80.500	0.00	0.10	2.938	O				3.03
80.583	0.00	0.10	2.937	O				3.03
80.667	0.00	0.10	2.937	O				3.03
80.750	0.00	0.10	2.936	O				3.03
80.833	0.00	0.10	2.935	O				3.03
80.917	0.00	0.10	2.935	O				3.03
81.000	0.00	0.10	2.934	O				3.02
81.083	0.00	0.10	2.933	O				3.02
81.167	0.00	0.10	2.932	O				3.02
81.250	0.00	0.10	2.932	O				3.02
81.333	0.00	0.10	2.931	O				3.02

81.417	0.00	0.10	2.930	O				3.02
81.500	0.00	0.10	2.930	O				3.02
81.583	0.00	0.10	2.929	O				3.02
81.667	0.00	0.10	2.928	O				3.02
81.750	0.00	0.10	2.928	O				3.02
81.833	0.00	0.10	2.927	O				3.02
81.917	0.00	0.10	2.926	O				3.02
82.000	0.00	0.10	2.926	O				3.02
82.083	0.00	0.10	2.925	O				3.02
82.167	0.00	0.10	2.924	O				3.01
82.250	0.00	0.10	2.924	O				3.01
82.333	0.00	0.10	2.923	O				3.01
82.417	0.00	0.10	2.922	O				3.01
82.500	0.00	0.10	2.921	O				3.01
82.583	0.00	0.10	2.921	O				3.01
82.667	0.00	0.10	2.920	O				3.01
82.750	0.00	0.10	2.919	O				3.01
82.833	0.00	0.10	2.919	O				3.01
82.917	0.00	0.10	2.918	O				3.01
83.000	0.00	0.10	2.917	O				3.01
83.083	0.00	0.10	2.917	O				3.01
83.167	0.00	0.10	2.916	O				3.01
83.250	0.00	0.10	2.915	O				3.01
83.333	0.00	0.10	2.915	O				3.00
83.417	0.00	0.10	2.914	O				3.00
83.500	0.00	0.10	2.913	O				3.00
83.583	0.00	0.10	2.912	O				3.00
83.667	0.00	0.10	2.912	O				3.00
83.750	0.00	0.10	2.911	O				3.00
83.833	0.00	0.10	2.910	O				3.00
83.917	0.00	0.10	2.910	O				3.00
84.000	0.00	0.10	2.909	O				3.00
84.083	0.00	0.10	2.908	O				3.00
84.167	0.00	0.10	2.908	O				3.00
84.250	0.00	0.10	2.907	O				3.00
84.333	0.00	0.10	2.906	O				3.00
84.417	0.00	0.10	2.906	O				3.00
84.500	0.00	0.10	2.905	O				2.99
84.583	0.00	0.10	2.904	O				2.99
84.667	0.00	0.10	2.904	O				2.99
84.750	0.00	0.10	2.903	O				2.99
84.833	0.00	0.10	2.902	O				2.99
84.917	0.00	0.10	2.901	O				2.99
85.000	0.00	0.10	2.901	O				2.99
85.083	0.00	0.10	2.900	O				2.99
85.167	0.00	0.10	2.899	O				2.99
85.250	0.00	0.10	2.899	O				2.99
85.333	0.00	0.10	2.898	O				2.99
85.417	0.00	0.10	2.897	O				2.99
85.500	0.00	0.10	2.897	O				2.99

85.583	0.00	0.10	2.896	O				2.99
85.667	0.00	0.10	2.895	O				2.98
85.750	0.00	0.10	2.895	O				2.98
85.833	0.00	0.10	2.894	O				2.98
85.917	0.00	0.10	2.893	O				2.98
86.000	0.00	0.10	2.893	O				2.98
86.083	0.00	0.10	2.892	O				2.98
86.167	0.00	0.10	2.891	O				2.98
86.250	0.00	0.10	2.890	O				2.98
86.333	0.00	0.10	2.890	O				2.98
86.417	0.00	0.10	2.889	O				2.98
86.500	0.00	0.10	2.888	O				2.98
86.583	0.00	0.10	2.888	O				2.98
86.667	0.00	0.10	2.887	O				2.98
86.750	0.00	0.10	2.886	O				2.98
86.833	0.00	0.10	2.886	O				2.98
86.917	0.00	0.10	2.885	O				2.97
87.000	0.00	0.10	2.884	O				2.97
87.083	0.00	0.10	2.884	O				2.97
87.167	0.00	0.10	2.883	O				2.97
87.250	0.00	0.10	2.882	O				2.97
87.333	0.00	0.10	2.882	O				2.97
87.417	0.00	0.10	2.881	O				2.97
87.500	0.00	0.10	2.880	O				2.97
87.583	0.00	0.10	2.879	O				2.97
87.667	0.00	0.10	2.879	O				2.97
87.750	0.00	0.10	2.878	O				2.97
87.833	0.00	0.10	2.877	O				2.97
87.917	0.00	0.10	2.877	O				2.97
88.000	0.00	0.10	2.876	O				2.97
88.083	0.00	0.10	2.875	O				2.96
88.167	0.00	0.10	2.875	O				2.96
88.250	0.00	0.10	2.874	O				2.96
88.333	0.00	0.10	2.873	O				2.96
88.417	0.00	0.10	2.873	O				2.96
88.500	0.00	0.10	2.872	O				2.96
88.583	0.00	0.10	2.871	O				2.96
88.667	0.00	0.10	2.870	O				2.96
88.750	0.00	0.10	2.870	O				2.96
88.833	0.00	0.10	2.869	O				2.96
88.917	0.00	0.10	2.868	O				2.96
89.000	0.00	0.10	2.868	O				2.96
89.083	0.00	0.10	2.867	O				2.96
89.167	0.00	0.10	2.866	O				2.96
89.250	0.00	0.10	2.866	O				2.95
89.333	0.00	0.10	2.865	O				2.95
89.417	0.00	0.10	2.864	O				2.95
89.500	0.00	0.10	2.864	O				2.95
89.583	0.00	0.10	2.863	O				2.95
89.667	0.00	0.10	2.862	O				2.95

89.750	0.00	0.10	2.862	O				2.95
89.833	0.00	0.10	2.861	O				2.95
89.917	0.00	0.10	2.860	O				2.95
90.000	0.00	0.10	2.859	O				2.95
90.083	0.00	0.10	2.859	O				2.95
90.167	0.00	0.10	2.858	O				2.95
90.250	0.00	0.10	2.857	O				2.95
90.333	0.00	0.10	2.857	O				2.95
90.417	0.00	0.10	2.856	O				2.94
90.500	0.00	0.10	2.855	O				2.94
90.583	0.00	0.10	2.855	O				2.94
90.667	0.00	0.10	2.854	O				2.94
90.750	0.00	0.10	2.853	O				2.94
90.833	0.00	0.10	2.853	O				2.94
90.917	0.00	0.10	2.852	O				2.94
91.000	0.00	0.10	2.851	O				2.94
91.083	0.00	0.10	2.851	O				2.94
91.167	0.00	0.10	2.850	O				2.94
91.250	0.00	0.10	2.849	O				2.94
91.333	0.00	0.10	2.848	O				2.94
91.417	0.00	0.10	2.848	O				2.94
91.500	0.00	0.10	2.847	O				2.94
91.583	0.00	0.10	2.846	O				2.94
91.667	0.00	0.10	2.846	O				2.93
91.750	0.00	0.10	2.845	O				2.93
91.833	0.00	0.10	2.844	O				2.93
91.917	0.00	0.10	2.844	O				2.93
92.000	0.00	0.10	2.843	O				2.93
92.083	0.00	0.10	2.842	O				2.93
92.167	0.00	0.10	2.842	O				2.93
92.250	0.00	0.10	2.841	O				2.93
92.333	0.00	0.10	2.840	O				2.93
92.417	0.00	0.10	2.839	O				2.93
92.500	0.00	0.10	2.839	O				2.93
92.583	0.00	0.10	2.838	O				2.93
92.667	0.00	0.10	2.837	O				2.93
92.750	0.00	0.10	2.837	O				2.93
92.833	0.00	0.10	2.836	O				2.92
92.917	0.00	0.10	2.835	O				2.92
93.000	0.00	0.10	2.835	O				2.92
93.083	0.00	0.10	2.834	O				2.92
93.167	0.00	0.10	2.833	O				2.92
93.250	0.00	0.10	2.833	O				2.92
93.333	0.00	0.10	2.832	O				2.92
93.417	0.00	0.10	2.831	O				2.92
93.500	0.00	0.10	2.831	O				2.92
93.583	0.00	0.10	2.830	O				2.92
93.667	0.00	0.10	2.829	O				2.92
93.750	0.00	0.10	2.828	O				2.92
93.833	0.00	0.10	2.828	O				2.92

93.917	0.00	0.10	2.827	O				2.92
94.000	0.00	0.10	2.826	O				2.91
94.083	0.00	0.10	2.826	O				2.91
94.167	0.00	0.10	2.825	O				2.91
94.250	0.00	0.10	2.824	O				2.91
94.333	0.00	0.10	2.824	O				2.91
94.417	0.00	0.10	2.823	O				2.91
94.500	0.00	0.10	2.822	O				2.91
94.583	0.00	0.10	2.822	O				2.91
94.667	0.00	0.10	2.821	O				2.91
94.750	0.00	0.10	2.820	O				2.91
94.833	0.00	0.10	2.820	O				2.91
94.917	0.00	0.10	2.819	O				2.91
95.000	0.00	0.10	2.818	O				2.91
95.083	0.00	0.10	2.817	O				2.91
95.167	0.00	0.10	2.817	O				2.90
95.250	0.00	0.10	2.816	O				2.90
95.333	0.00	0.10	2.815	O				2.90
95.417	0.00	0.10	2.815	O				2.90
95.500	0.00	0.10	2.814	O				2.90
95.583	0.00	0.10	2.813	O				2.90
95.667	0.00	0.10	2.813	O				2.90
95.750	0.00	0.10	2.812	O				2.90
95.833	0.00	0.10	2.811	O				2.90
95.917	0.00	0.10	2.811	O				2.90
96.000	0.00	0.10	2.810	O				2.90
96.083	0.00	0.10	2.809	O				2.90
96.167	0.00	0.10	2.809	O				2.90
96.250	0.00	0.10	2.808	O				2.90
96.333	0.00	0.10	2.807	O				2.90
96.417	0.00	0.10	2.806	O				2.89
96.500	0.00	0.10	2.806	O				2.89
96.583	0.00	0.10	2.805	O				2.89
96.667	0.00	0.10	2.804	O				2.89
96.750	0.00	0.10	2.804	O				2.89
96.833	0.00	0.10	2.803	O				2.89
96.917	0.00	0.10	2.802	O				2.89
97.000	0.00	0.10	2.802	O				2.89
97.083	0.00	0.10	2.801	O				2.89
97.167	0.00	0.10	2.800	O				2.89
97.250	0.00	0.10	2.800	O				2.89
97.333	0.00	0.10	2.799	O				2.89
97.417	0.00	0.10	2.798	O				2.89
97.500	0.00	0.10	2.797	O				2.89
97.583	0.00	0.10	2.797	O				2.88
97.667	0.00	0.10	2.796	O				2.88
97.750	0.00	0.10	2.795	O				2.88
97.833	0.00	0.10	2.795	O				2.88
97.917	0.00	0.10	2.794	O				2.88
98.000	0.00	0.10	2.793	O				2.88

98.083	0.00	0.10	2.793	O				2.88
98.167	0.00	0.10	2.792	O				2.88
98.250	0.00	0.10	2.791	O				2.88
98.333	0.00	0.10	2.791	O				2.88
98.417	0.00	0.10	2.790	O				2.88
98.500	0.00	0.10	2.789	O				2.88
98.583	0.00	0.10	2.789	O				2.88
98.667	0.00	0.10	2.788	O				2.88
98.750	0.00	0.10	2.787	O				2.87
98.833	0.00	0.10	2.786	O				2.87
98.917	0.00	0.10	2.786	O				2.87
99.000	0.00	0.10	2.785	O				2.87
99.083	0.00	0.10	2.784	O				2.87
99.167	0.00	0.10	2.784	O				2.87
99.250	0.00	0.10	2.783	O				2.87
99.333	0.00	0.10	2.782	O				2.87
99.417	0.00	0.10	2.782	O				2.87
99.500	0.00	0.10	2.781	O				2.87
99.583	0.00	0.10	2.780	O				2.87
99.667	0.00	0.10	2.780	O				2.87
99.750	0.00	0.10	2.779	O				2.87
99.833	0.00	0.10	2.778	O				2.87
99.917	0.00	0.10	2.778	O				2.86
100.000	0.00	0.10	2.777	O				2.86
100.083	0.00	0.10	2.776	O				2.86
100.167	0.00	0.10	2.775	O				2.86
100.250	0.00	0.10	2.775	O				2.86
100.333	0.00	0.10	2.774	O				2.86
100.417	0.00	0.10	2.773	O				2.86
100.500	0.00	0.10	2.773	O				2.86
100.583	0.00	0.10	2.772	O				2.86
100.667	0.00	0.10	2.771	O				2.86
100.750	0.00	0.10	2.771	O				2.86
100.833	0.00	0.10	2.770	O				2.86
100.917	0.00	0.10	2.769	O				2.86
101.000	0.00	0.10	2.769	O				2.86
101.083	0.00	0.10	2.768	O				2.85
101.167	0.00	0.10	2.767	O				2.85
101.250	0.00	0.10	2.766	O				2.85
101.333	0.00	0.10	2.766	O				2.85
101.417	0.00	0.10	2.765	O				2.85
101.500	0.00	0.10	2.764	O				2.85
101.583	0.00	0.10	2.764	O				2.85
101.667	0.00	0.10	2.763	O				2.85
101.750	0.00	0.10	2.762	O				2.85
101.833	0.00	0.10	2.762	O				2.85
101.917	0.00	0.10	2.761	O				2.85
102.000	0.00	0.10	2.760	O				2.85
102.083	0.00	0.10	2.760	O				2.85
102.167	0.00	0.10	2.759	O				2.85

102.250	0.00	0.10	2.758	O				2.85
102.333	0.00	0.10	2.758	O				2.84
102.417	0.00	0.10	2.757	O				2.84
102.500	0.00	0.10	2.756	O				2.84
102.583	0.00	0.10	2.755	O				2.84
102.667	0.00	0.10	2.755	O				2.84
102.750	0.00	0.10	2.754	O				2.84
102.833	0.00	0.10	2.753	O				2.84
102.917	0.00	0.10	2.753	O				2.84
103.000	0.00	0.10	2.752	O				2.84
103.083	0.00	0.10	2.751	O				2.84
103.167	0.00	0.10	2.751	O				2.84
103.250	0.00	0.10	2.750	O				2.84
103.333	0.00	0.10	2.749	O				2.84
103.417	0.00	0.10	2.749	O				2.84
103.500	0.00	0.10	2.748	O				2.83
103.583	0.00	0.10	2.747	O				2.83
103.667	0.00	0.10	2.747	O				2.83
103.750	0.00	0.10	2.746	O				2.83
103.833	0.00	0.10	2.745	O				2.83
103.917	0.00	0.10	2.744	O				2.83
104.000	0.00	0.10	2.744	O				2.83
104.083	0.00	0.10	2.743	O				2.83
104.167	0.00	0.10	2.742	O				2.83
104.250	0.00	0.10	2.742	O				2.83
104.333	0.00	0.10	2.741	O				2.83
104.417	0.00	0.10	2.740	O				2.83
104.500	0.00	0.10	2.740	O				2.83
104.583	0.00	0.10	2.739	O				2.83
104.667	0.00	0.10	2.738	O				2.82
104.750	0.00	0.10	2.738	O				2.82
104.833	0.00	0.10	2.737	O				2.82
104.917	0.00	0.10	2.736	O				2.82
105.000	0.00	0.10	2.735	O				2.82
105.083	0.00	0.10	2.735	O				2.82
105.167	0.00	0.10	2.734	O				2.82
105.250	0.00	0.10	2.733	O				2.82
105.333	0.00	0.10	2.733	O				2.82
105.417	0.00	0.10	2.732	O				2.82
105.500	0.00	0.10	2.731	O				2.82
105.583	0.00	0.10	2.731	O				2.82
105.667	0.00	0.10	2.730	O				2.82
105.750	0.00	0.10	2.729	O				2.82
105.833	0.00	0.10	2.729	O				2.81
105.917	0.00	0.10	2.728	O				2.81
106.000	0.00	0.10	2.727	O				2.81
106.083	0.00	0.10	2.727	O				2.81
106.167	0.00	0.10	2.726	O				2.81
106.250	0.00	0.10	2.725	O				2.81
106.333	0.00	0.10	2.724	O				2.81

106.417	0.00	0.10	2.724	O	|	|	|	|	2.81
106.500	0.00	0.10	2.723	O	|	|	|	|	2.81
106.583	0.00	0.10	2.722	O	|	|	|	|	2.81
106.667	0.00	0.10	2.722	O	|	|	|	|	2.81
106.750	0.00	0.10	2.721	O	|	|	|	|	2.81
106.833	0.00	0.10	2.720	O	|	|	|	|	2.81
106.917	0.00	0.10	2.720	O	|	|	|	|	2.81
107.000	0.00	0.10	2.719	O	|	|	|	|	2.81
107.083	0.00	0.10	2.718	O	|	|	|	|	2.80
107.167	0.00	0.10	2.718	O	|	|	|	|	2.80
107.250	0.00	0.10	2.717	O	|	|	|	|	2.80
107.333	0.00	0.10	2.716	O	|	|	|	|	2.80
107.417	0.00	0.10	2.716	O	|	|	|	|	2.80
107.500	0.00	0.10	2.715	O	|	|	|	|	2.80
107.583	0.00	0.10	2.714	O	|	|	|	|	2.80
107.667	0.00	0.10	2.713	O	|	|	|	|	2.80
107.750	0.00	0.10	2.713	O	|	|	|	|	2.80
107.833	0.00	0.10	2.712	O	|	|	|	|	2.80
107.917	0.00	0.10	2.711	O	|	|	|	|	2.80
108.000	0.00	0.10	2.711	O	|	|	|	|	2.80
108.083	0.00	0.10	2.710	O	|	|	|	|	2.80
108.167	0.00	0.10	2.709	O	|	|	|	|	2.80
108.250	0.00	0.10	2.709	O	|	|	|	|	2.79
108.333	0.00	0.10	2.708	O	|	|	|	|	2.79
108.417	0.00	0.10	2.707	O	|	|	|	|	2.79
108.500	0.00	0.10	2.707	O	|	|	|	|	2.79
108.583	0.00	0.10	2.706	O	|	|	|	|	2.79
108.667	0.00	0.10	2.705	O	|	|	|	|	2.79
108.750	0.00	0.10	2.705	O	|	|	|	|	2.79
108.833	0.00	0.10	2.704	O	|	|	|	|	2.79
108.917	0.00	0.10	2.703	O	|	|	|	|	2.79
109.000	0.00	0.10	2.702	O	|	|	|	|	2.79
109.083	0.00	0.10	2.702	O	|	|	|	|	2.79
109.167	0.00	0.10	2.701	O	|	|	|	|	2.79
109.250	0.00	0.10	2.700	O	|	|	|	|	2.79
109.333	0.00	0.10	2.700	O	|	|	|	|	2.79
109.417	0.00	0.10	2.699	O	|	|	|	|	2.78
109.500	0.00	0.10	2.698	O	|	|	|	|	2.78
109.583	0.00	0.10	2.698	O	|	|	|	|	2.78
109.667	0.00	0.10	2.697	O	|	|	|	|	2.78
109.750	0.00	0.10	2.696	O	|	|	|	|	2.78
109.833	0.00	0.10	2.696	O	|	|	|	|	2.78
109.917	0.00	0.10	2.695	O	|	|	|	|	2.78
110.000	0.00	0.10	2.694	O	|	|	|	|	2.78
110.083	0.00	0.10	2.693	O	|	|	|	|	2.78
110.167	0.00	0.10	2.693	O	|	|	|	|	2.78
110.250	0.00	0.10	2.692	O	|	|	|	|	2.78
110.333	0.00	0.10	2.691	O	|	|	|	|	2.78
110.417	0.00	0.10	2.691	O	|	|	|	|	2.78
110.500	0.00	0.10	2.690	O	|	|	|	|	2.78

110.583	0.00	0.10	2.689	O					2.77
110.667	0.00	0.10	2.689	O					2.77
110.750	0.00	0.10	2.688	O					2.77
110.833	0.00	0.10	2.687	O					2.77
110.917	0.00	0.10	2.687	O					2.77
111.000	0.00	0.10	2.686	O					2.77
111.083	0.00	0.10	2.685	O					2.77
111.167	0.00	0.10	2.685	O					2.77
111.250	0.00	0.10	2.684	O					2.77
111.333	0.00	0.10	2.683	O					2.77
111.417	0.00	0.10	2.682	O					2.77
111.500	0.00	0.10	2.682	O					2.77
111.583	0.00	0.10	2.681	O					2.77
111.667	0.00	0.10	2.680	O					2.77
111.750	0.00	0.10	2.680	O					2.77
111.833	0.00	0.10	2.679	O					2.76
111.917	0.00	0.10	2.678	O					2.76
112.000	0.00	0.10	2.678	O					2.76
112.083	0.00	0.10	2.677	O					2.76
112.167	0.00	0.10	2.676	O					2.76
112.250	0.00	0.10	2.676	O					2.76
112.333	0.00	0.10	2.675	O					2.76
112.417	0.00	0.10	2.674	O					2.76
112.500	0.00	0.10	2.674	O					2.76
112.583	0.00	0.10	2.673	O					2.76
112.667	0.00	0.10	2.672	O					2.76
112.750	0.00	0.10	2.671	O					2.76
112.833	0.00	0.10	2.671	O					2.76
112.917	0.00	0.10	2.670	O					2.76
113.000	0.00	0.10	2.669	O					2.75
113.083	0.00	0.10	2.669	O					2.75
113.167	0.00	0.10	2.668	O					2.75
113.250	0.00	0.10	2.667	O					2.75
113.333	0.00	0.10	2.667	O					2.75
113.417	0.00	0.10	2.666	O					2.75
113.500	0.00	0.10	2.665	O					2.75
113.583	0.00	0.10	2.665	O					2.75
113.667	0.00	0.10	2.664	O					2.75
113.750	0.00	0.10	2.663	O					2.75
113.833	0.00	0.10	2.662	O					2.75
113.917	0.00	0.10	2.662	O					2.75
114.000	0.00	0.10	2.661	O					2.75
114.083	0.00	0.10	2.660	O					2.75
114.167	0.00	0.10	2.660	O					2.74
114.250	0.00	0.10	2.659	O					2.74
114.333	0.00	0.10	2.658	O					2.74
114.417	0.00	0.10	2.658	O					2.74
114.500	0.00	0.10	2.657	O					2.74
114.583	0.00	0.10	2.656	O					2.74
114.667	0.00	0.10	2.656	O					2.74

114.750	0.00	0.10	2.655	O				2.74
114.833	0.00	0.10	2.654	O				2.74
114.917	0.00	0.10	2.654	O				2.74
115.000	0.00	0.10	2.653	O				2.74
115.083	0.00	0.10	2.652	O				2.74
115.167	0.00	0.10	2.651	O				2.74
115.250	0.00	0.10	2.651	O				2.74
115.333	0.00	0.10	2.650	O				2.73
115.417	0.00	0.10	2.649	O				2.73
115.500	0.00	0.10	2.649	O				2.73
115.583	0.00	0.10	2.648	O				2.73
115.667	0.00	0.10	2.647	O				2.73
115.750	0.00	0.10	2.647	O				2.73
115.833	0.00	0.10	2.646	O				2.73
115.917	0.00	0.10	2.645	O				2.73
116.000	0.00	0.10	2.645	O				2.73
116.083	0.00	0.10	2.644	O				2.73
116.167	0.00	0.10	2.643	O				2.73
116.250	0.00	0.10	2.643	O				2.73
116.333	0.00	0.10	2.642	O				2.73
116.417	0.00	0.10	2.641	O				2.73
116.500	0.00	0.10	2.640	O				2.72
116.583	0.00	0.10	2.640	O				2.72
116.667	0.00	0.10	2.639	O				2.72
116.750	0.00	0.10	2.638	O				2.72
116.833	0.00	0.10	2.638	O				2.72
116.917	0.00	0.10	2.637	O				2.72
117.000	0.00	0.10	2.636	O				2.72
117.083	0.00	0.10	2.636	O				2.72
117.167	0.00	0.10	2.635	O				2.72
117.250	0.00	0.10	2.634	O				2.72
117.333	0.00	0.10	2.634	O				2.72
117.417	0.00	0.10	2.633	O				2.72
117.500	0.00	0.10	2.632	O				2.72
117.583	0.00	0.10	2.632	O				2.72
117.667	0.00	0.10	2.631	O				2.72
117.750	0.00	0.10	2.630	O				2.71
117.833	0.00	0.10	2.629	O				2.71
117.917	0.00	0.10	2.629	O				2.71
118.000	0.00	0.10	2.628	O				2.71
118.083	0.00	0.10	2.627	O				2.71
118.167	0.00	0.10	2.627	O				2.71
118.250	0.00	0.10	2.626	O				2.71
118.333	0.00	0.10	2.625	O				2.71
118.417	0.00	0.10	2.625	O				2.71
118.500	0.00	0.10	2.624	O				2.71
118.583	0.00	0.10	2.623	O				2.71
118.667	0.00	0.10	2.623	O				2.71
118.750	0.00	0.10	2.622	O				2.71
118.833	0.00	0.10	2.621	O				2.71

118.917	0.00	0.10	2.620	O					2.70
119.000	0.00	0.10	2.620	O					2.70
119.083	0.00	0.10	2.619	O					2.70
119.167	0.00	0.10	2.618	O					2.70
119.250	0.00	0.10	2.618	O					2.70
119.333	0.00	0.10	2.617	O					2.70
119.417	0.00	0.10	2.616	O					2.70
119.500	0.00	0.10	2.616	O					2.70
119.583	0.00	0.10	2.615	O					2.70
119.667	0.00	0.10	2.614	O					2.70
119.750	0.00	0.10	2.614	O					2.70
119.833	0.00	0.10	2.613	O					2.70
119.917	0.00	0.10	2.612	O					2.70
120.000	0.00	0.10	2.612	O					2.70
120.083	0.00	0.10	2.611	O					2.69
120.167	0.00	0.10	2.610	O					2.69
120.250	0.00	0.10	2.609	O					2.69
120.333	0.00	0.10	2.609	O					2.69
120.417	0.00	0.10	2.608	O					2.69
120.500	0.00	0.10	2.607	O					2.69
120.583	0.00	0.10	2.607	O					2.69
120.667	0.00	0.10	2.606	O					2.69
120.750	0.00	0.10	2.605	O					2.69
120.833	0.00	0.10	2.605	O					2.69
120.917	0.00	0.10	2.604	O					2.69
121.000	0.00	0.10	2.603	O					2.69
121.083	0.00	0.10	2.603	O					2.69
121.167	0.00	0.10	2.602	O					2.69
121.250	0.00	0.10	2.601	O					2.68
121.333	0.00	0.10	2.601	O					2.68
121.417	0.00	0.10	2.600	O					2.68
121.500	0.00	0.10	2.599	O					2.68
121.583	0.00	0.10	2.598	O					2.68
121.667	0.00	0.10	2.598	O					2.68
121.750	0.00	0.10	2.597	O					2.68
121.833	0.00	0.10	2.596	O					2.68
121.917	0.00	0.10	2.596	O					2.68
122.000	0.00	0.10	2.595	O					2.68
122.083	0.00	0.10	2.594	O					2.68
122.167	0.00	0.10	2.594	O					2.68
122.250	0.00	0.10	2.593	O					2.68
122.333	0.00	0.10	2.592	O					2.68
122.417	0.00	0.10	2.592	O					2.68
122.500	0.00	0.10	2.591	O					2.67
122.583	0.00	0.10	2.590	O					2.67
122.667	0.00	0.10	2.589	O					2.67
122.750	0.00	0.10	2.589	O					2.67
122.833	0.00	0.10	2.588	O					2.67
122.917	0.00	0.10	2.587	O					2.67
123.000	0.00	0.10	2.587	O					2.67

123.083	0.00	0.10	2.586	O				2.67
123.167	0.00	0.10	2.585	O				2.67
123.250	0.00	0.10	2.585	O				2.67
123.333	0.00	0.10	2.584	O				2.67
123.417	0.00	0.10	2.583	O				2.67
123.500	0.00	0.10	2.583	O				2.67
123.583	0.00	0.10	2.582	O				2.67
123.667	0.00	0.10	2.581	O				2.66
123.750	0.00	0.10	2.581	O				2.66
123.833	0.00	0.10	2.580	O				2.66
123.917	0.00	0.10	2.579	O				2.66
124.000	0.00	0.10	2.578	O				2.66
124.083	0.00	0.10	2.578	O				2.66
124.167	0.00	0.10	2.577	O				2.66
124.250	0.00	0.10	2.576	O				2.66
124.333	0.00	0.10	2.576	O				2.66
124.417	0.00	0.10	2.575	O				2.66
124.500	0.00	0.10	2.574	O				2.66
124.583	0.00	0.10	2.574	O				2.66
124.667	0.00	0.10	2.573	O				2.66
124.750	0.00	0.10	2.572	O				2.66
124.833	0.00	0.10	2.572	O				2.65
124.917	0.00	0.10	2.571	O				2.65
125.000	0.00	0.10	2.570	O				2.65
125.083	0.00	0.10	2.570	O				2.65
125.167	0.00	0.10	2.569	O				2.65
125.250	0.00	0.10	2.568	O				2.65
125.333	0.00	0.10	2.567	O				2.65
125.417	0.00	0.10	2.567	O				2.65
125.500	0.00	0.10	2.566	O				2.65
125.583	0.00	0.10	2.565	O				2.65
125.667	0.00	0.10	2.565	O				2.65
125.750	0.00	0.10	2.564	O				2.65
125.833	0.00	0.10	2.563	O				2.65
125.917	0.00	0.10	2.563	O				2.65
126.000	0.00	0.10	2.562	O				2.64
126.083	0.00	0.10	2.561	O				2.64
126.167	0.00	0.10	2.561	O				2.64
126.250	0.00	0.10	2.560	O				2.64
126.333	0.00	0.10	2.559	O				2.64
126.417	0.00	0.10	2.559	O				2.64
126.500	0.00	0.10	2.558	O				2.64
126.583	0.00	0.10	2.557	O				2.64
126.667	0.00	0.10	2.556	O				2.64
126.750	0.00	0.10	2.556	O				2.64
126.833	0.00	0.10	2.555	O				2.64
126.917	0.00	0.10	2.554	O				2.64
127.000	0.00	0.10	2.554	O				2.64
127.083	0.00	0.10	2.553	O				2.64
127.167	0.00	0.10	2.552	O				2.64

127.250	0.00	0.10	2.552	O				2.63
127.333	0.00	0.10	2.551	O				2.63
127.417	0.00	0.10	2.550	O				2.63
127.500	0.00	0.10	2.550	O				2.63
127.583	0.00	0.10	2.549	O				2.63
127.667	0.00	0.10	2.548	O				2.63
127.750	0.00	0.10	2.547	O				2.63
127.833	0.00	0.10	2.547	O				2.63
127.917	0.00	0.10	2.546	O				2.63
128.000	0.00	0.10	2.545	O				2.63
128.083	0.00	0.10	2.545	O				2.63
128.167	0.00	0.10	2.544	O				2.63
128.250	0.00	0.10	2.543	O				2.63
128.333	0.00	0.10	2.543	O				2.63
128.417	0.00	0.10	2.542	O				2.62
128.500	0.00	0.10	2.541	O				2.62
128.583	0.00	0.10	2.541	O				2.62
128.667	0.00	0.10	2.540	O				2.62
128.750	0.00	0.10	2.539	O				2.62
128.833	0.00	0.10	2.539	O				2.62
128.917	0.00	0.10	2.538	O				2.62
129.000	0.00	0.10	2.537	O				2.62
129.083	0.00	0.10	2.536	O				2.62
129.167	0.00	0.10	2.536	O				2.62
129.250	0.00	0.10	2.535	O				2.62
129.333	0.00	0.10	2.534	O				2.62
129.417	0.00	0.10	2.534	O				2.62
129.500	0.00	0.10	2.533	O				2.62
129.583	0.00	0.10	2.532	O				2.61
129.667	0.00	0.10	2.532	O				2.61
129.750	0.00	0.10	2.531	O				2.61
129.833	0.00	0.10	2.530	O				2.61
129.917	0.00	0.10	2.530	O				2.61
130.000	0.00	0.10	2.529	O				2.61
130.083	0.00	0.10	2.528	O				2.61
130.167	0.00	0.10	2.528	O				2.61
130.250	0.00	0.10	2.527	O				2.61
130.333	0.00	0.10	2.526	O				2.61
130.417	0.00	0.10	2.525	O				2.61
130.500	0.00	0.10	2.525	O				2.61
130.583	0.00	0.10	2.524	O				2.61
130.667	0.00	0.10	2.523	O				2.61
130.750	0.00	0.10	2.523	O				2.60
130.833	0.00	0.10	2.522	O				2.60
130.917	0.00	0.10	2.521	O				2.60
131.000	0.00	0.10	2.521	O				2.60
131.083	0.00	0.10	2.520	O				2.60
131.167	0.00	0.10	2.519	O				2.60
131.250	0.00	0.10	2.519	O				2.60
131.333	0.00	0.10	2.518	O				2.60

131.417	0.00	0.10	2.517	O					2.60
131.500	0.00	0.10	2.516	O					2.60
131.583	0.00	0.10	2.516	O					2.60
131.667	0.00	0.10	2.515	O					2.60
131.750	0.00	0.10	2.514	O					2.60
131.833	0.00	0.10	2.514	O					2.60
131.917	0.00	0.10	2.513	O					2.59
132.000	0.00	0.10	2.512	O					2.59
132.083	0.00	0.10	2.512	O					2.59
132.167	0.00	0.10	2.511	O					2.59
132.250	0.00	0.10	2.510	O					2.59
132.333	0.00	0.10	2.510	O					2.59
132.417	0.00	0.10	2.509	O					2.59
132.500	0.00	0.10	2.508	O					2.59
132.583	0.00	0.10	2.508	O					2.59
132.667	0.00	0.10	2.507	O					2.59
132.750	0.00	0.10	2.506	O					2.59
132.833	0.00	0.10	2.505	O					2.59
132.917	0.00	0.10	2.505	O					2.59
133.000	0.00	0.10	2.504	O					2.59
133.083	0.00	0.10	2.503	O					2.59
133.167	0.00	0.10	2.503	O					2.58
133.250	0.00	0.10	2.502	O					2.58
133.333	0.00	0.10	2.501	O					2.58
133.417	0.00	0.10	2.501	O					2.58
133.500	0.00	0.10	2.500	O					2.58
133.583	0.00	0.10	2.499	O					2.58
133.667	0.00	0.10	2.499	O					2.58
133.750	0.00	0.10	2.498	O					2.58
133.833	0.00	0.10	2.497	O					2.58
133.917	0.00	0.10	2.497	O					2.58
134.000	0.00	0.10	2.496	O					2.58
134.083	0.00	0.10	2.495	O					2.58
134.167	0.00	0.10	2.494	O					2.58
134.250	0.00	0.10	2.494	O					2.58
134.333	0.00	0.10	2.493	O					2.57
134.417	0.00	0.10	2.492	O					2.57
134.500	0.00	0.10	2.492	O					2.57
134.583	0.00	0.10	2.491	O					2.57
134.667	0.00	0.10	2.490	O					2.57
134.750	0.00	0.10	2.490	O					2.57
134.833	0.00	0.10	2.489	O					2.57
134.917	0.00	0.10	2.488	O					2.57
135.000	0.00	0.10	2.488	O					2.57
135.083	0.00	0.10	2.487	O					2.57
135.167	0.00	0.10	2.486	O					2.57
135.250	0.00	0.10	2.485	O					2.57
135.333	0.00	0.10	2.485	O					2.57
135.417	0.00	0.10	2.484	O					2.57
135.500	0.00	0.10	2.483	O					2.56

135.583	0.00	0.10	2.483	O					2.56
135.667	0.00	0.10	2.482	O					2.56
135.750	0.00	0.10	2.481	O					2.56
135.833	0.00	0.10	2.481	O					2.56
135.917	0.00	0.10	2.480	O					2.56
136.000	0.00	0.10	2.479	O					2.56
136.083	0.00	0.10	2.479	O					2.56
136.167	0.00	0.10	2.478	O					2.56
136.250	0.00	0.10	2.477	O					2.56
136.333	0.00	0.10	2.477	O					2.56
136.417	0.00	0.10	2.476	O					2.56
136.500	0.00	0.10	2.475	O					2.56
136.583	0.00	0.10	2.474	O					2.56
136.667	0.00	0.10	2.474	O					2.55
136.750	0.00	0.10	2.473	O					2.55
136.833	0.00	0.10	2.472	O					2.55
136.917	0.00	0.10	2.472	O					2.55
137.000	0.00	0.10	2.471	O					2.55
137.083	0.00	0.10	2.470	O					2.55
137.167	0.00	0.10	2.470	O					2.55
137.250	0.00	0.10	2.469	O					2.55
137.333	0.00	0.10	2.468	O					2.55
137.417	0.00	0.10	2.468	O					2.55
137.500	0.00	0.10	2.467	O					2.55
137.583	0.00	0.10	2.466	O					2.55
137.667	0.00	0.10	2.466	O					2.55
137.750	0.00	0.10	2.465	O					2.55
137.833	0.00	0.10	2.464	O					2.55
137.917	0.00	0.10	2.463	O					2.54
138.000	0.00	0.10	2.463	O					2.54
138.083	0.00	0.10	2.462	O					2.54
138.167	0.00	0.10	2.461	O					2.54
138.250	0.00	0.10	2.461	O					2.54
138.333	0.00	0.10	2.460	O					2.54
138.417	0.00	0.10	2.459	O					2.54
138.500	0.00	0.10	2.459	O					2.54
138.583	0.00	0.10	2.458	O					2.54
138.667	0.00	0.10	2.457	O					2.54
138.750	0.00	0.10	2.457	O					2.54
138.833	0.00	0.10	2.456	O					2.54
138.917	0.00	0.10	2.455	O					2.54
139.000	0.00	0.10	2.455	O					2.54
139.083	0.00	0.10	2.454	O					2.53
139.167	0.00	0.10	2.453	O					2.53
139.250	0.00	0.10	2.452	O					2.53
139.333	0.00	0.10	2.452	O					2.53
139.417	0.00	0.10	2.451	O					2.53
139.500	0.00	0.10	2.450	O					2.53
139.583	0.00	0.10	2.450	O					2.53
139.667	0.00	0.10	2.449	O					2.53

139.750	0.00	0.10	2.448	O				2.53
139.833	0.00	0.10	2.448	O				2.53
139.917	0.00	0.10	2.447	O				2.53
140.000	0.00	0.10	2.446	O				2.53
140.083	0.00	0.10	2.446	O				2.53
140.167	0.00	0.10	2.445	O				2.53
140.250	0.00	0.10	2.444	O				2.52
140.333	0.00	0.10	2.443	O				2.52
140.417	0.00	0.10	2.443	O				2.52
140.500	0.00	0.10	2.442	O				2.52
140.583	0.00	0.10	2.441	O				2.52
140.667	0.00	0.10	2.441	O				2.52
140.750	0.00	0.10	2.440	O				2.52
140.833	0.00	0.10	2.439	O				2.52
140.917	0.00	0.10	2.439	O				2.52
141.000	0.00	0.10	2.438	O				2.52
141.083	0.00	0.10	2.437	O				2.52
141.167	0.00	0.10	2.437	O				2.52
141.250	0.00	0.10	2.436	O				2.52
141.333	0.00	0.10	2.435	O				2.52
141.417	0.00	0.10	2.435	O				2.51
141.500	0.00	0.10	2.434	O				2.51
141.583	0.00	0.10	2.433	O				2.51
141.667	0.00	0.10	2.432	O				2.51
141.750	0.00	0.10	2.432	O				2.51
141.833	0.00	0.10	2.431	O				2.51
141.917	0.00	0.10	2.430	O				2.51
142.000	0.00	0.10	2.430	O				2.51
142.083	0.00	0.10	2.429	O				2.51
142.167	0.00	0.10	2.428	O				2.51
142.250	0.00	0.10	2.428	O				2.51
142.333	0.00	0.10	2.427	O				2.51
142.417	0.00	0.10	2.426	O				2.51
142.500	0.00	0.10	2.426	O				2.51
142.583	0.00	0.10	2.425	O				2.50
142.667	0.00	0.10	2.424	O				2.50
142.750	0.00	0.10	2.424	O				2.50
142.833	0.00	0.10	2.423	O				2.50
142.917	0.00	0.10	2.422	O				2.50
143.000	0.00	0.10	2.421	O				2.50
143.083	0.00	0.10	2.421	O				2.50
143.167	0.00	0.10	2.420	O				2.50
143.250	0.00	0.10	2.419	O				2.50
143.333	0.00	0.10	2.419	O				2.50
143.417	0.00	0.10	2.418	O				2.50
143.500	0.00	0.10	2.417	O				2.50
143.583	0.00	0.10	2.417	O				2.50
143.667	0.00	0.10	2.416	O				2.50
143.750	0.00	0.10	2.415	O				2.50
143.833	0.00	0.10	2.415	O				2.49

143.917	0.00	0.10	2.414	O				2.49
144.000	0.00	0.10	2.413	O				2.49
144.083	0.00	0.10	2.413	O				2.49
144.167	0.00	0.10	2.412	O				2.49
144.250	0.00	0.10	2.411	O				2.49
144.333	0.00	0.10	2.411	O				2.49
144.417	0.00	0.10	2.410	O				2.49
144.500	0.00	0.10	2.409	O				2.49
144.583	0.00	0.10	2.408	O				2.49
144.667	0.00	0.10	2.408	O				2.49
144.750	0.00	0.10	2.407	O				2.49
144.833	0.00	0.10	2.406	O				2.49
144.917	0.00	0.10	2.406	O				2.49
145.000	0.00	0.10	2.405	O				2.48
145.083	0.00	0.10	2.404	O				2.48
145.167	0.00	0.10	2.404	O				2.48
145.250	0.00	0.10	2.403	O				2.48
145.333	0.00	0.10	2.402	O				2.48
145.417	0.00	0.10	2.402	O				2.48
145.500	0.00	0.10	2.401	O				2.48
145.583	0.00	0.10	2.400	O				2.48
145.667	0.00	0.10	2.400	O				2.48
145.750	0.00	0.10	2.399	O				2.48
145.833	0.00	0.10	2.398	O				2.48
145.917	0.00	0.10	2.398	O				2.48
146.000	0.00	0.10	2.397	O				2.48
146.083	0.00	0.10	2.396	O				2.48
146.167	0.00	0.10	2.396	O				2.47
146.250	0.00	0.10	2.395	O				2.47
146.333	0.00	0.10	2.395	O				2.47
146.417	0.00	0.10	2.394	O				2.47
146.500	0.00	0.09	2.393	O				2.47
146.583	0.00	0.09	2.393	O				2.47
146.667	0.00	0.09	2.392	O				2.47
146.750	0.00	0.09	2.391	O				2.47
146.833	0.00	0.09	2.391	O				2.47
146.917	0.00	0.09	2.390	O				2.47
147.000	0.00	0.09	2.389	O				2.47
147.083	0.00	0.09	2.389	O				2.47
147.167	0.00	0.09	2.388	O				2.47
147.250	0.00	0.09	2.387	O				2.47
147.333	0.00	0.09	2.387	O				2.47
147.417	0.00	0.09	2.386	O				2.46
147.500	0.00	0.09	2.385	O				2.46
147.583	0.00	0.09	2.385	O				2.46
147.667	0.00	0.09	2.384	O				2.46
147.750	0.00	0.09	2.384	O				2.46
147.833	0.00	0.09	2.383	O				2.46
147.917	0.00	0.09	2.382	O				2.46
148.000	0.00	0.09	2.382	O				2.46

148.083	0.00	0.09	2.381	O				2.46
148.167	0.00	0.09	2.380	O				2.46
148.250	0.00	0.09	2.380	O				2.46
148.333	0.00	0.09	2.379	O				2.46
148.417	0.00	0.09	2.378	O				2.46
148.500	0.00	0.09	2.378	O				2.46
148.583	0.00	0.09	2.377	O				2.46
148.667	0.00	0.09	2.376	O				2.45
148.750	0.00	0.09	2.376	O				2.45
148.833	0.00	0.09	2.375	O				2.45
148.917	0.00	0.09	2.375	O				2.45
149.000	0.00	0.09	2.374	O				2.45
149.083	0.00	0.09	2.373	O				2.45
149.167	0.00	0.09	2.373	O				2.45
149.250	0.00	0.09	2.372	O				2.45
149.333	0.00	0.09	2.371	O				2.45
149.417	0.00	0.09	2.371	O				2.45
149.500	0.00	0.09	2.370	O				2.45
149.583	0.00	0.09	2.370	O				2.45
149.667	0.00	0.09	2.369	O				2.45
149.750	0.00	0.09	2.368	O				2.45
149.833	0.00	0.09	2.368	O				2.45
149.917	0.00	0.09	2.367	O				2.44
150.000	0.00	0.09	2.366	O				2.44
150.083	0.00	0.09	2.366	O				2.44
150.167	0.00	0.09	2.365	O				2.44
150.250	0.00	0.09	2.365	O				2.44
150.333	0.00	0.09	2.364	O				2.44
150.417	0.00	0.09	2.363	O				2.44
150.500	0.00	0.09	2.363	O				2.44
150.583	0.00	0.09	2.362	O				2.44
150.667	0.00	0.09	2.362	O				2.44
150.750	0.00	0.09	2.361	O				2.44
150.833	0.00	0.09	2.360	O				2.44
150.917	0.00	0.09	2.360	O				2.44
151.000	0.00	0.09	2.359	O				2.44
151.083	0.00	0.09	2.358	O				2.44
151.167	0.00	0.09	2.358	O				2.44
151.250	0.00	0.09	2.357	O				2.43
151.333	0.00	0.09	2.357	O				2.43
151.417	0.00	0.09	2.356	O				2.43
151.500	0.00	0.09	2.355	O				2.43
151.583	0.00	0.09	2.355	O				2.43
151.667	0.00	0.09	2.354	O				2.43
151.750	0.00	0.09	2.354	O				2.43
151.833	0.00	0.09	2.353	O				2.43
151.917	0.00	0.09	2.352	O				2.43
152.000	0.00	0.09	2.352	O				2.43
152.083	0.00	0.09	2.351	O				2.43
152.167	0.00	0.09	2.351	O				2.43

152.250	0.00	0.09	2.350	O				2.43
152.333	0.00	0.09	2.349	O				2.43
152.417	0.00	0.09	2.349	O				2.43
152.500	0.00	0.09	2.348	O				2.43
152.583	0.00	0.09	2.348	O				2.42
152.667	0.00	0.09	2.347	O				2.42
152.750	0.00	0.09	2.346	O				2.42
152.833	0.00	0.09	2.346	O				2.42
152.917	0.00	0.09	2.345	O				2.42
153.000	0.00	0.09	2.345	O				2.42
153.083	0.00	0.09	2.344	O				2.42
153.167	0.00	0.09	2.344	O				2.42
153.250	0.00	0.09	2.343	O				2.42
153.333	0.00	0.09	2.342	O				2.42
153.417	0.00	0.09	2.342	O				2.42
153.500	0.00	0.09	2.341	O				2.42
153.583	0.00	0.09	2.341	O				2.42
153.667	0.00	0.08	2.340	O				2.42
153.750	0.00	0.08	2.339	O				2.42
153.833	0.00	0.08	2.339	O				2.42
153.917	0.00	0.08	2.338	O				2.41
154.000	0.00	0.08	2.338	O				2.41
154.083	0.00	0.08	2.337	O				2.41
154.167	0.00	0.08	2.336	O				2.41
154.250	0.00	0.08	2.336	O				2.41
154.333	0.00	0.08	2.335	O				2.41
154.417	0.00	0.08	2.335	O				2.41
154.500	0.00	0.08	2.334	O				2.41
154.583	0.00	0.08	2.334	O				2.41
154.667	0.00	0.08	2.333	O				2.41
154.750	0.00	0.08	2.332	O				2.41
154.833	0.00	0.08	2.332	O				2.41
154.917	0.00	0.08	2.331	O				2.41
155.000	0.00	0.08	2.331	O				2.41
155.083	0.00	0.08	2.330	O				2.41
155.167	0.00	0.08	2.330	O				2.41
155.250	0.00	0.08	2.329	O				2.41
155.333	0.00	0.08	2.328	O				2.40
155.417	0.00	0.08	2.328	O				2.40
155.500	0.00	0.08	2.327	O				2.40
155.583	0.00	0.08	2.327	O				2.40
155.667	0.00	0.08	2.326	O				2.40
155.750	0.00	0.08	2.326	O				2.40
155.833	0.00	0.08	2.325	O				2.40
155.917	0.00	0.08	2.324	O				2.40
156.000	0.00	0.08	2.324	O				2.40
156.083	0.00	0.08	2.323	O				2.40
156.167	0.00	0.08	2.323	O				2.40
156.250	0.00	0.08	2.322	O				2.40
156.333	0.00	0.08	2.322	O				2.40

156.417	0.00	0.08	2.321	O				2.40
156.500	0.00	0.08	2.321	O				2.40
156.583	0.00	0.08	2.320	O				2.40
156.667	0.00	0.08	2.319	O				2.40
156.750	0.00	0.08	2.319	O				2.39
156.833	0.00	0.08	2.318	O				2.39
156.917	0.00	0.08	2.318	O				2.39
157.000	0.00	0.08	2.317	O				2.39
157.083	0.00	0.08	2.317	O				2.39
157.167	0.00	0.08	2.316	O				2.39
157.250	0.00	0.08	2.315	O				2.39
157.333	0.00	0.08	2.315	O				2.39
157.417	0.00	0.08	2.314	O				2.39
157.500	0.00	0.08	2.314	O				2.39
157.583	0.00	0.08	2.313	O				2.39
157.667	0.00	0.08	2.313	O				2.39
157.750	0.00	0.08	2.312	O				2.39
157.833	0.00	0.08	2.312	O				2.39
157.917	0.00	0.08	2.311	O				2.39
158.000	0.00	0.08	2.311	O				2.39
158.083	0.00	0.08	2.310	O				2.39
158.167	0.00	0.08	2.309	O				2.38
158.250	0.00	0.08	2.309	O				2.38
158.333	0.00	0.08	2.308	O				2.38
158.417	0.00	0.08	2.308	O				2.38
158.500	0.00	0.08	2.307	O				2.38
158.583	0.00	0.08	2.307	O				2.38
158.667	0.00	0.08	2.306	O				2.38
158.750	0.00	0.08	2.306	O				2.38
158.833	0.00	0.08	2.305	O				2.38
158.917	0.00	0.08	2.305	O				2.38
159.000	0.00	0.08	2.304	O				2.38
159.083	0.00	0.08	2.303	O				2.38
159.167	0.00	0.08	2.303	O				2.38
159.250	0.00	0.08	2.302	O				2.38
159.333	0.00	0.08	2.302	O				2.38
159.417	0.00	0.08	2.301	O				2.38
159.500	0.00	0.08	2.301	O				2.38
159.583	0.00	0.08	2.300	O				2.38
159.667	0.00	0.08	2.300	O				2.37
159.750	0.00	0.08	2.299	O				2.37
159.833	0.00	0.08	2.299	O				2.37
159.917	0.00	0.08	2.298	O				2.37
160.000	0.00	0.08	2.298	O				2.37
160.083	0.00	0.08	2.297	O				2.37
160.167	0.00	0.08	2.297	O				2.37
160.250	0.00	0.08	2.296	O				2.37
160.333	0.00	0.08	2.295	O				2.37
160.417	0.00	0.08	2.295	O				2.37
160.500	0.00	0.08	2.294	O				2.37

160.583	0.00	0.08	2.294	O	|	|	|	2.37
160.667	0.00	0.08	2.293	O	|	|	|	2.37
160.750	0.00	0.08	2.293	O	|	|	|	2.37
160.833	0.00	0.08	2.292	O	|	|	|	2.37
160.917	0.00	0.08	2.292	O	|	|	|	2.37
161.000	0.00	0.08	2.291	O	|	|	|	2.37
161.083	0.00	0.08	2.291	O	|	|	|	2.37
161.167	0.00	0.08	2.290	O	|	|	|	2.36
161.250	0.00	0.08	2.290	O	|	|	|	2.36
161.333	0.00	0.08	2.289	O	|	|	|	2.36
161.417	0.00	0.08	2.289	O	|	|	|	2.36
161.500	0.00	0.08	2.288	O	|	|	|	2.36
161.583	0.00	0.08	2.288	O	|	|	|	2.36
161.667	0.00	0.08	2.287	O	|	|	|	2.36
161.750	0.00	0.07	2.287	O	|	|	|	2.36
161.833	0.00	0.07	2.286	O	|	|	|	2.36
161.917	0.00	0.07	2.286	O	|	|	|	2.36
162.000	0.00	0.07	2.285	O	|	|	|	2.36
162.083	0.00	0.07	2.285	O	|	|	|	2.36
162.167	0.00	0.07	2.284	O	|	|	|	2.36
162.250	0.00	0.07	2.284	O	|	|	|	2.36
162.333	0.00	0.07	2.283	O	|	|	|	2.36
162.417	0.00	0.07	2.282	O	|	|	|	2.36
162.500	0.00	0.07	2.282	O	|	|	|	2.36
162.583	0.00	0.07	2.281	O	|	|	|	2.36
162.667	0.00	0.07	2.281	O	|	|	|	2.36
162.750	0.00	0.07	2.280	O	|	|	|	2.35
162.833	0.00	0.07	2.280	O	|	|	|	2.35
162.917	0.00	0.07	2.279	O	|	|	|	2.35
163.000	0.00	0.07	2.279	O	|	|	|	2.35
163.083	0.00	0.07	2.278	O	|	|	|	2.35
163.167	0.00	0.07	2.278	O	|	|	|	2.35
163.250	0.00	0.07	2.277	O	|	|	|	2.35
163.333	0.00	0.07	2.277	O	|	|	|	2.35
163.417	0.00	0.07	2.276	O	|	|	|	2.35
163.500	0.00	0.07	2.276	O	|	|	|	2.35
163.583	0.00	0.07	2.275	O	|	|	|	2.35
163.667	0.00	0.07	2.275	O	|	|	|	2.35
163.750	0.00	0.07	2.274	O	|	|	|	2.35
163.833	0.00	0.07	2.274	O	|	|	|	2.35
163.917	0.00	0.07	2.273	O	|	|	|	2.35
164.000	0.00	0.07	2.273	O	|	|	|	2.35
164.083	0.00	0.07	2.272	O	|	|	|	2.35
164.167	0.00	0.07	2.272	O	|	|	|	2.35
164.250	0.00	0.07	2.271	O	|	|	|	2.35
164.333	0.00	0.07	2.271	O	|	|	|	2.34
164.417	0.00	0.07	2.270	O	|	|	|	2.34
164.500	0.00	0.07	2.270	O	|	|	|	2.34
164.583	0.00	0.07	2.269	O	|	|	|	2.34
164.667	0.00	0.07	2.269	O	|	|	|	2.34

164.750	0.00	0.07	2.268	O				2.34
164.833	0.00	0.07	2.268	O				2.34
164.917	0.00	0.07	2.267	O				2.34
165.000	0.00	0.07	2.267	O				2.34
165.083	0.00	0.07	2.266	O				2.34
165.167	0.00	0.07	2.266	O				2.34
165.250	0.00	0.07	2.265	O				2.34
165.333	0.00	0.07	2.265	O				2.34
165.417	0.00	0.07	2.265	O				2.34
165.500	0.00	0.07	2.264	O				2.34
165.583	0.00	0.07	2.264	O				2.34
165.667	0.00	0.07	2.263	O				2.34
165.750	0.00	0.07	2.263	O				2.34
165.833	0.00	0.07	2.262	O				2.34
165.917	0.00	0.07	2.262	O				2.34
166.000	0.00	0.07	2.261	O				2.33
166.083	0.00	0.07	2.261	O				2.33
166.167	0.00	0.07	2.260	O				2.33
166.250	0.00	0.07	2.260	O				2.33
166.333	0.00	0.07	2.259	O				2.33
166.417	0.00	0.07	2.259	O				2.33
166.500	0.00	0.07	2.258	O				2.33
166.583	0.00	0.07	2.258	O				2.33
166.667	0.00	0.07	2.257	O				2.33
166.750	0.00	0.07	2.257	O				2.33
166.833	0.00	0.07	2.256	O				2.33
166.917	0.00	0.07	2.256	O				2.33
167.000	0.00	0.07	2.255	O				2.33
167.083	0.00	0.07	2.255	O				2.33
167.167	0.00	0.07	2.254	O				2.33
167.250	0.00	0.07	2.254	O				2.33
167.333	0.00	0.07	2.253	O				2.33
167.417	0.00	0.07	2.253	O				2.33
167.500	0.00	0.07	2.253	O				2.33
167.583	0.00	0.07	2.252	O				2.33
167.667	0.00	0.07	2.252	O				2.32
167.750	0.00	0.07	2.251	O				2.32
167.833	0.00	0.07	2.251	O				2.32
167.917	0.00	0.07	2.250	O				2.32
168.000	0.00	0.07	2.250	O				2.32
168.083	0.00	0.07	2.249	O				2.32
168.167	0.00	0.07	2.249	O				2.32
168.250	0.00	0.07	2.248	O				2.32
168.333	0.00	0.07	2.248	O				2.32
168.417	0.00	0.07	2.247	O				2.32
168.500	0.00	0.07	2.247	O				2.32
168.583	0.00	0.07	2.246	O				2.32
168.667	0.00	0.07	2.246	O				2.32
168.750	0.00	0.07	2.245	O				2.32
168.833	0.00	0.07	2.245	O				2.32

168.917	0.00	0.07	2.245	O				2.32
169.000	0.00	0.07	2.244	O				2.32
169.083	0.00	0.07	2.244	O				2.32
169.167	0.00	0.07	2.243	O				2.32
169.250	0.00	0.07	2.243	O				2.32
169.333	0.00	0.07	2.242	O				2.31
169.417	0.00	0.07	2.242	O				2.31
169.500	0.00	0.07	2.241	O				2.31
169.583	0.00	0.07	2.241	O				2.31
169.667	0.00	0.07	2.240	O				2.31
169.750	0.00	0.07	2.240	O				2.31
169.833	0.00	0.07	2.240	O				2.31
169.917	0.00	0.07	2.239	O				2.31
170.000	0.00	0.07	2.239	O				2.31
170.083	0.00	0.07	2.238	O				2.31
170.167	0.00	0.07	2.238	O				2.31
170.250	0.00	0.07	2.237	O				2.31
170.333	0.00	0.07	2.237	O				2.31
170.417	0.00	0.07	2.236	O				2.31
170.500	0.00	0.07	2.236	O				2.31
170.583	0.00	0.07	2.235	O				2.31
170.667	0.00	0.07	2.235	O				2.31
170.750	0.00	0.07	2.235	O				2.31
170.833	0.00	0.07	2.234	O				2.31
170.917	0.00	0.07	2.234	O				2.31
171.000	0.00	0.06	2.233	O				2.31
171.083	0.00	0.06	2.233	O				2.30
171.167	0.00	0.06	2.232	O				2.30
171.250	0.00	0.06	2.232	O				2.30
171.333	0.00	0.06	2.231	O				2.30
171.417	0.00	0.06	2.231	O				2.30
171.500	0.00	0.06	2.231	O				2.30
171.583	0.00	0.06	2.230	O				2.30
171.667	0.00	0.06	2.230	O				2.30
171.750	0.00	0.06	2.229	O				2.30
171.833	0.00	0.06	2.229	O				2.30
171.917	0.00	0.06	2.228	O				2.30
172.000	0.00	0.06	2.228	O				2.30
172.083	0.00	0.06	2.227	O				2.30
172.167	0.00	0.06	2.227	O				2.30
172.250	0.00	0.06	2.227	O				2.30
172.333	0.00	0.06	2.226	O				2.30
172.417	0.00	0.06	2.226	O				2.30
172.500	0.00	0.06	2.225	O				2.30
172.583	0.00	0.06	2.225	O				2.30
172.667	0.00	0.06	2.224	O				2.30
172.750	0.00	0.06	2.224	O				2.30
172.833	0.00	0.06	2.223	O				2.30
172.917	0.00	0.06	2.223	O				2.29
173.000	0.00	0.06	2.223	O				2.29

173.083	0.00	0.06	2.222	O				2.29
173.167	0.00	0.06	2.222	O				2.29
173.250	0.00	0.06	2.221	O				2.29
173.333	0.00	0.06	2.221	O				2.29
173.417	0.00	0.06	2.220	O				2.29
173.500	0.00	0.06	2.220	O				2.29
173.583	0.00	0.06	2.220	O				2.29
173.667	0.00	0.06	2.219	O				2.29
173.750	0.00	0.06	2.219	O				2.29
173.833	0.00	0.06	2.218	O				2.29
173.917	0.00	0.06	2.218	O				2.29
174.000	0.00	0.06	2.217	O				2.29
174.083	0.00	0.06	2.217	O				2.29
174.167	0.00	0.06	2.217	O				2.29
174.250	0.00	0.06	2.216	O				2.29
174.333	0.00	0.06	2.216	O				2.29
174.417	0.00	0.06	2.215	O				2.29
174.500	0.00	0.06	2.215	O				2.29
174.583	0.00	0.06	2.214	O				2.29
174.667	0.00	0.06	2.214	O				2.29
174.750	0.00	0.06	2.214	O				2.29
174.833	0.00	0.06	2.213	O				2.28
174.917	0.00	0.06	2.213	O				2.28
175.000	0.00	0.06	2.212	O				2.28
175.083	0.00	0.06	2.212	O				2.28
175.167	0.00	0.06	2.212	O				2.28
175.250	0.00	0.06	2.211	O				2.28
175.333	0.00	0.06	2.211	O				2.28
175.417	0.00	0.06	2.210	O				2.28
175.500	0.00	0.06	2.210	O				2.28
175.583	0.00	0.06	2.209	O				2.28
175.667	0.00	0.06	2.209	O				2.28
175.750	0.00	0.06	2.209	O				2.28
175.833	0.00	0.06	2.208	O				2.28
175.917	0.00	0.06	2.208	O				2.28
176.000	0.00	0.06	2.207	O				2.28
176.083	0.00	0.06	2.207	O				2.28
176.167	0.00	0.06	2.207	O				2.28
176.250	0.00	0.06	2.206	O				2.28
176.333	0.00	0.06	2.206	O				2.28
176.417	0.00	0.06	2.205	O				2.28
176.500	0.00	0.06	2.205	O				2.28
176.583	0.00	0.06	2.204	O				2.28
176.667	0.00	0.06	2.204	O				2.28
176.750	0.00	0.06	2.204	O				2.27
176.833	0.00	0.06	2.203	O				2.27
176.917	0.00	0.06	2.203	O				2.27
177.000	0.00	0.06	2.202	O				2.27
177.083	0.00	0.06	2.202	O				2.27
177.167	0.00	0.06	2.202	O				2.27

177.250	0.00	0.06	2.201	O				2.27
177.333	0.00	0.06	2.201	O				2.27
177.417	0.00	0.06	2.200	O				2.27
177.500	0.00	0.06	2.200	O				2.27
177.583	0.00	0.06	2.200	O				2.27
177.667	0.00	0.06	2.199	O				2.27
177.750	0.00	0.06	2.199	O				2.27
177.833	0.00	0.06	2.198	O				2.27
177.917	0.00	0.06	2.198	O				2.27
178.000	0.00	0.06	2.198	O				2.27
178.083	0.00	0.06	2.197	O				2.27
178.167	0.00	0.06	2.197	O				2.27
178.250	0.00	0.06	2.196	O				2.27
178.333	0.00	0.06	2.196	O				2.27
178.417	0.00	0.06	2.196	O				2.27
178.500	0.00	0.06	2.195	O				2.27
178.583	0.00	0.06	2.195	O				2.27
178.667	0.00	0.06	2.194	O				2.26
178.750	0.00	0.06	2.194	O				2.26
178.833	0.00	0.06	2.194	O				2.26
178.917	0.00	0.06	2.193	O				2.26
179.000	0.00	0.06	2.193	O				2.26
179.083	0.00	0.06	2.192	O				2.26
179.167	0.00	0.06	2.192	O				2.26
179.250	0.00	0.06	2.192	O				2.26
179.333	0.00	0.06	2.191	O				2.26
179.417	0.00	0.06	2.191	O				2.26
179.500	0.00	0.06	2.190	O				2.26
179.583	0.00	0.06	2.190	O				2.26
179.667	0.00	0.06	2.190	O				2.26
179.750	0.00	0.06	2.189	O				2.26
179.833	0.00	0.06	2.189	O				2.26
179.917	0.00	0.06	2.188	O				2.26
180.000	0.00	0.06	2.188	O				2.26
180.083	0.00	0.06	2.188	O				2.26
180.167	0.00	0.06	2.187	O				2.26
180.250	0.00	0.06	2.187	O				2.26
180.333	0.00	0.06	2.187	O				2.26
180.417	0.00	0.06	2.186	O				2.26
180.500	0.00	0.06	2.186	O				2.26
180.583	0.00	0.06	2.185	O				2.26
180.667	0.00	0.06	2.185	O				2.26
180.750	0.00	0.06	2.185	O				2.25
180.833	0.00	0.06	2.184	O				2.25
180.917	0.00	0.06	2.184	O				2.25
181.000	0.00	0.06	2.183	O				2.25
181.083	0.00	0.06	2.183	O				2.25
181.167	0.00	0.06	2.183	O				2.25
181.250	0.00	0.06	2.182	O				2.25
181.333	0.00	0.06	2.182	O				2.25

181.417	0.00	0.06	2.182	O					2.25
181.500	0.00	0.06	2.181	O					2.25
181.583	0.00	0.06	2.181	O					2.25
181.667	0.00	0.06	2.180	O					2.25
181.750	0.00	0.06	2.180	O					2.25
181.833	0.00	0.05	2.180	O					2.25
181.917	0.00	0.05	2.179	O					2.25
182.000	0.00	0.05	2.179	O					2.25
182.083	0.00	0.05	2.179	O					2.25
182.167	0.00	0.05	2.178	O					2.25
182.250	0.00	0.05	2.178	O					2.25
182.333	0.00	0.05	2.177	O					2.25
182.417	0.00	0.05	2.177	O					2.25
182.500	0.00	0.05	2.177	O					2.25
182.583	0.00	0.05	2.176	O					2.25
182.667	0.00	0.05	2.176	O					2.25
182.750	0.00	0.05	2.176	O					2.25
182.833	0.00	0.05	2.175	O					2.24
182.917	0.00	0.05	2.175	O					2.24
183.000	0.00	0.05	2.174	O					2.24
183.083	0.00	0.05	2.174	O					2.24
183.167	0.00	0.05	2.174	O					2.24
183.250	0.00	0.05	2.173	O					2.24
183.333	0.00	0.05	2.173	O					2.24
183.417	0.00	0.05	2.173	O					2.24
183.500	0.00	0.05	2.172	O					2.24
183.583	0.00	0.05	2.172	O					2.24
183.667	0.00	0.05	2.171	O					2.24
183.750	0.00	0.05	2.171	O					2.24
183.833	0.00	0.05	2.171	O					2.24
183.917	0.00	0.05	2.170	O					2.24
184.000	0.00	0.05	2.170	O					2.24
184.083	0.00	0.05	2.170	O					2.24
184.167	0.00	0.05	2.169	O					2.24
184.250	0.00	0.05	2.169	O					2.24
184.333	0.00	0.05	2.169	O					2.24
184.417	0.00	0.05	2.168	O					2.24
184.500	0.00	0.05	2.168	O					2.24
184.583	0.00	0.05	2.167	O					2.24
184.667	0.00	0.05	2.167	O					2.24
184.750	0.00	0.05	2.167	O					2.24
184.833	0.00	0.05	2.166	O					2.24
184.917	0.00	0.05	2.166	O					2.24
185.000	0.00	0.05	2.166	O					2.24
185.083	0.00	0.05	2.165	O					2.23
185.167	0.00	0.05	2.165	O					2.23
185.250	0.00	0.05	2.165	O					2.23
185.333	0.00	0.05	2.164	O					2.23
185.417	0.00	0.05	2.164	O					2.23
185.500	0.00	0.05	2.163	O					2.23

185.583	0.00	0.05	2.163	O				2.23
185.667	0.00	0.05	2.163	O				2.23
185.750	0.00	0.05	2.162	O				2.23
185.833	0.00	0.05	2.162	O				2.23
185.917	0.00	0.05	2.162	O				2.23
186.000	0.00	0.05	2.161	O				2.23
186.083	0.00	0.05	2.161	O				2.23
186.167	0.00	0.05	2.161	O				2.23
186.250	0.00	0.05	2.160	O				2.23
186.333	0.00	0.05	2.160	O				2.23
186.417	0.00	0.05	2.160	O				2.23
186.500	0.00	0.05	2.159	O				2.23
186.583	0.00	0.05	2.159	O				2.23
186.667	0.00	0.05	2.159	O				2.23
186.750	0.00	0.05	2.158	O				2.23
186.833	0.00	0.05	2.158	O				2.23
186.917	0.00	0.05	2.157	O				2.23
187.000	0.00	0.05	2.157	O				2.23
187.083	0.00	0.05	2.157	O				2.23
187.167	0.00	0.05	2.156	O				2.23
187.250	0.00	0.05	2.156	O				2.23
187.333	0.00	0.05	2.156	O				2.22
187.417	0.00	0.05	2.155	O				2.22
187.500	0.00	0.05	2.155	O				2.22
187.583	0.00	0.05	2.155	O				2.22
187.667	0.00	0.05	2.154	O				2.22
187.750	0.00	0.05	2.154	O				2.22
187.833	0.00	0.05	2.154	O				2.22
187.917	0.00	0.05	2.153	O				2.22
188.000	0.00	0.05	2.153	O				2.22
188.083	0.00	0.05	2.153	O				2.22
188.167	0.00	0.05	2.152	O				2.22
188.250	0.00	0.05	2.152	O				2.22
188.333	0.00	0.05	2.152	O				2.22
188.417	0.00	0.05	2.151	O				2.22
188.500	0.00	0.05	2.151	O				2.22
188.583	0.00	0.05	2.151	O				2.22
188.667	0.00	0.05	2.150	O				2.22
188.750	0.00	0.05	2.150	O				2.22
188.833	0.00	0.05	2.150	O				2.22
188.917	0.00	0.05	2.149	O				2.22
189.000	0.00	0.05	2.149	O				2.22
189.083	0.00	0.05	2.149	O				2.22
189.167	0.00	0.05	2.148	O				2.22
189.250	0.00	0.05	2.148	O				2.22
189.333	0.00	0.05	2.148	O				2.22
189.417	0.00	0.05	2.147	O				2.22
189.500	0.00	0.05	2.147	O				2.22
189.583	0.00	0.05	2.146	O				2.22
189.667	0.00	0.05	2.146	O				2.21

189.750	0.00	0.05	2.146	O				2.21
189.833	0.00	0.05	2.145	O				2.21
189.917	0.00	0.05	2.145	O				2.21
190.000	0.00	0.05	2.145	O				2.21
190.083	0.00	0.05	2.144	O				2.21
190.167	0.00	0.05	2.144	O				2.21
190.250	0.00	0.05	2.144	O				2.21
190.333	0.00	0.05	2.143	O				2.21
190.417	0.00	0.05	2.143	O				2.21
190.500	0.00	0.05	2.143	O				2.21
190.583	0.00	0.05	2.142	O				2.21
190.667	0.00	0.05	2.142	O				2.21
190.750	0.00	0.05	2.142	O				2.21
190.833	0.00	0.05	2.142	O				2.21
190.917	0.00	0.05	2.141	O				2.21
191.000	0.00	0.05	2.141	O				2.21
191.083	0.00	0.05	2.141	O				2.21
191.167	0.00	0.05	2.140	O				2.21
191.250	0.00	0.05	2.140	O				2.21
191.333	0.00	0.05	2.140	O				2.21
191.417	0.00	0.05	2.139	O				2.21
191.500	0.00	0.05	2.139	O				2.21
191.583	0.00	0.05	2.139	O				2.21
191.667	0.00	0.05	2.138	O				2.21
191.750	0.00	0.05	2.138	O				2.21
191.833	0.00	0.05	2.138	O				2.21
191.917	0.00	0.05	2.137	O				2.21
192.000	0.00	0.05	2.137	O				2.21
192.083	0.00	0.05	2.137	O				2.20
192.167	0.00	0.05	2.136	O				2.20
192.250	0.00	0.05	2.136	O				2.20
192.333	0.00	0.05	2.136	O				2.20
192.417	0.00	0.05	2.135	O				2.20
192.500	0.00	0.05	2.135	O				2.20
192.583	0.00	0.05	2.135	O				2.20
192.667	0.00	0.05	2.134	O				2.20
192.750	0.00	0.05	2.134	O				2.20
192.833	0.00	0.05	2.134	O				2.20
192.917	0.00	0.05	2.133	O				2.20
193.000	0.00	0.05	2.133	O				2.20
193.083	0.00	0.05	2.133	O				2.20
193.167	0.00	0.05	2.132	O				2.20
193.250	0.00	0.05	2.132	O				2.20
193.333	0.00	0.05	2.132	O				2.20
193.417	0.00	0.05	2.132	O				2.20
193.500	0.00	0.05	2.131	O				2.20
193.583	0.00	0.05	2.131	O				2.20
193.667	0.00	0.05	2.131	O				2.20
193.750	0.00	0.05	2.130	O				2.20
193.833	0.00	0.05	2.130	O				2.20

193.917	0.00	0.05	2.130	O				2.20
194.000	0.00	0.05	2.129	O				2.20
194.083	0.00	0.05	2.129	O				2.20
194.167	0.00	0.05	2.129	O				2.20
194.250	0.00	0.05	2.128	O				2.20
194.333	0.00	0.05	2.128	O				2.20
194.417	0.00	0.05	2.128	O				2.20
194.500	0.00	0.05	2.127	O				2.20
194.583	0.00	0.05	2.127	O				2.19
194.667	0.00	0.05	2.127	O				2.19
194.750	0.00	0.04	2.127	O				2.19
194.833	0.00	0.04	2.126	O				2.19
194.917	0.00	0.04	2.126	O				2.19
195.000	0.00	0.04	2.126	O				2.19
195.083	0.00	0.04	2.125	O				2.19
195.167	0.00	0.04	2.125	O				2.19
195.250	0.00	0.04	2.125	O				2.19
195.333	0.00	0.04	2.124	O				2.19
195.417	0.00	0.04	2.124	O				2.19
195.500	0.00	0.04	2.124	O				2.19
195.583	0.00	0.04	2.123	O				2.19
195.667	0.00	0.04	2.123	O				2.19
195.750	0.00	0.04	2.123	O				2.19
195.833	0.00	0.04	2.123	O				2.19
195.917	0.00	0.04	2.122	O				2.19
196.000	0.00	0.04	2.122	O				2.19
196.083	0.00	0.04	2.122	O				2.19
196.167	0.00	0.04	2.121	O				2.19
196.250	0.00	0.04	2.121	O				2.19
196.333	0.00	0.04	2.121	O				2.19
196.417	0.00	0.04	2.120	O				2.19
196.500	0.00	0.04	2.120	O				2.19
196.583	0.00	0.04	2.120	O				2.19
196.667	0.00	0.04	2.119	O				2.19
196.750	0.00	0.04	2.119	O				2.19
196.833	0.00	0.04	2.119	O				2.19
196.917	0.00	0.04	2.119	O				2.19
197.000	0.00	0.04	2.118	O				2.19
197.083	0.00	0.04	2.118	O				2.19
197.167	0.00	0.04	2.118	O				2.19
197.250	0.00	0.04	2.117	O				2.18
197.333	0.00	0.04	2.117	O				2.18
197.417	0.00	0.04	2.117	O				2.18
197.500	0.00	0.04	2.116	O				2.18
197.583	0.00	0.04	2.116	O				2.18
197.667	0.00	0.04	2.116	O				2.18
197.750	0.00	0.04	2.116	O				2.18
197.833	0.00	0.04	2.115	O				2.18
197.917	0.00	0.04	2.115	O				2.18
198.000	0.00	0.04	2.115	O				2.18

198.083	0.00	0.04	2.114	O				2.18
198.167	0.00	0.04	2.114	O				2.18
198.250	0.00	0.04	2.114	O				2.18
198.333	0.00	0.04	2.114	O				2.18
198.417	0.00	0.04	2.113	O				2.18
198.500	0.00	0.04	2.113	O				2.18
198.583	0.00	0.04	2.113	O				2.18
198.667	0.00	0.04	2.112	O				2.18
198.750	0.00	0.04	2.112	O				2.18
198.833	0.00	0.04	2.112	O				2.18
198.917	0.00	0.04	2.112	O				2.18
199.000	0.00	0.04	2.111	O				2.18
199.083	0.00	0.04	2.111	O				2.18
199.167	0.00	0.04	2.111	O				2.18
199.250	0.00	0.04	2.110	O				2.18
199.333	0.00	0.04	2.110	O				2.18
199.417	0.00	0.04	2.110	O				2.18
199.500	0.00	0.04	2.109	O				2.18
199.583	0.00	0.04	2.109	O				2.18
199.667	0.00	0.04	2.109	O				2.18
199.750	0.00	0.04	2.109	O				2.18
199.833	0.00	0.04	2.108	O				2.18
199.917	0.00	0.04	2.108	O				2.18
200.000	0.00	0.04	2.108	O				2.17
200.083	0.00	0.04	2.107	O				2.17
200.167	0.00	0.04	2.107	O				2.17
200.250	0.00	0.04	2.107	O				2.17
200.333	0.00	0.04	2.107	O				2.17
200.417	0.00	0.04	2.106	O				2.17
200.500	0.00	0.04	2.106	O				2.17
200.583	0.00	0.04	2.106	O				2.17
200.667	0.00	0.04	2.105	O				2.17
200.750	0.00	0.04	2.105	O				2.17
200.833	0.00	0.04	2.105	O				2.17
200.917	0.00	0.04	2.105	O				2.17
201.000	0.00	0.04	2.104	O				2.17
201.083	0.00	0.04	2.104	O				2.17
201.167	0.00	0.04	2.104	O				2.17
201.250	0.00	0.04	2.104	O				2.17
201.333	0.00	0.04	2.103	O				2.17
201.417	0.00	0.04	2.103	O				2.17
201.500	0.00	0.04	2.103	O				2.17
201.583	0.00	0.04	2.102	O				2.17
201.667	0.00	0.04	2.102	O				2.17
201.750	0.00	0.04	2.102	O				2.17
201.833	0.00	0.04	2.102	O				2.17
201.917	0.00	0.04	2.101	O				2.17
202.000	0.00	0.04	2.101	O				2.17
202.083	0.00	0.04	2.101	O				2.17
202.167	0.00	0.04	2.100	O				2.17

202.250	0.00	0.04	2.100	O				2.17
202.333	0.00	0.04	2.100	O				2.17
202.417	0.00	0.04	2.100	O				2.17
202.500	0.00	0.04	2.099	O				2.17
202.583	0.00	0.04	2.099	O				2.17
202.667	0.00	0.04	2.099	O				2.17
202.750	0.00	0.04	2.099	O				2.17
202.833	0.00	0.04	2.098	O				2.16
202.917	0.00	0.04	2.098	O				2.16
203.000	0.00	0.04	2.098	O				2.16
203.083	0.00	0.04	2.097	O				2.16
203.167	0.00	0.04	2.097	O				2.16
203.250	0.00	0.04	2.097	O				2.16
203.333	0.00	0.04	2.097	O				2.16
203.417	0.00	0.04	2.096	O				2.16
203.500	0.00	0.04	2.096	O				2.16
203.583	0.00	0.04	2.096	O				2.16
203.667	0.00	0.04	2.096	O				2.16
203.750	0.00	0.04	2.095	O				2.16
203.833	0.00	0.04	2.095	O				2.16
203.917	0.00	0.04	2.095	O				2.16
204.000	0.00	0.04	2.094	O				2.16
204.083	0.00	0.04	2.094	O				2.16
204.167	0.00	0.04	2.094	O				2.16
204.250	0.00	0.04	2.094	O				2.16
204.333	0.00	0.04	2.093	O				2.16
204.417	0.00	0.04	2.093	O				2.16
204.500	0.00	0.04	2.093	O				2.16
204.583	0.00	0.04	2.093	O				2.16
204.667	0.00	0.04	2.092	O				2.16
204.750	0.00	0.04	2.092	O				2.16
204.833	0.00	0.04	2.092	O				2.16
204.917	0.00	0.04	2.092	O				2.16
205.000	0.00	0.04	2.091	O				2.16
205.083	0.00	0.04	2.091	O				2.16
205.167	0.00	0.04	2.091	O				2.16
205.250	0.00	0.04	2.090	O				2.16
205.333	0.00	0.04	2.090	O				2.16
205.417	0.00	0.04	2.090	O				2.16
205.500	0.00	0.04	2.090	O				2.16
205.583	0.00	0.04	2.089	O				2.16
205.667	0.00	0.04	2.089	O				2.16
205.750	0.00	0.04	2.089	O				2.16
205.833	0.00	0.04	2.089	O				2.15
205.917	0.00	0.04	2.088	O				2.15
206.000	0.00	0.04	2.088	O				2.15
206.083	0.00	0.04	2.088	O				2.15
206.167	0.00	0.04	2.088	O				2.15
206.250	0.00	0.04	2.087	O				2.15
206.333	0.00	0.04	2.087	O				2.15

206.417	0.00	0.04	2.087	O	|	|	|	|	2.15
206.500	0.00	0.04	2.087	O	|	|	|	|	2.15
206.583	0.00	0.04	2.086	O	|	|	|	|	2.15
206.667	0.00	0.04	2.086	O	|	|	|	|	2.15
206.750	0.00	0.04	2.086	O	|	|	|	|	2.15
206.833	0.00	0.04	2.086	O	|	|	|	|	2.15
206.917	0.00	0.04	2.085	O	|	|	|	|	2.15
207.000	0.00	0.04	2.085	O	|	|	|	|	2.15
207.083	0.00	0.04	2.085	O	|	|	|	|	2.15
207.167	0.00	0.04	2.085	O	|	|	|	|	2.15
207.250	0.00	0.04	2.084	O	|	|	|	|	2.15
207.333	0.00	0.04	2.084	O	|	|	|	|	2.15
207.417	0.00	0.04	2.084	O	|	|	|	|	2.15
207.500	0.00	0.04	2.084	O	|	|	|	|	2.15
207.583	0.00	0.04	2.083	O	|	|	|	|	2.15
207.667	0.00	0.04	2.083	O	|	|	|	|	2.15
207.750	0.00	0.04	2.083	O	|	|	|	|	2.15
207.833	0.00	0.04	2.082	O	|	|	|	|	2.15
207.917	0.00	0.04	2.082	O	|	|	|	|	2.15
208.000	0.00	0.04	2.082	O	|	|	|	|	2.15
208.083	0.00	0.04	2.082	O	|	|	|	|	2.15
208.167	0.00	0.04	2.081	O	|	|	|	|	2.15
208.250	0.00	0.04	2.081	O	|	|	|	|	2.15
208.333	0.00	0.04	2.081	O	|	|	|	|	2.15
208.417	0.00	0.04	2.081	O	|	|	|	|	2.15
208.500	0.00	0.04	2.080	O	|	|	|	|	2.15
208.583	0.00	0.04	2.080	O	|	|	|	|	2.15
208.667	0.00	0.04	2.080	O	|	|	|	|	2.15
208.750	0.00	0.04	2.080	O	|	|	|	|	2.15
208.833	0.00	0.04	2.079	O	|	|	|	|	2.15
208.917	0.00	0.04	2.079	O	|	|	|	|	2.15
209.000	0.00	0.04	2.079	O	|	|	|	|	2.14
209.083	0.00	0.04	2.079	O	|	|	|	|	2.14
209.167	0.00	0.04	2.078	O	|	|	|	|	2.14
209.250	0.00	0.04	2.078	O	|	|	|	|	2.14
209.333	0.00	0.04	2.078	O	|	|	|	|	2.14
209.417	0.00	0.04	2.078	O	|	|	|	|	2.14
209.500	0.00	0.04	2.077	O	|	|	|	|	2.14
209.583	0.00	0.04	2.077	O	|	|	|	|	2.14
209.667	0.00	0.04	2.077	O	|	|	|	|	2.14
209.750	0.00	0.04	2.077	O	|	|	|	|	2.14
209.833	0.00	0.04	2.077	O	|	|	|	|	2.14
209.917	0.00	0.04	2.076	O	|	|	|	|	2.14
210.000	0.00	0.04	2.076	O	|	|	|	|	2.14
210.083	0.00	0.04	2.076	O	|	|	|	|	2.14
210.167	0.00	0.04	2.076	O	|	|	|	|	2.14
210.250	0.00	0.04	2.075	O	|	|	|	|	2.14
210.333	0.00	0.04	2.075	O	|	|	|	|	2.14
210.417	0.00	0.04	2.075	O	|	|	|	|	2.14
210.500	0.00	0.04	2.075	O	|	|	|	|	2.14

210.583	0.00	0.04	2.074	O	|	|	|	2.14
210.667	0.00	0.04	2.074	O	|	|	|	2.14
210.750	0.00	0.04	2.074	O	|	|	|	2.14
210.833	0.00	0.04	2.074	O	|	|	|	2.14
210.917	0.00	0.04	2.073	O	|	|	|	2.14
211.000	0.00	0.03	2.073	O	|	|	|	2.14
211.083	0.00	0.03	2.073	O	|	|	|	2.14
211.167	0.00	0.03	2.073	O	|	|	|	2.14
211.250	0.00	0.03	2.072	O	|	|	|	2.14
211.333	0.00	0.03	2.072	O	|	|	|	2.14
211.417	0.00	0.03	2.072	O	|	|	|	2.14
211.500	0.00	0.03	2.072	O	|	|	|	2.14
211.583	0.00	0.03	2.071	O	|	|	|	2.14
211.667	0.00	0.03	2.071	O	|	|	|	2.14
211.750	0.00	0.03	2.071	O	|	|	|	2.14
211.833	0.00	0.03	2.071	O	|	|	|	2.14
211.917	0.00	0.03	2.070	O	|	|	|	2.14
212.000	0.00	0.03	2.070	O	|	|	|	2.14
212.083	0.00	0.03	2.070	O	|	|	|	2.14
212.167	0.00	0.03	2.070	O	|	|	|	2.14
212.250	0.00	0.03	2.070	O	|	|	|	2.13
212.333	0.00	0.03	2.069	O	|	|	|	2.13
212.417	0.00	0.03	2.069	O	|	|	|	2.13
212.500	0.00	0.03	2.069	O	|	|	|	2.13
212.583	0.00	0.03	2.069	O	|	|	|	2.13
212.667	0.00	0.03	2.068	O	|	|	|	2.13
212.750	0.00	0.03	2.068	O	|	|	|	2.13
212.833	0.00	0.03	2.068	O	|	|	|	2.13
212.917	0.00	0.03	2.068	O	|	|	|	2.13
213.000	0.00	0.03	2.067	O	|	|	|	2.13
213.083	0.00	0.03	2.067	O	|	|	|	2.13
213.167	0.00	0.03	2.067	O	|	|	|	2.13
213.250	0.00	0.03	2.067	O	|	|	|	2.13
213.333	0.00	0.03	2.066	O	|	|	|	2.13
213.417	0.00	0.03	2.066	O	|	|	|	2.13
213.500	0.00	0.03	2.066	O	|	|	|	2.13
213.583	0.00	0.03	2.066	O	|	|	|	2.13
213.667	0.00	0.03	2.066	O	|	|	|	2.13
213.750	0.00	0.03	2.065	O	|	|	|	2.13
213.833	0.00	0.03	2.065	O	|	|	|	2.13
213.917	0.00	0.03	2.065	O	|	|	|	2.13
214.000	0.00	0.03	2.065	O	|	|	|	2.13
214.083	0.00	0.03	2.064	O	|	|	|	2.13
214.167	0.00	0.03	2.064	O	|	|	|	2.13
214.250	0.00	0.03	2.064	O	|	|	|	2.13
214.333	0.00	0.03	2.064	O	|	|	|	2.13
214.417	0.00	0.03	2.063	O	|	|	|	2.13
214.500	0.00	0.03	2.063	O	|	|	|	2.13
214.583	0.00	0.03	2.063	O	|	|	|	2.13
214.667	0.00	0.03	2.063	O	|	|	|	2.13

214.750	0.00	0.03	2.063	O				2.13
214.833	0.00	0.03	2.062	O				2.13
214.917	0.00	0.03	2.062	O				2.13
215.000	0.00	0.03	2.062	O				2.13
215.083	0.00	0.03	2.062	O				2.13
215.167	0.00	0.03	2.061	O				2.13
215.250	0.00	0.03	2.061	O				2.13
215.333	0.00	0.03	2.061	O				2.13
215.417	0.00	0.03	2.061	O				2.13
215.500	0.00	0.03	2.061	O				2.13
215.583	0.00	0.03	2.060	O				2.13
215.667	0.00	0.03	2.060	O				2.13
215.750	0.00	0.03	2.060	O				2.12
215.833	0.00	0.03	2.060	O				2.12
215.917	0.00	0.03	2.059	O				2.12
216.000	0.00	0.03	2.059	O				2.12
216.083	0.00	0.03	2.059	O				2.12
216.167	0.00	0.03	2.059	O				2.12
216.250	0.00	0.03	2.059	O				2.12
216.333	0.00	0.03	2.058	O				2.12
216.417	0.00	0.03	2.058	O				2.12
216.500	0.00	0.03	2.058	O				2.12
216.583	0.00	0.03	2.058	O				2.12
216.667	0.00	0.03	2.057	O				2.12
216.750	0.00	0.03	2.057	O				2.12
216.833	0.00	0.03	2.057	O				2.12
216.917	0.00	0.03	2.057	O				2.12
217.000	0.00	0.03	2.057	O				2.12
217.083	0.00	0.03	2.056	O				2.12
217.167	0.00	0.03	2.056	O				2.12
217.250	0.00	0.03	2.056	O				2.12
217.333	0.00	0.03	2.056	O				2.12
217.417	0.00	0.03	2.055	O				2.12
217.500	0.00	0.03	2.055	O				2.12
217.583	0.00	0.03	2.055	O				2.12
217.667	0.00	0.03	2.055	O				2.12
217.750	0.00	0.03	2.055	O				2.12
217.833	0.00	0.03	2.054	O				2.12
217.917	0.00	0.03	2.054	O				2.12
218.000	0.00	0.03	2.054	O				2.12
218.083	0.00	0.03	2.054	O				2.12
218.167	0.00	0.03	2.054	O				2.12
218.250	0.00	0.03	2.053	O				2.12
218.333	0.00	0.03	2.053	O				2.12
218.417	0.00	0.03	2.053	O				2.12
218.500	0.00	0.03	2.053	O				2.12
218.583	0.00	0.03	2.052	O				2.12
218.667	0.00	0.03	2.052	O				2.12
218.750	0.00	0.03	2.052	O				2.12
218.833	0.00	0.03	2.052	O				2.12

218.917	0.00	0.03	2.052	O	|	|	|	|	2.12
219.000	0.00	0.03	2.051	O	|	|	|	|	2.12
219.083	0.00	0.03	2.051	O	|	|	|	|	2.12
219.167	0.00	0.03	2.051	O	|	|	|	|	2.12
219.250	0.00	0.03	2.051	O	|	|	|	|	2.12
219.333	0.00	0.03	2.051	O	|	|	|	|	2.12
219.417	0.00	0.03	2.050	O	|	|	|	|	2.11
219.500	0.00	0.03	2.050	O	|	|	|	|	2.11
219.583	0.00	0.03	2.050	O	|	|	|	|	2.11
219.667	0.00	0.03	2.050	O	|	|	|	|	2.11
219.750	0.00	0.03	2.049	O	|	|	|	|	2.11
219.833	0.00	0.03	2.049	O	|	|	|	|	2.11
219.917	0.00	0.03	2.049	O	|	|	|	|	2.11
220.000	0.00	0.03	2.049	O	|	|	|	|	2.11
220.083	0.00	0.03	2.049	O	|	|	|	|	2.11
220.167	0.00	0.03	2.048	O	|	|	|	|	2.11
220.250	0.00	0.03	2.048	O	|	|	|	|	2.11
220.333	0.00	0.03	2.048	O	|	|	|	|	2.11
220.417	0.00	0.03	2.048	O	|	|	|	|	2.11
220.500	0.00	0.03	2.048	O	|	|	|	|	2.11
220.583	0.00	0.03	2.047	O	|	|	|	|	2.11
220.667	0.00	0.03	2.047	O	|	|	|	|	2.11
220.750	0.00	0.03	2.047	O	|	|	|	|	2.11
220.833	0.00	0.03	2.047	O	|	|	|	|	2.11
220.917	0.00	0.03	2.047	O	|	|	|	|	2.11
221.000	0.00	0.03	2.046	O	|	|	|	|	2.11
221.083	0.00	0.03	2.046	O	|	|	|	|	2.11
221.167	0.00	0.03	2.046	O	|	|	|	|	2.11
221.250	0.00	0.03	2.046	O	|	|	|	|	2.11
221.333	0.00	0.03	2.046	O	|	|	|	|	2.11
221.417	0.00	0.03	2.045	O	|	|	|	|	2.11
221.500	0.00	0.03	2.045	O	|	|	|	|	2.11
221.583	0.00	0.03	2.045	O	|	|	|	|	2.11
221.667	0.00	0.03	2.045	O	|	|	|	|	2.11
221.750	0.00	0.03	2.045	O	|	|	|	|	2.11
221.833	0.00	0.03	2.044	O	|	|	|	|	2.11
221.917	0.00	0.03	2.044	O	|	|	|	|	2.11
222.000	0.00	0.03	2.044	O	|	|	|	|	2.11
222.083	0.00	0.03	2.044	O	|	|	|	|	2.11
222.167	0.00	0.03	2.043	O	|	|	|	|	2.11
222.250	0.00	0.03	2.043	O	|	|	|	|	2.11
222.333	0.00	0.03	2.043	O	|	|	|	|	2.11
222.417	0.00	0.03	2.043	O	|	|	|	|	2.11
222.500	0.00	0.03	2.043	O	|	|	|	|	2.11
222.583	0.00	0.03	2.042	O	|	|	|	|	2.11
222.667	0.00	0.03	2.042	O	|	|	|	|	2.11
222.750	0.00	0.03	2.042	O	|	|	|	|	2.11
222.833	0.00	0.03	2.042	O	|	|	|	|	2.11
222.917	0.00	0.03	2.042	O	|	|	|	|	2.11
223.000	0.00	0.03	2.041	O	|	|	|	|	2.11

223.083	0.00	0.03	2.041	O	|	|	|	2.11
223.167	0.00	0.03	2.041	O	|	|	|	2.11
223.250	0.00	0.03	2.041	O	|	|	|	2.11
223.333	0.00	0.03	2.041	O	|	|	|	2.10
223.417	0.00	0.03	2.040	O	|	|	|	2.10
223.500	0.00	0.03	2.040	O	|	|	|	2.10
223.583	0.00	0.03	2.040	O	|	|	|	2.10
223.667	0.00	0.03	2.040	O	|	|	|	2.10
223.750	0.00	0.03	2.040	O	|	|	|	2.10
223.833	0.00	0.03	2.039	O	|	|	|	2.10
223.917	0.00	0.03	2.039	O	|	|	|	2.10
224.000	0.00	0.03	2.039	O	|	|	|	2.10
224.083	0.00	0.03	2.039	O	|	|	|	2.10
224.167	0.00	0.03	2.039	O	|	|	|	2.10
224.250	0.00	0.03	2.039	O	|	|	|	2.10
224.333	0.00	0.03	2.038	O	|	|	|	2.10
224.417	0.00	0.03	2.038	O	|	|	|	2.10
224.500	0.00	0.03	2.038	O	|	|	|	2.10
224.583	0.00	0.03	2.038	O	|	|	|	2.10
224.667	0.00	0.03	2.038	O	|	|	|	2.10
224.750	0.00	0.03	2.037	O	|	|	|	2.10
224.833	0.00	0.03	2.037	O	|	|	|	2.10
224.917	0.00	0.03	2.037	O	|	|	|	2.10
225.000	0.00	0.03	2.037	O	|	|	|	2.10
225.083	0.00	0.03	2.037	O	|	|	|	2.10
225.167	0.00	0.03	2.036	O	|	|	|	2.10
225.250	0.00	0.03	2.036	O	|	|	|	2.10
225.333	0.00	0.03	2.036	O	|	|	|	2.10
225.417	0.00	0.03	2.036	O	|	|	|	2.10
225.500	0.00	0.03	2.036	O	|	|	|	2.10
225.583	0.00	0.03	2.035	O	|	|	|	2.10
225.667	0.00	0.03	2.035	O	|	|	|	2.10
225.750	0.00	0.03	2.035	O	|	|	|	2.10
225.833	0.00	0.03	2.035	O	|	|	|	2.10
225.917	0.00	0.03	2.035	O	|	|	|	2.10
226.000	0.00	0.03	2.034	O	|	|	|	2.10
226.083	0.00	0.03	2.034	O	|	|	|	2.10
226.167	0.00	0.03	2.034	O	|	|	|	2.10
226.250	0.00	0.03	2.034	O	|	|	|	2.10
226.333	0.00	0.03	2.034	O	|	|	|	2.10
226.417	0.00	0.03	2.033	O	|	|	|	2.10
226.500	0.00	0.03	2.033	O	|	|	|	2.10
226.583	0.00	0.03	2.033	O	|	|	|	2.10
226.667	0.00	0.03	2.033	O	|	|	|	2.10
226.750	0.00	0.03	2.033	O	|	|	|	2.10
226.833	0.00	0.03	2.033	O	|	|	|	2.10
226.917	0.00	0.03	2.032	O	|	|	|	2.10
227.000	0.00	0.03	2.032	O	|	|	|	2.10
227.083	0.00	0.03	2.032	O	|	|	|	2.10
227.167	0.00	0.03	2.032	O	|	|	|	2.10

227.250	0.00	0.03	2.032	O				2.10
227.333	0.00	0.03	2.031	O				2.10
227.417	0.00	0.03	2.031	O				2.10
227.500	0.00	0.03	2.031	O				2.09
227.583	0.00	0.03	2.031	O				2.09
227.667	0.00	0.03	2.031	O				2.09
227.750	0.00	0.03	2.030	O				2.09
227.833	0.00	0.03	2.030	O				2.09
227.917	0.00	0.03	2.030	O				2.09
228.000	0.00	0.03	2.030	O				2.09
228.083	0.00	0.03	2.030	O				2.09
228.167	0.00	0.03	2.030	O				2.09
228.250	0.00	0.03	2.029	O				2.09
228.333	0.00	0.03	2.029	O				2.09
228.417	0.00	0.03	2.029	O				2.09
228.500	0.00	0.03	2.029	O				2.09
228.583	0.00	0.03	2.029	O				2.09
228.667	0.00	0.03	2.028	O				2.09
228.750	0.00	0.03	2.028	O				2.09
228.833	0.00	0.03	2.028	O				2.09
228.917	0.00	0.03	2.028	O				2.09
229.000	0.00	0.03	2.028	O				2.09
229.083	0.00	0.03	2.028	O				2.09
229.167	0.00	0.03	2.027	O				2.09
229.250	0.00	0.03	2.027	O				2.09
229.333	0.00	0.03	2.027	O				2.09
229.417	0.00	0.03	2.027	O				2.09
229.500	0.00	0.03	2.027	O				2.09
229.583	0.00	0.03	2.026	O				2.09
229.667	0.00	0.03	2.026	O				2.09
229.750	0.00	0.03	2.026	O				2.09
229.833	0.00	0.03	2.026	O				2.09
229.917	0.00	0.03	2.026	O				2.09
230.000	0.00	0.03	2.026	O				2.09
230.083	0.00	0.03	2.025	O				2.09
230.167	0.00	0.03	2.025	O				2.09
230.250	0.00	0.03	2.025	O				2.09
230.333	0.00	0.03	2.025	O				2.09
230.417	0.00	0.03	2.025	O				2.09
230.500	0.00	0.03	2.024	O				2.09
230.583	0.00	0.03	2.024	O				2.09
230.667	0.00	0.03	2.024	O				2.09
230.750	0.00	0.03	2.024	O				2.09
230.833	0.00	0.03	2.024	O				2.09
230.917	0.00	0.03	2.024	O				2.09
231.000	0.00	0.03	2.023	O				2.09
231.083	0.00	0.03	2.023	O				2.09
231.167	0.00	0.03	2.023	O				2.09
231.250	0.00	0.03	2.023	O				2.09
231.333	0.00	0.03	2.023	O				2.09

231.417	0.00	0.03	2.023	O				2.09
231.500	0.00	0.03	2.022	O				2.09
231.583	0.00	0.03	2.022	O				2.09
231.667	0.00	0.03	2.022	O				2.09
231.750	0.00	0.03	2.022	O				2.09
231.833	0.00	0.03	2.022	O				2.09
231.917	0.00	0.03	2.021	O				2.08
232.000	0.00	0.03	2.021	O				2.08
232.083	0.00	0.03	2.021	O				2.08
232.167	0.00	0.03	2.021	O				2.08
232.250	0.00	0.03	2.021	O				2.08
232.333	0.00	0.03	2.021	O				2.08
232.417	0.00	0.03	2.020	O				2.08
232.500	0.00	0.03	2.020	O				2.08
232.583	0.00	0.03	2.020	O				2.08
232.667	0.00	0.02	2.020	O				2.08
232.750	0.00	0.02	2.020	O				2.08
232.833	0.00	0.02	2.020	O				2.08
232.917	0.00	0.02	2.019	O				2.08
233.000	0.00	0.02	2.019	O				2.08
233.083	0.00	0.02	2.019	O				2.08
233.167	0.00	0.02	2.019	O				2.08
233.250	0.00	0.02	2.019	O				2.08
233.333	0.00	0.02	2.019	O				2.08
233.417	0.00	0.02	2.018	O				2.08
233.500	0.00	0.02	2.018	O				2.08
233.583	0.00	0.02	2.018	O				2.08
233.667	0.00	0.02	2.018	O				2.08
233.750	0.00	0.02	2.018	O				2.08
233.833	0.00	0.02	2.018	O				2.08
233.917	0.00	0.02	2.017	O				2.08
234.000	0.00	0.02	2.017	O				2.08
234.083	0.00	0.02	2.017	O				2.08
234.167	0.00	0.02	2.017	O				2.08
234.250	0.00	0.02	2.017	O				2.08
234.333	0.00	0.02	2.017	O				2.08
234.417	0.00	0.02	2.016	O				2.08
234.500	0.00	0.02	2.016	O				2.08
234.583	0.00	0.02	2.016	O				2.08
234.667	0.00	0.02	2.016	O				2.08
234.750	0.00	0.02	2.016	O				2.08
234.833	0.00	0.02	2.016	O				2.08
234.917	0.00	0.02	2.015	O				2.08
235.000	0.00	0.02	2.015	O				2.08
235.083	0.00	0.02	2.015	O				2.08
235.167	0.00	0.02	2.015	O				2.08
235.250	0.00	0.02	2.015	O				2.08
235.333	0.00	0.02	2.015	O				2.08
235.417	0.00	0.02	2.014	O				2.08
235.500	0.00	0.02	2.014	O				2.08

235.583	0.00	0.02	2.014	O				2.08
235.667	0.00	0.02	2.014	O				2.08
235.750	0.00	0.02	2.014	O				2.08
235.833	0.00	0.02	2.014	O				2.08
235.917	0.00	0.02	2.013	O				2.08
236.000	0.00	0.02	2.013	O				2.08
236.083	0.00	0.02	2.013	O				2.08
236.167	0.00	0.02	2.013	O				2.08
236.250	0.00	0.02	2.013	O				2.08
236.333	0.00	0.02	2.013	O				2.08
236.417	0.00	0.02	2.012	O				2.08
236.500	0.00	0.02	2.012	O				2.08
236.583	0.00	0.02	2.012	O				2.08
236.667	0.00	0.02	2.012	O				2.07
236.750	0.00	0.02	2.012	O				2.07
236.833	0.00	0.02	2.012	O				2.07
236.917	0.00	0.02	2.011	O				2.07
237.000	0.00	0.02	2.011	O				2.07
237.083	0.00	0.02	2.011	O				2.07
237.167	0.00	0.02	2.011	O				2.07
237.250	0.00	0.02	2.011	O				2.07
237.333	0.00	0.02	2.011	O				2.07
237.417	0.00	0.02	2.010	O				2.07
237.500	0.00	0.02	2.010	O				2.07
237.583	0.00	0.02	2.010	O				2.07
237.667	0.00	0.02	2.010	O				2.07
237.750	0.00	0.02	2.010	O				2.07
237.833	0.00	0.02	2.010	O				2.07
237.917	0.00	0.02	2.010	O				2.07
238.000	0.00	0.02	2.009	O				2.07
238.083	0.00	0.02	2.009	O				2.07
238.167	0.00	0.02	2.009	O				2.07
238.250	0.00	0.02	2.009	O				2.07
238.333	0.00	0.02	2.009	O				2.07
238.417	0.00	0.02	2.009	O				2.07
238.500	0.00	0.02	2.008	O				2.07
238.583	0.00	0.02	2.008	O				2.07
238.667	0.00	0.02	2.008	O				2.07
238.750	0.00	0.02	2.008	O				2.07
238.833	0.00	0.02	2.008	O				2.07
238.917	0.00	0.02	2.008	O				2.07
239.000	0.00	0.02	2.007	O				2.07
239.083	0.00	0.02	2.007	O				2.07
239.167	0.00	0.02	2.007	O				2.07
239.250	0.00	0.02	2.007	O				2.07
239.333	0.00	0.02	2.007	O				2.07
239.417	0.00	0.02	2.007	O				2.07
239.500	0.00	0.02	2.007	O				2.07
239.583	0.00	0.02	2.006	O				2.07
239.667	0.00	0.02	2.006	O				2.07

239.750	0.00	0.02	2.006	O				2.07
239.833	0.00	0.02	2.006	O				2.07
239.917	0.00	0.02	2.006	O				2.07
240.000	0.00	0.02	2.006	O				2.07
240.083	0.00	0.02	2.005	O				2.07
240.167	0.00	0.02	2.005	O				2.07
240.250	0.00	0.02	2.005	O				2.07
240.333	0.00	0.02	2.005	O				2.07
240.417	0.00	0.02	2.005	O				2.07
240.500	0.00	0.02	2.005	O				2.07
240.583	0.00	0.02	2.005	O				2.07
240.667	0.00	0.02	2.004	O				2.07
240.750	0.00	0.02	2.004	O				2.07
240.833	0.00	0.02	2.004	O				2.07
240.917	0.00	0.02	2.004	O				2.07
241.000	0.00	0.02	2.004	O				2.07
241.083	0.00	0.02	2.004	O				2.07
241.167	0.00	0.02	2.003	O				2.07
241.250	0.00	0.02	2.003	O				2.07
241.333	0.00	0.02	2.003	O				2.07
241.417	0.00	0.02	2.003	O				2.07
241.500	0.00	0.02	2.003	O				2.07
241.583	0.00	0.02	2.003	O				2.07
241.667	0.00	0.02	2.003	O				2.07
241.750	0.00	0.02	2.002	O				2.07
241.833	0.00	0.02	2.002	O				2.06
241.917	0.00	0.02	2.002	O				2.06
242.000	0.00	0.02	2.002	O				2.06
242.083	0.00	0.02	2.002	O				2.06
242.167	0.00	0.02	2.002	O				2.06
242.250	0.00	0.02	2.002	O				2.06
242.333	0.00	0.02	2.001	O				2.06
242.417	0.00	0.02	2.001	O				2.06
242.500	0.00	0.02	2.001	O				2.06
242.583	0.00	0.02	2.001	O				2.06
242.667	0.00	0.02	2.001	O				2.06
242.750	0.00	0.02	2.001	O				2.06
242.833	0.00	0.02	2.001	O				2.06
242.917	0.00	0.02	2.000	O				2.06
243.000	0.00	0.02	2.000	O				2.06
243.083	0.00	0.02	2.000	O				2.06
243.167	0.00	0.02	2.000	O				2.06
243.250	0.00	0.02	2.000	O				2.06
243.333	0.00	0.02	2.000	O				2.06
243.417	0.00	0.02	1.999	O				2.06
243.500	0.00	0.02	1.999	O				2.06
243.583	0.00	0.02	1.999	O				2.06
243.667	0.00	0.02	1.999	O				2.06
243.750	0.00	0.02	1.999	O				2.06
243.833	0.00	0.02	1.999	O				2.06

243.917	0.00	0.02	1.999	O				2.06
244.000	0.00	0.02	1.998	O				2.06
244.083	0.00	0.02	1.998	O				2.06
244.167	0.00	0.02	1.998	O				2.06
244.250	0.00	0.02	1.998	O				2.06
244.333	0.00	0.02	1.998	O				2.06
244.417	0.00	0.02	1.998	O				2.06
244.500	0.00	0.02	1.998	O				2.06
244.583	0.00	0.02	1.997	O				2.06
244.667	0.00	0.02	1.997	O				2.06
244.750	0.00	0.02	1.997	O				2.06
244.833	0.00	0.02	1.997	O				2.06
244.917	0.00	0.02	1.997	O				2.06
245.000	0.00	0.02	1.997	O				2.06
245.083	0.00	0.02	1.997	O				2.06
245.167	0.00	0.02	1.996	O				2.06
245.250	0.00	0.02	1.996	O				2.06
245.333	0.00	0.02	1.996	O				2.06
245.417	0.00	0.02	1.996	O				2.06
245.500	0.00	0.02	1.996	O				2.06
245.583	0.00	0.02	1.996	O				2.06
245.667	0.00	0.02	1.996	O				2.06
245.750	0.00	0.02	1.995	O				2.06
245.833	0.00	0.02	1.995	O				2.06
245.917	0.00	0.02	1.995	O				2.06
246.000	0.00	0.02	1.995	O				2.06
246.083	0.00	0.02	1.995	O				2.06
246.167	0.00	0.02	1.995	O				2.06
246.250	0.00	0.02	1.995	O				2.06
246.333	0.00	0.02	1.995	O				2.06
246.417	0.00	0.02	1.994	O				2.06
246.500	0.00	0.02	1.994	O				2.06
246.583	0.00	0.02	1.994	O				2.06
246.667	0.00	0.02	1.994	O				2.06
246.750	0.00	0.02	1.994	O				2.06
246.833	0.00	0.02	1.994	O				2.06
246.917	0.00	0.02	1.994	O				2.06
247.000	0.00	0.02	1.993	O				2.06
247.083	0.00	0.02	1.993	O				2.06
247.167	0.00	0.02	1.993	O				2.06
247.250	0.00	0.02	1.993	O				2.06
247.333	0.00	0.02	1.993	O				2.06
247.417	0.00	0.02	1.993	O				2.05
247.500	0.00	0.02	1.993	O				2.05
247.583	0.00	0.02	1.992	O				2.05
247.667	0.00	0.02	1.992	O				2.05
247.750	0.00	0.02	1.992	O				2.05
247.833	0.00	0.02	1.992	O				2.05
247.917	0.00	0.02	1.992	O				2.05
248.000	0.00	0.02	1.992	O				2.05

248.083	0.00	0.02	1.992	O				2.05
248.167	0.00	0.02	1.991	O				2.05
248.250	0.00	0.02	1.991	O				2.05
248.333	0.00	0.02	1.991	O				2.05
248.417	0.00	0.02	1.991	O				2.05
248.500	0.00	0.02	1.991	O				2.05
248.583	0.00	0.02	1.991	O				2.05
248.667	0.00	0.02	1.991	O				2.05
248.750	0.00	0.02	1.991	O				2.05
248.833	0.00	0.02	1.990	O				2.05
248.917	0.00	0.02	1.990	O				2.05
249.000	0.00	0.02	1.990	O				2.05
249.083	0.00	0.02	1.990	O				2.05
249.167	0.00	0.02	1.990	O				2.05
249.250	0.00	0.02	1.990	O				2.05
249.333	0.00	0.02	1.990	O				2.05
249.417	0.00	0.02	1.989	O				2.05
249.500	0.00	0.02	1.989	O				2.05
249.583	0.00	0.02	1.989	O				2.05
249.667	0.00	0.02	1.989	O				2.05
249.750	0.00	0.02	1.989	O				2.05
249.833	0.00	0.02	1.989	O				2.05
249.917	0.00	0.02	1.989	O				2.05
250.000	0.00	0.02	1.989	O				2.05
250.083	0.00	0.02	1.988	O				2.05
250.167	0.00	0.02	1.988	O				2.05
250.250	0.00	0.02	1.988	O				2.05
250.333	0.00	0.02	1.988	O				2.05
250.417	0.00	0.02	1.988	O				2.05
250.500	0.00	0.02	1.988	O				2.05
250.583	0.00	0.02	1.988	O				2.05
250.667	0.00	0.02	1.988	O				2.05
250.750	0.00	0.02	1.987	O				2.05
250.833	0.00	0.02	1.987	O				2.05
250.917	0.00	0.02	1.987	O				2.05
251.000	0.00	0.02	1.987	O				2.05
251.083	0.00	0.02	1.987	O				2.05
251.167	0.00	0.02	1.987	O				2.05
251.250	0.00	0.02	1.987	O				2.05
251.333	0.00	0.02	1.986	O				2.05
251.417	0.00	0.02	1.986	O				2.05
251.500	0.00	0.02	1.986	O				2.05
251.583	0.00	0.02	1.986	O				2.05
251.667	0.00	0.02	1.986	O				2.05
251.750	0.00	0.02	1.986	O				2.05
251.833	0.00	0.02	1.986	O				2.05
251.917	0.00	0.02	1.986	O				2.05
252.000	0.00	0.02	1.985	O				2.05
252.083	0.00	0.02	1.985	O				2.05
252.167	0.00	0.02	1.985	O				2.05

252.250	0.00	0.02	1.985	O	|	|	|	2.05
252.333	0.00	0.02	1.985	O	|	|	|	2.05
252.417	0.00	0.02	1.985	O	|	|	|	2.05
252.500	0.00	0.02	1.985	O	|	|	|	2.05
252.583	0.00	0.02	1.985	O	|	|	|	2.05
252.667	0.00	0.02	1.984	O	|	|	|	2.05
252.750	0.00	0.02	1.984	O	|	|	|	2.05
252.833	0.00	0.02	1.984	O	|	|	|	2.05
252.917	0.00	0.02	1.984	O	|	|	|	2.05
253.000	0.00	0.02	1.984	O	|	|	|	2.05
253.083	0.00	0.02	1.984	O	|	|	|	2.05
253.167	0.00	0.02	1.984	O	|	|	|	2.05
253.250	0.00	0.02	1.984	O	|	|	|	2.05
253.333	0.00	0.02	1.983	O	|	|	|	2.05
253.417	0.00	0.02	1.983	O	|	|	|	2.05
253.500	0.00	0.02	1.983	O	|	|	|	2.04
253.583	0.00	0.02	1.983	O	|	|	|	2.04
253.667	0.00	0.02	1.983	O	|	|	|	2.04
253.750	0.00	0.02	1.983	O	|	|	|	2.04
253.833	0.00	0.02	1.983	O	|	|	|	2.04
253.917	0.00	0.02	1.983	O	|	|	|	2.04
254.000	0.00	0.02	1.982	O	|	|	|	2.04
254.083	0.00	0.02	1.982	O	|	|	|	2.04
254.167	0.00	0.02	1.982	O	|	|	|	2.04
254.250	0.00	0.02	1.982	O	|	|	|	2.04
254.333	0.00	0.02	1.982	O	|	|	|	2.04
254.417	0.00	0.02	1.982	O	|	|	|	2.04
254.500	0.00	0.02	1.982	O	|	|	|	2.04
254.583	0.00	0.02	1.982	O	|	|	|	2.04
254.667	0.00	0.02	1.981	O	|	|	|	2.04
254.750	0.00	0.02	1.981	O	|	|	|	2.04
254.833	0.00	0.02	1.981	O	|	|	|	2.04
254.917	0.00	0.02	1.981	O	|	|	|	2.04
255.000	0.00	0.02	1.981	O	|	|	|	2.04
255.083	0.00	0.02	1.981	O	|	|	|	2.04
255.167	0.00	0.02	1.981	O	|	|	|	2.04
255.250	0.00	0.02	1.981	O	|	|	|	2.04
255.333	0.00	0.02	1.980	O	|	|	|	2.04
255.417	0.00	0.02	1.980	O	|	|	|	2.04
255.500	0.00	0.02	1.980	O	|	|	|	2.04
255.583	0.00	0.02	1.980	O	|	|	|	2.04
255.667	0.00	0.02	1.980	O	|	|	|	2.04
255.750	0.00	0.02	1.980	O	|	|	|	2.04
255.833	0.00	0.02	1.980	O	|	|	|	2.04
255.917	0.00	0.02	1.980	O	|	|	|	2.04
256.000	0.00	0.02	1.980	O	|	|	|	2.04
256.083	0.00	0.02	1.979	O	|	|	|	2.04
256.167	0.00	0.02	1.979	O	|	|	|	2.04
256.250	0.00	0.02	1.979	O	|	|	|	2.04
256.333	0.00	0.02	1.979	O	|	|	|	2.04

256.417	0.00	0.02	1.979	O				2.04
256.500	0.00	0.02	1.979	O				2.04
256.583	0.00	0.02	1.979	O				2.04
256.667	0.00	0.02	1.979	O				2.04
256.750	0.00	0.02	1.978	O				2.04
256.833	0.00	0.02	1.978	O				2.04
256.917	0.00	0.02	1.978	O				2.04
257.000	0.00	0.02	1.978	O				2.04
257.083	0.00	0.02	1.978	O				2.04
257.167	0.00	0.02	1.978	O				2.04
257.250	0.00	0.02	1.978	O				2.04
257.333	0.00	0.02	1.978	O				2.04
257.417	0.00	0.02	1.977	O				2.04
257.500	0.00	0.02	1.977	O				2.04
257.583	0.00	0.02	1.977	O				2.04
257.667	0.00	0.02	1.977	O				2.04
257.750	0.00	0.02	1.977	O				2.04
257.833	0.00	0.02	1.977	O				2.04
257.917	0.00	0.02	1.977	O				2.04
258.000	0.00	0.02	1.977	O				2.04
258.083	0.00	0.02	1.977	O				2.04
258.167	0.00	0.02	1.976	O				2.04
258.250	0.00	0.02	1.976	O				2.04
258.333	0.00	0.02	1.976	O				2.04
258.417	0.00	0.02	1.976	O				2.04
258.500	0.00	0.02	1.976	O				2.04
258.583	0.00	0.02	1.976	O				2.04
258.667	0.00	0.02	1.976	O				2.04
258.750	0.00	0.02	1.976	O				2.04
258.833	0.00	0.02	1.976	O				2.04
258.917	0.00	0.02	1.975	O				2.04
259.000	0.00	0.02	1.975	O				2.04
259.083	0.00	0.02	1.975	O				2.04
259.167	0.00	0.02	1.975	O				2.04
259.250	0.00	0.02	1.975	O				2.04
259.333	0.00	0.02	1.975	O				2.04
259.417	0.00	0.02	1.975	O				2.04
259.500	0.00	0.02	1.975	O				2.04
259.583	0.00	0.02	1.974	O				2.04
259.667	0.00	0.02	1.974	O				2.04
259.750	0.00	0.02	1.974	O				2.04
259.833	0.00	0.02	1.974	O				2.04
259.917	0.00	0.02	1.974	O				2.04
260.000	0.00	0.02	1.974	O				2.04
260.083	0.00	0.02	1.974	O				2.04
260.167	0.00	0.02	1.974	O				2.04
260.250	0.00	0.02	1.974	O				2.03
260.333	0.00	0.02	1.973	O				2.03
260.417	0.00	0.02	1.973	O				2.03
260.500	0.00	0.02	1.973	O				2.03

260.583	0.00	0.02	1.973	O	|	|	|	2.03
260.667	0.00	0.02	1.973	O	|	|	|	2.03
260.750	0.00	0.02	1.973	O	|	|	|	2.03
260.833	0.00	0.02	1.973	O	|	|	|	2.03
260.917	0.00	0.02	1.973	O	|	|	|	2.03
261.000	0.00	0.02	1.973	O	|	|	|	2.03
261.083	0.00	0.02	1.972	O	|	|	|	2.03
261.167	0.00	0.02	1.972	O	|	|	|	2.03
261.250	0.00	0.02	1.972	O	|	|	|	2.03
261.333	0.00	0.02	1.972	O	|	|	|	2.03
261.417	0.00	0.02	1.972	O	|	|	|	2.03
261.500	0.00	0.02	1.972	O	|	|	|	2.03
261.583	0.00	0.02	1.972	O	|	|	|	2.03
261.667	0.00	0.02	1.972	O	|	|	|	2.03
261.750	0.00	0.02	1.972	O	|	|	|	2.03
261.833	0.00	0.02	1.971	O	|	|	|	2.03
261.917	0.00	0.02	1.971	O	|	|	|	2.03
262.000	0.00	0.02	1.971	O	|	|	|	2.03
262.083	0.00	0.02	1.971	O	|	|	|	2.03
262.167	0.00	0.02	1.971	O	|	|	|	2.03
262.250	0.00	0.02	1.971	O	|	|	|	2.03
262.333	0.00	0.02	1.971	O	|	|	|	2.03
262.417	0.00	0.02	1.971	O	|	|	|	2.03
262.500	0.00	0.02	1.971	O	|	|	|	2.03
262.583	0.00	0.02	1.970	O	|	|	|	2.03
262.667	0.00	0.02	1.970	O	|	|	|	2.03
262.750	0.00	0.02	1.970	O	|	|	|	2.03
262.833	0.00	0.02	1.970	O	|	|	|	2.03
262.917	0.00	0.02	1.970	O	|	|	|	2.03
263.000	0.00	0.02	1.970	O	|	|	|	2.03
263.083	0.00	0.02	1.970	O	|	|	|	2.03
263.167	0.00	0.02	1.970	O	|	|	|	2.03
263.250	0.00	0.02	1.970	O	|	|	|	2.03
263.333	0.00	0.02	1.970	O	|	|	|	2.03
263.417	0.00	0.02	1.969	O	|	|	|	2.03
263.500	0.00	0.02	1.969	O	|	|	|	2.03
263.583	0.00	0.02	1.969	O	|	|	|	2.03
263.667	0.00	0.02	1.969	O	|	|	|	2.03
263.750	0.00	0.02	1.969	O	|	|	|	2.03
263.833	0.00	0.02	1.969	O	|	|	|	2.03
263.917	0.00	0.02	1.969	O	|	|	|	2.03
264.000	0.00	0.02	1.969	O	|	|	|	2.03
264.083	0.00	0.02	1.969	O	|	|	|	2.03
264.167	0.00	0.02	1.968	O	|	|	|	2.03
264.250	0.00	0.02	1.968	O	|	|	|	2.03
264.333	0.00	0.02	1.968	O	|	|	|	2.03
264.417	0.00	0.02	1.968	O	|	|	|	2.03
264.500	0.00	0.02	1.968	O	|	|	|	2.03
264.583	0.00	0.02	1.968	O	|	|	|	2.03
264.667	0.00	0.02	1.968	O	|	|	|	2.03

264.750	0.00	0.02	1.968	O	|	|	|	2.03
264.833	0.00	0.02	1.968	O	|	|	|	2.03
264.917	0.00	0.02	1.968	O	|	|	|	2.03
265.000	0.00	0.02	1.967	O	|	|	|	2.03
265.083	0.00	0.02	1.967	O	|	|	|	2.03
265.167	0.00	0.02	1.967	O	|	|	|	2.03
265.250	0.00	0.02	1.967	O	|	|	|	2.03
265.333	0.00	0.02	1.967	O	|	|	|	2.03
265.417	0.00	0.02	1.967	O	|	|	|	2.03
265.500	0.00	0.02	1.967	O	|	|	|	2.03
265.583	0.00	0.02	1.967	O	|	|	|	2.03
265.667	0.00	0.01	1.967	O	|	|	|	2.03
265.750	0.00	0.01	1.966	O	|	|	|	2.03
265.833	0.00	0.01	1.966	O	|	|	|	2.03
265.917	0.00	0.01	1.966	O	|	|	|	2.03
266.000	0.00	0.01	1.966	O	|	|	|	2.03
266.083	0.00	0.01	1.966	O	|	|	|	2.03
266.167	0.00	0.01	1.966	O	|	|	|	2.03
266.250	0.00	0.01	1.966	O	|	|	|	2.03
266.333	0.00	0.01	1.966	O	|	|	|	2.03
266.417	0.00	0.01	1.966	O	|	|	|	2.03
266.500	0.00	0.01	1.966	O	|	|	|	2.03
266.583	0.00	0.01	1.965	O	|	|	|	2.03
266.667	0.00	0.01	1.965	O	|	|	|	2.03
266.750	0.00	0.01	1.965	O	|	|	|	2.03
266.833	0.00	0.01	1.965	O	|	|	|	2.03
266.917	0.00	0.01	1.965	O	|	|	|	2.03
267.000	0.00	0.01	1.965	O	|	|	|	2.03
267.083	0.00	0.01	1.965	O	|	|	|	2.03
267.167	0.00	0.01	1.965	O	|	|	|	2.03
267.250	0.00	0.01	1.965	O	|	|	|	2.03
267.333	0.00	0.01	1.965	O	|	|	|	2.03
267.417	0.00	0.01	1.964	O	|	|	|	2.03
267.500	0.00	0.01	1.964	O	|	|	|	2.03
267.583	0.00	0.01	1.964	O	|	|	|	2.03
267.667	0.00	0.01	1.964	O	|	|	|	2.03
267.750	0.00	0.01	1.964	O	|	|	|	2.03
267.833	0.00	0.01	1.964	O	|	|	|	2.02
267.917	0.00	0.01	1.964	O	|	|	|	2.02
268.000	0.00	0.01	1.964	O	|	|	|	2.02
268.083	0.00	0.01	1.964	O	|	|	|	2.02
268.167	0.00	0.01	1.964	O	|	|	|	2.02
268.250	0.00	0.01	1.963	O	|	|	|	2.02
268.333	0.00	0.01	1.963	O	|	|	|	2.02
268.417	0.00	0.01	1.963	O	|	|	|	2.02
268.500	0.00	0.01	1.963	O	|	|	|	2.02
268.583	0.00	0.01	1.963	O	|	|	|	2.02
268.667	0.00	0.01	1.963	O	|	|	|	2.02
268.750	0.00	0.01	1.963	O	|	|	|	2.02
268.833	0.00	0.01	1.963	O	|	|	|	2.02

268.917	0.00	0.01	1.963	O				2.02
269.000	0.00	0.01	1.963	O				2.02
269.083	0.00	0.01	1.962	O				2.02
269.167	0.00	0.01	1.962	O				2.02
269.250	0.00	0.01	1.962	O				2.02
269.333	0.00	0.01	1.962	O				2.02
269.417	0.00	0.01	1.962	O				2.02
269.500	0.00	0.01	1.962	O				2.02
269.583	0.00	0.01	1.962	O				2.02
269.667	0.00	0.01	1.962	O				2.02
269.750	0.00	0.01	1.962	O				2.02
269.833	0.00	0.01	1.962	O				2.02
269.917	0.00	0.01	1.961	O				2.02
270.000	0.00	0.01	1.961	O				2.02
270.083	0.00	0.01	1.961	O				2.02
270.167	0.00	0.01	1.961	O				2.02
270.250	0.00	0.01	1.961	O				2.02
270.333	0.00	0.01	1.961	O				2.02
270.417	0.00	0.01	1.961	O				2.02
270.500	0.00	0.01	1.961	O				2.02
270.583	0.00	0.01	1.961	O				2.02
270.667	0.00	0.01	1.961	O				2.02
270.750	0.00	0.01	1.961	O				2.02
270.833	0.00	0.01	1.960	O				2.02
270.917	0.00	0.01	1.960	O				2.02
271.000	0.00	0.01	1.960	O				2.02
271.083	0.00	0.01	1.960	O				2.02
271.167	0.00	0.01	1.960	O				2.02
271.250	0.00	0.01	1.960	O				2.02
271.333	0.00	0.01	1.960	O				2.02
271.417	0.00	0.01	1.960	O				2.02
271.500	0.00	0.01	1.960	O				2.02
271.583	0.00	0.01	1.960	O				2.02
271.667	0.00	0.01	1.959	O				2.02
271.750	0.00	0.01	1.959	O				2.02
271.833	0.00	0.01	1.959	O				2.02
271.917	0.00	0.01	1.959	O				2.02
272.000	0.00	0.01	1.959	O				2.02
272.083	0.00	0.01	1.959	O				2.02
272.167	0.00	0.01	1.959	O				2.02
272.250	0.00	0.01	1.959	O				2.02
272.333	0.00	0.01	1.959	O				2.02
272.417	0.00	0.01	1.959	O				2.02
272.500	0.00	0.01	1.959	O				2.02
272.583	0.00	0.01	1.958	O				2.02
272.667	0.00	0.01	1.958	O				2.02
272.750	0.00	0.01	1.958	O				2.02
272.833	0.00	0.01	1.958	O				2.02
272.917	0.00	0.01	1.958	O				2.02
273.000	0.00	0.01	1.958	O				2.02

273.083	0.00	0.01	1.958	O				2.02
273.167	0.00	0.01	1.958	O				2.02
273.250	0.00	0.01	1.958	O				2.02
273.333	0.00	0.01	1.958	O				2.02
273.417	0.00	0.01	1.958	O				2.02
273.500	0.00	0.01	1.957	O				2.02
273.583	0.00	0.01	1.957	O				2.02
273.667	0.00	0.01	1.957	O				2.02
273.750	0.00	0.01	1.957	O				2.02
273.833	0.00	0.01	1.957	O				2.02
273.917	0.00	0.01	1.957	O				2.02
274.000	0.00	0.01	1.957	O				2.02
274.083	0.00	0.01	1.957	O				2.02
274.167	0.00	0.01	1.957	O				2.02
274.250	0.00	0.01	1.957	O				2.02
274.333	0.00	0.01	1.957	O				2.02
274.417	0.00	0.01	1.956	O				2.02
274.500	0.00	0.01	1.956	O				2.02
274.583	0.00	0.01	1.956	O				2.02
274.667	0.00	0.01	1.956	O				2.02
274.750	0.00	0.01	1.956	O				2.02
274.833	0.00	0.01	1.956	O				2.02
274.917	0.00	0.01	1.956	O				2.02
275.000	0.00	0.01	1.956	O				2.02
275.083	0.00	0.01	1.956	O				2.02
275.167	0.00	0.01	1.956	O				2.02
275.250	0.00	0.01	1.956	O				2.02
275.333	0.00	0.01	1.955	O				2.02
275.417	0.00	0.01	1.955	O				2.02
275.500	0.00	0.01	1.955	O				2.02
275.583	0.00	0.01	1.955	O				2.02
275.667	0.00	0.01	1.955	O				2.02
275.750	0.00	0.01	1.955	O				2.02
275.833	0.00	0.01	1.955	O				2.02
275.917	0.00	0.01	1.955	O				2.02
276.000	0.00	0.01	1.955	O				2.02
276.083	0.00	0.01	1.955	O				2.02
276.167	0.00	0.01	1.955	O				2.02
276.250	0.00	0.01	1.954	O				2.02
276.333	0.00	0.01	1.954	O				2.02
276.417	0.00	0.01	1.954	O				2.01
276.500	0.00	0.01	1.954	O				2.01
276.583	0.00	0.01	1.954	O				2.01
276.667	0.00	0.01	1.954	O				2.01
276.750	0.00	0.01	1.954	O				2.01
276.833	0.00	0.01	1.954	O				2.01
276.917	0.00	0.01	1.954	O				2.01
277.000	0.00	0.01	1.954	O				2.01
277.083	0.00	0.01	1.954	O				2.01
277.167	0.00	0.01	1.954	O				2.01

277.250	0.00	0.01	1.953	O				2.01
277.333	0.00	0.01	1.953	O				2.01
277.417	0.00	0.01	1.953	O				2.01
277.500	0.00	0.01	1.953	O				2.01
277.583	0.00	0.01	1.953	O				2.01
277.667	0.00	0.01	1.953	O				2.01
277.750	0.00	0.01	1.953	O				2.01
277.833	0.00	0.01	1.953	O				2.01
277.917	0.00	0.01	1.953	O				2.01
278.000	0.00	0.01	1.953	O				2.01
278.083	0.00	0.01	1.953	O				2.01
278.167	0.00	0.01	1.953	O				2.01
278.250	0.00	0.01	1.952	O				2.01
278.333	0.00	0.01	1.952	O				2.01
278.417	0.00	0.01	1.952	O				2.01
278.500	0.00	0.01	1.952	O				2.01
278.583	0.00	0.01	1.952	O				2.01
278.667	0.00	0.01	1.952	O				2.01
278.750	0.00	0.01	1.952	O				2.01
278.833	0.00	0.01	1.952	O				2.01
278.917	0.00	0.01	1.952	O				2.01
279.000	0.00	0.01	1.952	O				2.01
279.083	0.00	0.01	1.952	O				2.01
279.167	0.00	0.01	1.952	O				2.01
279.250	0.00	0.01	1.951	O				2.01
279.333	0.00	0.01	1.951	O				2.01
279.417	0.00	0.01	1.951	O				2.01
279.500	0.00	0.01	1.951	O				2.01
279.583	0.00	0.01	1.951	O				2.01
279.667	0.00	0.01	1.951	O				2.01
279.750	0.00	0.01	1.951	O				2.01
279.833	0.00	0.01	1.951	O				2.01
279.917	0.00	0.01	1.951	O				2.01
280.000	0.00	0.01	1.951	O				2.01
280.083	0.00	0.01	1.951	O				2.01
280.167	0.00	0.01	1.951	O				2.01
280.250	0.00	0.01	1.950	O				2.01
280.333	0.00	0.01	1.950	O				2.01
280.417	0.00	0.01	1.950	O				2.01
280.500	0.00	0.01	1.950	O				2.01
280.583	0.00	0.01	1.950	O				2.01
280.667	0.00	0.01	1.950	O				2.01
280.750	0.00	0.01	1.950	O				2.01
280.833	0.00	0.01	1.950	O				2.01
280.917	0.00	0.01	1.950	O				2.01
281.000	0.00	0.01	1.950	O				2.01
281.083	0.00	0.01	1.950	O				2.01
281.167	0.00	0.01	1.950	O				2.01
281.250	0.00	0.01	1.949	O				2.01
281.333	0.00	0.01	1.949	O				2.01

281.417	0.00	0.01	1.949	O				2.01
281.500	0.00	0.01	1.949	O				2.01
281.583	0.00	0.01	1.949	O				2.01
281.667	0.00	0.01	1.949	O				2.01
281.750	0.00	0.01	1.949	O				2.01
281.833	0.00	0.01	1.949	O				2.01
281.917	0.00	0.01	1.949	O				2.01
282.000	0.00	0.01	1.949	O				2.01
282.083	0.00	0.01	1.949	O				2.01
282.167	0.00	0.01	1.949	O				2.01
282.250	0.00	0.01	1.948	O				2.01
282.333	0.00	0.01	1.948	O				2.01
282.417	0.00	0.01	1.948	O				2.01
282.500	0.00	0.01	1.948	O				2.01
282.583	0.00	0.01	1.948	O				2.01
282.667	0.00	0.01	1.948	O				2.01
282.750	0.00	0.01	1.948	O				2.01
282.833	0.00	0.01	1.948	O				2.01
282.917	0.00	0.01	1.948	O				2.01
283.000	0.00	0.01	1.948	O				2.01
283.083	0.00	0.01	1.948	O				2.01
283.167	0.00	0.01	1.948	O				2.01
283.250	0.00	0.01	1.948	O				2.01
283.333	0.00	0.01	1.947	O				2.01
283.417	0.00	0.01	1.947	O				2.01
283.500	0.00	0.01	1.947	O				2.01
283.583	0.00	0.01	1.947	O				2.01
283.667	0.00	0.01	1.947	O				2.01
283.750	0.00	0.01	1.947	O				2.01
283.833	0.00	0.01	1.947	O				2.01
283.917	0.00	0.01	1.947	O				2.01
284.000	0.00	0.01	1.947	O				2.01
284.083	0.00	0.01	1.947	O				2.01
284.167	0.00	0.01	1.947	O				2.01
284.250	0.00	0.01	1.947	O				2.01
284.333	0.00	0.01	1.947	O				2.01
284.417	0.00	0.01	1.946	O				2.01
284.500	0.00	0.01	1.946	O				2.01
284.583	0.00	0.01	1.946	O				2.01
284.667	0.00	0.01	1.946	O				2.01
284.750	0.00	0.01	1.946	O				2.01
284.833	0.00	0.01	1.946	O				2.01
284.917	0.00	0.01	1.946	O				2.01
285.000	0.00	0.01	1.946	O				2.01
285.083	0.00	0.01	1.946	O				2.01
285.167	0.00	0.01	1.946	O				2.01
285.250	0.00	0.01	1.946	O				2.01
285.333	0.00	0.01	1.946	O				2.01
285.417	0.00	0.01	1.946	O				2.01
285.500	0.00	0.01	1.945	O				2.01

285.583	0.00	0.01	1.945	O				2.01
285.667	0.00	0.01	1.945	O				2.01
285.750	0.00	0.01	1.945	O				2.01
285.833	0.00	0.01	1.945	O				2.01
285.917	0.00	0.01	1.945	O				2.01
286.000	0.00	0.01	1.945	O				2.01
286.083	0.00	0.01	1.945	O				2.01
286.167	0.00	0.01	1.945	O				2.01
286.250	0.00	0.01	1.945	O				2.00
286.333	0.00	0.01	1.945	O				2.00
286.417	0.00	0.01	1.945	O				2.00
286.500	0.00	0.01	1.945	O				2.00
286.583	0.00	0.01	1.944	O				2.00
286.667	0.00	0.01	1.944	O				2.00
286.750	0.00	0.01	1.944	O				2.00
286.833	0.00	0.01	1.944	O				2.00
286.917	0.00	0.01	1.944	O				2.00
287.000	0.00	0.01	1.944	O				2.00
287.083	0.00	0.01	1.944	O				2.00
287.167	0.00	0.01	1.944	O				2.00
287.250	0.00	0.01	1.944	O				2.00
287.333	0.00	0.01	1.944	O				2.00
287.417	0.00	0.01	1.944	O				2.00
287.500	0.00	0.01	1.944	O				2.00
287.583	0.00	0.01	1.944	O				2.00
287.667	0.00	0.01	1.944	O				2.00
287.750	0.00	0.01	1.943	O				2.00
287.833	0.00	0.01	1.943	O				2.00
287.917	0.00	0.01	1.943	O				2.00
288.000	0.00	0.01	1.943	O				2.00
288.083	0.00	0.01	1.943	O				2.00
288.167	0.00	0.01	1.943	O				2.00
288.250	0.00	0.01	1.943	O				2.00
288.333	0.00	0.01	1.943	O				2.00
288.417	0.00	0.01	1.943	O				2.00
288.500	0.00	0.01	1.943	O				2.00
288.583	0.00	0.01	1.943	O				2.00
288.667	0.00	0.01	1.943	O				2.00
288.750	0.00	0.01	1.943	O				2.00
288.833	0.00	0.01	1.942	O				2.00
288.917	0.00	0.01	1.942	O				2.00
289.000	0.00	0.01	1.942	O				2.00
289.083	0.00	0.01	1.942	O				2.00
289.167	0.00	0.01	1.942	O				2.00
289.250	0.00	0.01	1.942	O				2.00
289.333	0.00	0.01	1.942	O				2.00
289.417	0.00	0.01	1.942	O				2.00
289.500	0.00	0.01	1.942	O				2.00
289.583	0.00	0.01	1.942	O				2.00
289.667	0.00	0.01	1.942	O				2.00

289.750	0.00	0.01	1.942	O				2.00
289.833	0.00	0.01	1.942	O				2.00
289.917	0.00	0.01	1.942	O				2.00
290.000	0.00	0.01	1.941	O				2.00
290.083	0.00	0.01	1.941	O				2.00
290.167	0.00	0.01	1.941	O				2.00
290.250	0.00	0.01	1.941	O				2.00
290.333	0.00	0.01	1.941	O				2.00
290.417	0.00	0.01	1.941	O				2.00
290.500	0.00	0.01	1.941	O				2.00
290.583	0.00	0.01	1.941	O				2.00
290.667	0.00	0.01	1.941	O				2.00
290.750	0.00	0.01	1.941	O				2.00
290.833	0.00	0.01	1.941	O				2.00
290.917	0.00	0.01	1.941	O				2.00
291.000	0.00	0.01	1.941	O				2.00
291.083	0.00	0.01	1.941	O				2.00
291.167	0.00	0.01	1.940	O				2.00
291.250	0.00	0.01	1.940	O				2.00
291.333	0.00	0.01	1.940	O				2.00
291.417	0.00	0.01	1.940	O				2.00
291.500	0.00	0.01	1.940	O				2.00
291.583	0.00	0.01	1.940	O				2.00
291.667	0.00	0.01	1.940	O				2.00
291.750	0.00	0.01	1.940	O				2.00
291.833	0.00	0.01	1.940	O				2.00
291.917	0.00	0.01	1.940	O				2.00
292.000	0.00	0.01	1.940	O				2.00
292.083	0.00	0.01	1.940	O				2.00
292.167	0.00	0.01	1.940	O				2.00
292.250	0.00	0.01	1.940	O				2.00
292.333	0.00	0.01	1.940	O				2.00
292.417	0.00	0.01	1.939	O				2.00
292.500	0.00	0.01	1.939	O				2.00
292.583	0.00	0.01	1.939	O				2.00
292.667	0.00	0.01	1.939	O				2.00
292.750	0.00	0.01	1.939	O				2.00
292.833	0.00	0.01	1.939	O				2.00
292.917	0.00	0.01	1.939	O				2.00
293.000	0.00	0.01	1.939	O				2.00
293.083	0.00	0.01	1.939	O				2.00
293.167	0.00	0.01	1.939	O				2.00
293.250	0.00	0.01	1.939	O				2.00
293.333	0.00	0.01	1.939	O				2.00
293.417	0.00	0.01	1.939	O				2.00
293.500	0.00	0.01	1.939	O				2.00
293.583	0.00	0.01	1.939	O				2.00
293.667	0.00	0.01	1.938	O				2.00
293.750	0.00	0.01	1.938	O				2.00
293.833	0.00	0.01	1.938	O				2.00

293.917	0.00	0.01	1.938	O				2.00
294.000	0.00	0.01	1.938	O				2.00
294.083	0.00	0.01	1.938	O				2.00
294.167	0.00	0.01	1.938	O				2.00
294.250	0.00	0.01	1.938	O				2.00
294.333	0.00	0.01	1.938	O				2.00
294.417	0.00	0.01	1.938	O				2.00
294.500	0.00	0.01	1.938	O				2.00
294.583	0.00	0.01	1.938	O				2.00
294.667	0.00	0.01	1.938	O				2.00
294.750	0.00	0.01	1.938	O				2.00
294.833	0.00	0.01	1.937	O				2.00
294.917	0.00	0.01	1.937	O				2.00
295.000	0.00	0.01	1.937	O				2.00
295.083	0.00	0.01	1.937	O				2.00
295.167	0.00	0.01	1.937	O				2.00
295.250	0.00	0.01	1.937	O				2.00
295.333	0.00	0.01	1.937	O				2.00
295.417	0.00	0.01	1.937	O				2.00
295.500	0.00	0.01	1.937	O				2.00
295.583	0.00	0.01	1.937	O				2.00
295.667	0.00	0.01	1.937	O				2.00
295.750	0.00	0.01	1.937	O				2.00
295.833	0.00	0.01	1.937	O				2.00
295.917	0.00	0.01	1.937	O				2.00
296.000	0.00	0.01	1.937	O				2.00
296.083	0.00	0.01	1.936	O				2.00
296.167	0.00	0.01	1.936	O				2.00
296.250	0.00	0.01	1.936	O				2.00
296.333	0.00	0.01	1.936	O				2.00
296.417	0.00	0.01	1.936	O				2.00
296.500	0.00	0.01	1.936	O				2.00
296.583	0.00	0.01	1.936	O				2.00
296.667	0.00	0.01	1.936	O				2.00
296.750	0.00	0.01	1.936	O				2.00
296.833	0.00	0.01	1.936	O				2.00
296.917	0.00	0.01	1.936	O				2.00
297.000	0.00	0.01	1.936	O				2.00
297.083	0.00	0.01	1.936	O				2.00
297.167	0.00	0.01	1.936	O				2.00
297.250	0.00	0.01	1.935	O				2.00
297.333	0.00	0.01	1.935	O				2.00
297.417	0.00	0.01	1.935	O				2.00
297.500	0.00	0.01	1.935	O				2.00
297.583	0.00	0.01	1.935	O				2.00
297.667	0.00	0.01	1.935	O				2.00
297.750	0.00	0.01	1.935	O				1.99
297.833	0.00	0.01	1.935	O				1.99
297.917	0.00	0.01	1.935	O				1.99
298.000	0.00	0.01	1.935	O				1.99

298.083	0.00	0.01	1.935	O				1.99
298.167	0.00	0.01	1.935	O				1.99
298.250	0.00	0.01	1.935	O				1.99
298.333	0.00	0.01	1.935	O				1.99
298.417	0.00	0.01	1.935	O				1.99
298.500	0.00	0.01	1.934	O				1.99
298.583	0.00	0.01	1.934	O				1.99
298.667	0.00	0.01	1.934	O				1.99
298.750	0.00	0.01	1.934	O				1.99
298.833	0.00	0.01	1.934	O				1.99
298.917	0.00	0.01	1.934	O				1.99
299.000	0.00	0.01	1.934	O				1.99
299.083	0.00	0.01	1.934	O				1.99
299.167	0.00	0.01	1.934	O				1.99
299.250	0.00	0.01	1.934	O				1.99
299.333	0.00	0.01	1.934	O				1.99
299.417	0.00	0.01	1.934	O				1.99
299.500	0.00	0.01	1.934	O				1.99
299.583	0.00	0.01	1.934	O				1.99
299.667	0.00	0.01	1.934	O				1.99
299.750	0.00	0.01	1.933	O				1.99
299.833	0.00	0.01	1.933	O				1.99
299.917	0.00	0.01	1.933	O				1.99
300.000	0.00	0.01	1.933	O				1.99
300.083	0.00	0.01	1.933	O				1.99
300.167	0.00	0.01	1.933	O				1.99
300.250	0.00	0.01	1.933	O				1.99
300.333	0.00	0.01	1.933	O				1.99
300.417	0.00	0.01	1.933	O				1.99
300.500	0.00	0.01	1.933	O				1.99
300.583	0.00	0.01	1.933	O				1.99
300.667	0.00	0.01	1.933	O				1.99
300.750	0.00	0.01	1.933	O				1.99
300.833	0.00	0.01	1.933	O				1.99
300.917	0.00	0.01	1.932	O				1.99
301.000	0.00	0.01	1.932	O				1.99
301.083	0.00	0.01	1.932	O				1.99
301.167	0.00	0.01	1.932	O				1.99
301.250	0.00	0.01	1.932	O				1.99
301.333	0.00	0.01	1.932	O				1.99
301.417	0.00	0.01	1.932	O				1.99
301.500	0.00	0.01	1.932	O				1.99
301.583	0.00	0.01	1.932	O				1.99
301.667	0.00	0.01	1.932	O				1.99
301.750	0.00	0.01	1.932	O				1.99
301.833	0.00	0.01	1.932	O				1.99
301.917	0.00	0.01	1.932	O				1.99
302.000	0.00	0.01	1.932	O				1.99
302.083	0.00	0.01	1.932	O				1.99
302.167	0.00	0.01	1.931	O				1.99

302.250	0.00	0.01	1.931	O				1.99
302.333	0.00	0.01	1.931	O				1.99
302.417	0.00	0.01	1.931	O				1.99
302.500	0.00	0.01	1.931	O				1.99
302.583	0.00	0.01	1.931	O				1.99
302.667	0.00	0.01	1.931	O				1.99
302.750	0.00	0.01	1.931	O				1.99
302.833	0.00	0.01	1.931	O				1.99
302.917	0.00	0.01	1.931	O				1.99
303.000	0.00	0.01	1.931	O				1.99
303.083	0.00	0.01	1.931	O				1.99
303.167	0.00	0.01	1.931	O				1.99
303.250	0.00	0.01	1.931	O				1.99
303.333	0.00	0.01	1.931	O				1.99
303.417	0.00	0.01	1.930	O				1.99
303.500	0.00	0.01	1.930	O				1.99
303.583	0.00	0.01	1.930	O				1.99
303.667	0.00	0.01	1.930	O				1.99
303.750	0.00	0.01	1.930	O				1.99
303.833	0.00	0.01	1.930	O				1.99
303.917	0.00	0.01	1.930	O				1.99
304.000	0.00	0.01	1.930	O				1.99
304.083	0.00	0.01	1.930	O				1.99
304.167	0.00	0.01	1.930	O				1.99
304.250	0.00	0.01	1.930	O				1.99
304.333	0.00	0.01	1.930	O				1.99
304.417	0.00	0.01	1.930	O				1.99
304.500	0.00	0.01	1.930	O				1.99
304.583	0.00	0.01	1.930	O				1.99
304.667	0.00	0.01	1.929	O				1.99
304.750	0.00	0.01	1.929	O				1.99
304.833	0.00	0.01	1.929	O				1.99
304.917	0.00	0.01	1.929	O				1.99
305.000	0.00	0.01	1.929	O				1.99
305.083	0.00	0.01	1.929	O				1.99
305.167	0.00	0.01	1.929	O				1.99
305.250	0.00	0.01	1.929	O				1.99
305.333	0.00	0.01	1.929	O				1.99
305.417	0.00	0.01	1.929	O				1.99
305.500	0.00	0.01	1.929	O				1.99
305.583	0.00	0.01	1.929	O				1.99
305.667	0.00	0.01	1.929	O				1.99
305.750	0.00	0.01	1.929	O				1.99
305.833	0.00	0.01	1.928	O				1.99
305.917	0.00	0.01	1.928	O				1.99
306.000	0.00	0.01	1.928	O				1.99
306.083	0.00	0.01	1.928	O				1.99
306.167	0.00	0.01	1.928	O				1.99
306.250	0.00	0.01	1.928	O				1.99
306.333	0.00	0.01	1.928	O				1.99

306.417	0.00	0.01	1.928	O				1.99
306.500	0.00	0.01	1.928	O				1.99
306.583	0.00	0.01	1.928	O				1.99
306.667	0.00	0.01	1.928	O				1.99
306.750	0.00	0.01	1.928	O				1.99
306.833	0.00	0.01	1.928	O				1.99
306.917	0.00	0.01	1.928	O				1.99
307.000	0.00	0.01	1.928	O				1.99
307.083	0.00	0.01	1.927	O				1.99
307.167	0.00	0.01	1.927	O				1.99
307.250	0.00	0.01	1.927	O				1.99
307.333	0.00	0.01	1.927	O				1.99
307.417	0.00	0.01	1.927	O				1.99
307.500	0.00	0.01	1.927	O				1.99
307.583	0.00	0.01	1.927	O				1.99
307.667	0.00	0.01	1.927	O				1.99
307.750	0.00	0.01	1.927	O				1.99
307.833	0.00	0.01	1.927	O				1.99
307.917	0.00	0.01	1.927	O				1.99
308.000	0.00	0.01	1.927	O				1.99
308.083	0.00	0.01	1.927	O				1.99
308.167	0.00	0.01	1.927	O				1.99
308.250	0.00	0.01	1.927	O				1.99
308.333	0.00	0.01	1.926	O				1.99
308.417	0.00	0.01	1.926	O				1.99
308.500	0.00	0.01	1.926	O				1.99
308.583	0.00	0.01	1.926	O				1.99
308.667	0.00	0.01	1.926	O				1.99
308.750	0.00	0.01	1.926	O				1.99
308.833	0.00	0.01	1.926	O				1.99
308.917	0.00	0.01	1.926	O				1.99
309.000	0.00	0.01	1.926	O				1.99
309.083	0.00	0.01	1.926	O				1.99
309.167	0.00	0.01	1.926	O				1.99
309.250	0.00	0.01	1.926	O				1.99
309.333	0.00	0.01	1.926	O				1.99
309.417	0.00	0.01	1.926	O				1.99
309.500	0.00	0.01	1.926	O				1.99
309.583	0.00	0.01	1.925	O				1.99
309.667	0.00	0.01	1.925	O				1.99
309.750	0.00	0.01	1.925	O				1.99
309.833	0.00	0.01	1.925	O				1.98
309.917	0.00	0.01	1.925	O				1.98
310.000	0.00	0.01	1.925	O				1.98
310.083	0.00	0.01	1.925	O				1.98
310.167	0.00	0.01	1.925	O				1.98
310.250	0.00	0.01	1.925	O				1.98
310.333	0.00	0.01	1.925	O				1.98
310.417	0.00	0.01	1.925	O				1.98
310.500	0.00	0.01	1.925	O				1.98

310.583	0.00	0.01	1.925	O				1.98
310.667	0.00	0.01	1.925	O				1.98
310.750	0.00	0.01	1.925	O				1.98
310.833	0.00	0.01	1.924	O				1.98
310.917	0.00	0.01	1.924	O				1.98
311.000	0.00	0.01	1.924	O				1.98
311.083	0.00	0.01	1.924	O				1.98
311.167	0.00	0.01	1.924	O				1.98
311.250	0.00	0.01	1.924	O				1.98
311.333	0.00	0.01	1.924	O				1.98
311.417	0.00	0.01	1.924	O				1.98
311.500	0.00	0.01	1.924	O				1.98
311.583	0.00	0.01	1.924	O				1.98
311.667	0.00	0.01	1.924	O				1.98
311.750	0.00	0.01	1.924	O				1.98
311.833	0.00	0.01	1.924	O				1.98
311.917	0.00	0.01	1.924	O				1.98
312.000	0.00	0.01	1.924	O				1.98
312.083	0.00	0.01	1.923	O				1.98
312.167	0.00	0.01	1.923	O				1.98
312.250	0.00	0.01	1.923	O				1.98
312.333	0.00	0.01	1.923	O				1.98
312.417	0.00	0.01	1.923	O				1.98
312.500	0.00	0.01	1.923	O				1.98
312.583	0.00	0.01	1.923	O				1.98
312.667	0.00	0.01	1.923	O				1.98
312.750	0.00	0.01	1.923	O				1.98
312.833	0.00	0.01	1.923	O				1.98
312.917	0.00	0.01	1.923	O				1.98
313.000	0.00	0.01	1.923	O				1.98
313.083	0.00	0.01	1.923	O				1.98
313.167	0.00	0.01	1.923	O				1.98
313.250	0.00	0.01	1.923	O				1.98
313.333	0.00	0.01	1.922	O				1.98
313.417	0.00	0.01	1.922	O				1.98
313.500	0.00	0.01	1.922	O				1.98
313.583	0.00	0.01	1.922	O				1.98
313.667	0.00	0.01	1.922	O				1.98
313.750	0.00	0.01	1.922	O				1.98
313.833	0.00	0.01	1.922	O				1.98
313.917	0.00	0.01	1.922	O				1.98
314.000	0.00	0.01	1.922	O				1.98
314.083	0.00	0.01	1.922	O				1.98
314.167	0.00	0.01	1.922	O				1.98
314.250	0.00	0.01	1.922	O				1.98
314.333	0.00	0.01	1.922	O				1.98
314.417	0.00	0.01	1.922	O				1.98
314.500	0.00	0.01	1.922	O				1.98
314.583	0.00	0.01	1.921	O				1.98
314.667	0.00	0.01	1.921	O				1.98

314.750	0.00	0.01	1.921	O	|	|	|	1.98
314.833	0.00	0.01	1.921	O	|	|	|	1.98
314.917	0.00	0.01	1.921	O	|	|	|	1.98
315.000	0.00	0.01	1.921	O	|	|	|	1.98
315.083	0.00	0.01	1.921	O	|	|	|	1.98
315.167	0.00	0.01	1.921	O	|	|	|	1.98
315.250	0.00	0.01	1.921	O	|	|	|	1.98
315.333	0.00	0.01	1.921	O	|	|	|	1.98
315.417	0.00	0.01	1.921	O	|	|	|	1.98
315.500	0.00	0.01	1.921	O	|	|	|	1.98
315.583	0.00	0.01	1.921	O	|	|	|	1.98
315.667	0.00	0.01	1.921	O	|	|	|	1.98
315.750	0.00	0.01	1.921	O	|	|	|	1.98
315.833	0.00	0.01	1.920	O	|	|	|	1.98
315.917	0.00	0.01	1.920	O	|	|	|	1.98
316.000	0.00	0.01	1.920	O	|	|	|	1.98
316.083	0.00	0.01	1.920	O	|	|	|	1.98
316.167	0.00	0.01	1.920	O	|	|	|	1.98
316.250	0.00	0.01	1.920	O	|	|	|	1.98
316.333	0.00	0.01	1.920	O	|	|	|	1.98
316.417	0.00	0.01	1.920	O	|	|	|	1.98
316.500	0.00	0.01	1.920	O	|	|	|	1.98
316.583	0.00	0.01	1.920	O	|	|	|	1.98
316.667	0.00	0.01	1.920	O	|	|	|	1.98
316.750	0.00	0.01	1.920	O	|	|	|	1.98
316.833	0.00	0.01	1.920	O	|	|	|	1.98
316.917	0.00	0.01	1.920	O	|	|	|	1.98
317.000	0.00	0.01	1.920	O	|	|	|	1.98
317.083	0.00	0.01	1.919	O	|	|	|	1.98
317.167	0.00	0.01	1.919	O	|	|	|	1.98
317.250	0.00	0.01	1.919	O	|	|	|	1.98
317.333	0.00	0.01	1.919	O	|	|	|	1.98
317.417	0.00	0.01	1.919	O	|	|	|	1.98
317.500	0.00	0.01	1.919	O	|	|	|	1.98
317.583	0.00	0.01	1.919	O	|	|	|	1.98
317.667	0.00	0.01	1.919	O	|	|	|	1.98
317.750	0.00	0.01	1.919	O	|	|	|	1.98
317.833	0.00	0.01	1.919	O	|	|	|	1.98
317.917	0.00	0.01	1.919	O	|	|	|	1.98
318.000	0.00	0.01	1.919	O	|	|	|	1.98
318.083	0.00	0.01	1.919	O	|	|	|	1.98
318.167	0.00	0.01	1.919	O	|	|	|	1.98
318.250	0.00	0.01	1.919	O	|	|	|	1.98
318.333	0.00	0.01	1.918	O	|	|	|	1.98
318.417	0.00	0.01	1.918	O	|	|	|	1.98
318.500	0.00	0.01	1.918	O	|	|	|	1.98
318.583	0.00	0.01	1.918	O	|	|	|	1.98
318.667	0.00	0.01	1.918	O	|	|	|	1.98
318.750	0.00	0.01	1.918	O	|	|	|	1.98
318.833	0.00	0.01	1.918	O	|	|	|	1.98

318.917	0.00	0.01	1.918	O				1.98
319.000	0.00	0.01	1.918	O				1.98
319.083	0.00	0.01	1.918	O				1.98
319.167	0.00	0.01	1.918	O				1.98
319.250	0.00	0.01	1.918	O				1.98
319.333	0.00	0.01	1.918	O				1.98
319.417	0.00	0.01	1.918	O				1.98
319.500	0.00	0.01	1.918	O				1.98
319.583	0.00	0.01	1.917	O				1.98
319.667	0.00	0.01	1.917	O				1.98
319.750	0.00	0.01	1.917	O				1.98
319.833	0.00	0.01	1.917	O				1.98
319.917	0.00	0.01	1.917	O				1.98
320.000	0.00	0.01	1.917	O				1.98
320.083	0.00	0.01	1.917	O				1.98
320.167	0.00	0.01	1.917	O				1.98
320.250	0.00	0.01	1.917	O				1.98
320.333	0.00	0.01	1.917	O				1.98
320.417	0.00	0.01	1.917	O				1.98
320.500	0.00	0.01	1.917	O				1.98
320.583	0.00	0.01	1.917	O				1.98
320.667	0.00	0.01	1.917	O				1.98
320.750	0.00	0.01	1.917	O				1.98
320.833	0.00	0.01	1.917	O				1.98
320.917	0.00	0.01	1.916	O				1.98
321.000	0.00	0.01	1.916	O				1.98
321.083	0.00	0.01	1.916	O				1.98
321.167	0.00	0.01	1.916	O				1.98
321.250	0.00	0.01	1.916	O				1.98
321.333	0.00	0.01	1.916	O				1.98
321.417	0.00	0.01	1.916	O				1.98
321.500	0.00	0.01	1.916	O				1.98
321.583	0.00	0.01	1.916	O				1.98
321.667	0.00	0.01	1.916	O				1.98
321.750	0.00	0.01	1.916	O				1.98
321.833	0.00	0.01	1.916	O				1.98
321.917	0.00	0.01	1.916	O				1.98
322.000	0.00	0.01	1.916	O				1.98
322.083	0.00	0.01	1.916	O				1.98
322.167	0.00	0.01	1.915	O				1.97
322.250	0.00	0.01	1.915	O				1.97
322.333	0.00	0.01	1.915	O				1.97
322.417	0.00	0.01	1.915	O				1.97
322.500	0.00	0.01	1.915	O				1.97
322.583	0.00	0.01	1.915	O				1.97
322.667	0.00	0.01	1.915	O				1.97
322.750	0.00	0.01	1.915	O				1.97
322.833	0.00	0.01	1.915	O				1.97
322.917	0.00	0.01	1.915	O				1.97
323.000	0.00	0.01	1.915	O				1.97

323.083	0.00	0.01	1.915	O				1.97
323.167	0.00	0.01	1.915	O				1.97
323.250	0.00	0.01	1.915	O				1.97
323.333	0.00	0.01	1.915	O				1.97
323.417	0.00	0.01	1.914	O				1.97
323.500	0.00	0.01	1.914	O				1.97
323.583	0.00	0.01	1.914	O				1.97
323.667	0.00	0.01	1.914	O				1.97
323.750	0.00	0.01	1.914	O				1.97
323.833	0.00	0.01	1.914	O				1.97
323.917	0.00	0.01	1.914	O				1.97
324.000	0.00	0.01	1.914	O				1.97
324.083	0.00	0.01	1.914	O				1.97
324.167	0.00	0.01	1.914	O				1.97
324.250	0.00	0.01	1.914	O				1.97
324.333	0.00	0.01	1.914	O				1.97
324.417	0.00	0.01	1.914	O				1.97
324.500	0.00	0.01	1.914	O				1.97
324.583	0.00	0.01	1.914	O				1.97
324.667	0.00	0.01	1.913	O				1.97
324.750	0.00	0.01	1.913	O				1.97
324.833	0.00	0.01	1.913	O				1.97
324.917	0.00	0.01	1.913	O				1.97
325.000	0.00	0.01	1.913	O				1.97
325.083	0.00	0.01	1.913	O				1.97
325.167	0.00	0.01	1.913	O				1.97
325.250	0.00	0.01	1.913	O				1.97
325.333	0.00	0.01	1.913	O				1.97
325.417	0.00	0.01	1.913	O				1.97
325.500	0.00	0.01	1.913	O				1.97
325.583	0.00	0.01	1.913	O				1.97
325.667	0.00	0.01	1.913	O				1.97
325.750	0.00	0.01	1.913	O				1.97
325.833	0.00	0.01	1.913	O				1.97
325.917	0.00	0.01	1.912	O				1.97
326.000	0.00	0.01	1.912	O				1.97
326.083	0.00	0.01	1.912	O				1.97
326.167	0.00	0.01	1.912	O				1.97
326.250	0.00	0.01	1.912	O				1.97
326.333	0.00	0.01	1.912	O				1.97
326.417	0.00	0.01	1.912	O				1.97
326.500	0.00	0.01	1.912	O				1.97
326.583	0.00	0.01	1.912	O				1.97
326.667	0.00	0.01	1.912	O				1.97
326.750	0.00	0.01	1.912	O				1.97
326.833	0.00	0.01	1.912	O				1.97
326.917	0.00	0.01	1.912	O				1.97
327.000	0.00	0.01	1.912	O				1.97
327.083	0.00	0.01	1.912	O				1.97
327.167	0.00	0.01	1.912	O				1.97

327.250	0.00	0.01	1.911	O				1.97
327.333	0.00	0.01	1.911	O				1.97
327.417	0.00	0.01	1.911	O				1.97
327.500	0.00	0.01	1.911	O				1.97
327.583	0.00	0.01	1.911	O				1.97
327.667	0.00	0.01	1.911	O				1.97
327.750	0.00	0.01	1.911	O				1.97
327.833	0.00	0.01	1.911	O				1.97
327.917	0.00	0.01	1.911	O				1.97
328.000	0.00	0.01	1.911	O				1.97
328.083	0.00	0.01	1.911	O				1.97
328.167	0.00	0.01	1.911	O				1.97
328.250	0.00	0.01	1.911	O				1.97
328.333	0.00	0.01	1.911	O				1.97
328.417	0.00	0.01	1.911	O				1.97
328.500	0.00	0.01	1.910	O				1.97
328.583	0.00	0.01	1.910	O				1.97
328.667	0.00	0.01	1.910	O				1.97
328.750	0.00	0.01	1.910	O				1.97
328.833	0.00	0.01	1.910	O				1.97
328.917	0.00	0.01	1.910	O				1.97
329.000	0.00	0.01	1.910	O				1.97
329.083	0.00	0.01	1.910	O				1.97
329.167	0.00	0.01	1.910	O				1.97
329.250	0.00	0.01	1.910	O				1.97
329.333	0.00	0.01	1.910	O				1.97
329.417	0.00	0.01	1.910	O				1.97
329.500	0.00	0.01	1.910	O				1.97
329.583	0.00	0.01	1.910	O				1.97
329.667	0.00	0.01	1.910	O				1.97
329.750	0.00	0.01	1.909	O				1.97
329.833	0.00	0.01	1.909	O				1.97
329.917	0.00	0.01	1.909	O				1.97
330.000	0.00	0.01	1.909	O				1.97
330.083	0.00	0.01	1.909	O				1.97
330.167	0.00	0.01	1.909	O				1.97
330.250	0.00	0.01	1.909	O				1.97
330.333	0.00	0.01	1.909	O				1.97
330.417	0.00	0.01	1.909	O				1.97
330.500	0.00	0.01	1.909	O				1.97
330.583	0.00	0.01	1.909	O				1.97
330.667	0.00	0.01	1.909	O				1.97
330.750	0.00	0.01	1.909	O				1.97
330.833	0.00	0.01	1.909	O				1.97
330.917	0.00	0.01	1.909	O				1.97
331.000	0.00	0.01	1.909	O				1.97
331.083	0.00	0.01	1.908	O				1.97
331.167	0.00	0.01	1.908	O				1.97
331.250	0.00	0.01	1.908	O				1.97
331.333	0.00	0.01	1.908	O				1.97

331.417	0.00	0.01	1.908	O				1.97
331.500	0.00	0.01	1.908	O				1.97
331.583	0.00	0.01	1.908	O				1.97
331.667	0.00	0.01	1.908	O				1.97
331.750	0.00	0.01	1.908	O				1.97
331.833	0.00	0.01	1.908	O				1.97
331.917	0.00	0.01	1.908	O				1.97
332.000	0.00	0.01	1.908	O				1.97
332.083	0.00	0.01	1.908	O				1.97
332.167	0.00	0.01	1.908	O				1.97
332.250	0.00	0.01	1.908	O				1.97
332.333	0.00	0.01	1.907	O				1.97
332.417	0.00	0.01	1.907	O				1.97
332.500	0.00	0.01	1.907	O				1.97
332.583	0.00	0.01	1.907	O				1.97
332.667	0.00	0.01	1.907	O				1.97
332.750	0.00	0.01	1.907	O				1.97
332.833	0.00	0.01	1.907	O				1.97
332.917	0.00	0.01	1.907	O				1.97
333.000	0.00	0.01	1.907	O				1.97
333.083	0.00	0.01	1.907	O				1.97
333.167	0.00	0.01	1.907	O				1.97
333.250	0.00	0.01	1.907	O				1.97
333.333	0.00	0.01	1.907	O				1.97
333.417	0.00	0.01	1.907	O				1.97
333.500	0.00	0.01	1.907	O				1.97
333.583	0.00	0.01	1.907	O				1.97
333.667	0.00	0.01	1.906	O				1.97
333.750	0.00	0.01	1.906	O				1.97
333.833	0.00	0.01	1.906	O				1.97
333.917	0.00	0.01	1.906	O				1.97
334.000	0.00	0.01	1.906	O				1.97
334.083	0.00	0.01	1.906	O				1.97
334.167	0.00	0.01	1.906	O				1.97
334.250	0.00	0.01	1.906	O				1.97
334.333	0.00	0.01	1.906	O				1.97
334.417	0.00	0.01	1.906	O				1.97
334.500	0.00	0.01	1.906	O				1.97
334.583	0.00	0.01	1.906	O				1.97
334.667	0.00	0.01	1.906	O				1.96
334.750	0.00	0.01	1.906	O				1.96
334.833	0.00	0.01	1.906	O				1.96
334.917	0.00	0.01	1.905	O				1.96
335.000	0.00	0.01	1.905	O				1.96
335.083	0.00	0.01	1.905	O				1.96
335.167	0.00	0.01	1.905	O				1.96
335.250	0.00	0.01	1.905	O				1.96
335.333	0.00	0.01	1.905	O				1.96
335.417	0.00	0.01	1.905	O				1.96
335.500	0.00	0.01	1.905	O				1.96

335.583	0.00	0.01	1.905	O				1.96
335.667	0.00	0.01	1.905	O				1.96
335.750	0.00	0.01	1.905	O				1.96
335.833	0.00	0.01	1.905	O				1.96
335.917	0.00	0.01	1.905	O				1.96
336.000	0.00	0.01	1.905	O				1.96
336.083	0.00	0.01	1.905	O				1.96
336.167	0.00	0.01	1.905	O				1.96
336.250	0.00	0.01	1.904	O				1.96
336.333	0.00	0.01	1.904	O				1.96
336.417	0.00	0.01	1.904	O				1.96
336.500	0.00	0.01	1.904	O				1.96
336.583	0.00	0.01	1.904	O				1.96
336.667	0.00	0.01	1.904	O				1.96
336.750	0.00	0.01	1.904	O				1.96
336.833	0.00	0.01	1.904	O				1.96
336.917	0.00	0.01	1.904	O				1.96
337.000	0.00	0.01	1.904	O				1.96
337.083	0.00	0.01	1.904	O				1.96
337.167	0.00	0.01	1.904	O				1.96
337.250	0.00	0.01	1.904	O				1.96
337.333	0.00	0.01	1.904	O				1.96
337.417	0.00	0.01	1.904	O				1.96
337.500	0.00	0.01	1.903	O				1.96
337.583	0.00	0.01	1.903	O				1.96
337.667	0.00	0.01	1.903	O				1.96
337.750	0.00	0.01	1.903	O				1.96
337.833	0.00	0.01	1.903	O				1.96
337.917	0.00	0.01	1.903	O				1.96
338.000	0.00	0.01	1.903	O				1.96
338.083	0.00	0.01	1.903	O				1.96
338.167	0.00	0.01	1.903	O				1.96
338.250	0.00	0.01	1.903	O				1.96
338.333	0.00	0.01	1.903	O				1.96
338.417	0.00	0.01	1.903	O				1.96
338.500	0.00	0.01	1.903	O				1.96
338.583	0.00	0.01	1.903	O				1.96
338.667	0.00	0.01	1.903	O				1.96
338.750	0.00	0.01	1.903	O				1.96
338.833	0.00	0.01	1.902	O				1.96
338.917	0.00	0.01	1.902	O				1.96
339.000	0.00	0.01	1.902	O				1.96
339.083	0.00	0.01	1.902	O				1.96
339.167	0.00	0.01	1.902	O				1.96
339.250	0.00	0.01	1.902	O				1.96
339.333	0.00	0.01	1.902	O				1.96
339.417	0.00	0.01	1.902	O				1.96
339.500	0.00	0.01	1.902	O				1.96
339.583	0.00	0.01	1.902	O				1.96
339.667	0.00	0.01	1.902	O				1.96

339.750	0.00	0.01	1.902	O				1.96
339.833	0.00	0.01	1.902	O				1.96
339.917	0.00	0.01	1.902	O				1.96
340.000	0.00	0.01	1.902	O				1.96
340.083	0.00	0.01	1.901	O				1.96
340.167	0.00	0.01	1.901	O				1.96
340.250	0.00	0.01	1.901	O				1.96
340.333	0.00	0.01	1.901	O				1.96
340.417	0.00	0.01	1.901	O				1.96
340.500	0.00	0.01	1.901	O				1.96
340.583	0.00	0.01	1.901	O				1.96
340.667	0.00	0.01	1.901	O				1.96
340.750	0.00	0.01	1.901	O				1.96
340.833	0.00	0.01	1.901	O				1.96
340.917	0.00	0.01	1.901	O				1.96
341.000	0.00	0.01	1.901	O				1.96
341.083	0.00	0.01	1.901	O				1.96
341.167	0.00	0.01	1.901	O				1.96
341.250	0.00	0.01	1.901	O				1.96
341.333	0.00	0.01	1.901	O				1.96
341.417	0.00	0.01	1.900	O				1.96
341.500	0.00	0.01	1.900	O				1.96
341.583	0.00	0.01	1.900	O				1.96
341.667	0.00	0.01	1.900	O				1.96
341.750	0.00	0.01	1.900	O				1.96
341.833	0.00	0.01	1.900	O				1.96
341.917	0.00	0.01	1.900	O				1.96
342.000	0.00	0.01	1.900	O				1.96
342.083	0.00	0.01	1.900	O				1.96
342.167	0.00	0.01	1.900	O				1.96
342.250	0.00	0.01	1.900	O				1.96
342.333	0.00	0.01	1.900	O				1.96
342.417	0.00	0.01	1.900	O				1.96
342.500	0.00	0.01	1.900	O				1.96
342.583	0.00	0.01	1.900	O				1.96
342.667	0.00	0.01	1.900	O				1.96
342.750	0.00	0.01	1.899	O				1.96
342.833	0.00	0.01	1.899	O				1.96
342.917	0.00	0.01	1.899	O				1.96
343.000	0.00	0.01	1.899	O				1.96
343.083	0.00	0.01	1.899	O				1.96
343.167	0.00	0.01	1.899	O				1.96
343.250	0.00	0.01	1.899	O				1.96
343.333	0.00	0.01	1.899	O				1.96
343.417	0.00	0.01	1.899	O				1.96
343.500	0.00	0.01	1.899	O				1.96
343.583	0.00	0.01	1.899	O				1.96
343.667	0.00	0.01	1.899	O				1.96
343.750	0.00	0.01	1.899	O				1.96
343.833	0.00	0.01	1.899	O				1.96

343.917	0.00	0.01	1.899	O				1.96
344.000	0.00	0.01	1.899	O				1.96
344.083	0.00	0.01	1.898	O				1.96
344.167	0.00	0.01	1.898	O				1.96
344.250	0.00	0.01	1.898	O				1.96
344.333	0.00	0.01	1.898	O				1.96
344.417	0.00	0.01	1.898	O				1.96
344.500	0.00	0.01	1.898	O				1.96
344.583	0.00	0.01	1.898	O				1.96
344.667	0.00	0.01	1.898	O				1.96
344.750	0.00	0.01	1.898	O				1.96
344.833	0.00	0.01	1.898	O				1.96
344.917	0.00	0.01	1.898	O				1.96
345.000	0.00	0.01	1.898	O				1.96
345.083	0.00	0.01	1.898	O				1.96
345.167	0.00	0.01	1.898	O				1.96
345.250	0.00	0.01	1.898	O				1.96
345.333	0.00	0.01	1.897	O				1.96
345.417	0.00	0.01	1.897	O				1.96
345.500	0.00	0.01	1.897	O				1.96
345.583	0.00	0.01	1.897	O				1.96
345.667	0.00	0.01	1.897	O				1.96
345.750	0.00	0.01	1.897	O				1.96
345.833	0.00	0.01	1.897	O				1.96
345.917	0.00	0.01	1.897	O				1.96
346.000	0.00	0.01	1.897	O				1.96
346.083	0.00	0.01	1.897	O				1.96
346.167	0.00	0.01	1.897	O				1.96
346.250	0.00	0.01	1.897	O				1.96
346.333	0.00	0.01	1.897	O				1.96
346.417	0.00	0.01	1.897	O				1.96
346.500	0.00	0.01	1.897	O				1.96
346.583	0.00	0.01	1.897	O				1.96
346.667	0.00	0.01	1.896	O				1.96
346.750	0.00	0.01	1.896	O				1.96
346.833	0.00	0.01	1.896	O				1.96
346.917	0.00	0.01	1.896	O				1.96
347.000	0.00	0.01	1.896	O				1.96
347.083	0.00	0.01	1.896	O				1.96
347.167	0.00	0.01	1.896	O				1.96
347.250	0.00	0.01	1.896	O				1.96
347.333	0.00	0.01	1.896	O				1.96
347.417	0.00	0.01	1.896	O				1.95
347.500	0.00	0.01	1.896	O				1.95
347.583	0.00	0.01	1.896	O				1.95
347.667	0.00	0.01	1.896	O				1.95
347.750	0.00	0.01	1.896	O				1.95
347.833	0.00	0.01	1.896	O				1.95
347.917	0.00	0.01	1.896	O				1.95
348.000	0.00	0.01	1.895	O				1.95

348.083	0.00	0.01	1.895	O				1.95
348.167	0.00	0.01	1.895	O				1.95
348.250	0.00	0.01	1.895	O				1.95
348.333	0.00	0.01	1.895	O				1.95
348.417	0.00	0.01	1.895	O				1.95
348.500	0.00	0.01	1.895	O				1.95
348.583	0.00	0.01	1.895	O				1.95
348.667	0.00	0.01	1.895	O				1.95
348.750	0.00	0.01	1.895	O				1.95
348.833	0.00	0.01	1.895	O				1.95
348.917	0.00	0.01	1.895	O				1.95
349.000	0.00	0.01	1.895	O				1.95
349.083	0.00	0.01	1.895	O				1.95
349.167	0.00	0.01	1.895	O				1.95
349.250	0.00	0.01	1.895	O				1.95
349.333	0.00	0.01	1.894	O				1.95
349.417	0.00	0.01	1.894	O				1.95
349.500	0.00	0.01	1.894	O				1.95
349.583	0.00	0.01	1.894	O				1.95
349.667	0.00	0.01	1.894	O				1.95
349.750	0.00	0.01	1.894	O				1.95
349.833	0.00	0.01	1.894	O				1.95
349.917	0.00	0.01	1.894	O				1.95
350.000	0.00	0.01	1.894	O				1.95
350.083	0.00	0.01	1.894	O				1.95
350.167	0.00	0.01	1.894	O				1.95
350.250	0.00	0.01	1.894	O				1.95
350.333	0.00	0.01	1.894	O				1.95
350.417	0.00	0.01	1.894	O				1.95
350.500	0.00	0.01	1.894	O				1.95
350.583	0.00	0.01	1.893	O				1.95
350.667	0.00	0.01	1.893	O				1.95
350.750	0.00	0.01	1.893	O				1.95
350.833	0.00	0.01	1.893	O				1.95
350.917	0.00	0.01	1.893	O				1.95
351.000	0.00	0.01	1.893	O				1.95
351.083	0.00	0.01	1.893	O				1.95
351.167	0.00	0.01	1.893	O				1.95
351.250	0.00	0.01	1.893	O				1.95
351.333	0.00	0.01	1.893	O				1.95
351.417	0.00	0.01	1.893	O				1.95
351.500	0.00	0.01	1.893	O				1.95
351.583	0.00	0.01	1.893	O				1.95
351.667	0.00	0.01	1.893	O				1.95
351.750	0.00	0.01	1.893	O				1.95
351.833	0.00	0.01	1.893	O				1.95
351.917	0.00	0.01	1.892	O				1.95
352.000	0.00	0.01	1.892	O				1.95
352.083	0.00	0.01	1.892	O				1.95
352.167	0.00	0.01	1.892	O				1.95

352.250	0.00	0.01	1.892	O				1.95
352.333	0.00	0.01	1.892	O				1.95
352.417	0.00	0.01	1.892	O				1.95
352.500	0.00	0.01	1.892	O				1.95
352.583	0.00	0.01	1.892	O				1.95
352.667	0.00	0.01	1.892	O				1.95
352.750	0.00	0.01	1.892	O				1.95
352.833	0.00	0.01	1.892	O				1.95
352.917	0.00	0.01	1.892	O				1.95
353.000	0.00	0.01	1.892	O				1.95
353.083	0.00	0.01	1.892	O				1.95
353.167	0.00	0.01	1.892	O				1.95
353.250	0.00	0.01	1.891	O				1.95
353.333	0.00	0.01	1.891	O				1.95
353.417	0.00	0.01	1.891	O				1.95
353.500	0.00	0.01	1.891	O				1.95
353.583	0.00	0.01	1.891	O				1.95
353.667	0.00	0.01	1.891	O				1.95
353.750	0.00	0.01	1.891	O				1.95
353.833	0.00	0.01	1.891	O				1.95
353.917	0.00	0.01	1.891	O				1.95
354.000	0.00	0.01	1.891	O				1.95
354.083	0.00	0.01	1.891	O				1.95
354.167	0.00	0.01	1.891	O				1.95
354.250	0.00	0.01	1.891	O				1.95
354.333	0.00	0.01	1.891	O				1.95
354.417	0.00	0.01	1.891	O				1.95
354.500	0.00	0.01	1.891	O				1.95
354.583	0.00	0.01	1.890	O				1.95
354.667	0.00	0.01	1.890	O				1.95
354.750	0.00	0.01	1.890	O				1.95
354.833	0.00	0.01	1.890	O				1.95
354.917	0.00	0.01	1.890	O				1.95
355.000	0.00	0.01	1.890	O				1.95
355.083	0.00	0.01	1.890	O				1.95
355.167	0.00	0.01	1.890	O				1.95
355.250	0.00	0.01	1.890	O				1.95
355.333	0.00	0.01	1.890	O				1.95
355.417	0.00	0.01	1.890	O				1.95
355.500	0.00	0.01	1.890	O				1.95
355.583	0.00	0.01	1.890	O				1.95
355.667	0.00	0.01	1.890	O				1.95
355.750	0.00	0.01	1.890	O				1.95
355.833	0.00	0.01	1.890	O				1.95
355.917	0.00	0.01	1.889	O				1.95
356.000	0.00	0.01	1.889	O				1.95
356.083	0.00	0.01	1.889	O				1.95
356.167	0.00	0.01	1.889	O				1.95
356.250	0.00	0.01	1.889	O				1.95
356.333	0.00	0.01	1.889	O				1.95

356.417	0.00	0.01	1.889	O				1.95
356.500	0.00	0.01	1.889	O				1.95
356.583	0.00	0.01	1.889	O				1.95
356.667	0.00	0.01	1.889	O				1.95
356.750	0.00	0.01	1.889	O				1.95
356.833	0.00	0.01	1.889	O				1.95
356.917	0.00	0.01	1.889	O				1.95
357.000	0.00	0.01	1.889	O				1.95
357.083	0.00	0.01	1.889	O				1.95
357.167	0.00	0.01	1.889	O				1.95
357.250	0.00	0.01	1.888	O				1.95
357.333	0.00	0.01	1.888	O				1.95
357.417	0.00	0.01	1.888	O				1.95
357.500	0.00	0.01	1.888	O				1.95
357.583	0.00	0.01	1.888	O				1.95
357.667	0.00	0.01	1.888	O				1.95
357.750	0.00	0.01	1.888	O				1.95
357.833	0.00	0.01	1.888	O				1.95
357.917	0.00	0.01	1.888	O				1.95
358.000	0.00	0.01	1.888	O				1.95
358.083	0.00	0.01	1.888	O				1.95
358.167	0.00	0.01	1.888	O				1.95
358.250	0.00	0.01	1.888	O				1.95
358.333	0.00	0.01	1.888	O				1.95
358.417	0.00	0.01	1.888	O				1.95
358.500	0.00	0.01	1.888	O				1.95
358.583	0.00	0.01	1.887	O				1.95
358.667	0.00	0.01	1.887	O				1.95
358.750	0.00	0.01	1.887	O				1.95
358.833	0.00	0.01	1.887	O				1.95
358.917	0.00	0.01	1.887	O				1.95
359.000	0.00	0.01	1.887	O				1.95
359.083	0.00	0.01	1.887	O				1.95
359.167	0.00	0.01	1.887	O				1.95
359.250	0.00	0.01	1.887	O				1.95
359.333	0.00	0.01	1.887	O				1.95
359.417	0.00	0.01	1.887	O				1.95
359.500	0.00	0.01	1.887	O				1.95
359.583	0.00	0.01	1.887	O				1.95
359.667	0.00	0.01	1.887	O				1.95
359.750	0.00	0.01	1.887	O				1.95
359.833	0.00	0.01	1.887	O				1.95
359.917	0.00	0.01	1.886	O				1.95
360.000	0.00	0.01	1.886	O				1.95
360.083	0.00	0.01	1.886	O				1.95
360.167	0.00	0.01	1.886	O				1.95
360.250	0.00	0.01	1.886	O				1.95
360.333	0.00	0.01	1.886	O				1.95
360.417	0.00	0.01	1.886	O				1.95
360.500	0.00	0.01	1.886	O				1.94

360.583	0.00	0.01	1.886	O				1.94
360.667	0.00	0.01	1.886	O				1.94
360.750	0.00	0.01	1.886	O				1.94
360.833	0.00	0.01	1.886	O				1.94
360.917	0.00	0.01	1.886	O				1.94
361.000	0.00	0.01	1.886	O				1.94
361.083	0.00	0.01	1.886	O				1.94
361.167	0.00	0.01	1.886	O				1.94
361.250	0.00	0.01	1.886	O				1.94
361.333	0.00	0.01	1.885	O				1.94
361.417	0.00	0.01	1.885	O				1.94
361.500	0.00	0.01	1.885	O				1.94
361.583	0.00	0.01	1.885	O				1.94
361.667	0.00	0.01	1.885	O				1.94
361.750	0.00	0.01	1.885	O				1.94
361.833	0.00	0.01	1.885	O				1.94
361.917	0.00	0.01	1.885	O				1.94
362.000	0.00	0.01	1.885	O				1.94
362.083	0.00	0.01	1.885	O				1.94
362.167	0.00	0.01	1.885	O				1.94
362.250	0.00	0.01	1.885	O				1.94
362.333	0.00	0.01	1.885	O				1.94
362.417	0.00	0.01	1.885	O				1.94
362.500	0.00	0.01	1.885	O				1.94
362.583	0.00	0.01	1.885	O				1.94
362.667	0.00	0.01	1.884	O				1.94
362.750	0.00	0.01	1.884	O				1.94
362.833	0.00	0.01	1.884	O				1.94
362.917	0.00	0.01	1.884	O				1.94
363.000	0.00	0.01	1.884	O				1.94
363.083	0.00	0.01	1.884	O				1.94
363.167	0.00	0.01	1.884	O				1.94
363.250	0.00	0.01	1.884	O				1.94
363.333	0.00	0.01	1.884	O				1.94
363.417	0.00	0.01	1.884	O				1.94
363.500	0.00	0.01	1.884	O				1.94
363.583	0.00	0.01	1.884	O				1.94
363.667	0.00	0.01	1.884	O				1.94
363.750	0.00	0.01	1.884	O				1.94
363.833	0.00	0.01	1.884	O				1.94
363.917	0.00	0.01	1.884	O				1.94
364.000	0.00	0.01	1.883	O				1.94
364.083	0.00	0.01	1.883	O				1.94
364.167	0.00	0.01	1.883	O				1.94
364.250	0.00	0.01	1.883	O				1.94
364.333	0.00	0.01	1.883	O				1.94
364.417	0.00	0.01	1.883	O				1.94
364.500	0.00	0.01	1.883	O				1.94
364.583	0.00	0.01	1.883	O				1.94
364.667	0.00	0.01	1.883	O				1.94

364.750	0.00	0.01	1.883	O				1.94
364.833	0.00	0.01	1.883	O				1.94
364.917	0.00	0.01	1.883	O				1.94
365.000	0.00	0.01	1.883	O				1.94
365.083	0.00	0.01	1.883	O				1.94
365.167	0.00	0.01	1.883	O				1.94
365.250	0.00	0.01	1.883	O				1.94
365.333	0.00	0.01	1.882	O				1.94
365.417	0.00	0.01	1.882	O				1.94
365.500	0.00	0.01	1.882	O				1.94
365.583	0.00	0.01	1.882	O				1.94
365.667	0.00	0.01	1.882	O				1.94
365.750	0.00	0.01	1.882	O				1.94
365.833	0.00	0.01	1.882	O				1.94
365.917	0.00	0.01	1.882	O				1.94
366.000	0.00	0.01	1.882	O				1.94
366.083	0.00	0.01	1.882	O				1.94
366.167	0.00	0.01	1.882	O				1.94
366.250	0.00	0.01	1.882	O				1.94
366.333	0.00	0.01	1.882	O				1.94
366.417	0.00	0.01	1.882	O				1.94
366.500	0.00	0.01	1.882	O				1.94
366.583	0.00	0.01	1.882	O				1.94
366.667	0.00	0.01	1.881	O				1.94
366.750	0.00	0.01	1.881	O				1.94
366.833	0.00	0.01	1.881	O				1.94
366.917	0.00	0.01	1.881	O				1.94
367.000	0.00	0.01	1.881	O				1.94
367.083	0.00	0.01	1.881	O				1.94
367.167	0.00	0.01	1.881	O				1.94
367.250	0.00	0.01	1.881	O				1.94
367.333	0.00	0.01	1.881	O				1.94
367.417	0.00	0.01	1.881	O				1.94
367.500	0.00	0.01	1.881	O				1.94
367.583	0.00	0.01	1.881	O				1.94
367.667	0.00	0.01	1.881	O				1.94
367.750	0.00	0.01	1.881	O				1.94
367.833	0.00	0.01	1.881	O				1.94
367.917	0.00	0.01	1.881	O				1.94
368.000	0.00	0.01	1.881	O				1.94
368.083	0.00	0.01	1.880	O				1.94
368.167	0.00	0.01	1.880	O				1.94
368.250	0.00	0.01	1.880	O				1.94
368.333	0.00	0.01	1.880	O				1.94
368.417	0.00	0.01	1.880	O				1.94
368.500	0.00	0.01	1.880	O				1.94
368.583	0.00	0.01	1.880	O				1.94
368.667	0.00	0.01	1.880	O				1.94
368.750	0.00	0.01	1.880	O				1.94
368.833	0.00	0.01	1.880	O				1.94

368.917	0.00	0.01	1.880	O				1.94
369.000	0.00	0.01	1.880	O				1.94
369.083	0.00	0.01	1.880	O				1.94
369.167	0.00	0.01	1.880	O				1.94
369.250	0.00	0.01	1.880	O				1.94
369.333	0.00	0.01	1.880	O				1.94
369.417	0.00	0.01	1.879	O				1.94
369.500	0.00	0.01	1.879	O				1.94
369.583	0.00	0.01	1.879	O				1.94
369.667	0.00	0.01	1.879	O				1.94
369.750	0.00	0.01	1.879	O				1.94
369.833	0.00	0.01	1.879	O				1.94
369.917	0.00	0.01	1.879	O				1.94
370.000	0.00	0.01	1.879	O				1.94
370.083	0.00	0.01	1.879	O				1.94
370.167	0.00	0.01	1.879	O				1.94
370.250	0.00	0.01	1.879	O				1.94
370.333	0.00	0.01	1.879	O				1.94
370.417	0.00	0.01	1.879	O				1.94
370.500	0.00	0.01	1.879	O				1.94
370.583	0.00	0.01	1.879	O				1.94
370.667	0.00	0.01	1.879	O				1.94
370.750	0.00	0.01	1.878	O				1.94
370.833	0.00	0.01	1.878	O				1.94
370.917	0.00	0.01	1.878	O				1.94
371.000	0.00	0.01	1.878	O				1.94
371.083	0.00	0.01	1.878	O				1.94
371.167	0.00	0.01	1.878	O				1.94
371.250	0.00	0.01	1.878	O				1.94
371.333	0.00	0.01	1.878	O				1.94
371.417	0.00	0.01	1.878	O				1.94
371.500	0.00	0.01	1.878	O				1.94
371.583	0.00	0.01	1.878	O				1.94
371.667	0.00	0.01	1.878	O				1.94
371.750	0.00	0.01	1.878	O				1.94
371.833	0.00	0.01	1.878	O				1.94
371.917	0.00	0.01	1.878	O				1.94
372.000	0.00	0.01	1.878	O				1.94
372.083	0.00	0.01	1.878	O				1.94
372.167	0.00	0.01	1.877	O				1.94
372.250	0.00	0.01	1.877	O				1.94
372.333	0.00	0.01	1.877	O				1.94
372.417	0.00	0.01	1.877	O				1.94
372.500	0.00	0.01	1.877	O				1.94
372.583	0.00	0.01	1.877	O				1.94
372.667	0.00	0.01	1.877	O				1.94
372.750	0.00	0.01	1.877	O				1.94
372.833	0.00	0.01	1.877	O				1.94
372.917	0.00	0.01	1.877	O				1.94
373.000	0.00	0.01	1.877	O				1.94

373.083	0.00	0.01	1.877	O				1.94
373.167	0.00	0.01	1.877	O				1.94
373.250	0.00	0.01	1.877	O				1.94
373.333	0.00	0.01	1.877	O				1.94
373.417	0.00	0.01	1.877	O				1.94
373.500	0.00	0.01	1.876	O				1.94
373.583	0.00	0.01	1.876	O				1.94
373.667	0.00	0.01	1.876	O				1.94
373.750	0.00	0.01	1.876	O				1.93
373.833	0.00	0.01	1.876	O				1.93
373.917	0.00	0.01	1.876	O				1.93
374.000	0.00	0.01	1.876	O				1.93
374.083	0.00	0.01	1.876	O				1.93
374.167	0.00	0.01	1.876	O				1.93
374.250	0.00	0.01	1.876	O				1.93
374.333	0.00	0.01	1.876	O				1.93
374.417	0.00	0.01	1.876	O				1.93
374.500	0.00	0.01	1.876	O				1.93
374.583	0.00	0.01	1.876	O				1.93
374.667	0.00	0.01	1.876	O				1.93
374.750	0.00	0.01	1.876	O				1.93
374.833	0.00	0.01	1.876	O				1.93
374.917	0.00	0.01	1.875	O				1.93
375.000	0.00	0.01	1.875	O				1.93
375.083	0.00	0.01	1.875	O				1.93
375.167	0.00	0.01	1.875	O				1.93
375.250	0.00	0.01	1.875	O				1.93
375.333	0.00	0.01	1.875	O				1.93
375.417	0.00	0.01	1.875	O				1.93
375.500	0.00	0.01	1.875	O				1.93
375.583	0.00	0.01	1.875	O				1.93
375.667	0.00	0.01	1.875	O				1.93
375.750	0.00	0.01	1.875	O				1.93
375.833	0.00	0.01	1.875	O				1.93
375.917	0.00	0.01	1.875	O				1.93
376.000	0.00	0.01	1.875	O				1.93
376.083	0.00	0.01	1.875	O				1.93
376.167	0.00	0.01	1.875	O				1.93
376.250	0.00	0.01	1.874	O				1.93
376.333	0.00	0.01	1.874	O				1.93
376.417	0.00	0.01	1.874	O				1.93
376.500	0.00	0.01	1.874	O				1.93
376.583	0.00	0.01	1.874	O				1.93
376.667	0.00	0.01	1.874	O				1.93
376.750	0.00	0.01	1.874	O				1.93
376.833	0.00	0.01	1.874	O				1.93
376.917	0.00	0.01	1.874	O				1.93
377.000	0.00	0.01	1.874	O				1.93
377.083	0.00	0.01	1.874	O				1.93
377.167	0.00	0.01	1.874	O				1.93

377.250	0.00	0.01	1.874	O				1.93
377.333	0.00	0.01	1.874	O				1.93
377.417	0.00	0.01	1.874	O				1.93
377.500	0.00	0.01	1.874	O				1.93
377.583	0.00	0.01	1.874	O				1.93
377.667	0.00	0.01	1.873	O				1.93
377.750	0.00	0.01	1.873	O				1.93
377.833	0.00	0.01	1.873	O				1.93
377.917	0.00	0.01	1.873	O				1.93
378.000	0.00	0.01	1.873	O				1.93
378.083	0.00	0.01	1.873	O				1.93
378.167	0.00	0.01	1.873	O				1.93
378.250	0.00	0.01	1.873	O				1.93
378.333	0.00	0.01	1.873	O				1.93
378.417	0.00	0.01	1.873	O				1.93
378.500	0.00	0.01	1.873	O				1.93
378.583	0.00	0.01	1.873	O				1.93
378.667	0.00	0.01	1.873	O				1.93
378.750	0.00	0.01	1.873	O				1.93
378.833	0.00	0.01	1.873	O				1.93
378.917	0.00	0.01	1.873	O				1.93
379.000	0.00	0.01	1.872	O				1.93
379.083	0.00	0.01	1.872	O				1.93
379.167	0.00	0.01	1.872	O				1.93
379.250	0.00	0.01	1.872	O				1.93
379.333	0.00	0.01	1.872	O				1.93
379.417	0.00	0.01	1.872	O				1.93
379.500	0.00	0.01	1.872	O				1.93
379.583	0.00	0.01	1.872	O				1.93
379.667	0.00	0.01	1.872	O				1.93
379.750	0.00	0.01	1.872	O				1.93
379.833	0.00	0.01	1.872	O				1.93
379.917	0.00	0.01	1.872	O				1.93
380.000	0.00	0.01	1.872	O				1.93
380.083	0.00	0.01	1.872	O				1.93
380.167	0.00	0.01	1.872	O				1.93
380.250	0.00	0.01	1.872	O				1.93
380.333	0.00	0.01	1.872	O				1.93
380.417	0.00	0.01	1.871	O				1.93
380.500	0.00	0.01	1.871	O				1.93
380.583	0.00	0.01	1.871	O				1.93
380.667	0.00	0.01	1.871	O				1.93
380.750	0.00	0.01	1.871	O				1.93
380.833	0.00	0.01	1.871	O				1.93
380.917	0.00	0.01	1.871	O				1.93
381.000	0.00	0.01	1.871	O				1.93
381.083	0.00	0.01	1.871	O				1.93
381.167	0.00	0.01	1.871	O				1.93
381.250	0.00	0.01	1.871	O				1.93
381.333	0.00	0.01	1.871	O				1.93

381.417	0.00	0.01	1.871	O	|	|	|	1.93
381.500	0.00	0.01	1.871	O	|	|	|	1.93
381.583	0.00	0.01	1.871	O	|	|	|	1.93
381.667	0.00	0.01	1.871	O	|	|	|	1.93
381.750	0.00	0.01	1.870	O	|	|	|	1.93
381.833	0.00	0.01	1.870	O	|	|	|	1.93
381.917	0.00	0.01	1.870	O	|	|	|	1.93
382.000	0.00	0.01	1.870	O	|	|	|	1.93
382.083	0.00	0.01	1.870	O	|	|	|	1.93
382.167	0.00	0.01	1.870	O	|	|	|	1.93
382.250	0.00	0.01	1.870	O	|	|	|	1.93
382.333	0.00	0.01	1.870	O	|	|	|	1.93
382.417	0.00	0.01	1.870	O	|	|	|	1.93
382.500	0.00	0.01	1.870	O	|	|	|	1.93
382.583	0.00	0.01	1.870	O	|	|	|	1.93
382.667	0.00	0.01	1.870	O	|	|	|	1.93
382.750	0.00	0.01	1.870	O	|	|	|	1.93
382.833	0.00	0.01	1.870	O	|	|	|	1.93
382.917	0.00	0.01	1.870	O	|	|	|	1.93
383.000	0.00	0.01	1.870	O	|	|	|	1.93
383.083	0.00	0.01	1.870	O	|	|	|	1.93
383.167	0.00	0.01	1.869	O	|	|	|	1.93
383.250	0.00	0.01	1.869	O	|	|	|	1.93
383.333	0.00	0.01	1.869	O	|	|	|	1.93
383.417	0.00	0.01	1.869	O	|	|	|	1.93
383.500	0.00	0.01	1.869	O	|	|	|	1.93
383.583	0.00	0.01	1.869	O	|	|	|	1.93
383.667	0.00	0.01	1.869	O	|	|	|	1.93
383.750	0.00	0.01	1.869	O	|	|	|	1.93
383.833	0.00	0.01	1.869	O	|	|	|	1.93
383.917	0.00	0.01	1.869	O	|	|	|	1.93
384.000	0.00	0.01	1.869	O	|	|	|	1.93
384.083	0.00	0.01	1.869	O	|	|	|	1.93
384.167	0.00	0.01	1.869	O	|	|	|	1.93
384.250	0.00	0.01	1.869	O	|	|	|	1.93
384.333	0.00	0.01	1.869	O	|	|	|	1.93
384.417	0.00	0.01	1.869	O	|	|	|	1.93
384.500	0.00	0.01	1.869	O	|	|	|	1.93
384.583	0.00	0.01	1.868	O	|	|	|	1.93
384.667	0.00	0.01	1.868	O	|	|	|	1.93
384.750	0.00	0.01	1.868	O	|	|	|	1.93
384.833	0.00	0.01	1.868	O	|	|	|	1.93
384.917	0.00	0.01	1.868	O	|	|	|	1.93
385.000	0.00	0.01	1.868	O	|	|	|	1.93
385.083	0.00	0.01	1.868	O	|	|	|	1.93
385.167	0.00	0.01	1.868	O	|	|	|	1.93
385.250	0.00	0.01	1.868	O	|	|	|	1.93
385.333	0.00	0.01	1.868	O	|	|	|	1.93
385.417	0.00	0.01	1.868	O	|	|	|	1.93
385.500	0.00	0.01	1.868	O	|	|	|	1.93

385.583	0.00	0.01	1.868	O				1.93
385.667	0.00	0.01	1.868	O				1.93
385.750	0.00	0.01	1.868	O				1.93
385.833	0.00	0.01	1.868	O				1.93
385.917	0.00	0.01	1.867	O				1.93
386.000	0.00	0.01	1.867	O				1.93
386.083	0.00	0.01	1.867	O				1.93
386.167	0.00	0.01	1.867	O				1.93
386.250	0.00	0.01	1.867	O				1.93
386.333	0.00	0.01	1.867	O				1.93
386.417	0.00	0.01	1.867	O				1.93
386.500	0.00	0.01	1.867	O				1.93
386.583	0.00	0.01	1.867	O				1.93
386.667	0.00	0.01	1.867	O				1.93
386.750	0.00	0.01	1.867	O				1.93
386.833	0.00	0.01	1.867	O				1.93
386.917	0.00	0.01	1.867	O				1.93
387.000	0.00	0.01	1.867	O				1.93
387.083	0.00	0.01	1.867	O				1.93
387.167	0.00	0.01	1.867	O				1.93
387.250	0.00	0.01	1.867	O				1.93
387.333	0.00	0.01	1.866	O				1.92
387.417	0.00	0.01	1.866	O				1.92
387.500	0.00	0.01	1.866	O				1.92
387.583	0.00	0.01	1.866	O				1.92
387.667	0.00	0.01	1.866	O				1.92
387.750	0.00	0.01	1.866	O				1.92
387.833	0.00	0.01	1.866	O				1.92
387.917	0.00	0.01	1.866	O				1.92
388.000	0.00	0.01	1.866	O				1.92
388.083	0.00	0.01	1.866	O				1.92
388.167	0.00	0.01	1.866	O				1.92
388.250	0.00	0.01	1.866	O				1.92
388.333	0.00	0.01	1.866	O				1.92
388.417	0.00	0.01	1.866	O				1.92
388.500	0.00	0.01	1.866	O				1.92
388.583	0.00	0.01	1.866	O				1.92
388.667	0.00	0.01	1.866	O				1.92
388.750	0.00	0.01	1.865	O				1.92
388.833	0.00	0.01	1.865	O				1.92
388.917	0.00	0.01	1.865	O				1.92
389.000	0.00	0.01	1.865	O				1.92
389.083	0.00	0.01	1.865	O				1.92
389.167	0.00	0.01	1.865	O				1.92
389.250	0.00	0.01	1.865	O				1.92
389.333	0.00	0.01	1.865	O				1.92
389.417	0.00	0.01	1.865	O				1.92
389.500	0.00	0.01	1.865	O				1.92
389.583	0.00	0.01	1.865	O				1.92
389.667	0.00	0.01	1.865	O				1.92

389.750	0.00	0.01	1.865	O				1.92
389.833	0.00	0.01	1.865	O				1.92
389.917	0.00	0.01	1.865	O				1.92
390.000	0.00	0.01	1.865	O				1.92
390.083	0.00	0.01	1.865	O				1.92
390.167	0.00	0.01	1.864	O				1.92
390.250	0.00	0.01	1.864	O				1.92
390.333	0.00	0.01	1.864	O				1.92
390.417	0.00	0.01	1.864	O				1.92
390.500	0.00	0.01	1.864	O				1.92
390.583	0.00	0.01	1.864	O				1.92
390.667	0.00	0.01	1.864	O				1.92
390.750	0.00	0.01	1.864	O				1.92
390.833	0.00	0.01	1.864	O				1.92
390.917	0.00	0.01	1.864	O				1.92
391.000	0.00	0.01	1.864	O				1.92
391.083	0.00	0.01	1.864	O				1.92
391.167	0.00	0.01	1.864	O				1.92
391.250	0.00	0.01	1.864	O				1.92
391.333	0.00	0.01	1.864	O				1.92
391.417	0.00	0.01	1.864	O				1.92
391.500	0.00	0.01	1.864	O				1.92
391.583	0.00	0.01	1.863	O				1.92
391.667	0.00	0.01	1.863	O				1.92
391.750	0.00	0.01	1.863	O				1.92
391.833	0.00	0.01	1.863	O				1.92
391.917	0.00	0.01	1.863	O				1.92
392.000	0.00	0.01	1.863	O				1.92
392.083	0.00	0.01	1.863	O				1.92
392.167	0.00	0.01	1.863	O				1.92
392.250	0.00	0.01	1.863	O				1.92
392.333	0.00	0.01	1.863	O				1.92
392.417	0.00	0.01	1.863	O				1.92
392.500	0.00	0.01	1.863	O				1.92
392.583	0.00	0.01	1.863	O				1.92
392.667	0.00	0.01	1.863	O				1.92
392.750	0.00	0.01	1.863	O				1.92
392.833	0.00	0.01	1.863	O				1.92
392.917	0.00	0.01	1.863	O				1.92
393.000	0.00	0.01	1.862	O				1.92
393.083	0.00	0.01	1.862	O				1.92
393.167	0.00	0.01	1.862	O				1.92
393.250	0.00	0.01	1.862	O				1.92
393.333	0.00	0.01	1.862	O				1.92
393.417	0.00	0.01	1.862	O				1.92
393.500	0.00	0.01	1.862	O				1.92
393.583	0.00	0.01	1.862	O				1.92
393.667	0.00	0.01	1.862	O				1.92
393.750	0.00	0.01	1.862	O				1.92
393.833	0.00	0.01	1.862	O				1.92

393.917	0.00	0.01	1.862	O				1.92
394.000	0.00	0.01	1.862	O				1.92
394.083	0.00	0.01	1.862	O				1.92
394.167	0.00	0.01	1.862	O				1.92
394.250	0.00	0.01	1.862	O				1.92
394.333	0.00	0.01	1.862	O				1.92
394.417	0.00	0.01	1.861	O				1.92
394.500	0.00	0.01	1.861	O				1.92
394.583	0.00	0.01	1.861	O				1.92
394.667	0.00	0.01	1.861	O				1.92
394.750	0.00	0.01	1.861	O				1.92
394.833	0.00	0.01	1.861	O				1.92
394.917	0.00	0.01	1.861	O				1.92
395.000	0.00	0.01	1.861	O				1.92
395.083	0.00	0.01	1.861	O				1.92
395.167	0.00	0.01	1.861	O				1.92
395.250	0.00	0.01	1.861	O				1.92
395.333	0.00	0.01	1.861	O				1.92
395.417	0.00	0.01	1.861	O				1.92
395.500	0.00	0.01	1.861	O				1.92
395.583	0.00	0.01	1.861	O				1.92
395.667	0.00	0.01	1.861	O				1.92
395.750	0.00	0.01	1.861	O				1.92
395.833	0.00	0.01	1.860	O				1.92
395.917	0.00	0.01	1.860	O				1.92
396.000	0.00	0.01	1.860	O				1.92
396.083	0.00	0.01	1.860	O				1.92
396.167	0.00	0.01	1.860	O				1.92
396.250	0.00	0.01	1.860	O				1.92
396.333	0.00	0.01	1.860	O				1.92
396.417	0.00	0.01	1.860	O				1.92
396.500	0.00	0.01	1.860	O				1.92
396.583	0.00	0.01	1.860	O				1.92
396.667	0.00	0.01	1.860	O				1.92
396.750	0.00	0.01	1.860	O				1.92
396.833	0.00	0.01	1.860	O				1.92
396.917	0.00	0.01	1.860	O				1.92
397.000	0.00	0.01	1.860	O				1.92
397.083	0.00	0.01	1.860	O				1.92
397.167	0.00	0.01	1.860	O				1.92
397.250	0.00	0.01	1.859	O				1.92
397.333	0.00	0.01	1.859	O				1.92
397.417	0.00	0.01	1.859	O				1.92
397.500	0.00	0.01	1.859	O				1.92
397.583	0.00	0.01	1.859	O				1.92
397.667	0.00	0.01	1.859	O				1.92
397.750	0.00	0.01	1.859	O				1.92
397.833	0.00	0.01	1.859	O				1.92
397.917	0.00	0.01	1.859	O				1.92
398.000	0.00	0.01	1.859	O				1.92

398.083	0.00	0.01	1.859	O				1.92
398.167	0.00	0.01	1.859	O				1.92
398.250	0.00	0.01	1.859	O				1.92
398.333	0.00	0.01	1.859	O				1.92
398.417	0.00	0.01	1.859	O				1.92
398.500	0.00	0.01	1.859	O				1.92
398.583	0.00	0.01	1.859	O				1.92
398.667	0.00	0.01	1.858	O				1.92
398.750	0.00	0.01	1.858	O				1.92
398.833	0.00	0.01	1.858	O				1.92
398.917	0.00	0.01	1.858	O				1.92
399.000	0.00	0.01	1.858	O				1.92
399.083	0.00	0.01	1.858	O				1.92
399.167	0.00	0.01	1.858	O				1.92
399.250	0.00	0.01	1.858	O				1.92
399.333	0.00	0.01	1.858	O				1.92
399.417	0.00	0.01	1.858	O				1.92
399.500	0.00	0.01	1.858	O				1.92
399.583	0.00	0.01	1.858	O				1.92
399.667	0.00	0.01	1.858	O				1.92
399.750	0.00	0.01	1.858	O				1.92
399.833	0.00	0.01	1.858	O				1.92
399.917	0.00	0.01	1.858	O				1.92
400.000	0.00	0.01	1.858	O				1.92
400.083	0.00	0.01	1.857	O				1.92
400.167	0.00	0.01	1.857	O				1.92
400.250	0.00	0.01	1.857	O				1.92
400.333	0.00	0.01	1.857	O				1.92
400.417	0.00	0.01	1.857	O				1.92
400.500	0.00	0.01	1.857	O				1.92
400.583	0.00	0.01	1.857	O				1.92
400.667	0.00	0.01	1.857	O				1.92
400.750	0.00	0.01	1.857	O				1.92
400.833	0.00	0.01	1.857	O				1.92
400.917	0.00	0.01	1.857	O				1.92
401.000	0.00	0.01	1.857	O				1.92
401.083	0.00	0.01	1.857	O				1.92
401.167	0.00	0.01	1.857	O				1.91
401.250	0.00	0.01	1.857	O				1.91
401.333	0.00	0.01	1.857	O				1.91
401.417	0.00	0.01	1.857	O				1.91
401.500	0.00	0.01	1.856	O				1.91
401.583	0.00	0.01	1.856	O				1.91
401.667	0.00	0.01	1.856	O				1.91
401.750	0.00	0.01	1.856	O				1.91
401.833	0.00	0.01	1.856	O				1.91
401.917	0.00	0.01	1.856	O				1.91
402.000	0.00	0.01	1.856	O				1.91
402.083	0.00	0.01	1.856	O				1.91
402.167	0.00	0.01	1.856	O				1.91

402.250	0.00	0.01	1.856	O				1.91
402.333	0.00	0.01	1.856	O				1.91
402.417	0.00	0.01	1.856	O				1.91
402.500	0.00	0.01	1.856	O				1.91
402.583	0.00	0.01	1.856	O				1.91
402.667	0.00	0.01	1.856	O				1.91
402.750	0.00	0.01	1.856	O				1.91
402.833	0.00	0.01	1.856	O				1.91
402.917	0.00	0.01	1.855	O				1.91
403.000	0.00	0.01	1.855	O				1.91
403.083	0.00	0.01	1.855	O				1.91
403.167	0.00	0.01	1.855	O				1.91
403.250	0.00	0.01	1.855	O				1.91
403.333	0.00	0.01	1.855	O				1.91
403.417	0.00	0.01	1.855	O				1.91
403.500	0.00	0.01	1.855	O				1.91
403.583	0.00	0.01	1.855	O				1.91
403.667	0.00	0.01	1.855	O				1.91
403.750	0.00	0.01	1.855	O				1.91
403.833	0.00	0.01	1.855	O				1.91
403.917	0.00	0.01	1.855	O				1.91
404.000	0.00	0.01	1.855	O				1.91
404.083	0.00	0.01	1.855	O				1.91
404.167	0.00	0.01	1.855	O				1.91
404.250	0.00	0.01	1.855	O				1.91
404.333	0.00	0.01	1.854	O				1.91
404.417	0.00	0.01	1.854	O				1.91
404.500	0.00	0.01	1.854	O				1.91
404.583	0.00	0.01	1.854	O				1.91
404.667	0.00	0.01	1.854	O				1.91
404.750	0.00	0.01	1.854	O				1.91
404.833	0.00	0.01	1.854	O				1.91
404.917	0.00	0.01	1.854	O				1.91
405.000	0.00	0.01	1.854	O				1.91
405.083	0.00	0.01	1.854	O				1.91
405.167	0.00	0.01	1.854	O				1.91
405.250	0.00	0.01	1.854	O				1.91
405.333	0.00	0.01	1.854	O				1.91
405.417	0.00	0.01	1.854	O				1.91
405.500	0.00	0.01	1.854	O				1.91
405.583	0.00	0.01	1.854	O				1.91
405.667	0.00	0.01	1.854	O				1.91
405.750	0.00	0.01	1.853	O				1.91
405.833	0.00	0.01	1.853	O				1.91
405.917	0.00	0.01	1.853	O				1.91
406.000	0.00	0.01	1.853	O				1.91
406.083	0.00	0.01	1.853	O				1.91
406.167	0.00	0.01	1.853	O				1.91
406.250	0.00	0.01	1.853	O				1.91
406.333	0.00	0.01	1.853	O				1.91

406.417	0.00	0.01	1.853	O				1.91
406.500	0.00	0.01	1.853	O				1.91
406.583	0.00	0.01	1.853	O				1.91
406.667	0.00	0.01	1.853	O				1.91
406.750	0.00	0.01	1.853	O				1.91
406.833	0.00	0.01	1.853	O				1.91
406.917	0.00	0.01	1.853	O				1.91
407.000	0.00	0.01	1.853	O				1.91
407.083	0.00	0.01	1.853	O				1.91
407.167	0.00	0.01	1.853	O				1.91
407.250	0.00	0.01	1.852	O				1.91
407.333	0.00	0.01	1.852	O				1.91
407.417	0.00	0.01	1.852	O				1.91
407.500	0.00	0.01	1.852	O				1.91
407.583	0.00	0.01	1.852	O				1.91
407.667	0.00	0.01	1.852	O				1.91
407.750	0.00	0.01	1.852	O				1.91
407.833	0.00	0.01	1.852	O				1.91
407.917	0.00	0.01	1.852	O				1.91
408.000	0.00	0.01	1.852	O				1.91
408.083	0.00	0.01	1.852	O				1.91
408.167	0.00	0.01	1.852	O				1.91
408.250	0.00	0.01	1.852	O				1.91
408.333	0.00	0.01	1.852	O				1.91
408.417	0.00	0.01	1.852	O				1.91
408.500	0.00	0.01	1.852	O				1.91
408.583	0.00	0.01	1.852	O				1.91
408.667	0.00	0.01	1.851	O				1.91
408.750	0.00	0.01	1.851	O				1.91
408.833	0.00	0.01	1.851	O				1.91
408.917	0.00	0.01	1.851	O				1.91
409.000	0.00	0.01	1.851	O				1.91
409.083	0.00	0.01	1.851	O				1.91
409.167	0.00	0.01	1.851	O				1.91
409.250	0.00	0.01	1.851	O				1.91
409.333	0.00	0.01	1.851	O				1.91
409.417	0.00	0.01	1.851	O				1.91
409.500	0.00	0.01	1.851	O				1.91
409.583	0.00	0.01	1.851	O				1.91
409.667	0.00	0.01	1.851	O				1.91
409.750	0.00	0.01	1.851	O				1.91
409.833	0.00	0.01	1.851	O				1.91
409.917	0.00	0.01	1.851	O				1.91
410.000	0.00	0.01	1.851	O				1.91
410.083	0.00	0.01	1.850	O				1.91
410.167	0.00	0.01	1.850	O				1.91
410.250	0.00	0.01	1.850	O				1.91
410.333	0.00	0.01	1.850	O				1.91
410.417	0.00	0.01	1.850	O				1.91
410.500	0.00	0.01	1.850	O				1.91

410.583	0.00	0.01	1.850	O	|	|	|	1.91
410.667	0.00	0.01	1.850	O	|	|	|	1.91
410.750	0.00	0.01	1.850	O	|	|	|	1.91
410.833	0.00	0.01	1.850	O	|	|	|	1.91
410.917	0.00	0.01	1.850	O	|	|	|	1.91
411.000	0.00	0.01	1.850	O	|	|	|	1.91
411.083	0.00	0.01	1.850	O	|	|	|	1.91
411.167	0.00	0.01	1.850	O	|	|	|	1.91
411.250	0.00	0.01	1.850	O	|	|	|	1.91
411.333	0.00	0.01	1.850	O	|	|	|	1.91
411.417	0.00	0.01	1.850	O	|	|	|	1.91
411.500	0.00	0.01	1.850	O	|	|	|	1.91
411.583	0.00	0.01	1.849	O	|	|	|	1.91
411.667	0.00	0.01	1.849	O	|	|	|	1.91
411.750	0.00	0.01	1.849	O	|	|	|	1.91
411.833	0.00	0.01	1.849	O	|	|	|	1.91
411.917	0.00	0.01	1.849	O	|	|	|	1.91
412.000	0.00	0.01	1.849	O	|	|	|	1.91
412.083	0.00	0.01	1.849	O	|	|	|	1.91
412.167	0.00	0.01	1.849	O	|	|	|	1.91
412.250	0.00	0.01	1.849	O	|	|	|	1.91
412.333	0.00	0.01	1.849	O	|	|	|	1.91
412.417	0.00	0.01	1.849	O	|	|	|	1.91
412.500	0.00	0.01	1.849	O	|	|	|	1.91
412.583	0.00	0.01	1.849	O	|	|	|	1.91
412.667	0.00	0.01	1.849	O	|	|	|	1.91
412.750	0.00	0.01	1.849	O	|	|	|	1.91
412.833	0.00	0.01	1.849	O	|	|	|	1.91
412.917	0.00	0.01	1.849	O	|	|	|	1.91
413.000	0.00	0.01	1.848	O	|	|	|	1.91
413.083	0.00	0.01	1.848	O	|	|	|	1.91
413.167	0.00	0.01	1.848	O	|	|	|	1.91
413.250	0.00	0.01	1.848	O	|	|	|	1.91
413.333	0.00	0.01	1.848	O	|	|	|	1.91
413.417	0.00	0.01	1.848	O	|	|	|	1.91
413.500	0.00	0.01	1.848	O	|	|	|	1.91
413.583	0.00	0.01	1.848	O	|	|	|	1.91
413.667	0.00	0.01	1.848	O	|	|	|	1.91
413.750	0.00	0.01	1.848	O	|	|	|	1.91
413.833	0.00	0.01	1.848	O	|	|	|	1.91
413.917	0.00	0.01	1.848	O	|	|	|	1.91
414.000	0.00	0.01	1.848	O	|	|	|	1.91
414.083	0.00	0.01	1.848	O	|	|	|	1.91
414.167	0.00	0.01	1.848	O	|	|	|	1.91
414.250	0.00	0.01	1.848	O	|	|	|	1.91
414.333	0.00	0.01	1.848	O	|	|	|	1.91
414.417	0.00	0.01	1.848	O	|	|	|	1.91
414.500	0.00	0.01	1.847	O	|	|	|	1.91
414.583	0.00	0.01	1.847	O	|	|	|	1.91
414.667	0.00	0.01	1.847	O	|	|	|	1.91

414.750	0.00	0.01	1.847	O	|	|	|	1.91
414.833	0.00	0.01	1.847	O	|	|	|	1.91
414.917	0.00	0.01	1.847	O	|	|	|	1.91
415.000	0.00	0.01	1.847	O	|	|	|	1.91
415.083	0.00	0.01	1.847	O	|	|	|	1.91
415.167	0.00	0.01	1.847	O	|	|	|	1.91
415.250	0.00	0.01	1.847	O	|	|	|	1.91
415.333	0.00	0.01	1.847	O	|	|	|	1.90
415.417	0.00	0.01	1.847	O	|	|	|	1.90
415.500	0.00	0.01	1.847	O	|	|	|	1.90
415.583	0.00	0.01	1.847	O	|	|	|	1.90
415.667	0.00	0.01	1.847	O	|	|	|	1.90
415.750	0.00	0.01	1.847	O	|	|	|	1.90
415.833	0.00	0.01	1.847	O	|	|	|	1.90
415.917	0.00	0.01	1.846	O	|	|	|	1.90
416.000	0.00	0.01	1.846	O	|	|	|	1.90
416.083	0.00	0.01	1.846	O	|	|	|	1.90
416.167	0.00	0.01	1.846	O	|	|	|	1.90
416.250	0.00	0.01	1.846	O	|	|	|	1.90
416.333	0.00	0.01	1.846	O	|	|	|	1.90
416.417	0.00	0.01	1.846	O	|	|	|	1.90
416.500	0.00	0.01	1.846	O	|	|	|	1.90
416.583	0.00	0.01	1.846	O	|	|	|	1.90
416.667	0.00	0.01	1.846	O	|	|	|	1.90

Remaining water in basin = 1.85 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 5001
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 13.167 (CFS)
Total volume = 3.945 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 08/07/22

IENLC
Basin D
10-year

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: 10yrareaD.rte
**********HYDROGRAPH DATA**********
Number of intervals = 301
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 55.358 (CFS)
Total volume = 5.639 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 100.000 to Point/Station 109.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 301
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)

Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.410	0.001	1.410	1.410
2.000	1.890	0.010	1.890	1.890
2.500	2.360	0.100	2.360	2.360
3.000	2.830	0.100	2.830	2.830
3.500	3.030	0.100	3.030	3.030
4.000	3.760	5.000	3.743	3.777
4.500	4.060	12.000	4.019	4.101
5.000	4.140	12.000	4.099	4.181

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	13.8	27.68	41.52	55.36	Depth (Ft.)
0.083	0.05	0.00	0.000	O	|	|	|	|	0.00
0.167	0.41	0.00	0.002	O	|	|	|	|	0.00
0.250	0.71	0.00	0.006	O	|	|	|	|	0.01
0.333	0.84	0.00	0.011	O	|	|	|	|	0.01
0.417	0.91	0.00	0.017	O	|	|	|	|	0.02
0.500	0.97	0.00	0.023	O	|	|	|	|	0.02
0.583	1.00	0.00	0.030	O	|	|	|	|	0.03
0.667	1.03	0.00	0.037	O	|	|	|	|	0.04
0.750	1.05	0.00	0.044	O	|	|	|	|	0.05
0.833	1.07	0.00	0.052	O	|	|	|	|	0.05
0.917	1.08	0.00	0.059	O	|	|	|	|	0.06
1.000	1.09	0.00	0.067	O	|	|	|	|	0.07
1.083	1.10	0.00	0.074	O	|	|	|	|	0.08
1.167	1.11	0.00	0.082	O	|	|	|	|	0.09
1.250	1.11	0.00	0.089	O	|	|	|	|	0.10
1.333	1.12	0.00	0.097	O	|	|	|	|	0.10
1.417	1.12	0.00	0.105	O	|	|	|	|	0.11
1.500	1.12	0.00	0.112	O	|	|	|	|	0.12
1.583	1.13	0.00	0.120	O	|	|	|	|	0.13
1.667	1.13	0.00	0.128	O	|	|	|	|	0.14
1.750	1.14	0.00	0.136	O	|	|	|	|	0.14
1.833	1.14	0.00	0.144	O	|	|	|	|	0.15
1.917	1.14	0.00	0.151	O	|	|	|	|	0.16
2.000	1.15	0.00	0.159	O	|	|	|	|	0.17
2.083	1.15	0.00	0.167	O	|	|	|	|	0.18
2.167	1.16	0.00	0.175	O	|	|	|	|	0.19

2.250	1.16	0.00	0.183	O	|	|	|	0.19
2.333	1.16	0.00	0.191	O	|	|	|	0.20
2.417	1.17	0.00	0.199	O	|	|	|	0.21
2.500	1.17	0.00	0.207	O	|	|	|	0.22
2.583	1.18	0.00	0.215	O	|	|	|	0.23
2.667	1.18	0.00	0.223	O	|	|	|	0.24
2.750	1.19	0.00	0.232	O	|	|	|	0.25
2.833	1.19	0.00	0.240	O	|	|	|	0.26
2.917	1.19	0.00	0.248	O	|	|	|	0.26
3.000	1.20	0.00	0.256	O	|	|	|	0.27
3.083	1.20	0.00	0.265	O	|	|	|	0.28
3.167	1.21	0.00	0.273	O	|	|	|	0.29
3.250	1.21	0.00	0.281	O	|	|	|	0.30
3.333	1.22	0.00	0.290	O	|	|	|	0.31
3.417	1.22	0.00	0.298	O	|	|	|	0.32
3.500	1.23	0.00	0.306	O	|	|	|	0.33
3.583	1.23	0.00	0.315	O	|	|	|	0.33
3.667	1.24	0.00	0.323	O	|	|	|	0.34
3.750	1.24	0.00	0.332	O	|	|	|	0.35
3.833	1.25	0.00	0.340	O	|	|	|	0.36
3.917	1.25	0.00	0.349	O	|	|	|	0.37
4.000	1.26	0.00	0.358	O	|	|	|	0.38
4.083	1.26	0.00	0.366	O	|	|	|	0.39
4.167	1.27	0.00	0.375	O	|	|	|	0.40
4.250	1.27	0.00	0.384	O	|	|	|	0.41
4.333	1.28	0.00	0.393	O	|	|	|	0.42
4.417	1.28	0.00	0.401	O	|	|	|	0.43
4.500	1.29	0.00	0.410	O	|	|	|	0.44
4.583	1.30	0.00	0.419	O	|	|	|	0.45
4.667	1.30	0.00	0.428	O	|	|	|	0.46
4.750	1.31	0.00	0.437	O	|	|	|	0.47
4.833	1.31	0.00	0.446	O	|	|	|	0.47
4.917	1.32	0.00	0.455	O	|	|	|	0.48
5.000	1.32	0.00	0.464	O	|	|	|	0.49
5.083	1.33	0.00	0.473	O	|	|	|	0.50
5.167	1.34	0.00	0.483	O	|	|	|	0.51
5.250	1.34	0.00	0.492	O	|	|	|	0.52
5.333	1.35	0.00	0.501	O	|	|	|	0.53
5.417	1.36	0.00	0.510	O	|	|	|	0.54
5.500	1.36	0.00	0.520	O	|	|	|	0.55
5.583	1.37	0.00	0.529	O	|	|	|	0.56
5.667	1.37	0.00	0.539	O	|	|	|	0.57
5.750	1.38	0.00	0.548	O	|	|	|	0.58
5.833	1.39	0.00	0.558	O	|	|	|	0.59
5.917	1.39	0.00	0.567	O	|	|	|	0.60
6.000	1.40	0.00	0.577	O	|	|	|	0.61
6.083	1.41	0.00	0.587	O	|	|	|	0.62
6.167	1.42	0.00	0.596	O	|	|	|	0.63
6.250	1.42	0.00	0.606	O	|	|	|	0.64
6.333	1.43	0.00	0.616	O	|	|	|	0.66

6.417	1.44	0.00	0.626	O				0.67
6.500	1.45	0.00	0.636	O				0.68
6.583	1.45	0.00	0.646	O				0.69
6.667	1.46	0.00	0.656	O				0.70
6.750	1.47	0.00	0.666	O				0.71
6.833	1.48	0.00	0.676	O				0.72
6.917	1.48	0.00	0.686	O				0.73
7.000	1.49	0.00	0.696	O				0.74
7.083	1.50	0.00	0.707	O				0.75
7.167	1.51	0.00	0.717	O				0.76
7.250	1.52	0.00	0.727	O				0.77
7.333	1.53	0.00	0.738	O				0.78
7.417	1.53	0.00	0.748	O				0.80
7.500	1.54	0.00	0.759	O				0.81
7.583	1.55	0.00	0.770	O				0.82
7.667	1.56	0.00	0.780	O				0.83
7.750	1.57	0.00	0.791	O				0.84
7.833	1.58	0.00	0.802	O				0.85
7.917	1.59	0.00	0.813	O				0.86
8.000	1.60	0.00	0.824	O				0.88
8.083	1.61	0.00	0.835	O				0.89
8.167	1.62	0.00	0.846	O				0.90
8.250	1.63	0.00	0.857	O				0.91
8.333	1.64	0.00	0.869	O				0.92
8.417	1.65	0.00	0.880	O				0.94
8.500	1.66	0.00	0.891	O				0.95
8.583	1.67	0.00	0.903	O				0.96
8.667	1.68	0.00	0.914	O				0.97
8.750	1.69	0.00	0.926	O				0.99
8.833	1.71	0.00	0.938	O				1.00
8.917	1.72	0.00	0.949	O				1.01
9.000	1.73	0.00	0.961	OI				1.02
9.083	1.74	0.00	0.973	OI				1.04
9.167	1.75	0.00	0.985	OI				1.05
9.250	1.77	0.00	0.997	OI				1.06
9.333	1.78	0.00	1.010	OI				1.07
9.417	1.79	0.00	1.022	OI				1.09
9.500	1.81	0.00	1.034	OI				1.10
9.583	1.82	0.00	1.047	OI				1.11
9.667	1.83	0.00	1.059	OI				1.13
9.750	1.85	0.00	1.072	OI				1.14
9.833	1.86	0.00	1.085	OI				1.15
9.917	1.88	0.00	1.098	OI				1.17
10.000	1.89	0.00	1.111	OI				1.18
10.083	1.91	0.00	1.124	OI				1.20
10.167	1.92	0.00	1.137	OI				1.21
10.250	1.94	0.00	1.150	OI				1.22
10.333	1.96	0.00	1.164	OI				1.24
10.417	1.97	0.00	1.177	OI				1.25
10.500	1.99	0.00	1.191	OI				1.27

10.583	2.01	0.00	1.205	OI				1.28
10.667	2.03	0.00	1.219	OI				1.30
10.750	2.05	0.00	1.233	OI				1.31
10.833	2.07	0.00	1.247	OI				1.33
10.917	2.08	0.00	1.261	OI				1.34
11.000	2.10	0.00	1.275	OI				1.36
11.083	2.12	0.00	1.290	OI				1.37
11.167	2.15	0.00	1.305	OI				1.39
11.250	2.17	0.00	1.319	OI				1.40
11.333	2.19	0.00	1.334	OI				1.42
11.417	2.21	0.00	1.350	OI				1.44
11.500	2.24	0.00	1.365	OI				1.45
11.583	2.26	0.00	1.380	OI				1.47
11.667	2.29	0.00	1.396	OI				1.49
11.750	2.31	0.00	1.412	OI				1.50
11.833	2.34	0.00	1.428	OI				1.52
11.917	2.36	0.00	1.444	OI				1.54
12.000	2.39	0.00	1.460	OI				1.55
12.083	2.42	0.00	1.477	OI				1.57
12.167	2.47	0.00	1.494	OI				1.59
12.250	2.51	0.00	1.511	OI				1.61
12.333	2.55	0.00	1.528	OI				1.62
12.417	2.58	0.00	1.546	OI				1.64
12.500	2.62	0.00	1.564	OI				1.66
12.583	2.66	0.00	1.582	OI				1.68
12.667	2.69	0.00	1.600	OI				1.70
12.750	2.73	0.00	1.619	OI				1.72
12.833	2.77	0.01	1.638	OI				1.74
12.917	2.81	0.01	1.657	OI				1.76
13.000	2.86	0.01	1.677	OI				1.78
13.083	2.90	0.01	1.696	OI				1.80
13.167	2.95	0.01	1.717	OI				1.82
13.250	3.00	0.01	1.737	OI				1.84
13.333	3.05	0.01	1.758	OI				1.86
13.417	3.10	0.01	1.779	OI				1.88
13.500	3.16	0.01	1.800	OI				1.91
13.583	3.22	0.01	1.822	OI				1.93
13.667	3.28	0.01	1.845	OI				1.95
13.750	3.34	0.01	1.867	OI				1.98
13.833	3.41	0.01	1.891	OI				2.00
13.917	3.49	0.01	1.914	O I				2.03
14.000	3.56	0.02	1.938	O I				2.05
14.083	3.64	0.02	1.963	O I				2.08
14.167	3.74	0.03	1.988	O I				2.10
14.250	3.83	0.03	2.014	O I				2.13
14.333	3.93	0.04	2.041	O I				2.16
14.417	4.04	0.04	2.068	O I				2.19
14.500	4.16	0.05	2.096	O I				2.22
14.583	4.27	0.05	2.124	O I				2.25
14.667	4.41	0.06	2.154	O I				2.28

14.750	4.55	0.07	2.184	O I	|	|	|	2.31
14.833	4.72	0.07	2.216	O I	|	|	|	2.35
14.917	4.89	0.08	2.248	O I	|	|	|	2.38
15.000	5.09	0.09	2.282	O I	|	|	|	2.42
15.083	5.29	0.09	2.317	O I	|	|	|	2.45
15.167	5.54	0.10	2.354	O I	|	|	|	2.49
15.250	5.81	0.10	2.392	O I	|	|	|	2.53
15.333	6.13	0.10	2.433	O I	|	|	|	2.58
15.417	6.39	0.10	2.475	O I	|	|	|	2.62
15.500	6.22	0.10	2.518	O I	|	|	|	2.67
15.583	6.18	0.10	2.560	O I	|	|	|	2.71
15.667	6.58	0.10	2.603	O I	|	|	|	2.76
15.750	7.18	0.10	2.650	O I	|	|	|	2.81
15.833	8.25	0.10	2.702	O I	|	|	|	2.86
15.917	9.92	0.10	2.764	O I	|	|	|	2.93
16.000	13.57	0.10	2.844	O I	|	|	|	3.04
16.083	24.09	0.10	2.973	O | I	|	|	|	3.36
16.167	55.36	1.52	3.241	O |	|	|	I|	3.64
16.250	47.14	3.77	3.576	| O	|	| I	|	3.87
16.333	26.34	5.84	3.796	| O	| I|	|	|	4.06
16.417	18.22	8.29	3.901	| O | I	|	|	|	4.23
16.500	14.37	9.48	3.952	| O I	|	|	|	4.32
16.583	11.81	10.02	3.975	| OI	|	|	|	4.36
16.667	10.01	10.15	3.981	| O	|	|	|	4.37
16.750	8.55	10.02	3.975	| IO	|	|	|	4.36
16.833	7.35	9.71	3.962	| IO	|	|	|	4.34
16.917	6.33	9.29	3.944	| I O	|	|	|	4.31
17.000	5.88	8.81	3.923	| I O	|	|	|	4.27
17.083	5.44	8.34	3.903	| IO	|	|	|	4.24
17.167	4.91	7.87	3.883	| I O	|	|	|	4.21
17.250	4.09	7.37	3.862	| I O	|	|	|	4.17
17.333	3.85	6.86	3.840	| IO	|	|	|	4.13
17.417	3.66	6.40	3.820	| IO	|	|	|	4.10
17.500	3.50	5.98	3.802	| IO	|	|	|	4.07
17.583	3.35	5.60	3.786	|I O	|	|	|	4.04
17.667	3.22	5.26	3.771	|I O	|	|	|	4.02
17.750	3.10	4.98	3.757	|IO	|	|	|	4.00
17.833	2.99	4.90	3.744	|IO	|	|	|	3.99
17.917	2.90	4.81	3.731	|IO	|	|	|	3.98
18.000	2.81	4.72	3.718	|IO	|	|	|	3.97
18.083	2.72	4.63	3.705	|IO	|	|	|	3.96
18.167	2.63	4.54	3.692	|IO	|	|	|	3.95
18.250	2.55	4.45	3.679	|IO	|	|	|	3.94
18.333	2.48	4.37	3.666	|IO	|	|	|	3.94
18.417	2.42	4.28	3.653	|IO	|	|	|	3.93
18.500	2.36	4.19	3.640	|IO	|	|	|	3.92
18.583	2.30	4.11	3.628	|IO	|	|	|	3.91
18.667	2.25	4.03	3.615	|IO	|	|	|	3.90
18.750	2.21	3.95	3.603	|IO	|	|	|	3.89
18.833	2.16	3.87	3.591	|IO	|	|	|	3.88

18.917	2.12	3.79	3.580	|IO	|	|	|	3.88
19.000	2.08	3.71	3.568	|IO	|	|	|	3.87
19.083	2.04	3.64	3.557	|IO	|	|	|	3.86
19.167	2.00	3.56	3.546	|IO	|	|	|	3.85
19.250	1.97	3.49	3.536	|IO	|	|	|	3.85
19.333	1.93	3.42	3.525	|O	|	|	|	3.84
19.417	1.90	3.36	3.515	|O	|	|	|	3.83
19.500	1.87	3.29	3.505	|O	|	|	|	3.83
19.583	1.84	3.22	3.495	|O	|	|	|	3.82
19.667	1.81	3.16	3.486	|O	|	|	|	3.81
19.750	1.79	3.10	3.477	|O	|	|	|	3.81
19.833	1.76	3.04	3.468	|O	|	|	|	3.80
19.917	1.74	2.98	3.459	|O	|	|	|	3.79
20.000	1.71	2.92	3.451	IO	|	|	|	3.79
20.083	1.69	2.87	3.443	IO	|	|	|	3.78
20.167	1.67	2.82	3.435	IO	|	|	|	3.78
20.250	1.65	2.76	3.427	IO	|	|	|	3.77
20.333	1.62	2.71	3.419	IO	|	|	|	3.77
20.417	1.60	2.66	3.412	IO	|	|	|	3.76
20.500	1.58	2.61	3.405	IO	|	|	|	3.76
20.583	1.57	2.57	3.398	IO	|	|	|	3.75
20.667	1.55	2.52	3.391	IO	|	|	|	3.75
20.750	1.53	2.48	3.384	IO	|	|	|	3.74
20.833	1.51	2.43	3.378	IO	|	|	|	3.74
20.917	1.50	2.39	3.371	IO	|	|	|	3.73
21.000	1.48	2.35	3.365	IO	|	|	|	3.73
21.083	1.46	2.31	3.359	IO	|	|	|	3.73
21.167	1.45	2.27	3.354	IO	|	|	|	3.72
21.250	1.43	2.24	3.348	IO	|	|	|	3.72
21.333	1.42	2.20	3.343	IO	|	|	|	3.71
21.417	1.41	2.16	3.337	IO	|	|	|	3.71
21.500	1.39	2.13	3.332	IO	|	|	|	3.71
21.583	1.38	2.10	3.327	IO	|	|	|	3.70
21.667	1.36	2.06	3.322	IO	|	|	|	3.70
21.750	1.35	2.03	3.318	IO	|	|	|	3.70
21.833	1.34	2.00	3.313	IO	|	|	|	3.69
21.917	1.33	1.97	3.309	IO	|	|	|	3.69
22.000	1.32	1.94	3.304	IO	|	|	|	3.69
22.083	1.30	1.91	3.300	IO	|	|	|	3.68
22.167	1.29	1.88	3.296	IO	|	|	|	3.68
22.250	1.28	1.86	3.292	IO	|	|	|	3.68
22.333	1.27	1.83	3.288	IO	|	|	|	3.68
22.417	1.26	1.81	3.284	IO	|	|	|	3.67
22.500	1.25	1.78	3.280	IO	|	|	|	3.67
22.583	1.24	1.76	3.277	IO	|	|	|	3.67
22.667	1.23	1.73	3.273	IO	|	|	|	3.67
22.750	1.22	1.71	3.270	O	|	|	|	3.66
22.833	1.21	1.69	3.266	O	|	|	|	3.66
22.917	1.20	1.67	3.263	O	|	|	|	3.66
23.000	1.19	1.64	3.260	O	|	|	|	3.66

23.083	1.18	1.62	3.257	O				3.66
23.167	1.17	1.60	3.254	O				3.65
23.250	1.17	1.58	3.251	O				3.65
23.333	1.16	1.57	3.248	O				3.65
23.417	1.15	1.55	3.245	O				3.65
23.500	1.14	1.53	3.243	O				3.65
23.583	1.13	1.51	3.240	O				3.64
23.667	1.13	1.49	3.238	O				3.64
23.750	1.12	1.48	3.235	O				3.64
23.833	1.11	1.46	3.233	O				3.64
23.917	1.10	1.44	3.230	O				3.64
24.000	1.10	1.43	3.228	O				3.64
24.083	1.03	1.41	3.225	O				3.63
24.167	0.68	1.39	3.222	O				3.63
24.250	0.37	1.35	3.216	O				3.63
24.333	0.24	1.30	3.209	O				3.62
24.417	0.17	1.25	3.202	O				3.62
24.500	0.12	1.20	3.194	O				3.61
24.583	0.08	1.15	3.187	O				3.61
24.667	0.06	1.10	3.179	O				3.60
24.750	0.04	1.06	3.172	O				3.60
24.833	0.03	1.01	3.165	O				3.59
24.917	0.02	0.96	3.159	O				3.59
25.000	0.01	0.92	3.152	O				3.58
25.083	0.01	0.88	3.146	O				3.58
25.167	0.00	0.84	3.140	O				3.58
25.250	0.00	0.80	3.135	O				3.57
25.333	0.00	0.77	3.129	O				3.57
25.417	0.00	0.73	3.124	O				3.56
25.500	0.00	0.70	3.119	O				3.56
25.583	0.00	0.67	3.114	O				3.56
25.667	0.00	0.64	3.110	O				3.55
25.750	0.00	0.61	3.106	O				3.55
25.833	0.00	0.58	3.102	O				3.55
25.917	0.00	0.55	3.098	O				3.55
26.000	0.00	0.53	3.094	O				3.54
26.083	0.00	0.51	3.090	O				3.54
26.167	0.00	0.48	3.087	O				3.54
26.250	0.00	0.46	3.084	O				3.54
26.333	0.00	0.44	3.081	O				3.53
26.417	0.00	0.42	3.078	O				3.53
26.500	0.00	0.40	3.075	O				3.53
26.583	0.00	0.38	3.072	O				3.53
26.667	0.00	0.37	3.070	O				3.53
26.750	0.00	0.35	3.067	O				3.53
26.833	0.00	0.33	3.065	O				3.52
26.917	0.00	0.32	3.063	O				3.52
27.000	0.00	0.30	3.060	O				3.52
27.083	0.00	0.29	3.058	O				3.52
27.167	0.00	0.28	3.056	O				3.52

27.250	0.00	0.26	3.055	O				3.52
27.333	0.00	0.25	3.053	O				3.52
27.417	0.00	0.24	3.051	O				3.51
27.500	0.00	0.23	3.049	O				3.51
27.583	0.00	0.22	3.048	O				3.51
27.667	0.00	0.21	3.046	O				3.51
27.750	0.00	0.20	3.045	O				3.51
27.833	0.00	0.19	3.044	O				3.51
27.917	0.00	0.18	3.042	O				3.51
28.000	0.00	0.17	3.041	O				3.51
28.083	0.00	0.17	3.040	O				3.51
28.167	0.00	0.16	3.039	O				3.51
28.250	0.00	0.15	3.038	O				3.51
28.333	0.00	0.15	3.037	O				3.50
28.417	0.00	0.14	3.036	O				3.50
28.500	0.00	0.13	3.035	O				3.50
28.583	0.00	0.13	3.034	O				3.50
28.667	0.00	0.12	3.033	O				3.50
28.750	0.00	0.12	3.032	O				3.50
28.833	0.00	0.11	3.031	O				3.50
28.917	0.00	0.10	3.031	O				3.50
29.000	0.00	0.10	3.030	O				3.50
29.083	0.00	0.10	3.029	O				3.50
29.167	0.00	0.10	3.029	O				3.50
29.250	0.00	0.10	3.028	O				3.49
29.333	0.00	0.10	3.027	O				3.49
29.417	0.00	0.10	3.027	O				3.49
29.500	0.00	0.10	3.026	O				3.49
29.583	0.00	0.10	3.025	O				3.49
29.667	0.00	0.10	3.025	O				3.49
29.750	0.00	0.10	3.024	O				3.48
29.833	0.00	0.10	3.023	O				3.48
29.917	0.00	0.10	3.022	O				3.48
30.000	0.00	0.10	3.022	O				3.48
30.083	0.00	0.10	3.021	O				3.48
30.167	0.00	0.10	3.020	O				3.48
30.250	0.00	0.10	3.020	O				3.47
30.333	0.00	0.10	3.019	O				3.47
30.417	0.00	0.10	3.018	O				3.47
30.500	0.00	0.10	3.018	O				3.47
30.583	0.00	0.10	3.017	O				3.47
30.667	0.00	0.10	3.016	O				3.47
30.750	0.00	0.10	3.016	O				3.46
30.833	0.00	0.10	3.015	O				3.46
30.917	0.00	0.10	3.014	O				3.46
31.000	0.00	0.10	3.013	O				3.46
31.083	0.00	0.10	3.013	O				3.46
31.167	0.00	0.10	3.012	O				3.46
31.250	0.00	0.10	3.011	O				3.45
31.333	0.00	0.10	3.011	O				3.45

31.417	0.00	0.10	3.010	O				3.45
31.500	0.00	0.10	3.009	O				3.45
31.583	0.00	0.10	3.009	O				3.45
31.667	0.00	0.10	3.008	O				3.44
31.750	0.00	0.10	3.007	O				3.44
31.833	0.00	0.10	3.007	O				3.44
31.917	0.00	0.10	3.006	O				3.44
32.000	0.00	0.10	3.005	O				3.44
32.083	0.00	0.10	3.005	O				3.44
32.167	0.00	0.10	3.004	O				3.43
32.250	0.00	0.10	3.003	O				3.43
32.333	0.00	0.10	3.002	O				3.43
32.417	0.00	0.10	3.002	O				3.43
32.500	0.00	0.10	3.001	O				3.43
32.583	0.00	0.10	3.000	O				3.43
32.667	0.00	0.10	3.000	O				3.42
32.750	0.00	0.10	2.999	O				3.42
32.833	0.00	0.10	2.998	O				3.42
32.917	0.00	0.10	2.998	O				3.42
33.000	0.00	0.10	2.997	O				3.42
33.083	0.00	0.10	2.996	O				3.42
33.167	0.00	0.10	2.996	O				3.41
33.250	0.00	0.10	2.995	O				3.41
33.333	0.00	0.10	2.994	O				3.41
33.417	0.00	0.10	2.994	O				3.41
33.500	0.00	0.10	2.993	O				3.41
33.583	0.00	0.10	2.992	O				3.41
33.667	0.00	0.10	2.991	O				3.40
33.750	0.00	0.10	2.991	O				3.40
33.833	0.00	0.10	2.990	O				3.40
33.917	0.00	0.10	2.989	O				3.40
34.000	0.00	0.10	2.989	O				3.40
34.083	0.00	0.10	2.988	O				3.40
34.167	0.00	0.10	2.987	O				3.39
34.250	0.00	0.10	2.987	O				3.39
34.333	0.00	0.10	2.986	O				3.39
34.417	0.00	0.10	2.985	O				3.39
34.500	0.00	0.10	2.985	O				3.39
34.583	0.00	0.10	2.984	O				3.38
34.667	0.00	0.10	2.983	O				3.38
34.750	0.00	0.10	2.983	O				3.38
34.833	0.00	0.10	2.982	O				3.38
34.917	0.00	0.10	2.981	O				3.38
35.000	0.00	0.10	2.980	O				3.38
35.083	0.00	0.10	2.980	O				3.37
35.167	0.00	0.10	2.979	O				3.37
35.250	0.00	0.10	2.978	O				3.37
35.333	0.00	0.10	2.978	O				3.37
35.417	0.00	0.10	2.977	O				3.37
35.500	0.00	0.10	2.976	O				3.37

35.583	0.00	0.10	2.976	O				3.36
35.667	0.00	0.10	2.975	O				3.36
35.750	0.00	0.10	2.974	O				3.36
35.833	0.00	0.10	2.974	O				3.36
35.917	0.00	0.10	2.973	O				3.36
36.000	0.00	0.10	2.972	O				3.36
36.083	0.00	0.10	2.971	O				3.35
36.167	0.00	0.10	2.971	O				3.35
36.250	0.00	0.10	2.970	O				3.35
36.333	0.00	0.10	2.969	O				3.35
36.417	0.00	0.10	2.969	O				3.35
36.500	0.00	0.10	2.968	O				3.35
36.583	0.00	0.10	2.967	O				3.34
36.667	0.00	0.10	2.967	O				3.34
36.750	0.00	0.10	2.966	O				3.34
36.833	0.00	0.10	2.965	O				3.34
36.917	0.00	0.10	2.965	O				3.34
37.000	0.00	0.10	2.964	O				3.33
37.083	0.00	0.10	2.963	O				3.33
37.167	0.00	0.10	2.963	O				3.33
37.250	0.00	0.10	2.962	O				3.33
37.333	0.00	0.10	2.961	O				3.33
37.417	0.00	0.10	2.960	O				3.33
37.500	0.00	0.10	2.960	O				3.32
37.583	0.00	0.10	2.959	O				3.32
37.667	0.00	0.10	2.958	O				3.32
37.750	0.00	0.10	2.958	O				3.32
37.833	0.00	0.10	2.957	O				3.32
37.917	0.00	0.10	2.956	O				3.32
38.000	0.00	0.10	2.956	O				3.31
38.083	0.00	0.10	2.955	O				3.31
38.167	0.00	0.10	2.954	O				3.31
38.250	0.00	0.10	2.954	O				3.31
38.333	0.00	0.10	2.953	O				3.31
38.417	0.00	0.10	2.952	O				3.31
38.500	0.00	0.10	2.952	O				3.30
38.583	0.00	0.10	2.951	O				3.30
38.667	0.00	0.10	2.950	O				3.30
38.750	0.00	0.10	2.949	O				3.30
38.833	0.00	0.10	2.949	O				3.30
38.917	0.00	0.10	2.948	O				3.30
39.000	0.00	0.10	2.947	O				3.29
39.083	0.00	0.10	2.947	O				3.29
39.167	0.00	0.10	2.946	O				3.29
39.250	0.00	0.10	2.945	O				3.29
39.333	0.00	0.10	2.945	O				3.29
39.417	0.00	0.10	2.944	O				3.28
39.500	0.00	0.10	2.943	O				3.28
39.583	0.00	0.10	2.943	O				3.28
39.667	0.00	0.10	2.942	O				3.28

39.750	0.00	0.10	2.941	O	|	|	|	3.28
39.833	0.00	0.10	2.940	O	|	|	|	3.28
39.917	0.00	0.10	2.940	O	|	|	|	3.27
40.000	0.00	0.10	2.939	O	|	|	|	3.27
40.083	0.00	0.10	2.938	O	|	|	|	3.27
40.167	0.00	0.10	2.938	O	|	|	|	3.27
40.250	0.00	0.10	2.937	O	|	|	|	3.27
40.333	0.00	0.10	2.936	O	|	|	|	3.27
40.417	0.00	0.10	2.936	O	|	|	|	3.26
40.500	0.00	0.10	2.935	O	|	|	|	3.26
40.583	0.00	0.10	2.934	O	|	|	|	3.26
40.667	0.00	0.10	2.934	O	|	|	|	3.26
40.750	0.00	0.10	2.933	O	|	|	|	3.26
40.833	0.00	0.10	2.932	O	|	|	|	3.26
40.917	0.00	0.10	2.932	O	|	|	|	3.25
41.000	0.00	0.10	2.931	O	|	|	|	3.25
41.083	0.00	0.10	2.930	O	|	|	|	3.25
41.167	0.00	0.10	2.929	O	|	|	|	3.25
41.250	0.00	0.10	2.929	O	|	|	|	3.25
41.333	0.00	0.10	2.928	O	|	|	|	3.25
41.417	0.00	0.10	2.927	O	|	|	|	3.24
41.500	0.00	0.10	2.927	O	|	|	|	3.24
41.583	0.00	0.10	2.926	O	|	|	|	3.24
41.667	0.00	0.10	2.925	O	|	|	|	3.24
41.750	0.00	0.10	2.925	O	|	|	|	3.24
41.833	0.00	0.10	2.924	O	|	|	|	3.23
41.917	0.00	0.10	2.923	O	|	|	|	3.23
42.000	0.00	0.10	2.923	O	|	|	|	3.23
42.083	0.00	0.10	2.922	O	|	|	|	3.23
42.167	0.00	0.10	2.921	O	|	|	|	3.23
42.250	0.00	0.10	2.921	O	|	|	|	3.23
42.333	0.00	0.10	2.920	O	|	|	|	3.22
42.417	0.00	0.10	2.919	O	|	|	|	3.22
42.500	0.00	0.10	2.918	O	|	|	|	3.22
42.583	0.00	0.10	2.918	O	|	|	|	3.22
42.667	0.00	0.10	2.917	O	|	|	|	3.22
42.750	0.00	0.10	2.916	O	|	|	|	3.22
42.833	0.00	0.10	2.916	O	|	|	|	3.21
42.917	0.00	0.10	2.915	O	|	|	|	3.21
43.000	0.00	0.10	2.914	O	|	|	|	3.21
43.083	0.00	0.10	2.914	O	|	|	|	3.21
43.167	0.00	0.10	2.913	O	|	|	|	3.21
43.250	0.00	0.10	2.912	O	|	|	|	3.21
43.333	0.00	0.10	2.912	O	|	|	|	3.20
43.417	0.00	0.10	2.911	O	|	|	|	3.20
43.500	0.00	0.10	2.910	O	|	|	|	3.20
43.583	0.00	0.10	2.910	O	|	|	|	3.20
43.667	0.00	0.10	2.909	O	|	|	|	3.20
43.750	0.00	0.10	2.908	O	|	|	|	3.20
43.833	0.00	0.10	2.907	O	|	|	|	3.19

43.917	0.00	0.10	2.907	O					3.19
44.000	0.00	0.10	2.906	O					3.19
44.083	0.00	0.10	2.905	O					3.19
44.167	0.00	0.10	2.905	O					3.19
44.250	0.00	0.10	2.904	O					3.18
44.333	0.00	0.10	2.903	O					3.18
44.417	0.00	0.10	2.903	O					3.18
44.500	0.00	0.10	2.902	O					3.18
44.583	0.00	0.10	2.901	O					3.18
44.667	0.00	0.10	2.901	O					3.18
44.750	0.00	0.10	2.900	O					3.17
44.833	0.00	0.10	2.899	O					3.17
44.917	0.00	0.10	2.898	O					3.17
45.000	0.00	0.10	2.898	O					3.17
45.083	0.00	0.10	2.897	O					3.17
45.167	0.00	0.10	2.896	O					3.17
45.250	0.00	0.10	2.896	O					3.16
45.333	0.00	0.10	2.895	O					3.16
45.417	0.00	0.10	2.894	O					3.16
45.500	0.00	0.10	2.894	O					3.16
45.583	0.00	0.10	2.893	O					3.16
45.667	0.00	0.10	2.892	O					3.16
45.750	0.00	0.10	2.892	O					3.15
45.833	0.00	0.10	2.891	O					3.15
45.917	0.00	0.10	2.890	O					3.15
46.000	0.00	0.10	2.890	O					3.15
46.083	0.00	0.10	2.889	O					3.15
46.167	0.00	0.10	2.888	O					3.15
46.250	0.00	0.10	2.887	O					3.14
46.333	0.00	0.10	2.887	O					3.14
46.417	0.00	0.10	2.886	O					3.14
46.500	0.00	0.10	2.885	O					3.14
46.583	0.00	0.10	2.885	O					3.14
46.667	0.00	0.10	2.884	O					3.14
46.750	0.00	0.10	2.883	O					3.13
46.833	0.00	0.10	2.883	O					3.13
46.917	0.00	0.10	2.882	O					3.13
47.000	0.00	0.10	2.881	O					3.13
47.083	0.00	0.10	2.881	O					3.13
47.167	0.00	0.10	2.880	O					3.12
47.250	0.00	0.10	2.879	O					3.12
47.333	0.00	0.10	2.879	O					3.12
47.417	0.00	0.10	2.878	O					3.12
47.500	0.00	0.10	2.877	O					3.12
47.583	0.00	0.10	2.876	O					3.12
47.667	0.00	0.10	2.876	O					3.11
47.750	0.00	0.10	2.875	O					3.11
47.833	0.00	0.10	2.874	O					3.11
47.917	0.00	0.10	2.874	O					3.11
48.000	0.00	0.10	2.873	O					3.11

48.083	0.00	0.10	2.872	O				3.11
48.167	0.00	0.10	2.872	O				3.10
48.250	0.00	0.10	2.871	O				3.10
48.333	0.00	0.10	2.870	O				3.10
48.417	0.00	0.10	2.870	O				3.10
48.500	0.00	0.10	2.869	O				3.10
48.583	0.00	0.10	2.868	O				3.10
48.667	0.00	0.10	2.867	O				3.09
48.750	0.00	0.10	2.867	O				3.09
48.833	0.00	0.10	2.866	O				3.09
48.917	0.00	0.10	2.865	O				3.09
49.000	0.00	0.10	2.865	O				3.09
49.083	0.00	0.10	2.864	O				3.09
49.167	0.00	0.10	2.863	O				3.08
49.250	0.00	0.10	2.863	O				3.08
49.333	0.00	0.10	2.862	O				3.08
49.417	0.00	0.10	2.861	O				3.08
49.500	0.00	0.10	2.861	O				3.08
49.583	0.00	0.10	2.860	O				3.07
49.667	0.00	0.10	2.859	O				3.07
49.750	0.00	0.10	2.859	O				3.07
49.833	0.00	0.10	2.858	O				3.07
49.917	0.00	0.10	2.857	O				3.07
50.000	0.00	0.10	2.856	O				3.07
50.083	0.00	0.10	2.856	O				3.06
50.167	0.00	0.10	2.855	O				3.06
50.250	0.00	0.10	2.854	O				3.06
50.333	0.00	0.10	2.854	O				3.06
50.417	0.00	0.10	2.853	O				3.06
50.500	0.00	0.10	2.852	O				3.06
50.583	0.00	0.10	2.852	O				3.05
50.667	0.00	0.10	2.851	O				3.05
50.750	0.00	0.10	2.850	O				3.05
50.833	0.00	0.10	2.850	O				3.05
50.917	0.00	0.10	2.849	O				3.05
51.000	0.00	0.10	2.848	O				3.05
51.083	0.00	0.10	2.848	O				3.04
51.167	0.00	0.10	2.847	O				3.04
51.250	0.00	0.10	2.846	O				3.04
51.333	0.00	0.10	2.845	O				3.04
51.417	0.00	0.10	2.845	O				3.04
51.500	0.00	0.10	2.844	O				3.04
51.583	0.00	0.10	2.843	O				3.03
51.667	0.00	0.10	2.843	O				3.03
51.750	0.00	0.10	2.842	O				3.03
51.833	0.00	0.10	2.841	O				3.03
51.917	0.00	0.10	2.841	O				3.03
52.000	0.00	0.10	2.840	O				3.02
52.083	0.00	0.10	2.839	O				3.02
52.167	0.00	0.10	2.839	O				3.02

52.250	0.00	0.10	2.838	O				3.02
52.333	0.00	0.10	2.837	O				3.02
52.417	0.00	0.10	2.837	O				3.02
52.500	0.00	0.10	2.836	O				3.01
52.583	0.00	0.10	2.835	O				3.01
52.667	0.00	0.10	2.834	O				3.01
52.750	0.00	0.10	2.834	O				3.01
52.833	0.00	0.10	2.833	O				3.01
52.917	0.00	0.10	2.832	O				3.01
53.000	0.00	0.10	2.832	O				3.00
53.083	0.00	0.10	2.831	O				3.00
53.167	0.00	0.10	2.830	O				3.00
53.250	0.00	0.10	2.830	O				3.00
53.333	0.00	0.10	2.829	O				3.00
53.417	0.00	0.10	2.828	O				3.00
53.500	0.00	0.10	2.828	O				3.00
53.583	0.00	0.10	2.827	O				3.00
53.667	0.00	0.10	2.826	O				3.00
53.750	0.00	0.10	2.825	O				3.00
53.833	0.00	0.10	2.825	O				2.99
53.917	0.00	0.10	2.824	O				2.99
54.000	0.00	0.10	2.823	O				2.99
54.083	0.00	0.10	2.823	O				2.99
54.167	0.00	0.10	2.822	O				2.99
54.250	0.00	0.10	2.821	O				2.99
54.333	0.00	0.10	2.821	O				2.99
54.417	0.00	0.10	2.820	O				2.99
54.500	0.00	0.10	2.819	O				2.99
54.583	0.00	0.10	2.819	O				2.99
54.667	0.00	0.10	2.818	O				2.99
54.750	0.00	0.10	2.817	O				2.99
54.833	0.00	0.10	2.817	O				2.99
54.917	0.00	0.10	2.816	O				2.98
55.000	0.00	0.10	2.815	O				2.98
55.083	0.00	0.10	2.814	O				2.98
55.167	0.00	0.10	2.814	O				2.98
55.250	0.00	0.10	2.813	O				2.98
55.333	0.00	0.10	2.812	O				2.98
55.417	0.00	0.10	2.812	O				2.98
55.500	0.00	0.10	2.811	O				2.98
55.583	0.00	0.10	2.810	O				2.98
55.667	0.00	0.10	2.810	O				2.98
55.750	0.00	0.10	2.809	O				2.98
55.833	0.00	0.10	2.808	O				2.98
55.917	0.00	0.10	2.808	O				2.98
56.000	0.00	0.10	2.807	O				2.98
56.083	0.00	0.10	2.806	O				2.97
56.167	0.00	0.10	2.806	O				2.97
56.250	0.00	0.10	2.805	O				2.97
56.333	0.00	0.10	2.804	O				2.97

56.417	0.00	0.10	2.803	O					2.97
56.500	0.00	0.10	2.803	O					2.97
56.583	0.00	0.10	2.802	O					2.97
56.667	0.00	0.10	2.801	O					2.97
56.750	0.00	0.10	2.801	O					2.97
56.833	0.00	0.10	2.800	O					2.97
56.917	0.00	0.10	2.799	O					2.97
57.000	0.00	0.10	2.799	O					2.97
57.083	0.00	0.10	2.798	O					2.97
57.167	0.00	0.10	2.797	O					2.97
57.250	0.00	0.10	2.797	O					2.96
57.333	0.00	0.10	2.796	O					2.96
57.417	0.00	0.10	2.795	O					2.96
57.500	0.00	0.10	2.794	O					2.96
57.583	0.00	0.10	2.794	O					2.96
57.667	0.00	0.10	2.793	O					2.96
57.750	0.00	0.10	2.792	O					2.96
57.833	0.00	0.10	2.792	O					2.96
57.917	0.00	0.10	2.791	O					2.96
58.000	0.00	0.10	2.790	O					2.96
58.083	0.00	0.10	2.790	O					2.96
58.167	0.00	0.10	2.789	O					2.96
58.250	0.00	0.10	2.788	O					2.96
58.333	0.00	0.10	2.788	O					2.95
58.417	0.00	0.10	2.787	O					2.95
58.500	0.00	0.10	2.786	O					2.95
58.583	0.00	0.10	2.786	O					2.95
58.667	0.00	0.10	2.785	O					2.95
58.750	0.00	0.10	2.784	O					2.95
58.833	0.00	0.10	2.783	O					2.95
58.917	0.00	0.10	2.783	O					2.95
59.000	0.00	0.10	2.782	O					2.95
59.083	0.00	0.10	2.781	O					2.95
59.167	0.00	0.10	2.781	O					2.95
59.250	0.00	0.10	2.780	O					2.95
59.333	0.00	0.10	2.779	O					2.95
59.417	0.00	0.10	2.779	O					2.95
59.500	0.00	0.10	2.778	O					2.94
59.583	0.00	0.10	2.777	O					2.94
59.667	0.00	0.10	2.777	O					2.94
59.750	0.00	0.10	2.776	O					2.94
59.833	0.00	0.10	2.775	O					2.94
59.917	0.00	0.10	2.775	O					2.94
60.000	0.00	0.10	2.774	O					2.94
60.083	0.00	0.10	2.773	O					2.94
60.167	0.00	0.10	2.772	O					2.94
60.250	0.00	0.10	2.772	O					2.94
60.333	0.00	0.10	2.771	O					2.94
60.417	0.00	0.10	2.770	O					2.94
60.500	0.00	0.10	2.770	O					2.94

60.583	0.00	0.10	2.769	O				2.94
60.667	0.00	0.10	2.768	O				2.93
60.750	0.00	0.10	2.768	O				2.93
60.833	0.00	0.10	2.767	O				2.93
60.917	0.00	0.10	2.766	O				2.93
61.000	0.00	0.10	2.766	O				2.93
61.083	0.00	0.10	2.765	O				2.93
61.167	0.00	0.10	2.764	O				2.93
61.250	0.00	0.10	2.763	O				2.93
61.333	0.00	0.10	2.763	O				2.93
61.417	0.00	0.10	2.762	O				2.93
61.500	0.00	0.10	2.761	O				2.93
61.583	0.00	0.10	2.761	O				2.93
61.667	0.00	0.10	2.760	O				2.93
61.750	0.00	0.10	2.759	O				2.92
61.833	0.00	0.10	2.759	O				2.92
61.917	0.00	0.10	2.758	O				2.92
62.000	0.00	0.10	2.757	O				2.92
62.083	0.00	0.10	2.757	O				2.92
62.167	0.00	0.10	2.756	O				2.92
62.250	0.00	0.10	2.755	O				2.92
62.333	0.00	0.10	2.755	O				2.92
62.417	0.00	0.10	2.754	O				2.92
62.500	0.00	0.10	2.753	O				2.92
62.583	0.00	0.10	2.752	O				2.92
62.667	0.00	0.10	2.752	O				2.92
62.750	0.00	0.10	2.751	O				2.92
62.833	0.00	0.10	2.750	O				2.92
62.917	0.00	0.10	2.750	O				2.91
63.000	0.00	0.10	2.749	O				2.91
63.083	0.00	0.10	2.748	O				2.91
63.167	0.00	0.10	2.748	O				2.91
63.250	0.00	0.10	2.747	O				2.91
63.333	0.00	0.10	2.746	O				2.91
63.417	0.00	0.10	2.746	O				2.91
63.500	0.00	0.10	2.745	O				2.91
63.583	0.00	0.10	2.744	O				2.91
63.667	0.00	0.10	2.744	O				2.91
63.750	0.00	0.10	2.743	O				2.91
63.833	0.00	0.10	2.742	O				2.91
63.917	0.00	0.10	2.741	O				2.91
64.000	0.00	0.10	2.741	O				2.91
64.083	0.00	0.10	2.740	O				2.90
64.167	0.00	0.10	2.739	O				2.90
64.250	0.00	0.10	2.739	O				2.90
64.333	0.00	0.10	2.738	O				2.90
64.417	0.00	0.10	2.737	O				2.90
64.500	0.00	0.10	2.737	O				2.90
64.583	0.00	0.10	2.736	O				2.90
64.667	0.00	0.10	2.735	O				2.90

64.750	0.00	0.10	2.735	O				2.90
64.833	0.00	0.10	2.734	O				2.90
64.917	0.00	0.10	2.733	O				2.90
65.000	0.00	0.10	2.733	O				2.90
65.083	0.00	0.10	2.732	O				2.90
65.167	0.00	0.10	2.731	O				2.89
65.250	0.00	0.10	2.730	O				2.89
65.333	0.00	0.10	2.730	O				2.89
65.417	0.00	0.10	2.729	O				2.89
65.500	0.00	0.10	2.728	O				2.89
65.583	0.00	0.10	2.728	O				2.89
65.667	0.00	0.10	2.727	O				2.89
65.750	0.00	0.10	2.726	O				2.89
65.833	0.00	0.10	2.726	O				2.89
65.917	0.00	0.10	2.725	O				2.89
66.000	0.00	0.10	2.724	O				2.89
66.083	0.00	0.10	2.724	O				2.89
66.167	0.00	0.10	2.723	O				2.89
66.250	0.00	0.10	2.722	O				2.89
66.333	0.00	0.10	2.721	O				2.88
66.417	0.00	0.10	2.721	O				2.88
66.500	0.00	0.10	2.720	O				2.88
66.583	0.00	0.10	2.719	O				2.88
66.667	0.00	0.10	2.719	O				2.88
66.750	0.00	0.10	2.718	O				2.88
66.833	0.00	0.10	2.717	O				2.88
66.917	0.00	0.10	2.717	O				2.88
67.000	0.00	0.10	2.716	O				2.88
67.083	0.00	0.10	2.715	O				2.88
67.167	0.00	0.10	2.715	O				2.88
67.250	0.00	0.10	2.714	O				2.88
67.333	0.00	0.10	2.713	O				2.88
67.417	0.00	0.10	2.713	O				2.88
67.500	0.00	0.10	2.712	O				2.87
67.583	0.00	0.10	2.711	O				2.87
67.667	0.00	0.10	2.710	O				2.87
67.750	0.00	0.10	2.710	O				2.87
67.833	0.00	0.10	2.709	O				2.87
67.917	0.00	0.10	2.708	O				2.87
68.000	0.00	0.10	2.708	O				2.87
68.083	0.00	0.10	2.707	O				2.87
68.167	0.00	0.10	2.706	O				2.87
68.250	0.00	0.10	2.706	O				2.87
68.333	0.00	0.10	2.705	O				2.87
68.417	0.00	0.10	2.704	O				2.87
68.500	0.00	0.10	2.704	O				2.87
68.583	0.00	0.10	2.703	O				2.86
68.667	0.00	0.10	2.702	O				2.86
68.750	0.00	0.10	2.702	O				2.86
68.833	0.00	0.10	2.701	O				2.86

68.917	0.00	0.10	2.700	O				2.86
69.000	0.00	0.10	2.699	O				2.86
69.083	0.00	0.10	2.699	O				2.86
69.167	0.00	0.10	2.698	O				2.86
69.250	0.00	0.10	2.697	O				2.86
69.333	0.00	0.10	2.697	O				2.86
69.417	0.00	0.10	2.696	O				2.86
69.500	0.00	0.10	2.695	O				2.86
69.583	0.00	0.10	2.695	O				2.86
69.667	0.00	0.10	2.694	O				2.86
69.750	0.00	0.10	2.693	O				2.85
69.833	0.00	0.10	2.693	O				2.85
69.917	0.00	0.10	2.692	O				2.85
70.000	0.00	0.10	2.691	O				2.85
70.083	0.00	0.10	2.690	O				2.85
70.167	0.00	0.10	2.690	O				2.85
70.250	0.00	0.10	2.689	O				2.85
70.333	0.00	0.10	2.688	O				2.85
70.417	0.00	0.10	2.688	O				2.85
70.500	0.00	0.10	2.687	O				2.85
70.583	0.00	0.10	2.686	O				2.85
70.667	0.00	0.10	2.686	O				2.85
70.750	0.00	0.10	2.685	O				2.85
70.833	0.00	0.10	2.684	O				2.84
70.917	0.00	0.10	2.684	O				2.84
71.000	0.00	0.10	2.683	O				2.84
71.083	0.00	0.10	2.682	O				2.84
71.167	0.00	0.10	2.682	O				2.84
71.250	0.00	0.10	2.681	O				2.84
71.333	0.00	0.10	2.680	O				2.84
71.417	0.00	0.10	2.679	O				2.84
71.500	0.00	0.10	2.679	O				2.84
71.583	0.00	0.10	2.678	O				2.84
71.667	0.00	0.10	2.677	O				2.84
71.750	0.00	0.10	2.677	O				2.84
71.833	0.00	0.10	2.676	O				2.84
71.917	0.00	0.10	2.675	O				2.84
72.000	0.00	0.10	2.675	O				2.83
72.083	0.00	0.10	2.674	O				2.83
72.167	0.00	0.10	2.673	O				2.83
72.250	0.00	0.10	2.673	O				2.83
72.333	0.00	0.10	2.672	O				2.83
72.417	0.00	0.10	2.671	O				2.83
72.500	0.00	0.10	2.671	O				2.83
72.583	0.00	0.10	2.670	O				2.83
72.667	0.00	0.10	2.669	O				2.83
72.750	0.00	0.10	2.668	O				2.83
72.833	0.00	0.10	2.668	O				2.83
72.917	0.00	0.10	2.667	O				2.83
73.000	0.00	0.10	2.666	O				2.83

73.083	0.00	0.10	2.666	O				2.83
73.167	0.00	0.10	2.665	O				2.82
73.250	0.00	0.10	2.664	O				2.82
73.333	0.00	0.10	2.664	O				2.82
73.417	0.00	0.10	2.663	O				2.82
73.500	0.00	0.10	2.662	O				2.82
73.583	0.00	0.10	2.662	O				2.82
73.667	0.00	0.10	2.661	O				2.82
73.750	0.00	0.10	2.660	O				2.82
73.833	0.00	0.10	2.660	O				2.82
73.917	0.00	0.10	2.659	O				2.82
74.000	0.00	0.10	2.658	O				2.82
74.083	0.00	0.10	2.657	O				2.82
74.167	0.00	0.10	2.657	O				2.82
74.250	0.00	0.10	2.656	O				2.81
74.333	0.00	0.10	2.655	O				2.81
74.417	0.00	0.10	2.655	O				2.81
74.500	0.00	0.10	2.654	O				2.81
74.583	0.00	0.10	2.653	O				2.81
74.667	0.00	0.10	2.653	O				2.81
74.750	0.00	0.10	2.652	O				2.81
74.833	0.00	0.10	2.651	O				2.81
74.917	0.00	0.10	2.651	O				2.81
75.000	0.00	0.10	2.650	O				2.81
75.083	0.00	0.10	2.649	O				2.81
75.167	0.00	0.10	2.648	O				2.81
75.250	0.00	0.10	2.648	O				2.81
75.333	0.00	0.10	2.647	O				2.81
75.417	0.00	0.10	2.646	O				2.80
75.500	0.00	0.10	2.646	O				2.80
75.583	0.00	0.10	2.645	O				2.80
75.667	0.00	0.10	2.644	O				2.80
75.750	0.00	0.10	2.644	O				2.80
75.833	0.00	0.10	2.643	O				2.80
75.917	0.00	0.10	2.642	O				2.80
76.000	0.00	0.10	2.642	O				2.80
76.083	0.00	0.10	2.641	O				2.80
76.167	0.00	0.10	2.640	O				2.80
76.250	0.00	0.10	2.640	O				2.80
76.333	0.00	0.10	2.639	O				2.80
76.417	0.00	0.10	2.638	O				2.80
76.500	0.00	0.10	2.637	O				2.80
76.583	0.00	0.10	2.637	O				2.79
76.667	0.00	0.10	2.636	O				2.79
76.750	0.00	0.10	2.635	O				2.79
76.833	0.00	0.10	2.635	O				2.79
76.917	0.00	0.10	2.634	O				2.79
77.000	0.00	0.10	2.633	O				2.79
77.083	0.00	0.10	2.633	O				2.79
77.167	0.00	0.10	2.632	O				2.79

77.250	0.00	0.10	2.631	O				2.79
77.333	0.00	0.10	2.631	O				2.79
77.417	0.00	0.10	2.630	O				2.79
77.500	0.00	0.10	2.629	O				2.79
77.583	0.00	0.10	2.629	O				2.79
77.667	0.00	0.10	2.628	O				2.78
77.750	0.00	0.10	2.627	O				2.78
77.833	0.00	0.10	2.626	O				2.78
77.917	0.00	0.10	2.626	O				2.78
78.000	0.00	0.10	2.625	O				2.78
78.083	0.00	0.10	2.624	O				2.78
78.167	0.00	0.10	2.624	O				2.78
78.250	0.00	0.10	2.623	O				2.78
78.333	0.00	0.10	2.622	O				2.78
78.417	0.00	0.10	2.622	O				2.78
78.500	0.00	0.10	2.621	O				2.78
78.583	0.00	0.10	2.620	O				2.78
78.667	0.00	0.10	2.620	O				2.78
78.750	0.00	0.10	2.619	O				2.78
78.833	0.00	0.10	2.618	O				2.77
78.917	0.00	0.10	2.617	O				2.77
79.000	0.00	0.10	2.617	O				2.77
79.083	0.00	0.10	2.616	O				2.77
79.167	0.00	0.10	2.615	O				2.77
79.250	0.00	0.10	2.615	O				2.77
79.333	0.00	0.10	2.614	O				2.77
79.417	0.00	0.10	2.613	O				2.77
79.500	0.00	0.10	2.613	O				2.77
79.583	0.00	0.10	2.612	O				2.77
79.667	0.00	0.10	2.611	O				2.77
79.750	0.00	0.10	2.611	O				2.77
79.833	0.00	0.10	2.610	O				2.77
79.917	0.00	0.10	2.609	O				2.77
80.000	0.00	0.10	2.609	O				2.76
80.083	0.00	0.10	2.608	O				2.76
80.167	0.00	0.10	2.607	O				2.76
80.250	0.00	0.10	2.606	O				2.76
80.333	0.00	0.10	2.606	O				2.76
80.417	0.00	0.10	2.605	O				2.76
80.500	0.00	0.10	2.604	O				2.76
80.583	0.00	0.10	2.604	O				2.76
80.667	0.00	0.10	2.603	O				2.76
80.750	0.00	0.10	2.602	O				2.76
80.833	0.00	0.10	2.602	O				2.76
80.917	0.00	0.10	2.601	O				2.76
81.000	0.00	0.10	2.600	O				2.76
81.083	0.00	0.10	2.600	O				2.75
81.167	0.00	0.10	2.599	O				2.75
81.250	0.00	0.10	2.598	O				2.75
81.333	0.00	0.10	2.598	O				2.75

81.417	0.00	0.10	2.597	O					2.75
81.500	0.00	0.10	2.596	O					2.75
81.583	0.00	0.10	2.595	O					2.75
81.667	0.00	0.10	2.595	O					2.75
81.750	0.00	0.10	2.594	O					2.75
81.833	0.00	0.10	2.593	O					2.75
81.917	0.00	0.10	2.593	O					2.75
82.000	0.00	0.10	2.592	O					2.75
82.083	0.00	0.10	2.591	O					2.75
82.167	0.00	0.10	2.591	O					2.75
82.250	0.00	0.10	2.590	O					2.74
82.333	0.00	0.10	2.589	O					2.74
82.417	0.00	0.10	2.589	O					2.74
82.500	0.00	0.10	2.588	O					2.74
82.583	0.00	0.10	2.587	O					2.74
82.667	0.00	0.10	2.587	O					2.74
82.750	0.00	0.10	2.586	O					2.74
82.833	0.00	0.10	2.585	O					2.74
82.917	0.00	0.10	2.584	O					2.74
83.000	0.00	0.10	2.584	O					2.74
83.083	0.00	0.10	2.583	O					2.74
83.167	0.00	0.10	2.582	O					2.74
83.250	0.00	0.10	2.582	O					2.74
83.333	0.00	0.10	2.581	O					2.74
83.417	0.00	0.10	2.580	O					2.73
83.500	0.00	0.10	2.580	O					2.73
83.583	0.00	0.10	2.579	O					2.73
83.667	0.00	0.10	2.578	O					2.73
83.750	0.00	0.10	2.578	O					2.73
83.833	0.00	0.10	2.577	O					2.73
83.917	0.00	0.10	2.576	O					2.73
84.000	0.00	0.10	2.575	O					2.73
84.083	0.00	0.10	2.575	O					2.73
84.167	0.00	0.10	2.574	O					2.73
84.250	0.00	0.10	2.573	O					2.73
84.333	0.00	0.10	2.573	O					2.73
84.417	0.00	0.10	2.572	O					2.73
84.500	0.00	0.10	2.571	O					2.72
84.583	0.00	0.10	2.571	O					2.72
84.667	0.00	0.10	2.570	O					2.72
84.750	0.00	0.10	2.569	O					2.72
84.833	0.00	0.10	2.569	O					2.72
84.917	0.00	0.10	2.568	O					2.72
85.000	0.00	0.10	2.567	O					2.72
85.083	0.00	0.10	2.567	O					2.72
85.167	0.00	0.10	2.566	O					2.72
85.250	0.00	0.10	2.565	O					2.72
85.333	0.00	0.10	2.564	O					2.72
85.417	0.00	0.10	2.564	O					2.72
85.500	0.00	0.10	2.563	O					2.72

85.583	0.00	0.10	2.562	O					2.72
85.667	0.00	0.10	2.562	O					2.71
85.750	0.00	0.10	2.561	O					2.71
85.833	0.00	0.10	2.560	O					2.71
85.917	0.00	0.10	2.560	O					2.71
86.000	0.00	0.10	2.559	O					2.71
86.083	0.00	0.10	2.558	O					2.71
86.167	0.00	0.10	2.558	O					2.71
86.250	0.00	0.10	2.557	O					2.71
86.333	0.00	0.10	2.556	O					2.71
86.417	0.00	0.10	2.556	O					2.71
86.500	0.00	0.10	2.555	O					2.71
86.583	0.00	0.10	2.554	O					2.71
86.667	0.00	0.10	2.553	O					2.71
86.750	0.00	0.10	2.553	O					2.71
86.833	0.00	0.10	2.552	O					2.70
86.917	0.00	0.10	2.551	O					2.70
87.000	0.00	0.10	2.551	O					2.70
87.083	0.00	0.10	2.550	O					2.70
87.167	0.00	0.10	2.549	O					2.70
87.250	0.00	0.10	2.549	O					2.70
87.333	0.00	0.10	2.548	O					2.70
87.417	0.00	0.10	2.547	O					2.70
87.500	0.00	0.10	2.547	O					2.70
87.583	0.00	0.10	2.546	O					2.70
87.667	0.00	0.10	2.545	O					2.70
87.750	0.00	0.10	2.544	O					2.70
87.833	0.00	0.10	2.544	O					2.70
87.917	0.00	0.10	2.543	O					2.69
88.000	0.00	0.10	2.542	O					2.69
88.083	0.00	0.10	2.542	O					2.69
88.167	0.00	0.10	2.541	O					2.69
88.250	0.00	0.10	2.540	O					2.69
88.333	0.00	0.10	2.540	O					2.69
88.417	0.00	0.10	2.539	O					2.69
88.500	0.00	0.10	2.538	O					2.69
88.583	0.00	0.10	2.538	O					2.69
88.667	0.00	0.10	2.537	O					2.69
88.750	0.00	0.10	2.536	O					2.69
88.833	0.00	0.10	2.536	O					2.69
88.917	0.00	0.10	2.535	O					2.69
89.000	0.00	0.10	2.534	O					2.69
89.083	0.00	0.10	2.533	O					2.68
89.167	0.00	0.10	2.533	O					2.68
89.250	0.00	0.10	2.532	O					2.68
89.333	0.00	0.10	2.531	O					2.68
89.417	0.00	0.10	2.531	O					2.68
89.500	0.00	0.10	2.530	O					2.68
89.583	0.00	0.10	2.529	O					2.68
89.667	0.00	0.10	2.529	O					2.68

89.750	0.00	0.10	2.528	O					2.68
89.833	0.00	0.10	2.527	O					2.68
89.917	0.00	0.10	2.527	O					2.68
90.000	0.00	0.10	2.526	O					2.68
90.083	0.00	0.10	2.525	O					2.68
90.167	0.00	0.10	2.525	O					2.68
90.250	0.00	0.10	2.524	O					2.67
90.333	0.00	0.10	2.523	O					2.67
90.417	0.00	0.10	2.522	O					2.67
90.500	0.00	0.10	2.522	O					2.67
90.583	0.00	0.10	2.521	O					2.67
90.667	0.00	0.10	2.520	O					2.67
90.750	0.00	0.10	2.520	O					2.67
90.833	0.00	0.10	2.519	O					2.67
90.917	0.00	0.10	2.518	O					2.67
91.000	0.00	0.10	2.518	O					2.67
91.083	0.00	0.10	2.517	O					2.67
91.167	0.00	0.10	2.516	O					2.67
91.250	0.00	0.10	2.516	O					2.67
91.333	0.00	0.10	2.515	O					2.66
91.417	0.00	0.10	2.514	O					2.66
91.500	0.00	0.10	2.513	O					2.66
91.583	0.00	0.10	2.513	O					2.66
91.667	0.00	0.10	2.512	O					2.66
91.750	0.00	0.10	2.511	O					2.66
91.833	0.00	0.10	2.511	O					2.66
91.917	0.00	0.10	2.510	O					2.66
92.000	0.00	0.10	2.509	O					2.66
92.083	0.00	0.10	2.509	O					2.66
92.167	0.00	0.10	2.508	O					2.66
92.250	0.00	0.10	2.507	O					2.66
92.333	0.00	0.10	2.507	O					2.66
92.417	0.00	0.10	2.506	O					2.66
92.500	0.00	0.10	2.505	O					2.65
92.583	0.00	0.10	2.505	O					2.65
92.667	0.00	0.10	2.504	O					2.65
92.750	0.00	0.10	2.503	O					2.65
92.833	0.00	0.10	2.502	O					2.65
92.917	0.00	0.10	2.502	O					2.65
93.000	0.00	0.10	2.501	O					2.65
93.083	0.00	0.10	2.500	O					2.65
93.167	0.00	0.10	2.500	O					2.65
93.250	0.00	0.10	2.499	O					2.65
93.333	0.00	0.10	2.498	O					2.65
93.417	0.00	0.10	2.498	O					2.65
93.500	0.00	0.10	2.497	O					2.65
93.583	0.00	0.10	2.496	O					2.64
93.667	0.00	0.10	2.496	O					2.64
93.750	0.00	0.10	2.495	O					2.64
93.833	0.00	0.10	2.494	O					2.64

93.917	0.00	0.10	2.494	O					2.64
94.000	0.00	0.10	2.493	O					2.64
94.083	0.00	0.10	2.492	O					2.64
94.167	0.00	0.10	2.491	O					2.64
94.250	0.00	0.10	2.491	O					2.64
94.333	0.00	0.10	2.490	O					2.64
94.417	0.00	0.10	2.489	O					2.64
94.500	0.00	0.10	2.489	O					2.64
94.583	0.00	0.10	2.488	O					2.64
94.667	0.00	0.10	2.487	O					2.64
94.750	0.00	0.10	2.487	O					2.63
94.833	0.00	0.10	2.486	O					2.63
94.917	0.00	0.10	2.485	O					2.63
95.000	0.00	0.10	2.485	O					2.63
95.083	0.00	0.10	2.484	O					2.63
95.167	0.00	0.10	2.483	O					2.63
95.250	0.00	0.10	2.483	O					2.63
95.333	0.00	0.10	2.482	O					2.63
95.417	0.00	0.10	2.481	O					2.63
95.500	0.00	0.10	2.480	O					2.63
95.583	0.00	0.10	2.480	O					2.63
95.667	0.00	0.10	2.479	O					2.63
95.750	0.00	0.10	2.478	O					2.63
95.833	0.00	0.10	2.478	O					2.63
95.917	0.00	0.10	2.477	O					2.62
96.000	0.00	0.10	2.476	O					2.62
96.083	0.00	0.10	2.476	O					2.62
96.167	0.00	0.10	2.475	O					2.62
96.250	0.00	0.10	2.474	O					2.62
96.333	0.00	0.10	2.474	O					2.62
96.417	0.00	0.10	2.473	O					2.62
96.500	0.00	0.10	2.472	O					2.62
96.583	0.00	0.10	2.471	O					2.62
96.667	0.00	0.10	2.471	O					2.62
96.750	0.00	0.10	2.470	O					2.62
96.833	0.00	0.10	2.469	O					2.62
96.917	0.00	0.10	2.469	O					2.62
97.000	0.00	0.10	2.468	O					2.61
97.083	0.00	0.10	2.467	O					2.61
97.167	0.00	0.10	2.467	O					2.61
97.250	0.00	0.10	2.466	O					2.61
97.333	0.00	0.10	2.465	O					2.61
97.417	0.00	0.10	2.465	O					2.61
97.500	0.00	0.10	2.464	O					2.61
97.583	0.00	0.10	2.463	O					2.61
97.667	0.00	0.10	2.463	O					2.61
97.750	0.00	0.10	2.462	O					2.61
97.833	0.00	0.10	2.461	O					2.61
97.917	0.00	0.10	2.460	O					2.61
98.000	0.00	0.10	2.460	O					2.61

98.083	0.00	0.10	2.459	O				2.61
98.167	0.00	0.10	2.458	O				2.60
98.250	0.00	0.10	2.458	O				2.60
98.333	0.00	0.10	2.457	O				2.60
98.417	0.00	0.10	2.456	O				2.60
98.500	0.00	0.10	2.456	O				2.60
98.583	0.00	0.10	2.455	O				2.60
98.667	0.00	0.10	2.454	O				2.60
98.750	0.00	0.10	2.454	O				2.60
98.833	0.00	0.10	2.453	O				2.60
98.917	0.00	0.10	2.452	O				2.60
99.000	0.00	0.10	2.452	O				2.60
99.083	0.00	0.10	2.451	O				2.60
99.167	0.00	0.10	2.450	O				2.60
99.250	0.00	0.10	2.449	O				2.60
99.333	0.00	0.10	2.449	O				2.59
99.417	0.00	0.10	2.448	O				2.59
99.500	0.00	0.10	2.447	O				2.59
99.583	0.00	0.10	2.447	O				2.59
99.667	0.00	0.10	2.446	O				2.59
99.750	0.00	0.10	2.445	O				2.59
99.833	0.00	0.10	2.445	O				2.59
99.917	0.00	0.10	2.444	O				2.59
100.000	0.00	0.10	2.443	O				2.59
100.083	0.00	0.10	2.443	O				2.59
100.167	0.00	0.10	2.442	O				2.59
100.250	0.00	0.10	2.441	O				2.59
100.333	0.00	0.10	2.440	O				2.59
100.417	0.00	0.10	2.440	O				2.58
100.500	0.00	0.10	2.439	O				2.58
100.583	0.00	0.10	2.438	O				2.58
100.667	0.00	0.10	2.438	O				2.58
100.750	0.00	0.10	2.437	O				2.58
100.833	0.00	0.10	2.436	O				2.58
100.917	0.00	0.10	2.436	O				2.58
101.000	0.00	0.10	2.435	O				2.58
101.083	0.00	0.10	2.434	O				2.58
101.167	0.00	0.10	2.434	O				2.58
101.250	0.00	0.10	2.433	O				2.58
101.333	0.00	0.10	2.432	O				2.58
101.417	0.00	0.10	2.432	O				2.58
101.500	0.00	0.10	2.431	O				2.58
101.583	0.00	0.10	2.430	O				2.57
101.667	0.00	0.10	2.429	O				2.57
101.750	0.00	0.10	2.429	O				2.57
101.833	0.00	0.10	2.428	O				2.57
101.917	0.00	0.10	2.427	O				2.57
102.000	0.00	0.10	2.427	O				2.57
102.083	0.00	0.10	2.426	O				2.57
102.167	0.00	0.10	2.425	O				2.57

102.250	0.00	0.10	2.425	O					2.57
102.333	0.00	0.10	2.424	O					2.57
102.417	0.00	0.10	2.423	O					2.57
102.500	0.00	0.10	2.423	O					2.57
102.583	0.00	0.10	2.422	O					2.57
102.667	0.00	0.10	2.421	O					2.57
102.750	0.00	0.10	2.421	O					2.56
102.833	0.00	0.10	2.420	O					2.56
102.917	0.00	0.10	2.419	O					2.56
103.000	0.00	0.10	2.418	O					2.56
103.083	0.00	0.10	2.418	O					2.56
103.167	0.00	0.10	2.417	O					2.56
103.250	0.00	0.10	2.416	O					2.56
103.333	0.00	0.10	2.416	O					2.56
103.417	0.00	0.10	2.415	O					2.56
103.500	0.00	0.10	2.414	O					2.56
103.583	0.00	0.10	2.414	O					2.56
103.667	0.00	0.10	2.413	O					2.56
103.750	0.00	0.10	2.412	O					2.56
103.833	0.00	0.10	2.412	O					2.55
103.917	0.00	0.10	2.411	O					2.55
104.000	0.00	0.10	2.410	O					2.55
104.083	0.00	0.10	2.410	O					2.55
104.167	0.00	0.10	2.409	O					2.55
104.250	0.00	0.10	2.408	O					2.55
104.333	0.00	0.10	2.407	O					2.55
104.417	0.00	0.10	2.407	O					2.55
104.500	0.00	0.10	2.406	O					2.55
104.583	0.00	0.10	2.405	O					2.55
104.667	0.00	0.10	2.405	O					2.55
104.750	0.00	0.10	2.404	O					2.55
104.833	0.00	0.10	2.403	O					2.55
104.917	0.00	0.10	2.403	O					2.55
105.000	0.00	0.10	2.402	O					2.54
105.083	0.00	0.10	2.401	O					2.54
105.167	0.00	0.10	2.401	O					2.54
105.250	0.00	0.10	2.400	O					2.54
105.333	0.00	0.10	2.399	O					2.54
105.417	0.00	0.10	2.398	O					2.54
105.500	0.00	0.10	2.398	O					2.54
105.583	0.00	0.10	2.397	O					2.54
105.667	0.00	0.10	2.396	O					2.54
105.750	0.00	0.10	2.396	O					2.54
105.833	0.00	0.10	2.395	O					2.54
105.917	0.00	0.10	2.394	O					2.54
106.000	0.00	0.10	2.394	O					2.54
106.083	0.00	0.10	2.393	O					2.54
106.167	0.00	0.10	2.392	O					2.53
106.250	0.00	0.10	2.392	O					2.53
106.333	0.00	0.10	2.391	O					2.53

106.417	0.00	0.10	2.390	O				2.53
106.500	0.00	0.10	2.390	O				2.53
106.583	0.00	0.10	2.389	O				2.53
106.667	0.00	0.10	2.388	O				2.53
106.750	0.00	0.10	2.387	O				2.53
106.833	0.00	0.10	2.387	O				2.53
106.917	0.00	0.10	2.386	O				2.53
107.000	0.00	0.10	2.385	O				2.53
107.083	0.00	0.10	2.385	O				2.53
107.167	0.00	0.10	2.384	O				2.53
107.250	0.00	0.10	2.383	O				2.52
107.333	0.00	0.10	2.383	O				2.52
107.417	0.00	0.10	2.382	O				2.52
107.500	0.00	0.10	2.381	O				2.52
107.583	0.00	0.10	2.381	O				2.52
107.667	0.00	0.10	2.380	O				2.52
107.750	0.00	0.10	2.379	O				2.52
107.833	0.00	0.10	2.379	O				2.52
107.917	0.00	0.10	2.378	O				2.52
108.000	0.00	0.10	2.377	O				2.52
108.083	0.00	0.10	2.376	O				2.52
108.167	0.00	0.10	2.376	O				2.52
108.250	0.00	0.10	2.375	O				2.52
108.333	0.00	0.10	2.374	O				2.52
108.417	0.00	0.10	2.374	O				2.51
108.500	0.00	0.10	2.373	O				2.51
108.583	0.00	0.10	2.372	O				2.51
108.667	0.00	0.10	2.372	O				2.51
108.750	0.00	0.10	2.371	O				2.51
108.833	0.00	0.10	2.370	O				2.51
108.917	0.00	0.10	2.370	O				2.51
109.000	0.00	0.10	2.369	O				2.51
109.083	0.00	0.10	2.368	O				2.51
109.167	0.00	0.10	2.367	O				2.51
109.250	0.00	0.10	2.367	O				2.51
109.333	0.00	0.10	2.366	O				2.51
109.417	0.00	0.10	2.365	O				2.51
109.500	0.00	0.10	2.365	O				2.51
109.583	0.00	0.10	2.364	O				2.50
109.667	0.00	0.10	2.363	O				2.50
109.750	0.00	0.10	2.363	O				2.50
109.833	0.00	0.10	2.362	O				2.50
109.917	0.00	0.10	2.361	O				2.50
110.000	0.00	0.10	2.361	O				2.50
110.083	0.00	0.10	2.360	O				2.50
110.167	0.00	0.10	2.359	O				2.50
110.250	0.00	0.10	2.359	O				2.50
110.333	0.00	0.10	2.358	O				2.50
110.417	0.00	0.10	2.357	O				2.50
110.500	0.00	0.10	2.356	O				2.50

110.583	0.00	0.10	2.356	O	|	|	|	2.50
110.667	0.00	0.10	2.355	O	|	|	|	2.49
110.750	0.00	0.10	2.354	O	|	|	|	2.49
110.833	0.00	0.10	2.354	O	|	|	|	2.49
110.917	0.00	0.10	2.353	O	|	|	|	2.49
111.000	0.00	0.10	2.352	O	|	|	|	2.49
111.083	0.00	0.10	2.352	O	|	|	|	2.49
111.167	0.00	0.10	2.351	O	|	|	|	2.49
111.250	0.00	0.10	2.350	O	|	|	|	2.49
111.333	0.00	0.10	2.350	O	|	|	|	2.49
111.417	0.00	0.10	2.349	O	|	|	|	2.49
111.500	0.00	0.10	2.348	O	|	|	|	2.49
111.583	0.00	0.10	2.348	O	|	|	|	2.49
111.667	0.00	0.10	2.347	O	|	|	|	2.49
111.750	0.00	0.10	2.346	O	|	|	|	2.49
111.833	0.00	0.10	2.346	O	|	|	|	2.48
111.917	0.00	0.10	2.345	O	|	|	|	2.48
112.000	0.00	0.10	2.344	O	|	|	|	2.48
112.083	0.00	0.10	2.344	O	|	|	|	2.48
112.167	0.00	0.10	2.343	O	|	|	|	2.48
112.250	0.00	0.10	2.342	O	|	|	|	2.48
112.333	0.00	0.10	2.342	O	|	|	|	2.48
112.417	0.00	0.10	2.341	O	|	|	|	2.48
112.500	0.00	0.10	2.340	O	|	|	|	2.48
112.583	0.00	0.10	2.340	O	|	|	|	2.48
112.667	0.00	0.10	2.339	O	|	|	|	2.48
112.750	0.00	0.10	2.338	O	|	|	|	2.48
112.833	0.00	0.10	2.338	O	|	|	|	2.48
112.917	0.00	0.10	2.337	O	|	|	|	2.48
113.000	0.00	0.10	2.336	O	|	|	|	2.47
113.083	0.00	0.10	2.336	O	|	|	|	2.47
113.167	0.00	0.10	2.335	O	|	|	|	2.47
113.250	0.00	0.10	2.334	O	|	|	|	2.47
113.333	0.00	0.09	2.334	O	|	|	|	2.47
113.417	0.00	0.09	2.333	O	|	|	|	2.47
113.500	0.00	0.09	2.332	O	|	|	|	2.47
113.583	0.00	0.09	2.332	O	|	|	|	2.47
113.667	0.00	0.09	2.331	O	|	|	|	2.47
113.750	0.00	0.09	2.330	O	|	|	|	2.47
113.833	0.00	0.09	2.330	O	|	|	|	2.47
113.917	0.00	0.09	2.329	O	|	|	|	2.47
114.000	0.00	0.09	2.329	O	|	|	|	2.47
114.083	0.00	0.09	2.328	O	|	|	|	2.47
114.167	0.00	0.09	2.327	O	|	|	|	2.47
114.250	0.00	0.09	2.327	O	|	|	|	2.46
114.333	0.00	0.09	2.326	O	|	|	|	2.46
114.417	0.00	0.09	2.325	O	|	|	|	2.46
114.500	0.00	0.09	2.325	O	|	|	|	2.46
114.583	0.00	0.09	2.324	O	|	|	|	2.46
114.667	0.00	0.09	2.323	O	|	|	|	2.46

114.750	0.00	0.09	2.323	O				2.46
114.833	0.00	0.09	2.322	O				2.46
114.917	0.00	0.09	2.321	O				2.46
115.000	0.00	0.09	2.321	O				2.46
115.083	0.00	0.09	2.320	O				2.46
115.167	0.00	0.09	2.320	O				2.46
115.250	0.00	0.09	2.319	O				2.46
115.333	0.00	0.09	2.318	O				2.46
115.417	0.00	0.09	2.318	O				2.45
115.500	0.00	0.09	2.317	O				2.45
115.583	0.00	0.09	2.316	O				2.45
115.667	0.00	0.09	2.316	O				2.45
115.750	0.00	0.09	2.315	O				2.45
115.833	0.00	0.09	2.315	O				2.45
115.917	0.00	0.09	2.314	O				2.45
116.000	0.00	0.09	2.313	O				2.45
116.083	0.00	0.09	2.313	O				2.45
116.167	0.00	0.09	2.312	O				2.45
116.250	0.00	0.09	2.311	O				2.45
116.333	0.00	0.09	2.311	O				2.45
116.417	0.00	0.09	2.310	O				2.45
116.500	0.00	0.09	2.309	O				2.45
116.583	0.00	0.09	2.309	O				2.45
116.667	0.00	0.09	2.308	O				2.44
116.750	0.00	0.09	2.308	O				2.44
116.833	0.00	0.09	2.307	O				2.44
116.917	0.00	0.09	2.306	O				2.44
117.000	0.00	0.09	2.306	O				2.44
117.083	0.00	0.09	2.305	O				2.44
117.167	0.00	0.09	2.305	O				2.44
117.250	0.00	0.09	2.304	O				2.44
117.333	0.00	0.09	2.303	O				2.44
117.417	0.00	0.09	2.303	O				2.44
117.500	0.00	0.09	2.302	O				2.44
117.583	0.00	0.09	2.301	O				2.44
117.667	0.00	0.09	2.301	O				2.44
117.750	0.00	0.09	2.300	O				2.44
117.833	0.00	0.09	2.300	O				2.44
117.917	0.00	0.09	2.299	O				2.44
118.000	0.00	0.09	2.298	O				2.43
118.083	0.00	0.09	2.298	O				2.43
118.167	0.00	0.09	2.297	O				2.43
118.250	0.00	0.09	2.297	O				2.43
118.333	0.00	0.09	2.296	O				2.43
118.417	0.00	0.09	2.295	O				2.43
118.500	0.00	0.09	2.295	O				2.43
118.583	0.00	0.09	2.294	O				2.43
118.667	0.00	0.09	2.294	O				2.43
118.750	0.00	0.09	2.293	O				2.43
118.833	0.00	0.09	2.292	O				2.43

118.917	0.00	0.09	2.292	O				2.43
119.000	0.00	0.09	2.291	O				2.43
119.083	0.00	0.09	2.291	O				2.43
119.167	0.00	0.09	2.290	O				2.43
119.250	0.00	0.09	2.289	O				2.42
119.333	0.00	0.09	2.289	O				2.42
119.417	0.00	0.09	2.288	O				2.42
119.500	0.00	0.09	2.288	O				2.42
119.583	0.00	0.09	2.287	O				2.42
119.667	0.00	0.09	2.286	O				2.42
119.750	0.00	0.09	2.286	O				2.42
119.833	0.00	0.09	2.285	O				2.42
119.917	0.00	0.09	2.285	O				2.42
120.000	0.00	0.09	2.284	O				2.42
120.083	0.00	0.09	2.283	O				2.42
120.167	0.00	0.09	2.283	O				2.42
120.250	0.00	0.09	2.282	O				2.42
120.333	0.00	0.09	2.282	O				2.42
120.417	0.00	0.08	2.281	O				2.42
120.500	0.00	0.08	2.281	O				2.42
120.583	0.00	0.08	2.280	O				2.41
120.667	0.00	0.08	2.279	O				2.41
120.750	0.00	0.08	2.279	O				2.41
120.833	0.00	0.08	2.278	O				2.41
120.917	0.00	0.08	2.278	O				2.41
121.000	0.00	0.08	2.277	O				2.41
121.083	0.00	0.08	2.276	O				2.41
121.167	0.00	0.08	2.276	O				2.41
121.250	0.00	0.08	2.275	O				2.41
121.333	0.00	0.08	2.275	O				2.41
121.417	0.00	0.08	2.274	O				2.41
121.500	0.00	0.08	2.274	O				2.41
121.583	0.00	0.08	2.273	O				2.41
121.667	0.00	0.08	2.272	O				2.41
121.750	0.00	0.08	2.272	O				2.41
121.833	0.00	0.08	2.271	O				2.41
121.917	0.00	0.08	2.271	O				2.41
122.000	0.00	0.08	2.270	O				2.40
122.083	0.00	0.08	2.270	O				2.40
122.167	0.00	0.08	2.269	O				2.40
122.250	0.00	0.08	2.268	O				2.40
122.333	0.00	0.08	2.268	O				2.40
122.417	0.00	0.08	2.267	O				2.40
122.500	0.00	0.08	2.267	O				2.40
122.583	0.00	0.08	2.266	O				2.40
122.667	0.00	0.08	2.266	O				2.40
122.750	0.00	0.08	2.265	O				2.40
122.833	0.00	0.08	2.265	O				2.40
122.917	0.00	0.08	2.264	O				2.40
123.000	0.00	0.08	2.263	O				2.40

123.083	0.00	0.08	2.263	O				2.40
123.167	0.00	0.08	2.262	O				2.40
123.250	0.00	0.08	2.262	O				2.40
123.333	0.00	0.08	2.261	O				2.39
123.417	0.00	0.08	2.261	O				2.39
123.500	0.00	0.08	2.260	O				2.39
123.583	0.00	0.08	2.259	O				2.39
123.667	0.00	0.08	2.259	O				2.39
123.750	0.00	0.08	2.258	O				2.39
123.833	0.00	0.08	2.258	O				2.39
123.917	0.00	0.08	2.257	O				2.39
124.000	0.00	0.08	2.257	O				2.39
124.083	0.00	0.08	2.256	O				2.39
124.167	0.00	0.08	2.256	O				2.39
124.250	0.00	0.08	2.255	O				2.39
124.333	0.00	0.08	2.255	O				2.39
124.417	0.00	0.08	2.254	O				2.39
124.500	0.00	0.08	2.253	O				2.39
124.583	0.00	0.08	2.253	O				2.39
124.667	0.00	0.08	2.252	O				2.39
124.750	0.00	0.08	2.252	O				2.38
124.833	0.00	0.08	2.251	O				2.38
124.917	0.00	0.08	2.251	O				2.38
125.000	0.00	0.08	2.250	O				2.38
125.083	0.00	0.08	2.250	O				2.38
125.167	0.00	0.08	2.249	O				2.38
125.250	0.00	0.08	2.248	O				2.38
125.333	0.00	0.08	2.248	O				2.38
125.417	0.00	0.08	2.247	O				2.38
125.500	0.00	0.08	2.247	O				2.38
125.583	0.00	0.08	2.246	O				2.38
125.667	0.00	0.08	2.246	O				2.38
125.750	0.00	0.08	2.245	O				2.38
125.833	0.00	0.08	2.245	O				2.38
125.917	0.00	0.08	2.244	O				2.38
126.000	0.00	0.08	2.244	O				2.38
126.083	0.00	0.08	2.243	O				2.38
126.167	0.00	0.08	2.243	O				2.38
126.250	0.00	0.08	2.242	O				2.37
126.333	0.00	0.08	2.242	O				2.37
126.417	0.00	0.08	2.241	O				2.37
126.500	0.00	0.08	2.240	O				2.37
126.583	0.00	0.08	2.240	O				2.37
126.667	0.00	0.08	2.239	O				2.37
126.750	0.00	0.08	2.239	O				2.37
126.833	0.00	0.08	2.238	O				2.37
126.917	0.00	0.08	2.238	O				2.37
127.000	0.00	0.08	2.237	O				2.37
127.083	0.00	0.08	2.237	O				2.37
127.167	0.00	0.08	2.236	O				2.37

127.250	0.00	0.08	2.236	O				2.37
127.333	0.00	0.08	2.235	O				2.37
127.417	0.00	0.08	2.235	O				2.37
127.500	0.00	0.08	2.234	O				2.37
127.583	0.00	0.08	2.234	O				2.37
127.667	0.00	0.08	2.233	O				2.36
127.750	0.00	0.08	2.233	O				2.36
127.833	0.00	0.08	2.232	O				2.36
127.917	0.00	0.08	2.232	O				2.36
128.000	0.00	0.08	2.231	O				2.36
128.083	0.00	0.08	2.230	O				2.36
128.167	0.00	0.08	2.230	O				2.36
128.250	0.00	0.08	2.229	O				2.36
128.333	0.00	0.07	2.229	O				2.36
128.417	0.00	0.07	2.228	O				2.36
128.500	0.00	0.07	2.228	O				2.36
128.583	0.00	0.07	2.227	O				2.36
128.667	0.00	0.07	2.227	O				2.36
128.750	0.00	0.07	2.226	O				2.36
128.833	0.00	0.07	2.226	O				2.36
128.917	0.00	0.07	2.225	O				2.36
129.000	0.00	0.07	2.225	O				2.36
129.083	0.00	0.07	2.224	O				2.36
129.167	0.00	0.07	2.224	O				2.36
129.250	0.00	0.07	2.223	O				2.35
129.333	0.00	0.07	2.223	O				2.35
129.417	0.00	0.07	2.222	O				2.35
129.500	0.00	0.07	2.222	O				2.35
129.583	0.00	0.07	2.221	O				2.35
129.667	0.00	0.07	2.221	O				2.35
129.750	0.00	0.07	2.220	O				2.35
129.833	0.00	0.07	2.220	O				2.35
129.917	0.00	0.07	2.219	O				2.35
130.000	0.00	0.07	2.219	O				2.35
130.083	0.00	0.07	2.218	O				2.35
130.167	0.00	0.07	2.218	O				2.35
130.250	0.00	0.07	2.217	O				2.35
130.333	0.00	0.07	2.217	O				2.35
130.417	0.00	0.07	2.216	O				2.35
130.500	0.00	0.07	2.216	O				2.35
130.583	0.00	0.07	2.215	O				2.35
130.667	0.00	0.07	2.215	O				2.35
130.750	0.00	0.07	2.214	O				2.34
130.833	0.00	0.07	2.214	O				2.34
130.917	0.00	0.07	2.213	O				2.34
131.000	0.00	0.07	2.213	O				2.34
131.083	0.00	0.07	2.212	O				2.34
131.167	0.00	0.07	2.212	O				2.34
131.250	0.00	0.07	2.211	O				2.34
131.333	0.00	0.07	2.211	O				2.34

131.417	0.00	0.07	2.210	O				2.34
131.500	0.00	0.07	2.210	O				2.34
131.583	0.00	0.07	2.209	O				2.34
131.667	0.00	0.07	2.209	O				2.34
131.750	0.00	0.07	2.208	O				2.34
131.833	0.00	0.07	2.208	O				2.34
131.917	0.00	0.07	2.207	O				2.34
132.000	0.00	0.07	2.207	O				2.34
132.083	0.00	0.07	2.206	O				2.34
132.167	0.00	0.07	2.206	O				2.34
132.250	0.00	0.07	2.205	O				2.34
132.333	0.00	0.07	2.205	O				2.34
132.417	0.00	0.07	2.204	O				2.33
132.500	0.00	0.07	2.204	O				2.33
132.583	0.00	0.07	2.203	O				2.33
132.667	0.00	0.07	2.203	O				2.33
132.750	0.00	0.07	2.203	O				2.33
132.833	0.00	0.07	2.202	O				2.33
132.917	0.00	0.07	2.202	O				2.33
133.000	0.00	0.07	2.201	O				2.33
133.083	0.00	0.07	2.201	O				2.33
133.167	0.00	0.07	2.200	O				2.33
133.250	0.00	0.07	2.200	O				2.33
133.333	0.00	0.07	2.199	O				2.33
133.417	0.00	0.07	2.199	O				2.33
133.500	0.00	0.07	2.198	O				2.33
133.583	0.00	0.07	2.198	O				2.33
133.667	0.00	0.07	2.197	O				2.33
133.750	0.00	0.07	2.197	O				2.33
133.833	0.00	0.07	2.196	O				2.33
133.917	0.00	0.07	2.196	O				2.33
134.000	0.00	0.07	2.195	O				2.32
134.083	0.00	0.07	2.195	O				2.32
134.167	0.00	0.07	2.194	O				2.32
134.250	0.00	0.07	2.194	O				2.32
134.333	0.00	0.07	2.194	O				2.32
134.417	0.00	0.07	2.193	O				2.32
134.500	0.00	0.07	2.193	O				2.32
134.583	0.00	0.07	2.192	O				2.32
134.667	0.00	0.07	2.192	O				2.32
134.750	0.00	0.07	2.191	O				2.32
134.833	0.00	0.07	2.191	O				2.32
134.917	0.00	0.07	2.190	O				2.32
135.000	0.00	0.07	2.190	O				2.32
135.083	0.00	0.07	2.189	O				2.32
135.167	0.00	0.07	2.189	O				2.32
135.250	0.00	0.07	2.188	O				2.32
135.333	0.00	0.07	2.188	O				2.32
135.417	0.00	0.07	2.187	O				2.32
135.500	0.00	0.07	2.187	O				2.32

135.583	0.00	0.07	2.187	O					2.32
135.667	0.00	0.07	2.186	O					2.31
135.750	0.00	0.07	2.186	O					2.31
135.833	0.00	0.07	2.185	O					2.31
135.917	0.00	0.07	2.185	O					2.31
136.000	0.00	0.07	2.184	O					2.31
136.083	0.00	0.07	2.184	O					2.31
136.167	0.00	0.07	2.183	O					2.31
136.250	0.00	0.07	2.183	O					2.31
136.333	0.00	0.07	2.182	O					2.31
136.417	0.00	0.07	2.182	O					2.31
136.500	0.00	0.07	2.182	O					2.31
136.583	0.00	0.07	2.181	O					2.31
136.667	0.00	0.07	2.181	O					2.31
136.750	0.00	0.07	2.180	O					2.31
136.833	0.00	0.07	2.180	O					2.31
136.917	0.00	0.07	2.179	O					2.31
137.000	0.00	0.07	2.179	O					2.31
137.083	0.00	0.07	2.178	O					2.31
137.167	0.00	0.07	2.178	O					2.31
137.250	0.00	0.07	2.177	O					2.31
137.333	0.00	0.06	2.177	O					2.31
137.417	0.00	0.06	2.177	O					2.30
137.500	0.00	0.06	2.176	O					2.30
137.583	0.00	0.06	2.176	O					2.30
137.667	0.00	0.06	2.175	O					2.30
137.750	0.00	0.06	2.175	O					2.30
137.833	0.00	0.06	2.174	O					2.30
137.917	0.00	0.06	2.174	O					2.30
138.000	0.00	0.06	2.173	O					2.30
138.083	0.00	0.06	2.173	O					2.30
138.167	0.00	0.06	2.173	O					2.30
138.250	0.00	0.06	2.172	O					2.30
138.333	0.00	0.06	2.172	O					2.30
138.417	0.00	0.06	2.171	O					2.30
138.500	0.00	0.06	2.171	O					2.30
138.583	0.00	0.06	2.170	O					2.30
138.667	0.00	0.06	2.170	O					2.30
138.750	0.00	0.06	2.169	O					2.30
138.833	0.00	0.06	2.169	O					2.30
138.917	0.00	0.06	2.169	O					2.30
139.000	0.00	0.06	2.168	O					2.30
139.083	0.00	0.06	2.168	O					2.30
139.167	0.00	0.06	2.167	O					2.30
139.250	0.00	0.06	2.167	O					2.29
139.333	0.00	0.06	2.166	O					2.29
139.417	0.00	0.06	2.166	O					2.29
139.500	0.00	0.06	2.166	O					2.29
139.583	0.00	0.06	2.165	O					2.29
139.667	0.00	0.06	2.165	O					2.29

139.750	0.00	0.06	2.164	O				2.29
139.833	0.00	0.06	2.164	O				2.29
139.917	0.00	0.06	2.163	O				2.29
140.000	0.00	0.06	2.163	O				2.29
140.083	0.00	0.06	2.163	O				2.29
140.167	0.00	0.06	2.162	O				2.29
140.250	0.00	0.06	2.162	O				2.29
140.333	0.00	0.06	2.161	O				2.29
140.417	0.00	0.06	2.161	O				2.29
140.500	0.00	0.06	2.160	O				2.29
140.583	0.00	0.06	2.160	O				2.29
140.667	0.00	0.06	2.160	O				2.29
140.750	0.00	0.06	2.159	O				2.29
140.833	0.00	0.06	2.159	O				2.29
140.917	0.00	0.06	2.158	O				2.29
141.000	0.00	0.06	2.158	O				2.28
141.083	0.00	0.06	2.157	O				2.28
141.167	0.00	0.06	2.157	O				2.28
141.250	0.00	0.06	2.157	O				2.28
141.333	0.00	0.06	2.156	O				2.28
141.417	0.00	0.06	2.156	O				2.28
141.500	0.00	0.06	2.155	O				2.28
141.583	0.00	0.06	2.155	O				2.28
141.667	0.00	0.06	2.155	O				2.28
141.750	0.00	0.06	2.154	O				2.28
141.833	0.00	0.06	2.154	O				2.28
141.917	0.00	0.06	2.153	O				2.28
142.000	0.00	0.06	2.153	O				2.28
142.083	0.00	0.06	2.152	O				2.28
142.167	0.00	0.06	2.152	O				2.28
142.250	0.00	0.06	2.152	O				2.28
142.333	0.00	0.06	2.151	O				2.28
142.417	0.00	0.06	2.151	O				2.28
142.500	0.00	0.06	2.150	O				2.28
142.583	0.00	0.06	2.150	O				2.28
142.667	0.00	0.06	2.150	O				2.28
142.750	0.00	0.06	2.149	O				2.28
142.833	0.00	0.06	2.149	O				2.28
142.917	0.00	0.06	2.148	O				2.27
143.000	0.00	0.06	2.148	O				2.27
143.083	0.00	0.06	2.148	O				2.27
143.167	0.00	0.06	2.147	O				2.27
143.250	0.00	0.06	2.147	O				2.27
143.333	0.00	0.06	2.146	O				2.27
143.417	0.00	0.06	2.146	O				2.27
143.500	0.00	0.06	2.145	O				2.27
143.583	0.00	0.06	2.145	O				2.27
143.667	0.00	0.06	2.145	O				2.27
143.750	0.00	0.06	2.144	O				2.27
143.833	0.00	0.06	2.144	O				2.27

143.917	0.00	0.06	2.143	O				2.27
144.000	0.00	0.06	2.143	O				2.27
144.083	0.00	0.06	2.143	O				2.27
144.167	0.00	0.06	2.142	O				2.27
144.250	0.00	0.06	2.142	O				2.27
144.333	0.00	0.06	2.141	O				2.27
144.417	0.00	0.06	2.141	O				2.27
144.500	0.00	0.06	2.141	O				2.27
144.583	0.00	0.06	2.140	O				2.27
144.667	0.00	0.06	2.140	O				2.27
144.750	0.00	0.06	2.139	O				2.27
144.833	0.00	0.06	2.139	O				2.26
144.917	0.00	0.06	2.139	O				2.26
145.000	0.00	0.06	2.138	O				2.26
145.083	0.00	0.06	2.138	O				2.26
145.167	0.00	0.06	2.137	O				2.26
145.250	0.00	0.06	2.137	O				2.26
145.333	0.00	0.06	2.137	O				2.26
145.417	0.00	0.06	2.136	O				2.26
145.500	0.00	0.06	2.136	O				2.26
145.583	0.00	0.06	2.135	O				2.26
145.667	0.00	0.06	2.135	O				2.26
145.750	0.00	0.06	2.135	O				2.26
145.833	0.00	0.06	2.134	O				2.26
145.917	0.00	0.06	2.134	O				2.26
146.000	0.00	0.06	2.134	O				2.26
146.083	0.00	0.06	2.133	O				2.26
146.167	0.00	0.06	2.133	O				2.26
146.250	0.00	0.06	2.132	O				2.26
146.333	0.00	0.06	2.132	O				2.26
146.417	0.00	0.06	2.132	O				2.26
146.500	0.00	0.06	2.131	O				2.26
146.583	0.00	0.06	2.131	O				2.26
146.667	0.00	0.06	2.130	O				2.26
146.750	0.00	0.06	2.130	O				2.26
146.833	0.00	0.06	2.130	O				2.25
146.917	0.00	0.06	2.129	O				2.25
147.000	0.00	0.06	2.129	O				2.25
147.083	0.00	0.06	2.129	O				2.25
147.167	0.00	0.06	2.128	O				2.25
147.250	0.00	0.06	2.128	O				2.25
147.333	0.00	0.06	2.127	O				2.25
147.417	0.00	0.06	2.127	O				2.25
147.500	0.00	0.06	2.127	O				2.25
147.583	0.00	0.06	2.126	O				2.25
147.667	0.00	0.06	2.126	O				2.25
147.750	0.00	0.06	2.125	O				2.25
147.833	0.00	0.06	2.125	O				2.25
147.917	0.00	0.05	2.125	O				2.25
148.000	0.00	0.05	2.124	O				2.25

148.083	0.00	0.05	2.124	O				2.25
148.167	0.00	0.05	2.124	O				2.25
148.250	0.00	0.05	2.123	O				2.25
148.333	0.00	0.05	2.123	O				2.25
148.417	0.00	0.05	2.122	O				2.25
148.500	0.00	0.05	2.122	O				2.25
148.583	0.00	0.05	2.122	O				2.25
148.667	0.00	0.05	2.121	O				2.25
148.750	0.00	0.05	2.121	O				2.25
148.833	0.00	0.05	2.121	O				2.25
148.917	0.00	0.05	2.120	O				2.24
149.000	0.00	0.05	2.120	O				2.24
149.083	0.00	0.05	2.119	O				2.24
149.167	0.00	0.05	2.119	O				2.24
149.250	0.00	0.05	2.119	O				2.24
149.333	0.00	0.05	2.118	O				2.24
149.417	0.00	0.05	2.118	O				2.24
149.500	0.00	0.05	2.118	O				2.24
149.583	0.00	0.05	2.117	O				2.24
149.667	0.00	0.05	2.117	O				2.24
149.750	0.00	0.05	2.116	O				2.24
149.833	0.00	0.05	2.116	O				2.24
149.917	0.00	0.05	2.116	O				2.24
150.000	0.00	0.05	2.115	O				2.24
150.083	0.00	0.05	2.115	O				2.24
150.167	0.00	0.05	2.115	O				2.24
150.250	0.00	0.05	2.114	O				2.24
150.333	0.00	0.05	2.114	O				2.24
150.417	0.00	0.05	2.114	O				2.24
150.500	0.00	0.05	2.113	O				2.24
150.583	0.00	0.05	2.113	O				2.24
150.667	0.00	0.05	2.112	O				2.24
150.750	0.00	0.05	2.112	O				2.24
150.833	0.00	0.05	2.112	O				2.24
150.917	0.00	0.05	2.111	O				2.24
151.000	0.00	0.05	2.111	O				2.24
151.083	0.00	0.05	2.111	O				2.23
151.167	0.00	0.05	2.110	O				2.23
151.250	0.00	0.05	2.110	O				2.23
151.333	0.00	0.05	2.110	O				2.23
151.417	0.00	0.05	2.109	O				2.23
151.500	0.00	0.05	2.109	O				2.23
151.583	0.00	0.05	2.109	O				2.23
151.667	0.00	0.05	2.108	O				2.23
151.750	0.00	0.05	2.108	O				2.23
151.833	0.00	0.05	2.107	O				2.23
151.917	0.00	0.05	2.107	O				2.23
152.000	0.00	0.05	2.107	O				2.23
152.083	0.00	0.05	2.106	O				2.23
152.167	0.00	0.05	2.106	O				2.23

152.250	0.00	0.05	2.106	O				2.23
152.333	0.00	0.05	2.105	O				2.23
152.417	0.00	0.05	2.105	O				2.23
152.500	0.00	0.05	2.105	O				2.23
152.583	0.00	0.05	2.104	O				2.23
152.667	0.00	0.05	2.104	O				2.23
152.750	0.00	0.05	2.104	O				2.23
152.833	0.00	0.05	2.103	O				2.23
152.917	0.00	0.05	2.103	O				2.23
153.000	0.00	0.05	2.103	O				2.23
153.083	0.00	0.05	2.102	O				2.23
153.167	0.00	0.05	2.102	O				2.23
153.250	0.00	0.05	2.101	O				2.22
153.333	0.00	0.05	2.101	O				2.22
153.417	0.00	0.05	2.101	O				2.22
153.500	0.00	0.05	2.100	O				2.22
153.583	0.00	0.05	2.100	O				2.22
153.667	0.00	0.05	2.100	O				2.22
153.750	0.00	0.05	2.099	O				2.22
153.833	0.00	0.05	2.099	O				2.22
153.917	0.00	0.05	2.099	O				2.22
154.000	0.00	0.05	2.098	O				2.22
154.083	0.00	0.05	2.098	O				2.22
154.167	0.00	0.05	2.098	O				2.22
154.250	0.00	0.05	2.097	O				2.22
154.333	0.00	0.05	2.097	O				2.22
154.417	0.00	0.05	2.097	O				2.22
154.500	0.00	0.05	2.096	O				2.22
154.583	0.00	0.05	2.096	O				2.22
154.667	0.00	0.05	2.096	O				2.22
154.750	0.00	0.05	2.095	O				2.22
154.833	0.00	0.05	2.095	O				2.22
154.917	0.00	0.05	2.095	O				2.22
155.000	0.00	0.05	2.094	O				2.22
155.083	0.00	0.05	2.094	O				2.22
155.167	0.00	0.05	2.094	O				2.22
155.250	0.00	0.05	2.093	O				2.22
155.333	0.00	0.05	2.093	O				2.22
155.417	0.00	0.05	2.093	O				2.22
155.500	0.00	0.05	2.092	O				2.22
155.583	0.00	0.05	2.092	O				2.21
155.667	0.00	0.05	2.092	O				2.21
155.750	0.00	0.05	2.091	O				2.21
155.833	0.00	0.05	2.091	O				2.21
155.917	0.00	0.05	2.091	O				2.21
156.000	0.00	0.05	2.090	O				2.21
156.083	0.00	0.05	2.090	O				2.21
156.167	0.00	0.05	2.090	O				2.21
156.250	0.00	0.05	2.089	O				2.21
156.333	0.00	0.05	2.089	O				2.21

156.417	0.00	0.05	2.089	O					2.21
156.500	0.00	0.05	2.088	O					2.21
156.583	0.00	0.05	2.088	O					2.21
156.667	0.00	0.05	2.088	O					2.21
156.750	0.00	0.05	2.087	O					2.21
156.833	0.00	0.05	2.087	O					2.21
156.917	0.00	0.05	2.087	O					2.21
157.000	0.00	0.05	2.086	O					2.21
157.083	0.00	0.05	2.086	O					2.21
157.167	0.00	0.05	2.086	O					2.21
157.250	0.00	0.05	2.085	O					2.21
157.333	0.00	0.05	2.085	O					2.21
157.417	0.00	0.05	2.085	O					2.21
157.500	0.00	0.05	2.084	O					2.21
157.583	0.00	0.05	2.084	O					2.21
157.667	0.00	0.05	2.084	O					2.21
157.750	0.00	0.05	2.083	O					2.21
157.833	0.00	0.05	2.083	O					2.21
157.917	0.00	0.05	2.083	O					2.21
158.000	0.00	0.05	2.082	O					2.20
158.083	0.00	0.05	2.082	O					2.20
158.167	0.00	0.05	2.082	O					2.20
158.250	0.00	0.05	2.081	O					2.20
158.333	0.00	0.05	2.081	O					2.20
158.417	0.00	0.05	2.081	O					2.20
158.500	0.00	0.05	2.080	O					2.20
158.583	0.00	0.05	2.080	O					2.20
158.667	0.00	0.05	2.080	O					2.20
158.750	0.00	0.05	2.079	O					2.20
158.833	0.00	0.05	2.079	O					2.20
158.917	0.00	0.05	2.079	O					2.20
159.000	0.00	0.05	2.079	O					2.20
159.083	0.00	0.05	2.078	O					2.20
159.167	0.00	0.05	2.078	O					2.20
159.250	0.00	0.05	2.078	O					2.20
159.333	0.00	0.05	2.077	O					2.20
159.417	0.00	0.05	2.077	O					2.20
159.500	0.00	0.05	2.077	O					2.20
159.583	0.00	0.05	2.076	O					2.20
159.667	0.00	0.05	2.076	O					2.20
159.750	0.00	0.05	2.076	O					2.20
159.833	0.00	0.05	2.075	O					2.20
159.917	0.00	0.05	2.075	O					2.20
160.000	0.00	0.05	2.075	O					2.20
160.083	0.00	0.05	2.074	O					2.20
160.167	0.00	0.05	2.074	O					2.20
160.250	0.00	0.05	2.074	O					2.20
160.333	0.00	0.05	2.074	O					2.20
160.417	0.00	0.05	2.073	O					2.19
160.500	0.00	0.05	2.073	O					2.19

160.583	0.00	0.04	2.073	O				2.19
160.667	0.00	0.04	2.072	O				2.19
160.750	0.00	0.04	2.072	O				2.19
160.833	0.00	0.04	2.072	O				2.19
160.917	0.00	0.04	2.071	O				2.19
161.000	0.00	0.04	2.071	O				2.19
161.083	0.00	0.04	2.071	O				2.19
161.167	0.00	0.04	2.070	O				2.19
161.250	0.00	0.04	2.070	O				2.19
161.333	0.00	0.04	2.070	O				2.19
161.417	0.00	0.04	2.070	O				2.19
161.500	0.00	0.04	2.069	O				2.19
161.583	0.00	0.04	2.069	O				2.19
161.667	0.00	0.04	2.069	O				2.19
161.750	0.00	0.04	2.068	O				2.19
161.833	0.00	0.04	2.068	O				2.19
161.917	0.00	0.04	2.068	O				2.19
162.000	0.00	0.04	2.067	O				2.19
162.083	0.00	0.04	2.067	O				2.19
162.167	0.00	0.04	2.067	O				2.19
162.250	0.00	0.04	2.066	O				2.19
162.333	0.00	0.04	2.066	O				2.19
162.417	0.00	0.04	2.066	O				2.19
162.500	0.00	0.04	2.066	O				2.19
162.583	0.00	0.04	2.065	O				2.19
162.667	0.00	0.04	2.065	O				2.19
162.750	0.00	0.04	2.065	O				2.19
162.833	0.00	0.04	2.064	O				2.19
162.917	0.00	0.04	2.064	O				2.19
163.000	0.00	0.04	2.064	O				2.18
163.083	0.00	0.04	2.063	O				2.18
163.167	0.00	0.04	2.063	O				2.18
163.250	0.00	0.04	2.063	O				2.18
163.333	0.00	0.04	2.063	O				2.18
163.417	0.00	0.04	2.062	O				2.18
163.500	0.00	0.04	2.062	O				2.18
163.583	0.00	0.04	2.062	O				2.18
163.667	0.00	0.04	2.061	O				2.18
163.750	0.00	0.04	2.061	O				2.18
163.833	0.00	0.04	2.061	O				2.18
163.917	0.00	0.04	2.061	O				2.18
164.000	0.00	0.04	2.060	O				2.18
164.083	0.00	0.04	2.060	O				2.18
164.167	0.00	0.04	2.060	O				2.18
164.250	0.00	0.04	2.059	O				2.18
164.333	0.00	0.04	2.059	O				2.18
164.417	0.00	0.04	2.059	O				2.18
164.500	0.00	0.04	2.058	O				2.18
164.583	0.00	0.04	2.058	O				2.18
164.667	0.00	0.04	2.058	O				2.18

164.750	0.00	0.04	2.058	O				2.18
164.833	0.00	0.04	2.057	O				2.18
164.917	0.00	0.04	2.057	O				2.18
165.000	0.00	0.04	2.057	O				2.18
165.083	0.00	0.04	2.056	O				2.18
165.167	0.00	0.04	2.056	O				2.18
165.250	0.00	0.04	2.056	O				2.18
165.333	0.00	0.04	2.056	O				2.18
165.417	0.00	0.04	2.055	O				2.18
165.500	0.00	0.04	2.055	O				2.18
165.583	0.00	0.04	2.055	O				2.18
165.667	0.00	0.04	2.054	O				2.17
165.750	0.00	0.04	2.054	O				2.17
165.833	0.00	0.04	2.054	O				2.17
165.917	0.00	0.04	2.054	O				2.17
166.000	0.00	0.04	2.053	O				2.17
166.083	0.00	0.04	2.053	O				2.17
166.167	0.00	0.04	2.053	O				2.17
166.250	0.00	0.04	2.052	O				2.17
166.333	0.00	0.04	2.052	O				2.17
166.417	0.00	0.04	2.052	O				2.17
166.500	0.00	0.04	2.052	O				2.17
166.583	0.00	0.04	2.051	O				2.17
166.667	0.00	0.04	2.051	O				2.17
166.750	0.00	0.04	2.051	O				2.17
166.833	0.00	0.04	2.050	O				2.17
166.917	0.00	0.04	2.050	O				2.17
167.000	0.00	0.04	2.050	O				2.17
167.083	0.00	0.04	2.050	O				2.17
167.167	0.00	0.04	2.049	O				2.17
167.250	0.00	0.04	2.049	O				2.17
167.333	0.00	0.04	2.049	O				2.17
167.417	0.00	0.04	2.049	O				2.17
167.500	0.00	0.04	2.048	O				2.17
167.583	0.00	0.04	2.048	O				2.17
167.667	0.00	0.04	2.048	O				2.17
167.750	0.00	0.04	2.047	O				2.17
167.833	0.00	0.04	2.047	O				2.17
167.917	0.00	0.04	2.047	O				2.17
168.000	0.00	0.04	2.047	O				2.17
168.083	0.00	0.04	2.046	O				2.17
168.167	0.00	0.04	2.046	O				2.17
168.250	0.00	0.04	2.046	O				2.17
168.333	0.00	0.04	2.045	O				2.17
168.417	0.00	0.04	2.045	O				2.17
168.500	0.00	0.04	2.045	O				2.16
168.583	0.00	0.04	2.045	O				2.16
168.667	0.00	0.04	2.044	O				2.16
168.750	0.00	0.04	2.044	O				2.16
168.833	0.00	0.04	2.044	O				2.16

168.917	0.00	0.04	2.044	O					2.16
169.000	0.00	0.04	2.043	O					2.16
169.083	0.00	0.04	2.043	O					2.16
169.167	0.00	0.04	2.043	O					2.16
169.250	0.00	0.04	2.042	O					2.16
169.333	0.00	0.04	2.042	O					2.16
169.417	0.00	0.04	2.042	O					2.16
169.500	0.00	0.04	2.042	O					2.16
169.583	0.00	0.04	2.041	O					2.16
169.667	0.00	0.04	2.041	O					2.16
169.750	0.00	0.04	2.041	O					2.16
169.833	0.00	0.04	2.041	O					2.16
169.917	0.00	0.04	2.040	O					2.16
170.000	0.00	0.04	2.040	O					2.16
170.083	0.00	0.04	2.040	O					2.16
170.167	0.00	0.04	2.040	O					2.16
170.250	0.00	0.04	2.039	O					2.16
170.333	0.00	0.04	2.039	O					2.16
170.417	0.00	0.04	2.039	O					2.16
170.500	0.00	0.04	2.038	O					2.16
170.583	0.00	0.04	2.038	O					2.16
170.667	0.00	0.04	2.038	O					2.16
170.750	0.00	0.04	2.038	O					2.16
170.833	0.00	0.04	2.037	O					2.16
170.917	0.00	0.04	2.037	O					2.16
171.000	0.00	0.04	2.037	O					2.16
171.083	0.00	0.04	2.037	O					2.16
171.167	0.00	0.04	2.036	O					2.16
171.250	0.00	0.04	2.036	O					2.16
171.333	0.00	0.04	2.036	O					2.16
171.417	0.00	0.04	2.036	O					2.15
171.500	0.00	0.04	2.035	O					2.15
171.583	0.00	0.04	2.035	O					2.15
171.667	0.00	0.04	2.035	O					2.15
171.750	0.00	0.04	2.035	O					2.15
171.833	0.00	0.04	2.034	O					2.15
171.917	0.00	0.04	2.034	O					2.15
172.000	0.00	0.04	2.034	O					2.15
172.083	0.00	0.04	2.034	O					2.15
172.167	0.00	0.04	2.033	O					2.15
172.250	0.00	0.04	2.033	O					2.15
172.333	0.00	0.04	2.033	O					2.15
172.417	0.00	0.04	2.032	O					2.15
172.500	0.00	0.04	2.032	O					2.15
172.583	0.00	0.04	2.032	O					2.15
172.667	0.00	0.04	2.032	O					2.15
172.750	0.00	0.04	2.031	O					2.15
172.833	0.00	0.04	2.031	O					2.15
172.917	0.00	0.04	2.031	O					2.15
173.000	0.00	0.04	2.031	O					2.15

173.083	0.00	0.04	2.030	O				2.15
173.167	0.00	0.04	2.030	O				2.15
173.250	0.00	0.04	2.030	O				2.15
173.333	0.00	0.04	2.030	O				2.15
173.417	0.00	0.04	2.029	O				2.15
173.500	0.00	0.04	2.029	O				2.15
173.583	0.00	0.04	2.029	O				2.15
173.667	0.00	0.04	2.029	O				2.15
173.750	0.00	0.04	2.028	O				2.15
173.833	0.00	0.04	2.028	O				2.15
173.917	0.00	0.04	2.028	O				2.15
174.000	0.00	0.04	2.028	O				2.15
174.083	0.00	0.04	2.027	O				2.15
174.167	0.00	0.04	2.027	O				2.15
174.250	0.00	0.04	2.027	O				2.15
174.333	0.00	0.04	2.027	O				2.15
174.417	0.00	0.04	2.026	O				2.15
174.500	0.00	0.04	2.026	O				2.14
174.583	0.00	0.04	2.026	O				2.14
174.667	0.00	0.04	2.026	O				2.14
174.750	0.00	0.04	2.025	O				2.14
174.833	0.00	0.04	2.025	O				2.14
174.917	0.00	0.04	2.025	O				2.14
175.000	0.00	0.04	2.025	O				2.14
175.083	0.00	0.04	2.024	O				2.14
175.167	0.00	0.04	2.024	O				2.14
175.250	0.00	0.04	2.024	O				2.14
175.333	0.00	0.04	2.024	O				2.14
175.417	0.00	0.04	2.023	O				2.14
175.500	0.00	0.04	2.023	O				2.14
175.583	0.00	0.04	2.023	O				2.14
175.667	0.00	0.04	2.023	O				2.14
175.750	0.00	0.04	2.022	O				2.14
175.833	0.00	0.04	2.022	O				2.14
175.917	0.00	0.04	2.022	O				2.14
176.000	0.00	0.04	2.022	O				2.14
176.083	0.00	0.04	2.022	O				2.14
176.167	0.00	0.04	2.021	O				2.14
176.250	0.00	0.04	2.021	O				2.14
176.333	0.00	0.04	2.021	O				2.14
176.417	0.00	0.03	2.021	O				2.14
176.500	0.00	0.03	2.020	O				2.14
176.583	0.00	0.03	2.020	O				2.14
176.667	0.00	0.03	2.020	O				2.14
176.750	0.00	0.03	2.020	O				2.14
176.833	0.00	0.03	2.019	O				2.14
176.917	0.00	0.03	2.019	O				2.14
177.000	0.00	0.03	2.019	O				2.14
177.083	0.00	0.03	2.019	O				2.14
177.167	0.00	0.03	2.018	O				2.14

177.250	0.00	0.03	2.018	O				2.14
177.333	0.00	0.03	2.018	O				2.14
177.417	0.00	0.03	2.018	O				2.14
177.500	0.00	0.03	2.017	O				2.14
177.583	0.00	0.03	2.017	O				2.14
177.667	0.00	0.03	2.017	O				2.14
177.750	0.00	0.03	2.017	O				2.13
177.833	0.00	0.03	2.016	O				2.13
177.917	0.00	0.03	2.016	O				2.13
178.000	0.00	0.03	2.016	O				2.13
178.083	0.00	0.03	2.016	O				2.13
178.167	0.00	0.03	2.016	O				2.13
178.250	0.00	0.03	2.015	O				2.13
178.333	0.00	0.03	2.015	O				2.13
178.417	0.00	0.03	2.015	O				2.13
178.500	0.00	0.03	2.015	O				2.13
178.583	0.00	0.03	2.014	O				2.13
178.667	0.00	0.03	2.014	O				2.13
178.750	0.00	0.03	2.014	O				2.13
178.833	0.00	0.03	2.014	O				2.13
178.917	0.00	0.03	2.013	O				2.13
179.000	0.00	0.03	2.013	O				2.13
179.083	0.00	0.03	2.013	O				2.13
179.167	0.00	0.03	2.013	O				2.13
179.250	0.00	0.03	2.013	O				2.13
179.333	0.00	0.03	2.012	O				2.13
179.417	0.00	0.03	2.012	O				2.13
179.500	0.00	0.03	2.012	O				2.13
179.583	0.00	0.03	2.012	O				2.13
179.667	0.00	0.03	2.011	O				2.13
179.750	0.00	0.03	2.011	O				2.13
179.833	0.00	0.03	2.011	O				2.13
179.917	0.00	0.03	2.011	O				2.13
180.000	0.00	0.03	2.010	O				2.13
180.083	0.00	0.03	2.010	O				2.13
180.167	0.00	0.03	2.010	O				2.13
180.250	0.00	0.03	2.010	O				2.13
180.333	0.00	0.03	2.010	O				2.13
180.417	0.00	0.03	2.009	O				2.13
180.500	0.00	0.03	2.009	O				2.13
180.583	0.00	0.03	2.009	O				2.13
180.667	0.00	0.03	2.009	O				2.13
180.750	0.00	0.03	2.008	O				2.13
180.833	0.00	0.03	2.008	O				2.13
180.917	0.00	0.03	2.008	O				2.13
181.000	0.00	0.03	2.008	O				2.13
181.083	0.00	0.03	2.008	O				2.13
181.167	0.00	0.03	2.007	O				2.12
181.250	0.00	0.03	2.007	O				2.12
181.333	0.00	0.03	2.007	O				2.12

181.417	0.00	0.03	2.007	O					2.12
181.500	0.00	0.03	2.006	O					2.12
181.583	0.00	0.03	2.006	O					2.12
181.667	0.00	0.03	2.006	O					2.12
181.750	0.00	0.03	2.006	O					2.12
181.833	0.00	0.03	2.006	O					2.12
181.917	0.00	0.03	2.005	O					2.12
182.000	0.00	0.03	2.005	O					2.12
182.083	0.00	0.03	2.005	O					2.12
182.167	0.00	0.03	2.005	O					2.12
182.250	0.00	0.03	2.004	O					2.12
182.333	0.00	0.03	2.004	O					2.12
182.417	0.00	0.03	2.004	O					2.12
182.500	0.00	0.03	2.004	O					2.12
182.583	0.00	0.03	2.004	O					2.12
182.667	0.00	0.03	2.003	O					2.12
182.750	0.00	0.03	2.003	O					2.12
182.833	0.00	0.03	2.003	O					2.12
182.917	0.00	0.03	2.003	O					2.12
183.000	0.00	0.03	2.002	O					2.12
183.083	0.00	0.03	2.002	O					2.12
183.167	0.00	0.03	2.002	O					2.12
183.250	0.00	0.03	2.002	O					2.12
183.333	0.00	0.03	2.002	O					2.12
183.417	0.00	0.03	2.001	O					2.12
183.500	0.00	0.03	2.001	O					2.12
183.583	0.00	0.03	2.001	O					2.12
183.667	0.00	0.03	2.001	O					2.12
183.750	0.00	0.03	2.001	O					2.12
183.833	0.00	0.03	2.000	O					2.12
183.917	0.00	0.03	2.000	O					2.12
184.000	0.00	0.03	2.000	O					2.12
184.083	0.00	0.03	2.000	O					2.12
184.167	0.00	0.03	1.999	O					2.12
184.250	0.00	0.03	1.999	O					2.12
184.333	0.00	0.03	1.999	O					2.12
184.417	0.00	0.03	1.999	O					2.12
184.500	0.00	0.03	1.999	O					2.12
184.583	0.00	0.03	1.998	O					2.12
184.667	0.00	0.03	1.998	O					2.12
184.750	0.00	0.03	1.998	O					2.11
184.833	0.00	0.03	1.998	O					2.11
184.917	0.00	0.03	1.998	O					2.11
185.000	0.00	0.03	1.997	O					2.11
185.083	0.00	0.03	1.997	O					2.11
185.167	0.00	0.03	1.997	O					2.11
185.250	0.00	0.03	1.997	O					2.11
185.333	0.00	0.03	1.996	O					2.11
185.417	0.00	0.03	1.996	O					2.11
185.500	0.00	0.03	1.996	O					2.11

185.583	0.00	0.03	1.996	O				2.11
185.667	0.00	0.03	1.996	O				2.11
185.750	0.00	0.03	1.995	O				2.11
185.833	0.00	0.03	1.995	O				2.11
185.917	0.00	0.03	1.995	O				2.11
186.000	0.00	0.03	1.995	O				2.11
186.083	0.00	0.03	1.995	O				2.11
186.167	0.00	0.03	1.994	O				2.11
186.250	0.00	0.03	1.994	O				2.11
186.333	0.00	0.03	1.994	O				2.11
186.417	0.00	0.03	1.994	O				2.11
186.500	0.00	0.03	1.994	O				2.11
186.583	0.00	0.03	1.993	O				2.11
186.667	0.00	0.03	1.993	O				2.11
186.750	0.00	0.03	1.993	O				2.11
186.833	0.00	0.03	1.993	O				2.11
186.917	0.00	0.03	1.993	O				2.11
187.000	0.00	0.03	1.992	O				2.11
187.083	0.00	0.03	1.992	O				2.11
187.167	0.00	0.03	1.992	O				2.11
187.250	0.00	0.03	1.992	O				2.11
187.333	0.00	0.03	1.992	O				2.11
187.417	0.00	0.03	1.991	O				2.11
187.500	0.00	0.03	1.991	O				2.11
187.583	0.00	0.03	1.991	O				2.11
187.667	0.00	0.03	1.991	O				2.11
187.750	0.00	0.03	1.991	O				2.11
187.833	0.00	0.03	1.990	O				2.11
187.917	0.00	0.03	1.990	O				2.11
188.000	0.00	0.03	1.990	O				2.11
188.083	0.00	0.03	1.990	O				2.11
188.167	0.00	0.03	1.990	O				2.11
188.250	0.00	0.03	1.989	O				2.11
188.333	0.00	0.03	1.989	O				2.11
188.417	0.00	0.03	1.989	O				2.11
188.500	0.00	0.03	1.989	O				2.11
188.583	0.00	0.03	1.989	O				2.10
188.667	0.00	0.03	1.988	O				2.10
188.750	0.00	0.03	1.988	O				2.10
188.833	0.00	0.03	1.988	O				2.10
188.917	0.00	0.03	1.988	O				2.10
189.000	0.00	0.03	1.988	O				2.10
189.083	0.00	0.03	1.987	O				2.10
189.167	0.00	0.03	1.987	O				2.10
189.250	0.00	0.03	1.987	O				2.10
189.333	0.00	0.03	1.987	O				2.10
189.417	0.00	0.03	1.987	O				2.10
189.500	0.00	0.03	1.986	O				2.10
189.583	0.00	0.03	1.986	O				2.10
189.667	0.00	0.03	1.986	O				2.10

189.750	0.00	0.03	1.986	O				2.10
189.833	0.00	0.03	1.986	O				2.10
189.917	0.00	0.03	1.985	O				2.10
190.000	0.00	0.03	1.985	O				2.10
190.083	0.00	0.03	1.985	O				2.10
190.167	0.00	0.03	1.985	O				2.10
190.250	0.00	0.03	1.985	O				2.10
190.333	0.00	0.03	1.984	O				2.10
190.417	0.00	0.03	1.984	O				2.10
190.500	0.00	0.03	1.984	O				2.10
190.583	0.00	0.03	1.984	O				2.10
190.667	0.00	0.03	1.984	O				2.10
190.750	0.00	0.03	1.983	O				2.10
190.833	0.00	0.03	1.983	O				2.10
190.917	0.00	0.03	1.983	O				2.10
191.000	0.00	0.03	1.983	O				2.10
191.083	0.00	0.03	1.983	O				2.10
191.167	0.00	0.03	1.982	O				2.10
191.250	0.00	0.03	1.982	O				2.10
191.333	0.00	0.03	1.982	O				2.10
191.417	0.00	0.03	1.982	O				2.10
191.500	0.00	0.03	1.982	O				2.10
191.583	0.00	0.03	1.982	O				2.10
191.667	0.00	0.03	1.981	O				2.10
191.750	0.00	0.03	1.981	O				2.10
191.833	0.00	0.03	1.981	O				2.10
191.917	0.00	0.03	1.981	O				2.10
192.000	0.00	0.03	1.981	O				2.10
192.083	0.00	0.03	1.980	O				2.10
192.167	0.00	0.03	1.980	O				2.10
192.250	0.00	0.03	1.980	O				2.10
192.333	0.00	0.03	1.980	O				2.10
192.417	0.00	0.03	1.980	O				2.10
192.500	0.00	0.03	1.979	O				2.10
192.583	0.00	0.03	1.979	O				2.09
192.667	0.00	0.03	1.979	O				2.09
192.750	0.00	0.03	1.979	O				2.09
192.833	0.00	0.03	1.979	O				2.09
192.917	0.00	0.03	1.979	O				2.09
193.000	0.00	0.03	1.978	O				2.09
193.083	0.00	0.03	1.978	O				2.09
193.167	0.00	0.03	1.978	O				2.09
193.250	0.00	0.03	1.978	O				2.09
193.333	0.00	0.03	1.978	O				2.09
193.417	0.00	0.03	1.977	O				2.09
193.500	0.00	0.03	1.977	O				2.09
193.583	0.00	0.03	1.977	O				2.09
193.667	0.00	0.03	1.977	O				2.09
193.750	0.00	0.03	1.977	O				2.09
193.833	0.00	0.03	1.977	O				2.09

193.917	0.00	0.03	1.976	O				2.09
194.000	0.00	0.03	1.976	O				2.09
194.083	0.00	0.03	1.976	O				2.09
194.167	0.00	0.03	1.976	O				2.09
194.250	0.00	0.03	1.976	O				2.09
194.333	0.00	0.03	1.975	O				2.09
194.417	0.00	0.03	1.975	O				2.09
194.500	0.00	0.03	1.975	O				2.09
194.583	0.00	0.03	1.975	O				2.09
194.667	0.00	0.03	1.975	O				2.09
194.750	0.00	0.03	1.975	O				2.09
194.833	0.00	0.03	1.974	O				2.09
194.917	0.00	0.03	1.974	O				2.09
195.000	0.00	0.03	1.974	O				2.09
195.083	0.00	0.03	1.974	O				2.09
195.167	0.00	0.03	1.974	O				2.09
195.250	0.00	0.03	1.973	O				2.09
195.333	0.00	0.03	1.973	O				2.09
195.417	0.00	0.03	1.973	O				2.09
195.500	0.00	0.03	1.973	O				2.09
195.583	0.00	0.03	1.973	O				2.09
195.667	0.00	0.03	1.973	O				2.09
195.750	0.00	0.03	1.972	O				2.09
195.833	0.00	0.03	1.972	O				2.09
195.917	0.00	0.03	1.972	O				2.09
196.000	0.00	0.03	1.972	O				2.09
196.083	0.00	0.03	1.972	O				2.09
196.167	0.00	0.03	1.971	O				2.09
196.250	0.00	0.03	1.971	O				2.09
196.333	0.00	0.03	1.971	O				2.09
196.417	0.00	0.03	1.971	O				2.09
196.500	0.00	0.03	1.971	O				2.09
196.583	0.00	0.03	1.971	O				2.09
196.667	0.00	0.03	1.970	O				2.09
196.750	0.00	0.03	1.970	O				2.09
196.833	0.00	0.03	1.970	O				2.09
196.917	0.00	0.03	1.970	O				2.09
197.000	0.00	0.03	1.970	O				2.08
197.083	0.00	0.03	1.970	O				2.08
197.167	0.00	0.03	1.969	O				2.08
197.250	0.00	0.03	1.969	O				2.08
197.333	0.00	0.03	1.969	O				2.08
197.417	0.00	0.03	1.969	O				2.08
197.500	0.00	0.03	1.969	O				2.08
197.583	0.00	0.03	1.969	O				2.08
197.667	0.00	0.03	1.968	O				2.08
197.750	0.00	0.02	1.968	O				2.08
197.833	0.00	0.02	1.968	O				2.08
197.917	0.00	0.02	1.968	O				2.08
198.000	0.00	0.02	1.968	O				2.08

198.083	0.00	0.02	1.967	O				2.08
198.167	0.00	0.02	1.967	O				2.08
198.250	0.00	0.02	1.967	O				2.08
198.333	0.00	0.02	1.967	O				2.08
198.417	0.00	0.02	1.967	O				2.08
198.500	0.00	0.02	1.967	O				2.08
198.583	0.00	0.02	1.966	O				2.08
198.667	0.00	0.02	1.966	O				2.08
198.750	0.00	0.02	1.966	O				2.08
198.833	0.00	0.02	1.966	O				2.08
198.917	0.00	0.02	1.966	O				2.08
199.000	0.00	0.02	1.966	O				2.08
199.083	0.00	0.02	1.965	O				2.08
199.167	0.00	0.02	1.965	O				2.08
199.250	0.00	0.02	1.965	O				2.08
199.333	0.00	0.02	1.965	O				2.08
199.417	0.00	0.02	1.965	O				2.08
199.500	0.00	0.02	1.965	O				2.08
199.583	0.00	0.02	1.964	O				2.08
199.667	0.00	0.02	1.964	O				2.08
199.750	0.00	0.02	1.964	O				2.08
199.833	0.00	0.02	1.964	O				2.08
199.917	0.00	0.02	1.964	O				2.08
200.000	0.00	0.02	1.964	O				2.08
200.083	0.00	0.02	1.963	O				2.08
200.167	0.00	0.02	1.963	O				2.08
200.250	0.00	0.02	1.963	O				2.08
200.333	0.00	0.02	1.963	O				2.08
200.417	0.00	0.02	1.963	O				2.08
200.500	0.00	0.02	1.963	O				2.08
200.583	0.00	0.02	1.962	O				2.08
200.667	0.00	0.02	1.962	O				2.08
200.750	0.00	0.02	1.962	O				2.08
200.833	0.00	0.02	1.962	O				2.08
200.917	0.00	0.02	1.962	O				2.08
201.000	0.00	0.02	1.962	O				2.08
201.083	0.00	0.02	1.961	O				2.08
201.167	0.00	0.02	1.961	O				2.08
201.250	0.00	0.02	1.961	O				2.08
201.333	0.00	0.02	1.961	O				2.08
201.417	0.00	0.02	1.961	O				2.08
201.500	0.00	0.02	1.961	O				2.08
201.583	0.00	0.02	1.960	O				2.07
201.667	0.00	0.02	1.960	O				2.07
201.750	0.00	0.02	1.960	O				2.07
201.833	0.00	0.02	1.960	O				2.07
201.917	0.00	0.02	1.960	O				2.07
202.000	0.00	0.02	1.960	O				2.07
202.083	0.00	0.02	1.960	O				2.07
202.167	0.00	0.02	1.959	O				2.07

202.250	0.00	0.02	1.959	O	|	|	|	2.07
202.333	0.00	0.02	1.959	O	|	|	|	2.07
202.417	0.00	0.02	1.959	O	|	|	|	2.07
202.500	0.00	0.02	1.959	O	|	|	|	2.07
202.583	0.00	0.02	1.959	O	|	|	|	2.07
202.667	0.00	0.02	1.958	O	|	|	|	2.07
202.750	0.00	0.02	1.958	O	|	|	|	2.07
202.833	0.00	0.02	1.958	O	|	|	|	2.07
202.917	0.00	0.02	1.958	O	|	|	|	2.07
203.000	0.00	0.02	1.958	O	|	|	|	2.07
203.083	0.00	0.02	1.958	O	|	|	|	2.07
203.167	0.00	0.02	1.957	O	|	|	|	2.07
203.250	0.00	0.02	1.957	O	|	|	|	2.07
203.333	0.00	0.02	1.957	O	|	|	|	2.07
203.417	0.00	0.02	1.957	O	|	|	|	2.07
203.500	0.00	0.02	1.957	O	|	|	|	2.07
203.583	0.00	0.02	1.957	O	|	|	|	2.07
203.667	0.00	0.02	1.957	O	|	|	|	2.07
203.750	0.00	0.02	1.956	O	|	|	|	2.07
203.833	0.00	0.02	1.956	O	|	|	|	2.07
203.917	0.00	0.02	1.956	O	|	|	|	2.07
204.000	0.00	0.02	1.956	O	|	|	|	2.07
204.083	0.00	0.02	1.956	O	|	|	|	2.07
204.167	0.00	0.02	1.956	O	|	|	|	2.07
204.250	0.00	0.02	1.955	O	|	|	|	2.07
204.333	0.00	0.02	1.955	O	|	|	|	2.07
204.417	0.00	0.02	1.955	O	|	|	|	2.07
204.500	0.00	0.02	1.955	O	|	|	|	2.07
204.583	0.00	0.02	1.955	O	|	|	|	2.07
204.667	0.00	0.02	1.955	O	|	|	|	2.07
204.750	0.00	0.02	1.954	O	|	|	|	2.07
204.833	0.00	0.02	1.954	O	|	|	|	2.07
204.917	0.00	0.02	1.954	O	|	|	|	2.07
205.000	0.00	0.02	1.954	O	|	|	|	2.07
205.083	0.00	0.02	1.954	O	|	|	|	2.07
205.167	0.00	0.02	1.954	O	|	|	|	2.07
205.250	0.00	0.02	1.954	O	|	|	|	2.07
205.333	0.00	0.02	1.953	O	|	|	|	2.07
205.417	0.00	0.02	1.953	O	|	|	|	2.07
205.500	0.00	0.02	1.953	O	|	|	|	2.07
205.583	0.00	0.02	1.953	O	|	|	|	2.07
205.667	0.00	0.02	1.953	O	|	|	|	2.07
205.750	0.00	0.02	1.953	O	|	|	|	2.07
205.833	0.00	0.02	1.953	O	|	|	|	2.07
205.917	0.00	0.02	1.952	O	|	|	|	2.07
206.000	0.00	0.02	1.952	O	|	|	|	2.07
206.083	0.00	0.02	1.952	O	|	|	|	2.07
206.167	0.00	0.02	1.952	O	|	|	|	2.07
206.250	0.00	0.02	1.952	O	|	|	|	2.07
206.333	0.00	0.02	1.952	O	|	|	|	2.07

206.417	0.00	0.02	1.951	O	|	|	|	2.07
206.500	0.00	0.02	1.951	O	|	|	|	2.07
206.583	0.00	0.02	1.951	O	|	|	|	2.07
206.667	0.00	0.02	1.951	O	|	|	|	2.06
206.750	0.00	0.02	1.951	O	|	|	|	2.06
206.833	0.00	0.02	1.951	O	|	|	|	2.06
206.917	0.00	0.02	1.951	O	|	|	|	2.06
207.000	0.00	0.02	1.950	O	|	|	|	2.06
207.083	0.00	0.02	1.950	O	|	|	|	2.06
207.167	0.00	0.02	1.950	O	|	|	|	2.06
207.250	0.00	0.02	1.950	O	|	|	|	2.06
207.333	0.00	0.02	1.950	O	|	|	|	2.06
207.417	0.00	0.02	1.950	O	|	|	|	2.06
207.500	0.00	0.02	1.950	O	|	|	|	2.06
207.583	0.00	0.02	1.949	O	|	|	|	2.06
207.667	0.00	0.02	1.949	O	|	|	|	2.06
207.750	0.00	0.02	1.949	O	|	|	|	2.06
207.833	0.00	0.02	1.949	O	|	|	|	2.06
207.917	0.00	0.02	1.949	O	|	|	|	2.06
208.000	0.00	0.02	1.949	O	|	|	|	2.06
208.083	0.00	0.02	1.949	O	|	|	|	2.06
208.167	0.00	0.02	1.948	O	|	|	|	2.06
208.250	0.00	0.02	1.948	O	|	|	|	2.06
208.333	0.00	0.02	1.948	O	|	|	|	2.06
208.417	0.00	0.02	1.948	O	|	|	|	2.06
208.500	0.00	0.02	1.948	O	|	|	|	2.06
208.583	0.00	0.02	1.948	O	|	|	|	2.06
208.667	0.00	0.02	1.947	O	|	|	|	2.06
208.750	0.00	0.02	1.947	O	|	|	|	2.06
208.833	0.00	0.02	1.947	O	|	|	|	2.06
208.917	0.00	0.02	1.947	O	|	|	|	2.06
209.000	0.00	0.02	1.947	O	|	|	|	2.06
209.083	0.00	0.02	1.947	O	|	|	|	2.06
209.167	0.00	0.02	1.947	O	|	|	|	2.06
209.250	0.00	0.02	1.946	O	|	|	|	2.06
209.333	0.00	0.02	1.946	O	|	|	|	2.06
209.417	0.00	0.02	1.946	O	|	|	|	2.06
209.500	0.00	0.02	1.946	O	|	|	|	2.06
209.583	0.00	0.02	1.946	O	|	|	|	2.06
209.667	0.00	0.02	1.946	O	|	|	|	2.06
209.750	0.00	0.02	1.946	O	|	|	|	2.06
209.833	0.00	0.02	1.945	O	|	|	|	2.06
209.917	0.00	0.02	1.945	O	|	|	|	2.06
210.000	0.00	0.02	1.945	O	|	|	|	2.06
210.083	0.00	0.02	1.945	O	|	|	|	2.06
210.167	0.00	0.02	1.945	O	|	|	|	2.06
210.250	0.00	0.02	1.945	O	|	|	|	2.06
210.333	0.00	0.02	1.945	O	|	|	|	2.06
210.417	0.00	0.02	1.944	O	|	|	|	2.06
210.500	0.00	0.02	1.944	O	|	|	|	2.06

210.583	0.00	0.02	1.944	O	|	|	|	2.06
210.667	0.00	0.02	1.944	O	|	|	|	2.06
210.750	0.00	0.02	1.944	O	|	|	|	2.06
210.833	0.00	0.02	1.944	O	|	|	|	2.06
210.917	0.00	0.02	1.944	O	|	|	|	2.06
211.000	0.00	0.02	1.944	O	|	|	|	2.06
211.083	0.00	0.02	1.943	O	|	|	|	2.06
211.167	0.00	0.02	1.943	O	|	|	|	2.06
211.250	0.00	0.02	1.943	O	|	|	|	2.06
211.333	0.00	0.02	1.943	O	|	|	|	2.06
211.417	0.00	0.02	1.943	O	|	|	|	2.06
211.500	0.00	0.02	1.943	O	|	|	|	2.06
211.583	0.00	0.02	1.943	O	|	|	|	2.06
211.667	0.00	0.02	1.942	O	|	|	|	2.06
211.750	0.00	0.02	1.942	O	|	|	|	2.06
211.833	0.00	0.02	1.942	O	|	|	|	2.06
211.917	0.00	0.02	1.942	O	|	|	|	2.06
212.000	0.00	0.02	1.942	O	|	|	|	2.06
212.083	0.00	0.02	1.942	O	|	|	|	2.06
212.167	0.00	0.02	1.942	O	|	|	|	2.05
212.250	0.00	0.02	1.941	O	|	|	|	2.05
212.333	0.00	0.02	1.941	O	|	|	|	2.05
212.417	0.00	0.02	1.941	O	|	|	|	2.05
212.500	0.00	0.02	1.941	O	|	|	|	2.05
212.583	0.00	0.02	1.941	O	|	|	|	2.05
212.667	0.00	0.02	1.941	O	|	|	|	2.05
212.750	0.00	0.02	1.941	O	|	|	|	2.05
212.833	0.00	0.02	1.940	O	|	|	|	2.05
212.917	0.00	0.02	1.940	O	|	|	|	2.05
213.000	0.00	0.02	1.940	O	|	|	|	2.05
213.083	0.00	0.02	1.940	O	|	|	|	2.05
213.167	0.00	0.02	1.940	O	|	|	|	2.05
213.250	0.00	0.02	1.940	O	|	|	|	2.05
213.333	0.00	0.02	1.940	O	|	|	|	2.05
213.417	0.00	0.02	1.940	O	|	|	|	2.05
213.500	0.00	0.02	1.939	O	|	|	|	2.05
213.583	0.00	0.02	1.939	O	|	|	|	2.05
213.667	0.00	0.02	1.939	O	|	|	|	2.05
213.750	0.00	0.02	1.939	O	|	|	|	2.05
213.833	0.00	0.02	1.939	O	|	|	|	2.05
213.917	0.00	0.02	1.939	O	|	|	|	2.05
214.000	0.00	0.02	1.939	O	|	|	|	2.05
214.083	0.00	0.02	1.938	O	|	|	|	2.05
214.167	0.00	0.02	1.938	O	|	|	|	2.05
214.250	0.00	0.02	1.938	O	|	|	|	2.05
214.333	0.00	0.02	1.938	O	|	|	|	2.05
214.417	0.00	0.02	1.938	O	|	|	|	2.05
214.500	0.00	0.02	1.938	O	|	|	|	2.05
214.583	0.00	0.02	1.938	O	|	|	|	2.05
214.667	0.00	0.02	1.938	O	|	|	|	2.05

214.750	0.00	0.02	1.937	O				2.05
214.833	0.00	0.02	1.937	O				2.05
214.917	0.00	0.02	1.937	O				2.05
215.000	0.00	0.02	1.937	O				2.05
215.083	0.00	0.02	1.937	O				2.05
215.167	0.00	0.02	1.937	O				2.05
215.250	0.00	0.02	1.937	O				2.05
215.333	0.00	0.02	1.936	O				2.05
215.417	0.00	0.02	1.936	O				2.05
215.500	0.00	0.02	1.936	O				2.05
215.583	0.00	0.02	1.936	O				2.05
215.667	0.00	0.02	1.936	O				2.05
215.750	0.00	0.02	1.936	O				2.05
215.833	0.00	0.02	1.936	O				2.05
215.917	0.00	0.02	1.936	O				2.05
216.000	0.00	0.02	1.935	O				2.05
216.083	0.00	0.02	1.935	O				2.05
216.167	0.00	0.02	1.935	O				2.05
216.250	0.00	0.02	1.935	O				2.05
216.333	0.00	0.02	1.935	O				2.05
216.417	0.00	0.02	1.935	O				2.05
216.500	0.00	0.02	1.935	O				2.05
216.583	0.00	0.02	1.935	O				2.05
216.667	0.00	0.02	1.934	O				2.05
216.750	0.00	0.02	1.934	O				2.05
216.833	0.00	0.02	1.934	O				2.05
216.917	0.00	0.02	1.934	O				2.05
217.000	0.00	0.02	1.934	O				2.05
217.083	0.00	0.02	1.934	O				2.05
217.167	0.00	0.02	1.934	O				2.05
217.250	0.00	0.02	1.934	O				2.05
217.333	0.00	0.02	1.933	O				2.05
217.417	0.00	0.02	1.933	O				2.05
217.500	0.00	0.02	1.933	O				2.05
217.583	0.00	0.02	1.933	O				2.05
217.667	0.00	0.02	1.933	O				2.05
217.750	0.00	0.02	1.933	O				2.05
217.833	0.00	0.02	1.933	O				2.05
217.917	0.00	0.02	1.933	O				2.05
218.000	0.00	0.02	1.932	O				2.05
218.083	0.00	0.02	1.932	O				2.04
218.167	0.00	0.02	1.932	O				2.04
218.250	0.00	0.02	1.932	O				2.04
218.333	0.00	0.02	1.932	O				2.04
218.417	0.00	0.02	1.932	O				2.04
218.500	0.00	0.02	1.932	O				2.04
218.583	0.00	0.02	1.932	O				2.04
218.667	0.00	0.02	1.931	O				2.04
218.750	0.00	0.02	1.931	O				2.04
218.833	0.00	0.02	1.931	O				2.04

218.917	0.00	0.02	1.931	O				2.04
219.000	0.00	0.02	1.931	O				2.04
219.083	0.00	0.02	1.931	O				2.04
219.167	0.00	0.02	1.931	O				2.04
219.250	0.00	0.02	1.931	O				2.04
219.333	0.00	0.02	1.930	O				2.04
219.417	0.00	0.02	1.930	O				2.04
219.500	0.00	0.02	1.930	O				2.04
219.583	0.00	0.02	1.930	O				2.04
219.667	0.00	0.02	1.930	O				2.04
219.750	0.00	0.02	1.930	O				2.04
219.833	0.00	0.02	1.930	O				2.04
219.917	0.00	0.02	1.930	O				2.04
220.000	0.00	0.02	1.929	O				2.04
220.083	0.00	0.02	1.929	O				2.04
220.167	0.00	0.02	1.929	O				2.04
220.250	0.00	0.02	1.929	O				2.04
220.333	0.00	0.02	1.929	O				2.04
220.417	0.00	0.02	1.929	O				2.04
220.500	0.00	0.02	1.929	O				2.04
220.583	0.00	0.02	1.929	O				2.04
220.667	0.00	0.02	1.929	O				2.04
220.750	0.00	0.02	1.928	O				2.04
220.833	0.00	0.02	1.928	O				2.04
220.917	0.00	0.02	1.928	O				2.04
221.000	0.00	0.02	1.928	O				2.04
221.083	0.00	0.02	1.928	O				2.04
221.167	0.00	0.02	1.928	O				2.04
221.250	0.00	0.02	1.928	O				2.04
221.333	0.00	0.02	1.928	O				2.04
221.417	0.00	0.02	1.927	O				2.04
221.500	0.00	0.02	1.927	O				2.04
221.583	0.00	0.02	1.927	O				2.04
221.667	0.00	0.02	1.927	O				2.04
221.750	0.00	0.02	1.927	O				2.04
221.833	0.00	0.02	1.927	O				2.04
221.917	0.00	0.02	1.927	O				2.04
222.000	0.00	0.02	1.927	O				2.04
222.083	0.00	0.02	1.926	O				2.04
222.167	0.00	0.02	1.926	O				2.04
222.250	0.00	0.02	1.926	O				2.04
222.333	0.00	0.02	1.926	O				2.04
222.417	0.00	0.02	1.926	O				2.04
222.500	0.00	0.02	1.926	O				2.04
222.583	0.00	0.02	1.926	O				2.04
222.667	0.00	0.02	1.926	O				2.04
222.750	0.00	0.02	1.926	O				2.04
222.833	0.00	0.02	1.925	O				2.04
222.917	0.00	0.02	1.925	O				2.04
223.000	0.00	0.02	1.925	O				2.04

223.083	0.00	0.02	1.925	O				2.04
223.167	0.00	0.02	1.925	O				2.04
223.250	0.00	0.02	1.925	O				2.04
223.333	0.00	0.02	1.925	O				2.04
223.417	0.00	0.02	1.925	O				2.04
223.500	0.00	0.02	1.925	O				2.04
223.583	0.00	0.02	1.924	O				2.04
223.667	0.00	0.02	1.924	O				2.04
223.750	0.00	0.02	1.924	O				2.04
223.833	0.00	0.02	1.924	O				2.04
223.917	0.00	0.02	1.924	O				2.04
224.000	0.00	0.02	1.924	O				2.04
224.083	0.00	0.02	1.924	O				2.04
224.167	0.00	0.02	1.924	O				2.04
224.250	0.00	0.02	1.924	O				2.04
224.333	0.00	0.02	1.923	O				2.04
224.417	0.00	0.02	1.923	O				2.04
224.500	0.00	0.02	1.923	O				2.04
224.583	0.00	0.02	1.923	O				2.04
224.667	0.00	0.02	1.923	O				2.04
224.750	0.00	0.02	1.923	O				2.03
224.833	0.00	0.02	1.923	O				2.03
224.917	0.00	0.02	1.923	O				2.03
225.000	0.00	0.02	1.922	O				2.03
225.083	0.00	0.02	1.922	O				2.03
225.167	0.00	0.02	1.922	O				2.03
225.250	0.00	0.02	1.922	O				2.03
225.333	0.00	0.02	1.922	O				2.03
225.417	0.00	0.02	1.922	O				2.03
225.500	0.00	0.02	1.922	O				2.03
225.583	0.00	0.02	1.922	O				2.03
225.667	0.00	0.02	1.922	O				2.03
225.750	0.00	0.02	1.921	O				2.03
225.833	0.00	0.02	1.921	O				2.03
225.917	0.00	0.02	1.921	O				2.03
226.000	0.00	0.02	1.921	O				2.03
226.083	0.00	0.02	1.921	O				2.03
226.167	0.00	0.02	1.921	O				2.03
226.250	0.00	0.02	1.921	O				2.03
226.333	0.00	0.02	1.921	O				2.03
226.417	0.00	0.02	1.921	O				2.03
226.500	0.00	0.02	1.921	O				2.03
226.583	0.00	0.02	1.920	O				2.03
226.667	0.00	0.02	1.920	O				2.03
226.750	0.00	0.02	1.920	O				2.03
226.833	0.00	0.02	1.920	O				2.03
226.917	0.00	0.02	1.920	O				2.03
227.000	0.00	0.02	1.920	O				2.03
227.083	0.00	0.02	1.920	O				2.03
227.167	0.00	0.02	1.920	O				2.03

227.250	0.00	0.02	1.920	O				2.03
227.333	0.00	0.02	1.919	O				2.03
227.417	0.00	0.02	1.919	O				2.03
227.500	0.00	0.02	1.919	O				2.03
227.583	0.00	0.02	1.919	O				2.03
227.667	0.00	0.02	1.919	O				2.03
227.750	0.00	0.02	1.919	O				2.03
227.833	0.00	0.02	1.919	O				2.03
227.917	0.00	0.02	1.919	O				2.03
228.000	0.00	0.02	1.919	O				2.03
228.083	0.00	0.02	1.918	O				2.03
228.167	0.00	0.02	1.918	O				2.03
228.250	0.00	0.02	1.918	O				2.03
228.333	0.00	0.02	1.918	O				2.03
228.417	0.00	0.02	1.918	O				2.03
228.500	0.00	0.02	1.918	O				2.03
228.583	0.00	0.02	1.918	O				2.03
228.667	0.00	0.02	1.918	O				2.03
228.750	0.00	0.02	1.918	O				2.03
228.833	0.00	0.02	1.918	O				2.03
228.917	0.00	0.02	1.917	O				2.03
229.000	0.00	0.02	1.917	O				2.03
229.083	0.00	0.02	1.917	O				2.03
229.167	0.00	0.02	1.917	O				2.03
229.250	0.00	0.02	1.917	O				2.03
229.333	0.00	0.02	1.917	O				2.03
229.417	0.00	0.02	1.917	O				2.03
229.500	0.00	0.02	1.917	O				2.03
229.583	0.00	0.02	1.917	O				2.03
229.667	0.00	0.02	1.916	O				2.03
229.750	0.00	0.02	1.916	O				2.03
229.833	0.00	0.02	1.916	O				2.03
229.917	0.00	0.02	1.916	O				2.03
230.000	0.00	0.01	1.916	O				2.03
230.083	0.00	0.01	1.916	O				2.03
230.167	0.00	0.01	1.916	O				2.03
230.250	0.00	0.01	1.916	O				2.03
230.333	0.00	0.01	1.916	O				2.03
230.417	0.00	0.01	1.916	O				2.03
230.500	0.00	0.01	1.915	O				2.03
230.583	0.00	0.01	1.915	O				2.03
230.667	0.00	0.01	1.915	O				2.03
230.750	0.00	0.01	1.915	O				2.03
230.833	0.00	0.01	1.915	O				2.03
230.917	0.00	0.01	1.915	O				2.03
231.000	0.00	0.01	1.915	O				2.03
231.083	0.00	0.01	1.915	O				2.03
231.167	0.00	0.01	1.915	O				2.03
231.250	0.00	0.01	1.915	O				2.03
231.333	0.00	0.01	1.914	O				2.03

231.417	0.00	0.01	1.914	O				2.03
231.500	0.00	0.01	1.914	O				2.03
231.583	0.00	0.01	1.914	O				2.03
231.667	0.00	0.01	1.914	O				2.03
231.750	0.00	0.01	1.914	O				2.03
231.833	0.00	0.01	1.914	O				2.03
231.917	0.00	0.01	1.914	O				2.03
232.000	0.00	0.01	1.914	O				2.03
232.083	0.00	0.01	1.914	O				2.03
232.167	0.00	0.01	1.913	O				2.02
232.250	0.00	0.01	1.913	O				2.02
232.333	0.00	0.01	1.913	O				2.02
232.417	0.00	0.01	1.913	O				2.02
232.500	0.00	0.01	1.913	O				2.02
232.583	0.00	0.01	1.913	O				2.02
232.667	0.00	0.01	1.913	O				2.02
232.750	0.00	0.01	1.913	O				2.02
232.833	0.00	0.01	1.913	O				2.02
232.917	0.00	0.01	1.913	O				2.02
233.000	0.00	0.01	1.912	O				2.02
233.083	0.00	0.01	1.912	O				2.02
233.167	0.00	0.01	1.912	O				2.02
233.250	0.00	0.01	1.912	O				2.02
233.333	0.00	0.01	1.912	O				2.02
233.417	0.00	0.01	1.912	O				2.02
233.500	0.00	0.01	1.912	O				2.02
233.583	0.00	0.01	1.912	O				2.02
233.667	0.00	0.01	1.912	O				2.02
233.750	0.00	0.01	1.912	O				2.02
233.833	0.00	0.01	1.911	O				2.02
233.917	0.00	0.01	1.911	O				2.02
234.000	0.00	0.01	1.911	O				2.02
234.083	0.00	0.01	1.911	O				2.02
234.167	0.00	0.01	1.911	O				2.02
234.250	0.00	0.01	1.911	O				2.02
234.333	0.00	0.01	1.911	O				2.02
234.417	0.00	0.01	1.911	O				2.02
234.500	0.00	0.01	1.911	O				2.02
234.583	0.00	0.01	1.911	O				2.02
234.667	0.00	0.01	1.910	O				2.02
234.750	0.00	0.01	1.910	O				2.02
234.833	0.00	0.01	1.910	O				2.02
234.917	0.00	0.01	1.910	O				2.02
235.000	0.00	0.01	1.910	O				2.02
235.083	0.00	0.01	1.910	O				2.02
235.167	0.00	0.01	1.910	O				2.02
235.250	0.00	0.01	1.910	O				2.02
235.333	0.00	0.01	1.910	O				2.02
235.417	0.00	0.01	1.910	O				2.02
235.500	0.00	0.01	1.910	O				2.02

235.583	0.00	0.01	1.909	O				2.02
235.667	0.00	0.01	1.909	O				2.02
235.750	0.00	0.01	1.909	O				2.02
235.833	0.00	0.01	1.909	O				2.02
235.917	0.00	0.01	1.909	O				2.02
236.000	0.00	0.01	1.909	O				2.02
236.083	0.00	0.01	1.909	O				2.02
236.167	0.00	0.01	1.909	O				2.02
236.250	0.00	0.01	1.909	O				2.02
236.333	0.00	0.01	1.909	O				2.02
236.417	0.00	0.01	1.908	O				2.02
236.500	0.00	0.01	1.908	O				2.02
236.583	0.00	0.01	1.908	O				2.02
236.667	0.00	0.01	1.908	O				2.02
236.750	0.00	0.01	1.908	O				2.02
236.833	0.00	0.01	1.908	O				2.02
236.917	0.00	0.01	1.908	O				2.02
237.000	0.00	0.01	1.908	O				2.02
237.083	0.00	0.01	1.908	O				2.02
237.167	0.00	0.01	1.908	O				2.02
237.250	0.00	0.01	1.908	O				2.02
237.333	0.00	0.01	1.907	O				2.02
237.417	0.00	0.01	1.907	O				2.02
237.500	0.00	0.01	1.907	O				2.02
237.583	0.00	0.01	1.907	O				2.02
237.667	0.00	0.01	1.907	O				2.02
237.750	0.00	0.01	1.907	O				2.02
237.833	0.00	0.01	1.907	O				2.02
237.917	0.00	0.01	1.907	O				2.02
238.000	0.00	0.01	1.907	O				2.02
238.083	0.00	0.01	1.907	O				2.02
238.167	0.00	0.01	1.907	O				2.02
238.250	0.00	0.01	1.906	O				2.02
238.333	0.00	0.01	1.906	O				2.02
238.417	0.00	0.01	1.906	O				2.02
238.500	0.00	0.01	1.906	O				2.02
238.583	0.00	0.01	1.906	O				2.02
238.667	0.00	0.01	1.906	O				2.02
238.750	0.00	0.01	1.906	O				2.02
238.833	0.00	0.01	1.906	O				2.02
238.917	0.00	0.01	1.906	O				2.02
239.000	0.00	0.01	1.906	O				2.02
239.083	0.00	0.01	1.906	O				2.02
239.167	0.00	0.01	1.905	O				2.02
239.250	0.00	0.01	1.905	O				2.02
239.333	0.00	0.01	1.905	O				2.02
239.417	0.00	0.01	1.905	O				2.02
239.500	0.00	0.01	1.905	O				2.02
239.583	0.00	0.01	1.905	O				2.02
239.667	0.00	0.01	1.905	O				2.02

239.750	0.00	0.01	1.905	O	|	|	|	2.02
239.833	0.00	0.01	1.905	O	|	|	|	2.02
239.917	0.00	0.01	1.905	O	|	|	|	2.02
240.000	0.00	0.01	1.905	O	|	|	|	2.02
240.083	0.00	0.01	1.905	O	|	|	|	2.02
240.167	0.00	0.01	1.904	O	|	|	|	2.02
240.250	0.00	0.01	1.904	O	|	|	|	2.02
240.333	0.00	0.01	1.904	O	|	|	|	2.02
240.417	0.00	0.01	1.904	O	|	|	|	2.02
240.500	0.00	0.01	1.904	O	|	|	|	2.01
240.583	0.00	0.01	1.904	O	|	|	|	2.01
240.667	0.00	0.01	1.904	O	|	|	|	2.01
240.750	0.00	0.01	1.904	O	|	|	|	2.01
240.833	0.00	0.01	1.904	O	|	|	|	2.01
240.917	0.00	0.01	1.904	O	|	|	|	2.01
241.000	0.00	0.01	1.904	O	|	|	|	2.01
241.083	0.00	0.01	1.903	O	|	|	|	2.01
241.167	0.00	0.01	1.903	O	|	|	|	2.01
241.250	0.00	0.01	1.903	O	|	|	|	2.01
241.333	0.00	0.01	1.903	O	|	|	|	2.01
241.417	0.00	0.01	1.903	O	|	|	|	2.01
241.500	0.00	0.01	1.903	O	|	|	|	2.01
241.583	0.00	0.01	1.903	O	|	|	|	2.01
241.667	0.00	0.01	1.903	O	|	|	|	2.01
241.750	0.00	0.01	1.903	O	|	|	|	2.01
241.833	0.00	0.01	1.903	O	|	|	|	2.01
241.917	0.00	0.01	1.903	O	|	|	|	2.01
242.000	0.00	0.01	1.903	O	|	|	|	2.01
242.083	0.00	0.01	1.902	O	|	|	|	2.01
242.167	0.00	0.01	1.902	O	|	|	|	2.01
242.250	0.00	0.01	1.902	O	|	|	|	2.01
242.333	0.00	0.01	1.902	O	|	|	|	2.01
242.417	0.00	0.01	1.902	O	|	|	|	2.01
242.500	0.00	0.01	1.902	O	|	|	|	2.01
242.583	0.00	0.01	1.902	O	|	|	|	2.01
242.667	0.00	0.01	1.902	O	|	|	|	2.01
242.750	0.00	0.01	1.902	O	|	|	|	2.01
242.833	0.00	0.01	1.902	O	|	|	|	2.01
242.917	0.00	0.01	1.902	O	|	|	|	2.01
243.000	0.00	0.01	1.901	O	|	|	|	2.01
243.083	0.00	0.01	1.901	O	|	|	|	2.01
243.167	0.00	0.01	1.901	O	|	|	|	2.01
243.250	0.00	0.01	1.901	O	|	|	|	2.01
243.333	0.00	0.01	1.901	O	|	|	|	2.01
243.417	0.00	0.01	1.901	O	|	|	|	2.01
243.500	0.00	0.01	1.901	O	|	|	|	2.01
243.583	0.00	0.01	1.901	O	|	|	|	2.01
243.667	0.00	0.01	1.901	O	|	|	|	2.01
243.750	0.00	0.01	1.901	O	|	|	|	2.01
243.833	0.00	0.01	1.901	O	|	|	|	2.01

243.917	0.00	0.01	1.901	O	|	|	|	2.01
244.000	0.00	0.01	1.900	O	|	|	|	2.01
244.083	0.00	0.01	1.900	O	|	|	|	2.01
244.167	0.00	0.01	1.900	O	|	|	|	2.01
244.250	0.00	0.01	1.900	O	|	|	|	2.01
244.333	0.00	0.01	1.900	O	|	|	|	2.01
244.417	0.00	0.01	1.900	O	|	|	|	2.01
244.500	0.00	0.01	1.900	O	|	|	|	2.01
244.583	0.00	0.01	1.900	O	|	|	|	2.01
244.667	0.00	0.01	1.900	O	|	|	|	2.01
244.750	0.00	0.01	1.900	O	|	|	|	2.01
244.833	0.00	0.01	1.900	O	|	|	|	2.01
244.917	0.00	0.01	1.900	O	|	|	|	2.01
245.000	0.00	0.01	1.900	O	|	|	|	2.01
245.083	0.00	0.01	1.899	O	|	|	|	2.01
245.167	0.00	0.01	1.899	O	|	|	|	2.01
245.250	0.00	0.01	1.899	O	|	|	|	2.01
245.333	0.00	0.01	1.899	O	|	|	|	2.01
245.417	0.00	0.01	1.899	O	|	|	|	2.01
245.500	0.00	0.01	1.899	O	|	|	|	2.01
245.583	0.00	0.01	1.899	O	|	|	|	2.01
245.667	0.00	0.01	1.899	O	|	|	|	2.01
245.750	0.00	0.01	1.899	O	|	|	|	2.01
245.833	0.00	0.01	1.899	O	|	|	|	2.01
245.917	0.00	0.01	1.899	O	|	|	|	2.01
246.000	0.00	0.01	1.899	O	|	|	|	2.01
246.083	0.00	0.01	1.898	O	|	|	|	2.01
246.167	0.00	0.01	1.898	O	|	|	|	2.01
246.250	0.00	0.01	1.898	O	|	|	|	2.01
246.333	0.00	0.01	1.898	O	|	|	|	2.01
246.417	0.00	0.01	1.898	O	|	|	|	2.01
246.500	0.00	0.01	1.898	O	|	|	|	2.01
246.583	0.00	0.01	1.898	O	|	|	|	2.01
246.667	0.00	0.01	1.898	O	|	|	|	2.01
246.750	0.00	0.01	1.898	O	|	|	|	2.01
246.833	0.00	0.01	1.898	O	|	|	|	2.01
246.917	0.00	0.01	1.898	O	|	|	|	2.01
247.000	0.00	0.01	1.898	O	|	|	|	2.01
247.083	0.00	0.01	1.898	O	|	|	|	2.01
247.167	0.00	0.01	1.897	O	|	|	|	2.01
247.250	0.00	0.01	1.897	O	|	|	|	2.01
247.333	0.00	0.01	1.897	O	|	|	|	2.01
247.417	0.00	0.01	1.897	O	|	|	|	2.01
247.500	0.00	0.01	1.897	O	|	|	|	2.01
247.583	0.00	0.01	1.897	O	|	|	|	2.01
247.667	0.00	0.01	1.897	O	|	|	|	2.01
247.750	0.00	0.01	1.897	O	|	|	|	2.01
247.833	0.00	0.01	1.897	O	|	|	|	2.01
247.917	0.00	0.01	1.897	O	|	|	|	2.01
248.000	0.00	0.01	1.897	O	|	|	|	2.01

248.083	0.00	0.01	1.897	O				2.01
248.167	0.00	0.01	1.896	O				2.01
248.250	0.00	0.01	1.896	O				2.01
248.333	0.00	0.01	1.896	O				2.01
248.417	0.00	0.01	1.896	O				2.01
248.500	0.00	0.01	1.896	O				2.01
248.583	0.00	0.01	1.896	O				2.01
248.667	0.00	0.01	1.896	O				2.01
248.750	0.00	0.01	1.896	O				2.01
248.833	0.00	0.01	1.896	O				2.01
248.917	0.00	0.01	1.896	O				2.01
249.000	0.00	0.01	1.896	O				2.01
249.083	0.00	0.01	1.896	O				2.01
249.167	0.00	0.01	1.896	O				2.01
249.250	0.00	0.01	1.895	O				2.01
249.333	0.00	0.01	1.895	O				2.01
249.417	0.00	0.01	1.895	O				2.01
249.500	0.00	0.01	1.895	O				2.01
249.583	0.00	0.01	1.895	O				2.01
249.667	0.00	0.01	1.895	O				2.01
249.750	0.00	0.01	1.895	O				2.01
249.833	0.00	0.01	1.895	O				2.01
249.917	0.00	0.01	1.895	O				2.01
250.000	0.00	0.01	1.895	O				2.01
250.083	0.00	0.01	1.895	O				2.01
250.167	0.00	0.01	1.895	O				2.00
250.250	0.00	0.01	1.895	O				2.00
250.333	0.00	0.01	1.895	O				2.00
250.417	0.00	0.01	1.894	O				2.00
250.500	0.00	0.01	1.894	O				2.00
250.583	0.00	0.01	1.894	O				2.00
250.667	0.00	0.01	1.894	O				2.00
250.750	0.00	0.01	1.894	O				2.00
250.833	0.00	0.01	1.894	O				2.00
250.917	0.00	0.01	1.894	O				2.00
251.000	0.00	0.01	1.894	O				2.00
251.083	0.00	0.01	1.894	O				2.00
251.167	0.00	0.01	1.894	O				2.00
251.250	0.00	0.01	1.894	O				2.00
251.333	0.00	0.01	1.894	O				2.00
251.417	0.00	0.01	1.894	O				2.00
251.500	0.00	0.01	1.893	O				2.00
251.583	0.00	0.01	1.893	O				2.00
251.667	0.00	0.01	1.893	O				2.00
251.750	0.00	0.01	1.893	O				2.00
251.833	0.00	0.01	1.893	O				2.00
251.917	0.00	0.01	1.893	O				2.00
252.000	0.00	0.01	1.893	O				2.00
252.083	0.00	0.01	1.893	O				2.00
252.167	0.00	0.01	1.893	O				2.00

252.250	0.00	0.01	1.893	O				2.00
252.333	0.00	0.01	1.893	O				2.00
252.417	0.00	0.01	1.893	O				2.00
252.500	0.00	0.01	1.893	O				2.00
252.583	0.00	0.01	1.893	O				2.00
252.667	0.00	0.01	1.892	O				2.00
252.750	0.00	0.01	1.892	O				2.00
252.833	0.00	0.01	1.892	O				2.00
252.917	0.00	0.01	1.892	O				2.00
253.000	0.00	0.01	1.892	O				2.00
253.083	0.00	0.01	1.892	O				2.00
253.167	0.00	0.01	1.892	O				2.00
253.250	0.00	0.01	1.892	O				2.00
253.333	0.00	0.01	1.892	O				2.00
253.417	0.00	0.01	1.892	O				2.00
253.500	0.00	0.01	1.892	O				2.00
253.583	0.00	0.01	1.892	O				2.00
253.667	0.00	0.01	1.892	O				2.00
253.750	0.00	0.01	1.892	O				2.00
253.833	0.00	0.01	1.891	O				2.00
253.917	0.00	0.01	1.891	O				2.00
254.000	0.00	0.01	1.891	O				2.00
254.083	0.00	0.01	1.891	O				2.00
254.167	0.00	0.01	1.891	O				2.00
254.250	0.00	0.01	1.891	O				2.00
254.333	0.00	0.01	1.891	O				2.00
254.417	0.00	0.01	1.891	O				2.00
254.500	0.00	0.01	1.891	O				2.00
254.583	0.00	0.01	1.891	O				2.00
254.667	0.00	0.01	1.891	O				2.00
254.750	0.00	0.01	1.891	O				2.00
254.833	0.00	0.01	1.891	O				2.00
254.917	0.00	0.01	1.891	O				2.00
255.000	0.00	0.01	1.890	O				2.00
255.083	0.00	0.01	1.890	O				2.00
255.167	0.00	0.01	1.890	O				2.00
255.250	0.00	0.01	1.890	O				2.00
255.333	0.00	0.01	1.890	O				2.00
255.417	0.00	0.01	1.890	O				2.00
255.500	0.00	0.01	1.890	O				2.00
255.583	0.00	0.01	1.890	O				2.00
255.667	0.00	0.01	1.890	O				2.00
255.750	0.00	0.01	1.890	O				2.00
255.833	0.00	0.01	1.890	O				2.00
255.917	0.00	0.01	1.890	O				2.00
256.000	0.00	0.01	1.890	O				2.00
256.083	0.00	0.01	1.890	O				2.00
256.167	0.00	0.01	1.890	O				2.00
256.250	0.00	0.01	1.889	O				2.00
256.333	0.00	0.01	1.889	O				2.00

256.417	0.00	0.01	1.889	O	|	|	|	2.00
256.500	0.00	0.01	1.889	O	|	|	|	2.00
256.583	0.00	0.01	1.889	O	|	|	|	2.00
256.667	0.00	0.01	1.889	O	|	|	|	2.00
256.750	0.00	0.01	1.889	O	|	|	|	2.00
256.833	0.00	0.01	1.889	O	|	|	|	2.00
256.917	0.00	0.01	1.889	O	|	|	|	2.00
257.000	0.00	0.01	1.889	O	|	|	|	2.00
257.083	0.00	0.01	1.889	O	|	|	|	2.00
257.167	0.00	0.01	1.889	O	|	|	|	2.00
257.250	0.00	0.01	1.889	O	|	|	|	2.00
257.333	0.00	0.01	1.889	O	|	|	|	2.00
257.417	0.00	0.01	1.888	O	|	|	|	2.00
257.500	0.00	0.01	1.888	O	|	|	|	2.00
257.583	0.00	0.01	1.888	O	|	|	|	2.00
257.667	0.00	0.01	1.888	O	|	|	|	2.00
257.750	0.00	0.01	1.888	O	|	|	|	2.00
257.833	0.00	0.01	1.888	O	|	|	|	2.00
257.917	0.00	0.01	1.888	O	|	|	|	2.00
258.000	0.00	0.01	1.888	O	|	|	|	2.00
258.083	0.00	0.01	1.888	O	|	|	|	2.00
258.167	0.00	0.01	1.888	O	|	|	|	2.00
258.250	0.00	0.01	1.888	O	|	|	|	2.00
258.333	0.00	0.01	1.888	O	|	|	|	2.00
258.417	0.00	0.01	1.888	O	|	|	|	2.00
258.500	0.00	0.01	1.888	O	|	|	|	2.00
258.583	0.00	0.01	1.888	O	|	|	|	2.00
258.667	0.00	0.01	1.887	O	|	|	|	2.00
258.750	0.00	0.01	1.887	O	|	|	|	2.00
258.833	0.00	0.01	1.887	O	|	|	|	2.00
258.917	0.00	0.01	1.887	O	|	|	|	2.00
259.000	0.00	0.01	1.887	O	|	|	|	2.00
259.083	0.00	0.01	1.887	O	|	|	|	2.00
259.167	0.00	0.01	1.887	O	|	|	|	2.00
259.250	0.00	0.01	1.887	O	|	|	|	2.00
259.333	0.00	0.01	1.887	O	|	|	|	2.00
259.417	0.00	0.01	1.887	O	|	|	|	2.00
259.500	0.00	0.01	1.887	O	|	|	|	2.00
259.583	0.00	0.01	1.887	O	|	|	|	2.00
259.667	0.00	0.01	1.887	O	|	|	|	2.00
259.750	0.00	0.01	1.887	O	|	|	|	2.00
259.833	0.00	0.01	1.886	O	|	|	|	2.00
259.917	0.00	0.01	1.886	O	|	|	|	2.00
260.000	0.00	0.01	1.886	O	|	|	|	2.00
260.083	0.00	0.01	1.886	O	|	|	|	2.00
260.167	0.00	0.01	1.886	O	|	|	|	2.00
260.250	0.00	0.01	1.886	O	|	|	|	2.00
260.333	0.00	0.01	1.886	O	|	|	|	2.00
260.417	0.00	0.01	1.886	O	|	|	|	2.00
260.500	0.00	0.01	1.886	O	|	|	|	2.00

260.583	0.00	0.01	1.886	O				2.00
260.667	0.00	0.01	1.886	O				2.00
260.750	0.00	0.01	1.886	O				2.00
260.833	0.00	0.01	1.886	O				2.00
260.917	0.00	0.01	1.886	O				2.00
261.000	0.00	0.01	1.886	O				2.00
261.083	0.00	0.01	1.885	O				2.00
261.167	0.00	0.01	1.885	O				2.00
261.250	0.00	0.01	1.885	O				2.00
261.333	0.00	0.01	1.885	O				2.00
261.417	0.00	0.01	1.885	O				1.99
261.500	0.00	0.01	1.885	O				1.99
261.583	0.00	0.01	1.885	O				1.99
261.667	0.00	0.01	1.885	O				1.99
261.750	0.00	0.01	1.885	O				1.99
261.833	0.00	0.01	1.885	O				1.99
261.917	0.00	0.01	1.885	O				1.99
262.000	0.00	0.01	1.885	O				1.99
262.083	0.00	0.01	1.885	O				1.99
262.167	0.00	0.01	1.885	O				1.99
262.250	0.00	0.01	1.885	O				1.99
262.333	0.00	0.01	1.884	O				1.99
262.417	0.00	0.01	1.884	O				1.99
262.500	0.00	0.01	1.884	O				1.99
262.583	0.00	0.01	1.884	O				1.99
262.667	0.00	0.01	1.884	O				1.99
262.750	0.00	0.01	1.884	O				1.99
262.833	0.00	0.01	1.884	O				1.99
262.917	0.00	0.01	1.884	O				1.99
263.000	0.00	0.01	1.884	O				1.99
263.083	0.00	0.01	1.884	O				1.99
263.167	0.00	0.01	1.884	O				1.99
263.250	0.00	0.01	1.884	O				1.99
263.333	0.00	0.01	1.884	O				1.99
263.417	0.00	0.01	1.884	O				1.99
263.500	0.00	0.01	1.883	O				1.99
263.583	0.00	0.01	1.883	O				1.99
263.667	0.00	0.01	1.883	O				1.99
263.750	0.00	0.01	1.883	O				1.99
263.833	0.00	0.01	1.883	O				1.99
263.917	0.00	0.01	1.883	O				1.99
264.000	0.00	0.01	1.883	O				1.99
264.083	0.00	0.01	1.883	O				1.99
264.167	0.00	0.01	1.883	O				1.99
264.250	0.00	0.01	1.883	O				1.99
264.333	0.00	0.01	1.883	O				1.99
264.417	0.00	0.01	1.883	O				1.99
264.500	0.00	0.01	1.883	O				1.99
264.583	0.00	0.01	1.883	O				1.99
264.667	0.00	0.01	1.883	O				1.99

264.750	0.00	0.01	1.882	O				1.99
264.833	0.00	0.01	1.882	O				1.99
264.917	0.00	0.01	1.882	O				1.99
265.000	0.00	0.01	1.882	O				1.99
265.083	0.00	0.01	1.882	O				1.99
265.167	0.00	0.01	1.882	O				1.99
265.250	0.00	0.01	1.882	O				1.99
265.333	0.00	0.01	1.882	O				1.99
265.417	0.00	0.01	1.882	O				1.99
265.500	0.00	0.01	1.882	O				1.99
265.583	0.00	0.01	1.882	O				1.99
265.667	0.00	0.01	1.882	O				1.99
265.750	0.00	0.01	1.882	O				1.99
265.833	0.00	0.01	1.882	O				1.99
265.917	0.00	0.01	1.882	O				1.99
266.000	0.00	0.01	1.881	O				1.99
266.083	0.00	0.01	1.881	O				1.99
266.167	0.00	0.01	1.881	O				1.99
266.250	0.00	0.01	1.881	O				1.99
266.333	0.00	0.01	1.881	O				1.99
266.417	0.00	0.01	1.881	O				1.99
266.500	0.00	0.01	1.881	O				1.99
266.583	0.00	0.01	1.881	O				1.99
266.667	0.00	0.01	1.881	O				1.99
266.750	0.00	0.01	1.881	O				1.99
266.833	0.00	0.01	1.881	O				1.99
266.917	0.00	0.01	1.881	O				1.99
267.000	0.00	0.01	1.881	O				1.99
267.083	0.00	0.01	1.881	O				1.99
267.167	0.00	0.01	1.881	O				1.99
267.250	0.00	0.01	1.880	O				1.99
267.333	0.00	0.01	1.880	O				1.99
267.417	0.00	0.01	1.880	O				1.99
267.500	0.00	0.01	1.880	O				1.99
267.583	0.00	0.01	1.880	O				1.99
267.667	0.00	0.01	1.880	O				1.99
267.750	0.00	0.01	1.880	O				1.99
267.833	0.00	0.01	1.880	O				1.99
267.917	0.00	0.01	1.880	O				1.99
268.000	0.00	0.01	1.880	O				1.99
268.083	0.00	0.01	1.880	O				1.99
268.167	0.00	0.01	1.880	O				1.99
268.250	0.00	0.01	1.880	O				1.99
268.333	0.00	0.01	1.880	O				1.99
268.417	0.00	0.01	1.879	O				1.99
268.500	0.00	0.01	1.879	O				1.99
268.583	0.00	0.01	1.879	O				1.99
268.667	0.00	0.01	1.879	O				1.99
268.750	0.00	0.01	1.879	O				1.99
268.833	0.00	0.01	1.879	O				1.99

268.917	0.00	0.01	1.879	O				1.99
269.000	0.00	0.01	1.879	O				1.99
269.083	0.00	0.01	1.879	O				1.99
269.167	0.00	0.01	1.879	O				1.99
269.250	0.00	0.01	1.879	O				1.99
269.333	0.00	0.01	1.879	O				1.99
269.417	0.00	0.01	1.879	O				1.99
269.500	0.00	0.01	1.879	O				1.99
269.583	0.00	0.01	1.879	O				1.99
269.667	0.00	0.01	1.878	O				1.99
269.750	0.00	0.01	1.878	O				1.99
269.833	0.00	0.01	1.878	O				1.99
269.917	0.00	0.01	1.878	O				1.99
270.000	0.00	0.01	1.878	O				1.99
270.083	0.00	0.01	1.878	O				1.99
270.167	0.00	0.01	1.878	O				1.99
270.250	0.00	0.01	1.878	O				1.99
270.333	0.00	0.01	1.878	O				1.99
270.417	0.00	0.01	1.878	O				1.99
270.500	0.00	0.01	1.878	O				1.99
270.583	0.00	0.01	1.878	O				1.99
270.667	0.00	0.01	1.878	O				1.99
270.750	0.00	0.01	1.878	O				1.99
270.833	0.00	0.01	1.878	O				1.99
270.917	0.00	0.01	1.877	O				1.99
271.000	0.00	0.01	1.877	O				1.99
271.083	0.00	0.01	1.877	O				1.99
271.167	0.00	0.01	1.877	O				1.99
271.250	0.00	0.01	1.877	O				1.99
271.333	0.00	0.01	1.877	O				1.99
271.417	0.00	0.01	1.877	O				1.99
271.500	0.00	0.01	1.877	O				1.99
271.583	0.00	0.01	1.877	O				1.99
271.667	0.00	0.01	1.877	O				1.99
271.750	0.00	0.01	1.877	O				1.99
271.833	0.00	0.01	1.877	O				1.99
271.917	0.00	0.01	1.877	O				1.99
272.000	0.00	0.01	1.877	O				1.99
272.083	0.00	0.01	1.877	O				1.99
272.167	0.00	0.01	1.876	O				1.99
272.250	0.00	0.01	1.876	O				1.99
272.333	0.00	0.01	1.876	O				1.99
272.417	0.00	0.01	1.876	O				1.99
272.500	0.00	0.01	1.876	O				1.99
272.583	0.00	0.01	1.876	O				1.99
272.667	0.00	0.01	1.876	O				1.99
272.750	0.00	0.01	1.876	O				1.99
272.833	0.00	0.01	1.876	O				1.99
272.917	0.00	0.01	1.876	O				1.99
273.000	0.00	0.01	1.876	O				1.99

273.083	0.00	0.01	1.876	O				1.99
273.167	0.00	0.01	1.876	O				1.99
273.250	0.00	0.01	1.876	O				1.98
273.333	0.00	0.01	1.876	O				1.98
273.417	0.00	0.01	1.875	O				1.98
273.500	0.00	0.01	1.875	O				1.98
273.583	0.00	0.01	1.875	O				1.98
273.667	0.00	0.01	1.875	O				1.98
273.750	0.00	0.01	1.875	O				1.98
273.833	0.00	0.01	1.875	O				1.98
273.917	0.00	0.01	1.875	O				1.98
274.000	0.00	0.01	1.875	O				1.98
274.083	0.00	0.01	1.875	O				1.98
274.167	0.00	0.01	1.875	O				1.98
274.250	0.00	0.01	1.875	O				1.98
274.333	0.00	0.01	1.875	O				1.98
274.417	0.00	0.01	1.875	O				1.98
274.500	0.00	0.01	1.875	O				1.98
274.583	0.00	0.01	1.875	O				1.98
274.667	0.00	0.01	1.874	O				1.98
274.750	0.00	0.01	1.874	O				1.98
274.833	0.00	0.01	1.874	O				1.98
274.917	0.00	0.01	1.874	O				1.98
275.000	0.00	0.01	1.874	O				1.98
275.083	0.00	0.01	1.874	O				1.98
275.167	0.00	0.01	1.874	O				1.98
275.250	0.00	0.01	1.874	O				1.98
275.333	0.00	0.01	1.874	O				1.98
275.417	0.00	0.01	1.874	O				1.98
275.500	0.00	0.01	1.874	O				1.98
275.583	0.00	0.01	1.874	O				1.98
275.667	0.00	0.01	1.874	O				1.98
275.750	0.00	0.01	1.874	O				1.98
275.833	0.00	0.01	1.874	O				1.98
275.917	0.00	0.01	1.873	O				1.98
276.000	0.00	0.01	1.873	O				1.98
276.083	0.00	0.01	1.873	O				1.98
276.167	0.00	0.01	1.873	O				1.98
276.250	0.00	0.01	1.873	O				1.98
276.333	0.00	0.01	1.873	O				1.98
276.417	0.00	0.01	1.873	O				1.98
276.500	0.00	0.01	1.873	O				1.98
276.583	0.00	0.01	1.873	O				1.98
276.667	0.00	0.01	1.873	O				1.98
276.750	0.00	0.01	1.873	O				1.98
276.833	0.00	0.01	1.873	O				1.98
276.917	0.00	0.01	1.873	O				1.98
277.000	0.00	0.01	1.873	O				1.98
277.083	0.00	0.01	1.873	O				1.98
277.167	0.00	0.01	1.872	O				1.98

277.250	0.00	0.01	1.872	O				1.98
277.333	0.00	0.01	1.872	O				1.98
277.417	0.00	0.01	1.872	O				1.98
277.500	0.00	0.01	1.872	O				1.98
277.583	0.00	0.01	1.872	O				1.98
277.667	0.00	0.01	1.872	O				1.98
277.750	0.00	0.01	1.872	O				1.98
277.833	0.00	0.01	1.872	O				1.98
277.917	0.00	0.01	1.872	O				1.98
278.000	0.00	0.01	1.872	O				1.98
278.083	0.00	0.01	1.872	O				1.98
278.167	0.00	0.01	1.872	O				1.98
278.250	0.00	0.01	1.872	O				1.98
278.333	0.00	0.01	1.872	O				1.98
278.417	0.00	0.01	1.871	O				1.98
278.500	0.00	0.01	1.871	O				1.98
278.583	0.00	0.01	1.871	O				1.98
278.667	0.00	0.01	1.871	O				1.98
278.750	0.00	0.01	1.871	O				1.98
278.833	0.00	0.01	1.871	O				1.98
278.917	0.00	0.01	1.871	O				1.98
279.000	0.00	0.01	1.871	O				1.98
279.083	0.00	0.01	1.871	O				1.98
279.167	0.00	0.01	1.871	O				1.98
279.250	0.00	0.01	1.871	O				1.98
279.333	0.00	0.01	1.871	O				1.98
279.417	0.00	0.01	1.871	O				1.98
279.500	0.00	0.01	1.871	O				1.98
279.583	0.00	0.01	1.871	O				1.98
279.667	0.00	0.01	1.870	O				1.98
279.750	0.00	0.01	1.870	O				1.98
279.833	0.00	0.01	1.870	O				1.98
279.917	0.00	0.01	1.870	O				1.98
280.000	0.00	0.01	1.870	O				1.98
280.083	0.00	0.01	1.870	O				1.98
280.167	0.00	0.01	1.870	O				1.98
280.250	0.00	0.01	1.870	O				1.98
280.333	0.00	0.01	1.870	O				1.98
280.417	0.00	0.01	1.870	O				1.98
280.500	0.00	0.01	1.870	O				1.98
280.583	0.00	0.01	1.870	O				1.98
280.667	0.00	0.01	1.870	O				1.98
280.750	0.00	0.01	1.870	O				1.98
280.833	0.00	0.01	1.870	O				1.98
280.917	0.00	0.01	1.869	O				1.98
281.000	0.00	0.01	1.869	O				1.98
281.083	0.00	0.01	1.869	O				1.98
281.167	0.00	0.01	1.869	O				1.98
281.250	0.00	0.01	1.869	O				1.98
281.333	0.00	0.01	1.869	O				1.98

281.417	0.00	0.01	1.869	O				1.98
281.500	0.00	0.01	1.869	O				1.98
281.583	0.00	0.01	1.869	O				1.98
281.667	0.00	0.01	1.869	O				1.98
281.750	0.00	0.01	1.869	O				1.98
281.833	0.00	0.01	1.869	O				1.98
281.917	0.00	0.01	1.869	O				1.98
282.000	0.00	0.01	1.869	O				1.98
282.083	0.00	0.01	1.869	O				1.98
282.167	0.00	0.01	1.868	O				1.98
282.250	0.00	0.01	1.868	O				1.98
282.333	0.00	0.01	1.868	O				1.98
282.417	0.00	0.01	1.868	O				1.98
282.500	0.00	0.01	1.868	O				1.98
282.583	0.00	0.01	1.868	O				1.98
282.667	0.00	0.01	1.868	O				1.98
282.750	0.00	0.01	1.868	O				1.98
282.833	0.00	0.01	1.868	O				1.98
282.917	0.00	0.01	1.868	O				1.98
283.000	0.00	0.01	1.868	O				1.98
283.083	0.00	0.01	1.868	O				1.98
283.167	0.00	0.01	1.868	O				1.98
283.250	0.00	0.01	1.868	O				1.98
283.333	0.00	0.01	1.868	O				1.98
283.417	0.00	0.01	1.867	O				1.98
283.500	0.00	0.01	1.867	O				1.98
283.583	0.00	0.01	1.867	O				1.98
283.667	0.00	0.01	1.867	O				1.98
283.750	0.00	0.01	1.867	O				1.98
283.833	0.00	0.01	1.867	O				1.98
283.917	0.00	0.01	1.867	O				1.98
284.000	0.00	0.01	1.867	O				1.98
284.083	0.00	0.01	1.867	O				1.98
284.167	0.00	0.01	1.867	O				1.98
284.250	0.00	0.01	1.867	O				1.98
284.333	0.00	0.01	1.867	O				1.98
284.417	0.00	0.01	1.867	O				1.98
284.500	0.00	0.01	1.867	O				1.98
284.583	0.00	0.01	1.867	O				1.98
284.667	0.00	0.01	1.866	O				1.98
284.750	0.00	0.01	1.866	O				1.98
284.833	0.00	0.01	1.866	O				1.98
284.917	0.00	0.01	1.866	O				1.98
285.000	0.00	0.01	1.866	O				1.98
285.083	0.00	0.01	1.866	O				1.98
285.167	0.00	0.01	1.866	O				1.98
285.250	0.00	0.01	1.866	O				1.98
285.333	0.00	0.01	1.866	O				1.97
285.417	0.00	0.01	1.866	O				1.97
285.500	0.00	0.01	1.866	O				1.97

285.583	0.00	0.01	1.866	O				1.97
285.667	0.00	0.01	1.866	O				1.97
285.750	0.00	0.01	1.866	O				1.97
285.833	0.00	0.01	1.866	O				1.97
285.917	0.00	0.01	1.866	O				1.97
286.000	0.00	0.01	1.865	O				1.97
286.083	0.00	0.01	1.865	O				1.97
286.167	0.00	0.01	1.865	O				1.97
286.250	0.00	0.01	1.865	O				1.97
286.333	0.00	0.01	1.865	O				1.97
286.417	0.00	0.01	1.865	O				1.97
286.500	0.00	0.01	1.865	O				1.97
286.583	0.00	0.01	1.865	O				1.97
286.667	0.00	0.01	1.865	O				1.97
286.750	0.00	0.01	1.865	O				1.97
286.833	0.00	0.01	1.865	O				1.97
286.917	0.00	0.01	1.865	O				1.97
287.000	0.00	0.01	1.865	O				1.97
287.083	0.00	0.01	1.865	O				1.97
287.167	0.00	0.01	1.865	O				1.97
287.250	0.00	0.01	1.864	O				1.97
287.333	0.00	0.01	1.864	O				1.97
287.417	0.00	0.01	1.864	O				1.97
287.500	0.00	0.01	1.864	O				1.97
287.583	0.00	0.01	1.864	O				1.97
287.667	0.00	0.01	1.864	O				1.97
287.750	0.00	0.01	1.864	O				1.97
287.833	0.00	0.01	1.864	O				1.97
287.917	0.00	0.01	1.864	O				1.97
288.000	0.00	0.01	1.864	O				1.97
288.083	0.00	0.01	1.864	O				1.97
288.167	0.00	0.01	1.864	O				1.97
288.250	0.00	0.01	1.864	O				1.97
288.333	0.00	0.01	1.864	O				1.97
288.417	0.00	0.01	1.864	O				1.97
288.500	0.00	0.01	1.863	O				1.97
288.583	0.00	0.01	1.863	O				1.97
288.667	0.00	0.01	1.863	O				1.97
288.750	0.00	0.01	1.863	O				1.97
288.833	0.00	0.01	1.863	O				1.97
288.917	0.00	0.01	1.863	O				1.97
289.000	0.00	0.01	1.863	O				1.97
289.083	0.00	0.01	1.863	O				1.97
289.167	0.00	0.01	1.863	O				1.97
289.250	0.00	0.01	1.863	O				1.97
289.333	0.00	0.01	1.863	O				1.97
289.417	0.00	0.01	1.863	O				1.97
289.500	0.00	0.01	1.863	O				1.97
289.583	0.00	0.01	1.863	O				1.97
289.667	0.00	0.01	1.863	O				1.97

289.750	0.00	0.01	1.862	O				1.97
289.833	0.00	0.01	1.862	O				1.97
289.917	0.00	0.01	1.862	O				1.97
290.000	0.00	0.01	1.862	O				1.97
290.083	0.00	0.01	1.862	O				1.97
290.167	0.00	0.01	1.862	O				1.97
290.250	0.00	0.01	1.862	O				1.97
290.333	0.00	0.01	1.862	O				1.97
290.417	0.00	0.01	1.862	O				1.97
290.500	0.00	0.01	1.862	O				1.97
290.583	0.00	0.01	1.862	O				1.97
290.667	0.00	0.01	1.862	O				1.97
290.750	0.00	0.01	1.862	O				1.97
290.833	0.00	0.01	1.862	O				1.97
290.917	0.00	0.01	1.862	O				1.97
291.000	0.00	0.01	1.862	O				1.97
291.083	0.00	0.01	1.861	O				1.97
291.167	0.00	0.01	1.861	O				1.97
291.250	0.00	0.01	1.861	O				1.97
291.333	0.00	0.01	1.861	O				1.97
291.417	0.00	0.01	1.861	O				1.97
291.500	0.00	0.01	1.861	O				1.97
291.583	0.00	0.01	1.861	O				1.97
291.667	0.00	0.01	1.861	O				1.97
291.750	0.00	0.01	1.861	O				1.97
291.833	0.00	0.01	1.861	O				1.97
291.917	0.00	0.01	1.861	O				1.97
292.000	0.00	0.01	1.861	O				1.97
292.083	0.00	0.01	1.861	O				1.97
292.167	0.00	0.01	1.861	O				1.97
292.250	0.00	0.01	1.861	O				1.97
292.333	0.00	0.01	1.860	O				1.97
292.417	0.00	0.01	1.860	O				1.97
292.500	0.00	0.01	1.860	O				1.97
292.583	0.00	0.01	1.860	O				1.97
292.667	0.00	0.01	1.860	O				1.97
292.750	0.00	0.01	1.860	O				1.97
292.833	0.00	0.01	1.860	O				1.97
292.917	0.00	0.01	1.860	O				1.97
293.000	0.00	0.01	1.860	O				1.97
293.083	0.00	0.01	1.860	O				1.97
293.167	0.00	0.01	1.860	O				1.97
293.250	0.00	0.01	1.860	O				1.97
293.333	0.00	0.01	1.860	O				1.97
293.417	0.00	0.01	1.860	O				1.97
293.500	0.00	0.01	1.860	O				1.97
293.583	0.00	0.01	1.859	O				1.97
293.667	0.00	0.01	1.859	O				1.97
293.750	0.00	0.01	1.859	O				1.97
293.833	0.00	0.01	1.859	O				1.97

293.917	0.00	0.01	1.859	O				1.97
294.000	0.00	0.01	1.859	O				1.97
294.083	0.00	0.01	1.859	O				1.97
294.167	0.00	0.01	1.859	O				1.97
294.250	0.00	0.01	1.859	O				1.97
294.333	0.00	0.01	1.859	O				1.97
294.417	0.00	0.01	1.859	O				1.97
294.500	0.00	0.01	1.859	O				1.97
294.583	0.00	0.01	1.859	O				1.97
294.667	0.00	0.01	1.859	O				1.97
294.750	0.00	0.01	1.859	O				1.97
294.833	0.00	0.01	1.859	O				1.97
294.917	0.00	0.01	1.858	O				1.97
295.000	0.00	0.01	1.858	O				1.97
295.083	0.00	0.01	1.858	O				1.97
295.167	0.00	0.01	1.858	O				1.97
295.250	0.00	0.01	1.858	O				1.97
295.333	0.00	0.01	1.858	O				1.97
295.417	0.00	0.01	1.858	O				1.97
295.500	0.00	0.01	1.858	O				1.97
295.583	0.00	0.01	1.858	O				1.97
295.667	0.00	0.01	1.858	O				1.97
295.750	0.00	0.01	1.858	O				1.97
295.833	0.00	0.01	1.858	O				1.97
295.917	0.00	0.01	1.858	O				1.97
296.000	0.00	0.01	1.858	O				1.97
296.083	0.00	0.01	1.858	O				1.97
296.167	0.00	0.01	1.857	O				1.97
296.250	0.00	0.01	1.857	O				1.97
296.333	0.00	0.01	1.857	O				1.97
296.417	0.00	0.01	1.857	O				1.97
296.500	0.00	0.01	1.857	O				1.97
296.583	0.00	0.01	1.857	O				1.97
296.667	0.00	0.01	1.857	O				1.97
296.750	0.00	0.01	1.857	O				1.97
296.833	0.00	0.01	1.857	O				1.97
296.917	0.00	0.01	1.857	O				1.97
297.000	0.00	0.01	1.857	O				1.97
297.083	0.00	0.01	1.857	O				1.97
297.167	0.00	0.01	1.857	O				1.97
297.250	0.00	0.01	1.857	O				1.97
297.333	0.00	0.01	1.857	O				1.97
297.417	0.00	0.01	1.857	O				1.97
297.500	0.00	0.01	1.856	O				1.97
297.583	0.00	0.01	1.856	O				1.96
297.667	0.00	0.01	1.856	O				1.96
297.750	0.00	0.01	1.856	O				1.96
297.833	0.00	0.01	1.856	O				1.96
297.917	0.00	0.01	1.856	O				1.96
298.000	0.00	0.01	1.856	O				1.96

298.083	0.00	0.01	1.856	O				1.96
298.167	0.00	0.01	1.856	O				1.96
298.250	0.00	0.01	1.856	O				1.96
298.333	0.00	0.01	1.856	O				1.96
298.417	0.00	0.01	1.856	O				1.96
298.500	0.00	0.01	1.856	O				1.96
298.583	0.00	0.01	1.856	O				1.96
298.667	0.00	0.01	1.856	O				1.96
298.750	0.00	0.01	1.855	O				1.96
298.833	0.00	0.01	1.855	O				1.96
298.917	0.00	0.01	1.855	O				1.96
299.000	0.00	0.01	1.855	O				1.96
299.083	0.00	0.01	1.855	O				1.96
299.167	0.00	0.01	1.855	O				1.96
299.250	0.00	0.01	1.855	O				1.96
299.333	0.00	0.01	1.855	O				1.96
299.417	0.00	0.01	1.855	O				1.96
299.500	0.00	0.01	1.855	O				1.96
299.583	0.00	0.01	1.855	O				1.96
299.667	0.00	0.01	1.855	O				1.96
299.750	0.00	0.01	1.855	O				1.96
299.833	0.00	0.01	1.855	O				1.96
299.917	0.00	0.01	1.855	O				1.96
300.000	0.00	0.01	1.855	O				1.96
300.083	0.00	0.01	1.854	O				1.96
300.167	0.00	0.01	1.854	O				1.96
300.250	0.00	0.01	1.854	O				1.96
300.333	0.00	0.01	1.854	O				1.96
300.417	0.00	0.01	1.854	O				1.96
300.500	0.00	0.01	1.854	O				1.96
300.583	0.00	0.01	1.854	O				1.96
300.667	0.00	0.01	1.854	O				1.96
300.750	0.00	0.01	1.854	O				1.96
300.833	0.00	0.01	1.854	O				1.96
300.917	0.00	0.01	1.854	O				1.96
301.000	0.00	0.01	1.854	O				1.96
301.083	0.00	0.01	1.854	O				1.96
301.167	0.00	0.01	1.854	O				1.96
301.250	0.00	0.01	1.854	O				1.96
301.333	0.00	0.01	1.853	O				1.96
301.417	0.00	0.01	1.853	O				1.96
301.500	0.00	0.01	1.853	O				1.96
301.583	0.00	0.01	1.853	O				1.96
301.667	0.00	0.01	1.853	O				1.96
301.750	0.00	0.01	1.853	O				1.96
301.833	0.00	0.01	1.853	O				1.96
301.917	0.00	0.01	1.853	O				1.96
302.000	0.00	0.01	1.853	O				1.96
302.083	0.00	0.01	1.853	O				1.96
302.167	0.00	0.01	1.853	O				1.96

302.250	0.00	0.01	1.853	O				1.96
302.333	0.00	0.01	1.853	O				1.96
302.417	0.00	0.01	1.853	O				1.96
302.500	0.00	0.01	1.853	O				1.96
302.583	0.00	0.01	1.853	O				1.96
302.667	0.00	0.01	1.852	O				1.96
302.750	0.00	0.01	1.852	O				1.96
302.833	0.00	0.01	1.852	O				1.96
302.917	0.00	0.01	1.852	O				1.96
303.000	0.00	0.01	1.852	O				1.96
303.083	0.00	0.01	1.852	O				1.96
303.167	0.00	0.01	1.852	O				1.96
303.250	0.00	0.01	1.852	O				1.96
303.333	0.00	0.01	1.852	O				1.96
303.417	0.00	0.01	1.852	O				1.96
303.500	0.00	0.01	1.852	O				1.96
303.583	0.00	0.01	1.852	O				1.96
303.667	0.00	0.01	1.852	O				1.96
303.750	0.00	0.01	1.852	O				1.96
303.833	0.00	0.01	1.852	O				1.96
303.917	0.00	0.01	1.852	O				1.96
304.000	0.00	0.01	1.851	O				1.96
304.083	0.00	0.01	1.851	O				1.96
304.167	0.00	0.01	1.851	O				1.96
304.250	0.00	0.01	1.851	O				1.96
304.333	0.00	0.01	1.851	O				1.96
304.417	0.00	0.01	1.851	O				1.96
304.500	0.00	0.01	1.851	O				1.96
304.583	0.00	0.01	1.851	O				1.96
304.667	0.00	0.01	1.851	O				1.96
304.750	0.00	0.01	1.851	O				1.96
304.833	0.00	0.01	1.851	O				1.96
304.917	0.00	0.01	1.851	O				1.96
305.000	0.00	0.01	1.851	O				1.96
305.083	0.00	0.01	1.851	O				1.96
305.167	0.00	0.01	1.851	O				1.96
305.250	0.00	0.01	1.850	O				1.96
305.333	0.00	0.01	1.850	O				1.96
305.417	0.00	0.01	1.850	O				1.96
305.500	0.00	0.01	1.850	O				1.96
305.583	0.00	0.01	1.850	O				1.96
305.667	0.00	0.01	1.850	O				1.96
305.750	0.00	0.01	1.850	O				1.96
305.833	0.00	0.01	1.850	O				1.96
305.917	0.00	0.01	1.850	O				1.96
306.000	0.00	0.01	1.850	O				1.96
306.083	0.00	0.01	1.850	O				1.96
306.167	0.00	0.01	1.850	O				1.96
306.250	0.00	0.01	1.850	O				1.96
306.333	0.00	0.01	1.850	O				1.96

306.417	0.00	0.01	1.850	O				1.96
306.500	0.00	0.01	1.850	O				1.96
306.583	0.00	0.01	1.849	O				1.96
306.667	0.00	0.01	1.849	O				1.96
306.750	0.00	0.01	1.849	O				1.96
306.833	0.00	0.01	1.849	O				1.96
306.917	0.00	0.01	1.849	O				1.96
307.000	0.00	0.01	1.849	O				1.96
307.083	0.00	0.01	1.849	O				1.96
307.167	0.00	0.01	1.849	O				1.96
307.250	0.00	0.01	1.849	O				1.96
307.333	0.00	0.01	1.849	O				1.96
307.417	0.00	0.01	1.849	O				1.96
307.500	0.00	0.01	1.849	O				1.96
307.583	0.00	0.01	1.849	O				1.96
307.667	0.00	0.01	1.849	O				1.96
307.750	0.00	0.01	1.849	O				1.96
307.833	0.00	0.01	1.849	O				1.96
307.917	0.00	0.01	1.848	O				1.96
308.000	0.00	0.01	1.848	O				1.96
308.083	0.00	0.01	1.848	O				1.96
308.167	0.00	0.01	1.848	O				1.96
308.250	0.00	0.01	1.848	O				1.96
308.333	0.00	0.01	1.848	O				1.96
308.417	0.00	0.01	1.848	O				1.96
308.500	0.00	0.01	1.848	O				1.96
308.583	0.00	0.01	1.848	O				1.96
308.667	0.00	0.01	1.848	O				1.96
308.750	0.00	0.01	1.848	O				1.96
308.833	0.00	0.01	1.848	O				1.96
308.917	0.00	0.01	1.848	O				1.96
309.000	0.00	0.01	1.848	O				1.96
309.083	0.00	0.01	1.848	O				1.96
309.167	0.00	0.01	1.847	O				1.96
309.250	0.00	0.01	1.847	O				1.96
309.333	0.00	0.01	1.847	O				1.96
309.417	0.00	0.01	1.847	O				1.96
309.500	0.00	0.01	1.847	O				1.96
309.583	0.00	0.01	1.847	O				1.96
309.667	0.00	0.01	1.847	O				1.96
309.750	0.00	0.01	1.847	O				1.96
309.833	0.00	0.01	1.847	O				1.96
309.917	0.00	0.01	1.847	O				1.96
310.000	0.00	0.01	1.847	O				1.96
310.083	0.00	0.01	1.847	O				1.95
310.167	0.00	0.01	1.847	O				1.95
310.250	0.00	0.01	1.847	O				1.95
310.333	0.00	0.01	1.847	O				1.95
310.417	0.00	0.01	1.847	O				1.95
310.500	0.00	0.01	1.846	O				1.95

310.583	0.00	0.01	1.846	O				1.95
310.667	0.00	0.01	1.846	O				1.95
310.750	0.00	0.01	1.846	O				1.95
310.833	0.00	0.01	1.846	O				1.95
310.917	0.00	0.01	1.846	O				1.95
311.000	0.00	0.01	1.846	O				1.95
311.083	0.00	0.01	1.846	O				1.95
311.167	0.00	0.01	1.846	O				1.95
311.250	0.00	0.01	1.846	O				1.95
311.333	0.00	0.01	1.846	O				1.95
311.417	0.00	0.01	1.846	O				1.95
311.500	0.00	0.01	1.846	O				1.95
311.583	0.00	0.01	1.846	O				1.95
311.667	0.00	0.01	1.846	O				1.95
311.750	0.00	0.01	1.846	O				1.95
311.833	0.00	0.01	1.845	O				1.95
311.917	0.00	0.01	1.845	O				1.95
312.000	0.00	0.01	1.845	O				1.95
312.083	0.00	0.01	1.845	O				1.95
312.167	0.00	0.01	1.845	O				1.95
312.250	0.00	0.01	1.845	O				1.95
312.333	0.00	0.01	1.845	O				1.95
312.417	0.00	0.01	1.845	O				1.95
312.500	0.00	0.01	1.845	O				1.95
312.583	0.00	0.01	1.845	O				1.95
312.667	0.00	0.01	1.845	O				1.95
312.750	0.00	0.01	1.845	O				1.95
312.833	0.00	0.01	1.845	O				1.95
312.917	0.00	0.01	1.845	O				1.95
313.000	0.00	0.01	1.845	O				1.95
313.083	0.00	0.01	1.845	O				1.95
313.167	0.00	0.01	1.844	O				1.95
313.250	0.00	0.01	1.844	O				1.95
313.333	0.00	0.01	1.844	O				1.95
313.417	0.00	0.01	1.844	O				1.95
313.500	0.00	0.01	1.844	O				1.95
313.583	0.00	0.01	1.844	O				1.95
313.667	0.00	0.01	1.844	O				1.95
313.750	0.00	0.01	1.844	O				1.95
313.833	0.00	0.01	1.844	O				1.95
313.917	0.00	0.01	1.844	O				1.95
314.000	0.00	0.01	1.844	O				1.95
314.083	0.00	0.01	1.844	O				1.95
314.167	0.00	0.01	1.844	O				1.95
314.250	0.00	0.01	1.844	O				1.95
314.333	0.00	0.01	1.844	O				1.95
314.417	0.00	0.01	1.844	O				1.95
314.500	0.00	0.01	1.843	O				1.95
314.583	0.00	0.01	1.843	O				1.95
314.667	0.00	0.01	1.843	O				1.95

314.750	0.00	0.01	1.843	O	|	|	|	1.95
314.833	0.00	0.01	1.843	O	|	|	|	1.95
314.917	0.00	0.01	1.843	O	|	|	|	1.95
315.000	0.00	0.01	1.843	O	|	|	|	1.95
315.083	0.00	0.01	1.843	O	|	|	|	1.95
315.167	0.00	0.01	1.843	O	|	|	|	1.95
315.250	0.00	0.01	1.843	O	|	|	|	1.95
315.333	0.00	0.01	1.843	O	|	|	|	1.95
315.417	0.00	0.01	1.843	O	|	|	|	1.95
315.500	0.00	0.01	1.843	O	|	|	|	1.95
315.583	0.00	0.01	1.843	O	|	|	|	1.95
315.667	0.00	0.01	1.843	O	|	|	|	1.95
315.750	0.00	0.01	1.843	O	|	|	|	1.95
315.833	0.00	0.01	1.842	O	|	|	|	1.95
315.917	0.00	0.01	1.842	O	|	|	|	1.95
316.000	0.00	0.01	1.842	O	|	|	|	1.95
316.083	0.00	0.01	1.842	O	|	|	|	1.95
316.167	0.00	0.01	1.842	O	|	|	|	1.95
316.250	0.00	0.01	1.842	O	|	|	|	1.95
316.333	0.00	0.01	1.842	O	|	|	|	1.95
316.417	0.00	0.01	1.842	O	|	|	|	1.95
316.500	0.00	0.01	1.842	O	|	|	|	1.95
316.583	0.00	0.01	1.842	O	|	|	|	1.95
316.667	0.00	0.01	1.842	O	|	|	|	1.95
316.750	0.00	0.01	1.842	O	|	|	|	1.95
316.833	0.00	0.01	1.842	O	|	|	|	1.95
316.917	0.00	0.01	1.842	O	|	|	|	1.95
317.000	0.00	0.01	1.842	O	|	|	|	1.95
317.083	0.00	0.01	1.842	O	|	|	|	1.95
317.167	0.00	0.01	1.841	O	|	|	|	1.95
317.250	0.00	0.01	1.841	O	|	|	|	1.95
317.333	0.00	0.01	1.841	O	|	|	|	1.95
317.417	0.00	0.01	1.841	O	|	|	|	1.95
317.500	0.00	0.01	1.841	O	|	|	|	1.95
317.583	0.00	0.01	1.841	O	|	|	|	1.95
317.667	0.00	0.01	1.841	O	|	|	|	1.95
317.750	0.00	0.01	1.841	O	|	|	|	1.95
317.833	0.00	0.01	1.841	O	|	|	|	1.95
317.917	0.00	0.01	1.841	O	|	|	|	1.95
318.000	0.00	0.01	1.841	O	|	|	|	1.95
318.083	0.00	0.01	1.841	O	|	|	|	1.95
318.167	0.00	0.01	1.841	O	|	|	|	1.95
318.250	0.00	0.01	1.841	O	|	|	|	1.95
318.333	0.00	0.01	1.841	O	|	|	|	1.95
318.417	0.00	0.01	1.841	O	|	|	|	1.95
318.500	0.00	0.01	1.840	O	|	|	|	1.95
318.583	0.00	0.01	1.840	O	|	|	|	1.95
318.667	0.00	0.01	1.840	O	|	|	|	1.95
318.750	0.00	0.01	1.840	O	|	|	|	1.95
318.833	0.00	0.01	1.840	O	|	|	|	1.95

318.917	0.00	0.01	1.840	O				1.95
319.000	0.00	0.01	1.840	O				1.95
319.083	0.00	0.01	1.840	O				1.95
319.167	0.00	0.01	1.840	O				1.95
319.250	0.00	0.01	1.840	O				1.95
319.333	0.00	0.01	1.840	O				1.95
319.417	0.00	0.01	1.840	O				1.95
319.500	0.00	0.01	1.840	O				1.95
319.583	0.00	0.01	1.840	O				1.95
319.667	0.00	0.01	1.840	O				1.95
319.750	0.00	0.01	1.840	O				1.95
319.833	0.00	0.01	1.839	O				1.95
319.917	0.00	0.01	1.839	O				1.95
320.000	0.00	0.01	1.839	O				1.95
320.083	0.00	0.01	1.839	O				1.95
320.167	0.00	0.01	1.839	O				1.95
320.250	0.00	0.01	1.839	O				1.95
320.333	0.00	0.01	1.839	O				1.95
320.417	0.00	0.01	1.839	O				1.95
320.500	0.00	0.01	1.839	O				1.95
320.583	0.00	0.01	1.839	O				1.95
320.667	0.00	0.01	1.839	O				1.95
320.750	0.00	0.01	1.839	O				1.95
320.833	0.00	0.01	1.839	O				1.95
320.917	0.00	0.01	1.839	O				1.95
321.000	0.00	0.01	1.839	O				1.95
321.083	0.00	0.01	1.839	O				1.95
321.167	0.00	0.01	1.838	O				1.95
321.250	0.00	0.01	1.838	O				1.95
321.333	0.00	0.01	1.838	O				1.95
321.417	0.00	0.01	1.838	O				1.95
321.500	0.00	0.01	1.838	O				1.95
321.583	0.00	0.01	1.838	O				1.95
321.667	0.00	0.01	1.838	O				1.95
321.750	0.00	0.01	1.838	O				1.95
321.833	0.00	0.01	1.838	O				1.95
321.917	0.00	0.01	1.838	O				1.95
322.000	0.00	0.01	1.838	O				1.95
322.083	0.00	0.01	1.838	O				1.95
322.167	0.00	0.01	1.838	O				1.95
322.250	0.00	0.01	1.838	O				1.95
322.333	0.00	0.01	1.838	O				1.95
322.417	0.00	0.01	1.838	O				1.95
322.500	0.00	0.01	1.837	O				1.95
322.583	0.00	0.01	1.837	O				1.95
322.667	0.00	0.01	1.837	O				1.95
322.750	0.00	0.01	1.837	O				1.95
322.833	0.00	0.01	1.837	O				1.95
322.917	0.00	0.01	1.837	O				1.94
323.000	0.00	0.01	1.837	O				1.94

323.083	0.00	0.01	1.837	O				1.94
323.167	0.00	0.01	1.837	O				1.94
323.250	0.00	0.01	1.837	O				1.94
323.333	0.00	0.01	1.837	O				1.94
323.417	0.00	0.01	1.837	O				1.94
323.500	0.00	0.01	1.837	O				1.94
323.583	0.00	0.01	1.837	O				1.94
323.667	0.00	0.01	1.837	O				1.94
323.750	0.00	0.01	1.837	O				1.94
323.833	0.00	0.01	1.836	O				1.94
323.917	0.00	0.01	1.836	O				1.94
324.000	0.00	0.01	1.836	O				1.94
324.083	0.00	0.01	1.836	O				1.94
324.167	0.00	0.01	1.836	O				1.94
324.250	0.00	0.01	1.836	O				1.94
324.333	0.00	0.01	1.836	O				1.94
324.417	0.00	0.01	1.836	O				1.94
324.500	0.00	0.01	1.836	O				1.94
324.583	0.00	0.01	1.836	O				1.94
324.667	0.00	0.01	1.836	O				1.94
324.750	0.00	0.01	1.836	O				1.94
324.833	0.00	0.01	1.836	O				1.94
324.917	0.00	0.01	1.836	O				1.94
325.000	0.00	0.01	1.836	O				1.94
325.083	0.00	0.01	1.836	O				1.94
325.167	0.00	0.01	1.835	O				1.94
325.250	0.00	0.01	1.835	O				1.94
325.333	0.00	0.01	1.835	O				1.94
325.417	0.00	0.01	1.835	O				1.94
325.500	0.00	0.01	1.835	O				1.94
325.583	0.00	0.01	1.835	O				1.94
325.667	0.00	0.01	1.835	O				1.94
325.750	0.00	0.01	1.835	O				1.94
325.833	0.00	0.01	1.835	O				1.94
325.917	0.00	0.01	1.835	O				1.94
326.000	0.00	0.01	1.835	O				1.94
326.083	0.00	0.01	1.835	O				1.94
326.167	0.00	0.01	1.835	O				1.94
326.250	0.00	0.01	1.835	O				1.94
326.333	0.00	0.01	1.835	O				1.94
326.417	0.00	0.01	1.835	O				1.94
326.500	0.00	0.01	1.834	O				1.94
326.583	0.00	0.01	1.834	O				1.94
326.667	0.00	0.01	1.834	O				1.94
326.750	0.00	0.01	1.834	O				1.94
326.833	0.00	0.01	1.834	O				1.94
326.917	0.00	0.01	1.834	O				1.94
327.000	0.00	0.01	1.834	O				1.94
327.083	0.00	0.01	1.834	O				1.94
327.167	0.00	0.01	1.834	O				1.94

327.250	0.00	0.01	1.834	O				1.94
327.333	0.00	0.01	1.834	O				1.94
327.417	0.00	0.01	1.834	O				1.94
327.500	0.00	0.01	1.834	O				1.94
327.583	0.00	0.01	1.834	O				1.94
327.667	0.00	0.01	1.834	O				1.94
327.750	0.00	0.01	1.834	O				1.94
327.833	0.00	0.01	1.834	O				1.94
327.917	0.00	0.01	1.833	O				1.94
328.000	0.00	0.01	1.833	O				1.94
328.083	0.00	0.01	1.833	O				1.94
328.167	0.00	0.01	1.833	O				1.94
328.250	0.00	0.01	1.833	O				1.94
328.333	0.00	0.01	1.833	O				1.94
328.417	0.00	0.01	1.833	O				1.94
328.500	0.00	0.01	1.833	O				1.94
328.583	0.00	0.01	1.833	O				1.94
328.667	0.00	0.01	1.833	O				1.94
328.750	0.00	0.01	1.833	O				1.94
328.833	0.00	0.01	1.833	O				1.94
328.917	0.00	0.01	1.833	O				1.94
329.000	0.00	0.01	1.833	O				1.94
329.083	0.00	0.01	1.833	O				1.94
329.167	0.00	0.01	1.833	O				1.94
329.250	0.00	0.01	1.832	O				1.94
329.333	0.00	0.01	1.832	O				1.94
329.417	0.00	0.01	1.832	O				1.94
329.500	0.00	0.01	1.832	O				1.94
329.583	0.00	0.01	1.832	O				1.94
329.667	0.00	0.01	1.832	O				1.94
329.750	0.00	0.01	1.832	O				1.94
329.833	0.00	0.01	1.832	O				1.94
329.917	0.00	0.01	1.832	O				1.94
330.000	0.00	0.01	1.832	O				1.94
330.083	0.00	0.01	1.832	O				1.94
330.167	0.00	0.01	1.832	O				1.94
330.250	0.00	0.01	1.832	O				1.94
330.333	0.00	0.01	1.832	O				1.94
330.417	0.00	0.01	1.832	O				1.94
330.500	0.00	0.01	1.832	O				1.94
330.583	0.00	0.01	1.831	O				1.94
330.667	0.00	0.01	1.831	O				1.94
330.750	0.00	0.01	1.831	O				1.94
330.833	0.00	0.01	1.831	O				1.94
330.917	0.00	0.01	1.831	O				1.94
331.000	0.00	0.01	1.831	O				1.94
331.083	0.00	0.01	1.831	O				1.94
331.167	0.00	0.01	1.831	O				1.94
331.250	0.00	0.01	1.831	O				1.94
331.333	0.00	0.01	1.831	O				1.94

331.417	0.00	0.01	1.831	O				1.94
331.500	0.00	0.01	1.831	O				1.94
331.583	0.00	0.01	1.831	O				1.94
331.667	0.00	0.01	1.831	O				1.94
331.750	0.00	0.01	1.831	O				1.94
331.833	0.00	0.01	1.831	O				1.94
331.917	0.00	0.01	1.830	O				1.94
332.000	0.00	0.01	1.830	O				1.94
332.083	0.00	0.01	1.830	O				1.94
332.167	0.00	0.01	1.830	O				1.94
332.250	0.00	0.01	1.830	O				1.94
332.333	0.00	0.01	1.830	O				1.94
332.417	0.00	0.01	1.830	O				1.94
332.500	0.00	0.01	1.830	O				1.94
332.583	0.00	0.01	1.830	O				1.94
332.667	0.00	0.01	1.830	O				1.94
332.750	0.00	0.01	1.830	O				1.94
332.833	0.00	0.01	1.830	O				1.94
332.917	0.00	0.01	1.830	O				1.94
333.000	0.00	0.01	1.830	O				1.94
333.083	0.00	0.01	1.830	O				1.94
333.167	0.00	0.01	1.830	O				1.94
333.250	0.00	0.01	1.830	O				1.94
333.333	0.00	0.01	1.829	O				1.94
333.417	0.00	0.01	1.829	O				1.94
333.500	0.00	0.01	1.829	O				1.94
333.583	0.00	0.01	1.829	O				1.94
333.667	0.00	0.01	1.829	O				1.94
333.750	0.00	0.01	1.829	O				1.94
333.833	0.00	0.01	1.829	O				1.94
333.917	0.00	0.01	1.829	O				1.94
334.000	0.00	0.01	1.829	O				1.94
334.083	0.00	0.01	1.829	O				1.94
334.167	0.00	0.01	1.829	O				1.94
334.250	0.00	0.01	1.829	O				1.94
334.333	0.00	0.01	1.829	O				1.94
334.417	0.00	0.01	1.829	O				1.94
334.500	0.00	0.01	1.829	O				1.94
334.583	0.00	0.01	1.829	O				1.94
334.667	0.00	0.01	1.828	O				1.94
334.750	0.00	0.01	1.828	O				1.94
334.833	0.00	0.01	1.828	O				1.94
334.917	0.00	0.01	1.828	O				1.94
335.000	0.00	0.01	1.828	O				1.94
335.083	0.00	0.01	1.828	O				1.94
335.167	0.00	0.01	1.828	O				1.94
335.250	0.00	0.01	1.828	O				1.94
335.333	0.00	0.01	1.828	O				1.94
335.417	0.00	0.01	1.828	O				1.94
335.500	0.00	0.01	1.828	O				1.94

335.583	0.00	0.01	1.828	O				1.94
335.667	0.00	0.01	1.828	O				1.94
335.750	0.00	0.01	1.828	O				1.94
335.833	0.00	0.01	1.828	O				1.94
335.917	0.00	0.01	1.828	O				1.93
336.000	0.00	0.01	1.828	O				1.93
336.083	0.00	0.01	1.827	O				1.93
336.167	0.00	0.01	1.827	O				1.93
336.250	0.00	0.01	1.827	O				1.93
336.333	0.00	0.01	1.827	O				1.93
336.417	0.00	0.01	1.827	O				1.93
336.500	0.00	0.01	1.827	O				1.93
336.583	0.00	0.01	1.827	O				1.93
336.667	0.00	0.01	1.827	O				1.93
336.750	0.00	0.01	1.827	O				1.93
336.833	0.00	0.01	1.827	O				1.93
336.917	0.00	0.01	1.827	O				1.93
337.000	0.00	0.01	1.827	O				1.93
337.083	0.00	0.01	1.827	O				1.93
337.167	0.00	0.01	1.827	O				1.93
337.250	0.00	0.01	1.827	O				1.93
337.333	0.00	0.01	1.827	O				1.93
337.417	0.00	0.01	1.826	O				1.93
337.500	0.00	0.01	1.826	O				1.93
337.583	0.00	0.01	1.826	O				1.93
337.667	0.00	0.01	1.826	O				1.93
337.750	0.00	0.01	1.826	O				1.93
337.833	0.00	0.01	1.826	O				1.93
337.917	0.00	0.01	1.826	O				1.93
338.000	0.00	0.01	1.826	O				1.93
338.083	0.00	0.01	1.826	O				1.93
338.167	0.00	0.01	1.826	O				1.93
338.250	0.00	0.01	1.826	O				1.93
338.333	0.00	0.01	1.826	O				1.93
338.417	0.00	0.01	1.826	O				1.93
338.500	0.00	0.01	1.826	O				1.93
338.583	0.00	0.01	1.826	O				1.93
338.667	0.00	0.01	1.826	O				1.93
338.750	0.00	0.01	1.826	O				1.93
338.833	0.00	0.01	1.825	O				1.93
338.917	0.00	0.01	1.825	O				1.93
339.000	0.00	0.01	1.825	O				1.93
339.083	0.00	0.01	1.825	O				1.93
339.167	0.00	0.01	1.825	O				1.93
339.250	0.00	0.01	1.825	O				1.93
339.333	0.00	0.01	1.825	O				1.93
339.417	0.00	0.01	1.825	O				1.93
339.500	0.00	0.01	1.825	O				1.93
339.583	0.00	0.01	1.825	O				1.93
339.667	0.00	0.01	1.825	O				1.93

339.750	0.00	0.01	1.825	O				1.93
339.833	0.00	0.01	1.825	O				1.93
339.917	0.00	0.01	1.825	O				1.93
340.000	0.00	0.01	1.825	O				1.93
340.083	0.00	0.01	1.825	O				1.93
340.167	0.00	0.01	1.824	O				1.93
340.250	0.00	0.01	1.824	O				1.93
340.333	0.00	0.01	1.824	O				1.93
340.417	0.00	0.01	1.824	O				1.93
340.500	0.00	0.01	1.824	O				1.93
340.583	0.00	0.01	1.824	O				1.93
340.667	0.00	0.01	1.824	O				1.93
340.750	0.00	0.01	1.824	O				1.93
340.833	0.00	0.01	1.824	O				1.93
340.917	0.00	0.01	1.824	O				1.93
341.000	0.00	0.01	1.824	O				1.93
341.083	0.00	0.01	1.824	O				1.93
341.167	0.00	0.01	1.824	O				1.93
341.250	0.00	0.01	1.824	O				1.93
341.333	0.00	0.01	1.824	O				1.93
341.417	0.00	0.01	1.824	O				1.93
341.500	0.00	0.01	1.824	O				1.93
341.583	0.00	0.01	1.823	O				1.93
341.667	0.00	0.01	1.823	O				1.93
341.750	0.00	0.01	1.823	O				1.93
341.833	0.00	0.01	1.823	O				1.93
341.917	0.00	0.01	1.823	O				1.93
342.000	0.00	0.01	1.823	O				1.93
342.083	0.00	0.01	1.823	O				1.93
342.167	0.00	0.01	1.823	O				1.93
342.250	0.00	0.01	1.823	O				1.93
342.333	0.00	0.01	1.823	O				1.93
342.417	0.00	0.01	1.823	O				1.93
342.500	0.00	0.01	1.823	O				1.93
342.583	0.00	0.01	1.823	O				1.93
342.667	0.00	0.01	1.823	O				1.93
342.750	0.00	0.01	1.823	O				1.93
342.833	0.00	0.01	1.823	O				1.93
342.917	0.00	0.01	1.822	O				1.93
343.000	0.00	0.01	1.822	O				1.93
343.083	0.00	0.01	1.822	O				1.93
343.167	0.00	0.01	1.822	O				1.93
343.250	0.00	0.01	1.822	O				1.93
343.333	0.00	0.01	1.822	O				1.93
343.417	0.00	0.01	1.822	O				1.93
343.500	0.00	0.01	1.822	O				1.93
343.583	0.00	0.01	1.822	O				1.93
343.667	0.00	0.01	1.822	O				1.93
343.750	0.00	0.01	1.822	O				1.93
343.833	0.00	0.01	1.822	O				1.93

343.917	0.00	0.01	1.822	O	|	|	|	1.93
344.000	0.00	0.01	1.822	O	|	|	|	1.93
344.083	0.00	0.01	1.822	O	|	|	|	1.93
344.167	0.00	0.01	1.822	O	|	|	|	1.93
344.250	0.00	0.01	1.822	O	|	|	|	1.93
344.333	0.00	0.01	1.821	O	|	|	|	1.93
344.417	0.00	0.01	1.821	O	|	|	|	1.93
344.500	0.00	0.01	1.821	O	|	|	|	1.93
344.583	0.00	0.01	1.821	O	|	|	|	1.93
344.667	0.00	0.01	1.821	O	|	|	|	1.93
344.750	0.00	0.01	1.821	O	|	|	|	1.93
344.833	0.00	0.01	1.821	O	|	|	|	1.93
344.917	0.00	0.01	1.821	O	|	|	|	1.93
345.000	0.00	0.01	1.821	O	|	|	|	1.93
345.083	0.00	0.01	1.821	O	|	|	|	1.93
345.167	0.00	0.01	1.821	O	|	|	|	1.93
345.250	0.00	0.01	1.821	O	|	|	|	1.93
345.333	0.00	0.01	1.821	O	|	|	|	1.93
345.417	0.00	0.01	1.821	O	|	|	|	1.93
345.500	0.00	0.01	1.821	O	|	|	|	1.93
345.583	0.00	0.01	1.821	O	|	|	|	1.93
345.667	0.00	0.01	1.821	O	|	|	|	1.93
345.750	0.00	0.01	1.820	O	|	|	|	1.93
345.833	0.00	0.01	1.820	O	|	|	|	1.93
345.917	0.00	0.01	1.820	O	|	|	|	1.93
346.000	0.00	0.01	1.820	O	|	|	|	1.93
346.083	0.00	0.01	1.820	O	|	|	|	1.93
346.167	0.00	0.01	1.820	O	|	|	|	1.93
346.250	0.00	0.01	1.820	O	|	|	|	1.93
346.333	0.00	0.01	1.820	O	|	|	|	1.93
346.417	0.00	0.01	1.820	O	|	|	|	1.93
346.500	0.00	0.01	1.820	O	|	|	|	1.93
346.583	0.00	0.01	1.820	O	|	|	|	1.93
346.667	0.00	0.01	1.820	O	|	|	|	1.93
346.750	0.00	0.01	1.820	O	|	|	|	1.93
346.833	0.00	0.01	1.820	O	|	|	|	1.93
346.917	0.00	0.01	1.820	O	|	|	|	1.93
347.000	0.00	0.01	1.820	O	|	|	|	1.93
347.083	0.00	0.01	1.819	O	|	|	|	1.93
347.167	0.00	0.01	1.819	O	|	|	|	1.93
347.250	0.00	0.01	1.819	O	|	|	|	1.93
347.333	0.00	0.01	1.819	O	|	|	|	1.93
347.417	0.00	0.01	1.819	O	|	|	|	1.93
347.500	0.00	0.01	1.819	O	|	|	|	1.93
347.583	0.00	0.01	1.819	O	|	|	|	1.93
347.667	0.00	0.01	1.819	O	|	|	|	1.93
347.750	0.00	0.01	1.819	O	|	|	|	1.93
347.833	0.00	0.01	1.819	O	|	|	|	1.93
347.917	0.00	0.01	1.819	O	|	|	|	1.93
348.000	0.00	0.01	1.819	O	|	|	|	1.93

348.083	0.00	0.01	1.819	O				1.93
348.167	0.00	0.01	1.819	O				1.93
348.250	0.00	0.01	1.819	O				1.93
348.333	0.00	0.01	1.819	O				1.93
348.417	0.00	0.01	1.819	O				1.93
348.500	0.00	0.01	1.818	O				1.93
348.583	0.00	0.01	1.818	O				1.93
348.667	0.00	0.01	1.818	O				1.93
348.750	0.00	0.01	1.818	O				1.93
348.833	0.00	0.01	1.818	O				1.93
348.917	0.00	0.01	1.818	O				1.93
349.000	0.00	0.01	1.818	O				1.93
349.083	0.00	0.01	1.818	O				1.93
349.167	0.00	0.01	1.818	O				1.92
349.250	0.00	0.01	1.818	O				1.92
349.333	0.00	0.01	1.818	O				1.92
349.417	0.00	0.01	1.818	O				1.92
349.500	0.00	0.01	1.818	O				1.92
349.583	0.00	0.01	1.818	O				1.92
349.667	0.00	0.01	1.818	O				1.92
349.750	0.00	0.01	1.818	O				1.92
349.833	0.00	0.01	1.818	O				1.92
349.917	0.00	0.01	1.817	O				1.92
350.000	0.00	0.01	1.817	O				1.92
350.083	0.00	0.01	1.817	O				1.92
350.167	0.00	0.01	1.817	O				1.92
350.250	0.00	0.01	1.817	O				1.92
350.333	0.00	0.01	1.817	O				1.92
350.417	0.00	0.01	1.817	O				1.92
350.500	0.00	0.01	1.817	O				1.92
350.583	0.00	0.01	1.817	O				1.92
350.667	0.00	0.01	1.817	O				1.92
350.750	0.00	0.01	1.817	O				1.92
350.833	0.00	0.01	1.817	O				1.92
350.917	0.00	0.01	1.817	O				1.92
351.000	0.00	0.01	1.817	O				1.92
351.083	0.00	0.01	1.817	O				1.92
351.167	0.00	0.01	1.817	O				1.92
351.250	0.00	0.01	1.817	O				1.92
351.333	0.00	0.01	1.816	O				1.92
351.417	0.00	0.01	1.816	O				1.92
351.500	0.00	0.01	1.816	O				1.92
351.583	0.00	0.01	1.816	O				1.92
351.667	0.00	0.01	1.816	O				1.92
351.750	0.00	0.01	1.816	O				1.92
351.833	0.00	0.01	1.816	O				1.92
351.917	0.00	0.01	1.816	O				1.92
352.000	0.00	0.01	1.816	O				1.92
352.083	0.00	0.01	1.816	O				1.92
352.167	0.00	0.01	1.816	O				1.92

352.250	0.00	0.01	1.816	O				1.92
352.333	0.00	0.01	1.816	O				1.92
352.417	0.00	0.01	1.816	O				1.92
352.500	0.00	0.01	1.816	O				1.92
352.583	0.00	0.01	1.816	O				1.92
352.667	0.00	0.01	1.816	O				1.92
352.750	0.00	0.01	1.815	O				1.92
352.833	0.00	0.01	1.815	O				1.92
352.917	0.00	0.01	1.815	O				1.92
353.000	0.00	0.01	1.815	O				1.92
353.083	0.00	0.01	1.815	O				1.92
353.167	0.00	0.01	1.815	O				1.92
353.250	0.00	0.01	1.815	O				1.92
353.333	0.00	0.01	1.815	O				1.92
353.417	0.00	0.01	1.815	O				1.92
353.500	0.00	0.01	1.815	O				1.92
353.583	0.00	0.01	1.815	O				1.92
353.667	0.00	0.01	1.815	O				1.92
353.750	0.00	0.01	1.815	O				1.92
353.833	0.00	0.01	1.815	O				1.92
353.917	0.00	0.01	1.815	O				1.92
354.000	0.00	0.01	1.815	O				1.92
354.083	0.00	0.01	1.814	O				1.92
354.167	0.00	0.01	1.814	O				1.92
354.250	0.00	0.01	1.814	O				1.92
354.333	0.00	0.01	1.814	O				1.92
354.417	0.00	0.01	1.814	O				1.92
354.500	0.00	0.01	1.814	O				1.92
354.583	0.00	0.01	1.814	O				1.92
354.667	0.00	0.01	1.814	O				1.92
354.750	0.00	0.01	1.814	O				1.92
354.833	0.00	0.01	1.814	O				1.92
354.917	0.00	0.01	1.814	O				1.92
355.000	0.00	0.01	1.814	O				1.92
355.083	0.00	0.01	1.814	O				1.92
355.167	0.00	0.01	1.814	O				1.92
355.250	0.00	0.01	1.814	O				1.92
355.333	0.00	0.01	1.814	O				1.92
355.417	0.00	0.01	1.814	O				1.92
355.500	0.00	0.01	1.813	O				1.92
355.583	0.00	0.01	1.813	O				1.92
355.667	0.00	0.01	1.813	O				1.92
355.750	0.00	0.01	1.813	O				1.92
355.833	0.00	0.01	1.813	O				1.92
355.917	0.00	0.01	1.813	O				1.92
356.000	0.00	0.01	1.813	O				1.92
356.083	0.00	0.01	1.813	O				1.92
356.167	0.00	0.01	1.813	O				1.92
356.250	0.00	0.01	1.813	O				1.92
356.333	0.00	0.01	1.813	O				1.92

356.417	0.00	0.01	1.813	O				1.92
356.500	0.00	0.01	1.813	O				1.92
356.583	0.00	0.01	1.813	O				1.92
356.667	0.00	0.01	1.813	O				1.92
356.750	0.00	0.01	1.813	O				1.92
356.833	0.00	0.01	1.813	O				1.92
356.917	0.00	0.01	1.812	O				1.92
357.000	0.00	0.01	1.812	O				1.92
357.083	0.00	0.01	1.812	O				1.92
357.167	0.00	0.01	1.812	O				1.92
357.250	0.00	0.01	1.812	O				1.92
357.333	0.00	0.01	1.812	O				1.92
357.417	0.00	0.01	1.812	O				1.92
357.500	0.00	0.01	1.812	O				1.92
357.583	0.00	0.01	1.812	O				1.92
357.667	0.00	0.01	1.812	O				1.92
357.750	0.00	0.01	1.812	O				1.92
357.833	0.00	0.01	1.812	O				1.92
357.917	0.00	0.01	1.812	O				1.92
358.000	0.00	0.01	1.812	O				1.92
358.083	0.00	0.01	1.812	O				1.92
358.167	0.00	0.01	1.812	O				1.92
358.250	0.00	0.01	1.812	O				1.92
358.333	0.00	0.01	1.811	O				1.92
358.417	0.00	0.01	1.811	O				1.92
358.500	0.00	0.01	1.811	O				1.92
358.583	0.00	0.01	1.811	O				1.92
358.667	0.00	0.01	1.811	O				1.92
358.750	0.00	0.01	1.811	O				1.92
358.833	0.00	0.01	1.811	O				1.92
358.917	0.00	0.01	1.811	O				1.92
359.000	0.00	0.01	1.811	O				1.92
359.083	0.00	0.01	1.811	O				1.92
359.167	0.00	0.01	1.811	O				1.92
359.250	0.00	0.01	1.811	O				1.92
359.333	0.00	0.01	1.811	O				1.92
359.417	0.00	0.01	1.811	O				1.92
359.500	0.00	0.01	1.811	O				1.92
359.583	0.00	0.01	1.811	O				1.92
359.667	0.00	0.01	1.811	O				1.92
359.750	0.00	0.01	1.810	O				1.92
359.833	0.00	0.01	1.810	O				1.92
359.917	0.00	0.01	1.810	O				1.92
360.000	0.00	0.01	1.810	O				1.92
360.083	0.00	0.01	1.810	O				1.92
360.167	0.00	0.01	1.810	O				1.92
360.250	0.00	0.01	1.810	O				1.92
360.333	0.00	0.01	1.810	O				1.92
360.417	0.00	0.01	1.810	O				1.92
360.500	0.00	0.01	1.810	O				1.92

360.583	0.00	0.01	1.810	O				1.92
360.667	0.00	0.01	1.810	O				1.92
360.750	0.00	0.01	1.810	O				1.92
360.833	0.00	0.01	1.810	O				1.92
360.917	0.00	0.01	1.810	O				1.92
361.000	0.00	0.01	1.810	O				1.92
361.083	0.00	0.01	1.810	O				1.92
361.167	0.00	0.01	1.809	O				1.92
361.250	0.00	0.01	1.809	O				1.92
361.333	0.00	0.01	1.809	O				1.92
361.417	0.00	0.01	1.809	O				1.92
361.500	0.00	0.01	1.809	O				1.92
361.583	0.00	0.01	1.809	O				1.92
361.667	0.00	0.01	1.809	O				1.92
361.750	0.00	0.01	1.809	O				1.92
361.833	0.00	0.01	1.809	O				1.92
361.917	0.00	0.01	1.809	O				1.92
362.000	0.00	0.01	1.809	O				1.92
362.083	0.00	0.01	1.809	O				1.92
362.167	0.00	0.01	1.809	O				1.92
362.250	0.00	0.01	1.809	O				1.92
362.333	0.00	0.01	1.809	O				1.92
362.417	0.00	0.01	1.809	O				1.92
362.500	0.00	0.01	1.809	O				1.92
362.583	0.00	0.01	1.809	O				1.92
362.667	0.00	0.01	1.808	O				1.92
362.750	0.00	0.01	1.808	O				1.91
362.833	0.00	0.01	1.808	O				1.91
362.917	0.00	0.01	1.808	O				1.91
363.000	0.00	0.01	1.808	O				1.91
363.083	0.00	0.01	1.808	O				1.91
363.167	0.00	0.01	1.808	O				1.91
363.250	0.00	0.01	1.808	O				1.91
363.333	0.00	0.01	1.808	O				1.91
363.417	0.00	0.01	1.808	O				1.91
363.500	0.00	0.01	1.808	O				1.91
363.583	0.00	0.01	1.808	O				1.91
363.667	0.00	0.01	1.808	O				1.91
363.750	0.00	0.01	1.808	O				1.91
363.833	0.00	0.01	1.808	O				1.91
363.917	0.00	0.01	1.808	O				1.91
364.000	0.00	0.01	1.808	O				1.91
364.083	0.00	0.01	1.807	O				1.91
364.167	0.00	0.01	1.807	O				1.91
364.250	0.00	0.01	1.807	O				1.91
364.333	0.00	0.01	1.807	O				1.91
364.417	0.00	0.01	1.807	O				1.91
364.500	0.00	0.01	1.807	O				1.91
364.583	0.00	0.01	1.807	O				1.91
364.667	0.00	0.01	1.807	O				1.91

364.750	0.00	0.01	1.807	O				1.91
364.833	0.00	0.01	1.807	O				1.91
364.917	0.00	0.01	1.807	O				1.91
365.000	0.00	0.01	1.807	O				1.91
365.083	0.00	0.01	1.807	O				1.91
365.167	0.00	0.01	1.807	O				1.91
365.250	0.00	0.01	1.807	O				1.91
365.333	0.00	0.01	1.807	O				1.91
365.417	0.00	0.01	1.807	O				1.91
365.500	0.00	0.01	1.806	O				1.91
365.583	0.00	0.01	1.806	O				1.91
365.667	0.00	0.01	1.806	O				1.91
365.750	0.00	0.01	1.806	O				1.91
365.833	0.00	0.01	1.806	O				1.91
365.917	0.00	0.01	1.806	O				1.91
366.000	0.00	0.01	1.806	O				1.91
366.083	0.00	0.01	1.806	O				1.91
366.167	0.00	0.01	1.806	O				1.91
366.250	0.00	0.01	1.806	O				1.91
366.333	0.00	0.01	1.806	O				1.91
366.417	0.00	0.01	1.806	O				1.91
366.500	0.00	0.01	1.806	O				1.91
366.583	0.00	0.01	1.806	O				1.91
366.667	0.00	0.01	1.806	O				1.91
366.750	0.00	0.01	1.806	O				1.91
366.833	0.00	0.01	1.806	O				1.91
366.917	0.00	0.01	1.805	O				1.91
367.000	0.00	0.01	1.805	O				1.91
367.083	0.00	0.01	1.805	O				1.91
367.167	0.00	0.01	1.805	O				1.91
367.250	0.00	0.01	1.805	O				1.91
367.333	0.00	0.01	1.805	O				1.91
367.417	0.00	0.01	1.805	O				1.91
367.500	0.00	0.01	1.805	O				1.91
367.583	0.00	0.01	1.805	O				1.91
367.667	0.00	0.01	1.805	O				1.91
367.750	0.00	0.01	1.805	O				1.91
367.833	0.00	0.01	1.805	O				1.91
367.917	0.00	0.01	1.805	O				1.91
368.000	0.00	0.01	1.805	O				1.91
368.083	0.00	0.01	1.805	O				1.91
368.167	0.00	0.01	1.805	O				1.91
368.250	0.00	0.01	1.805	O				1.91
368.333	0.00	0.01	1.804	O				1.91
368.417	0.00	0.01	1.804	O				1.91
368.500	0.00	0.01	1.804	O				1.91
368.583	0.00	0.01	1.804	O				1.91
368.667	0.00	0.01	1.804	O				1.91
368.750	0.00	0.01	1.804	O				1.91
368.833	0.00	0.01	1.804	O				1.91

368.917	0.00	0.01	1.804	O				1.91
369.000	0.00	0.01	1.804	O				1.91
369.083	0.00	0.01	1.804	O				1.91
369.167	0.00	0.01	1.804	O				1.91
369.250	0.00	0.01	1.804	O				1.91
369.333	0.00	0.01	1.804	O				1.91
369.417	0.00	0.01	1.804	O				1.91
369.500	0.00	0.01	1.804	O				1.91
369.583	0.00	0.01	1.804	O				1.91
369.667	0.00	0.01	1.804	O				1.91
369.750	0.00	0.01	1.804	O				1.91
369.833	0.00	0.01	1.803	O				1.91
369.917	0.00	0.01	1.803	O				1.91
370.000	0.00	0.01	1.803	O				1.91
370.083	0.00	0.01	1.803	O				1.91
370.167	0.00	0.01	1.803	O				1.91
370.250	0.00	0.01	1.803	O				1.91
370.333	0.00	0.01	1.803	O				1.91
370.417	0.00	0.01	1.803	O				1.91
370.500	0.00	0.01	1.803	O				1.91
370.583	0.00	0.01	1.803	O				1.91
370.667	0.00	0.01	1.803	O				1.91
370.750	0.00	0.01	1.803	O				1.91
370.833	0.00	0.01	1.803	O				1.91
370.917	0.00	0.01	1.803	O				1.91
371.000	0.00	0.01	1.803	O				1.91
371.083	0.00	0.01	1.803	O				1.91
371.167	0.00	0.01	1.803	O				1.91
371.250	0.00	0.01	1.802	O				1.91
371.333	0.00	0.01	1.802	O				1.91
371.417	0.00	0.01	1.802	O				1.91
371.500	0.00	0.01	1.802	O				1.91
371.583	0.00	0.01	1.802	O				1.91
371.667	0.00	0.01	1.802	O				1.91
371.750	0.00	0.01	1.802	O				1.91
371.833	0.00	0.01	1.802	O				1.91
371.917	0.00	0.01	1.802	O				1.91
372.000	0.00	0.01	1.802	O				1.91
372.083	0.00	0.01	1.802	O				1.91
372.167	0.00	0.01	1.802	O				1.91
372.250	0.00	0.01	1.802	O				1.91
372.333	0.00	0.01	1.802	O				1.91
372.417	0.00	0.01	1.802	O				1.91
372.500	0.00	0.01	1.802	O				1.91
372.583	0.00	0.01	1.802	O				1.91
372.667	0.00	0.01	1.801	O				1.91
372.750	0.00	0.01	1.801	O				1.91
372.833	0.00	0.01	1.801	O				1.91
372.917	0.00	0.01	1.801	O				1.91
373.000	0.00	0.01	1.801	O				1.91

373.083	0.00	0.01	1.801	O				1.91
373.167	0.00	0.01	1.801	O				1.91
373.250	0.00	0.01	1.801	O				1.91
373.333	0.00	0.01	1.801	O				1.91
373.417	0.00	0.01	1.801	O				1.91
373.500	0.00	0.01	1.801	O				1.91
373.583	0.00	0.01	1.801	O				1.91
373.667	0.00	0.01	1.801	O				1.91
373.750	0.00	0.01	1.801	O				1.91
373.833	0.00	0.01	1.801	O				1.91
373.917	0.00	0.01	1.801	O				1.91
374.000	0.00	0.01	1.801	O				1.91
374.083	0.00	0.01	1.801	O				1.91
374.167	0.00	0.01	1.800	O				1.91
374.250	0.00	0.01	1.800	O				1.91
374.333	0.00	0.01	1.800	O				1.91
374.417	0.00	0.01	1.800	O				1.91
374.500	0.00	0.01	1.800	O				1.91
374.583	0.00	0.01	1.800	O				1.91
374.667	0.00	0.01	1.800	O				1.91
374.750	0.00	0.01	1.800	O				1.91
374.833	0.00	0.01	1.800	O				1.91
374.917	0.00	0.01	1.800	O				1.91
375.000	0.00	0.01	1.800	O				1.91
375.083	0.00	0.01	1.800	O				1.91
375.167	0.00	0.01	1.800	O				1.91
375.250	0.00	0.01	1.800	O				1.91
375.333	0.00	0.01	1.800	O				1.91
375.417	0.00	0.01	1.800	O				1.91
375.500	0.00	0.01	1.800	O				1.91
375.583	0.00	0.01	1.799	O				1.91
375.667	0.00	0.01	1.799	O				1.91
375.750	0.00	0.01	1.799	O				1.91
375.833	0.00	0.01	1.799	O				1.91
375.917	0.00	0.01	1.799	O				1.91
376.000	0.00	0.01	1.799	O				1.91
376.083	0.00	0.01	1.799	O				1.91
376.167	0.00	0.01	1.799	O				1.91
376.250	0.00	0.01	1.799	O				1.91
376.333	0.00	0.01	1.799	O				1.91
376.417	0.00	0.01	1.799	O				1.91
376.500	0.00	0.01	1.799	O				1.91
376.583	0.00	0.01	1.799	O				1.91
376.667	0.00	0.01	1.799	O				1.90
376.750	0.00	0.01	1.799	O				1.90
376.833	0.00	0.01	1.799	O				1.90
376.917	0.00	0.01	1.799	O				1.90
377.000	0.00	0.01	1.799	O				1.90
377.083	0.00	0.01	1.798	O				1.90
377.167	0.00	0.01	1.798	O				1.90

377.250	0.00	0.01	1.798	O				1.90
377.333	0.00	0.01	1.798	O				1.90
377.417	0.00	0.01	1.798	O				1.90
377.500	0.00	0.01	1.798	O				1.90
377.583	0.00	0.01	1.798	O				1.90
377.667	0.00	0.01	1.798	O				1.90
377.750	0.00	0.01	1.798	O				1.90
377.833	0.00	0.01	1.798	O				1.90
377.917	0.00	0.01	1.798	O				1.90
378.000	0.00	0.01	1.798	O				1.90
378.083	0.00	0.01	1.798	O				1.90
378.167	0.00	0.01	1.798	O				1.90
378.250	0.00	0.01	1.798	O				1.90
378.333	0.00	0.01	1.798	O				1.90
378.417	0.00	0.01	1.798	O				1.90
378.500	0.00	0.01	1.797	O				1.90
378.583	0.00	0.01	1.797	O				1.90
378.667	0.00	0.01	1.797	O				1.90
378.750	0.00	0.01	1.797	O				1.90
378.833	0.00	0.01	1.797	O				1.90
378.917	0.00	0.01	1.797	O				1.90
379.000	0.00	0.01	1.797	O				1.90
379.083	0.00	0.01	1.797	O				1.90
379.167	0.00	0.01	1.797	O				1.90
379.250	0.00	0.01	1.797	O				1.90
379.333	0.00	0.01	1.797	O				1.90
379.417	0.00	0.01	1.797	O				1.90
379.500	0.00	0.01	1.797	O				1.90
379.583	0.00	0.01	1.797	O				1.90
379.667	0.00	0.01	1.797	O				1.90
379.750	0.00	0.01	1.797	O				1.90
379.833	0.00	0.01	1.797	O				1.90
379.917	0.00	0.01	1.797	O				1.90
380.000	0.00	0.01	1.796	O				1.90
380.083	0.00	0.01	1.796	O				1.90
380.167	0.00	0.01	1.796	O				1.90
380.250	0.00	0.01	1.796	O				1.90
380.333	0.00	0.01	1.796	O				1.90
380.417	0.00	0.01	1.796	O				1.90
380.500	0.00	0.01	1.796	O				1.90
380.583	0.00	0.01	1.796	O				1.90
380.667	0.00	0.01	1.796	O				1.90
380.750	0.00	0.01	1.796	O				1.90
380.833	0.00	0.01	1.796	O				1.90
380.917	0.00	0.01	1.796	O				1.90
381.000	0.00	0.01	1.796	O				1.90
381.083	0.00	0.01	1.796	O				1.90
381.167	0.00	0.01	1.796	O				1.90
381.250	0.00	0.01	1.796	O				1.90
381.333	0.00	0.01	1.796	O				1.90

381.417	0.00	0.01	1.796	O				1.90
381.500	0.00	0.01	1.795	O				1.90
381.583	0.00	0.01	1.795	O				1.90
381.667	0.00	0.01	1.795	O				1.90
381.750	0.00	0.01	1.795	O				1.90
381.833	0.00	0.01	1.795	O				1.90
381.917	0.00	0.01	1.795	O				1.90
382.000	0.00	0.01	1.795	O				1.90
382.083	0.00	0.01	1.795	O				1.90
382.167	0.00	0.01	1.795	O				1.90
382.250	0.00	0.01	1.795	O				1.90
382.333	0.00	0.01	1.795	O				1.90
382.417	0.00	0.01	1.795	O				1.90
382.500	0.00	0.01	1.795	O				1.90
382.583	0.00	0.01	1.795	O				1.90
382.667	0.00	0.01	1.795	O				1.90
382.750	0.00	0.01	1.795	O				1.90
382.833	0.00	0.01	1.795	O				1.90
382.917	0.00	0.01	1.794	O				1.90
383.000	0.00	0.01	1.794	O				1.90
383.083	0.00	0.01	1.794	O				1.90
383.167	0.00	0.01	1.794	O				1.90
383.250	0.00	0.01	1.794	O				1.90
383.333	0.00	0.01	1.794	O				1.90
383.417	0.00	0.01	1.794	O				1.90
383.500	0.00	0.01	1.794	O				1.90
383.583	0.00	0.01	1.794	O				1.90
383.667	0.00	0.01	1.794	O				1.90
383.750	0.00	0.01	1.794	O				1.90
383.833	0.00	0.01	1.794	O				1.90
383.917	0.00	0.01	1.794	O				1.90
384.000	0.00	0.01	1.794	O				1.90
384.083	0.00	0.01	1.794	O				1.90
384.167	0.00	0.01	1.794	O				1.90
384.250	0.00	0.01	1.794	O				1.90
384.333	0.00	0.01	1.794	O				1.90
384.417	0.00	0.01	1.793	O				1.90
384.500	0.00	0.01	1.793	O				1.90
384.583	0.00	0.01	1.793	O				1.90
384.667	0.00	0.01	1.793	O				1.90
384.750	0.00	0.01	1.793	O				1.90
384.833	0.00	0.01	1.793	O				1.90
384.917	0.00	0.01	1.793	O				1.90
385.000	0.00	0.01	1.793	O				1.90
385.083	0.00	0.01	1.793	O				1.90
385.167	0.00	0.01	1.793	O				1.90
385.250	0.00	0.01	1.793	O				1.90
385.333	0.00	0.01	1.793	O				1.90
385.417	0.00	0.01	1.793	O				1.90
385.500	0.00	0.01	1.793	O				1.90

385.583	0.00	0.01	1.793	O				1.90
385.667	0.00	0.01	1.793	O				1.90
385.750	0.00	0.01	1.793	O				1.90
385.833	0.00	0.01	1.793	O				1.90
385.917	0.00	0.01	1.792	O				1.90
386.000	0.00	0.01	1.792	O				1.90
386.083	0.00	0.01	1.792	O				1.90
386.167	0.00	0.01	1.792	O				1.90
386.250	0.00	0.01	1.792	O				1.90
386.333	0.00	0.01	1.792	O				1.90
386.417	0.00	0.01	1.792	O				1.90
386.500	0.00	0.01	1.792	O				1.90
386.583	0.00	0.01	1.792	O				1.90
386.667	0.00	0.01	1.792	O				1.90
386.750	0.00	0.01	1.792	O				1.90
386.833	0.00	0.01	1.792	O				1.90
386.917	0.00	0.01	1.792	O				1.90
387.000	0.00	0.01	1.792	O				1.90
387.083	0.00	0.01	1.792	O				1.90
387.167	0.00	0.01	1.792	O				1.90
387.250	0.00	0.01	1.792	O				1.90
387.333	0.00	0.01	1.792	O				1.90
387.417	0.00	0.01	1.791	O				1.90
387.500	0.00	0.01	1.791	O				1.90
387.583	0.00	0.01	1.791	O				1.90
387.667	0.00	0.01	1.791	O				1.90
387.750	0.00	0.01	1.791	O				1.90
387.833	0.00	0.01	1.791	O				1.90
387.917	0.00	0.01	1.791	O				1.90
388.000	0.00	0.01	1.791	O				1.90
388.083	0.00	0.01	1.791	O				1.90
388.167	0.00	0.01	1.791	O				1.90
388.250	0.00	0.01	1.791	O				1.90
388.333	0.00	0.01	1.791	O				1.90
388.417	0.00	0.01	1.791	O				1.90
388.500	0.00	0.01	1.791	O				1.90
388.583	0.00	0.01	1.791	O				1.90
388.667	0.00	0.01	1.791	O				1.90
388.750	0.00	0.01	1.791	O				1.90
388.833	0.00	0.01	1.790	O				1.90
388.917	0.00	0.01	1.790	O				1.90
389.000	0.00	0.01	1.790	O				1.90
389.083	0.00	0.01	1.790	O				1.90
389.167	0.00	0.01	1.790	O				1.90
389.250	0.00	0.01	1.790	O				1.90
389.333	0.00	0.01	1.790	O				1.90
389.417	0.00	0.01	1.790	O				1.90
389.500	0.00	0.01	1.790	O				1.90
389.583	0.00	0.01	1.790	O				1.90
389.667	0.00	0.01	1.790	O				1.90

389.750	0.00	0.01	1.790	O	|	|	|	1.90
389.833	0.00	0.01	1.790	O	|	|	|	1.90
389.917	0.00	0.01	1.790	O	|	|	|	1.90
390.000	0.00	0.01	1.790	O	|	|	|	1.90
390.083	0.00	0.01	1.790	O	|	|	|	1.90
390.167	0.00	0.01	1.790	O	|	|	|	1.90
390.250	0.00	0.01	1.790	O	|	|	|	1.90
390.333	0.00	0.01	1.789	O	|	|	|	1.90
390.417	0.00	0.01	1.789	O	|	|	|	1.90
390.500	0.00	0.01	1.789	O	|	|	|	1.90
390.583	0.00	0.01	1.789	O	|	|	|	1.90
390.667	0.00	0.01	1.789	O	|	|	|	1.90
390.750	0.00	0.01	1.789	O	|	|	|	1.90
390.833	0.00	0.01	1.789	O	|	|	|	1.89
390.917	0.00	0.01	1.789	O	|	|	|	1.89
391.000	0.00	0.01	1.789	O	|	|	|	1.89
391.083	0.00	0.01	1.789	O	|	|	|	1.89
391.167	0.00	0.01	1.789	O	|	|	|	1.89
391.250	0.00	0.01	1.789	O	|	|	|	1.89
391.333	0.00	0.01	1.789	O	|	|	|	1.89
391.417	0.00	0.01	1.789	O	|	|	|	1.89
391.500	0.00	0.01	1.789	O	|	|	|	1.89
391.583	0.00	0.01	1.789	O	|	|	|	1.89
391.667	0.00	0.01	1.789	O	|	|	|	1.89
391.750	0.00	0.01	1.789	O	|	|	|	1.89
391.833	0.00	0.01	1.788	O	|	|	|	1.89
391.917	0.00	0.01	1.788	O	|	|	|	1.89
392.000	0.00	0.01	1.788	O	|	|	|	1.89
392.083	0.00	0.01	1.788	O	|	|	|	1.89
392.167	0.00	0.01	1.788	O	|	|	|	1.89
392.250	0.00	0.01	1.788	O	|	|	|	1.89
392.333	0.00	0.01	1.788	O	|	|	|	1.89
392.417	0.00	0.01	1.788	O	|	|	|	1.89
392.500	0.00	0.01	1.788	O	|	|	|	1.89
392.583	0.00	0.01	1.788	O	|	|	|	1.89
392.667	0.00	0.01	1.788	O	|	|	|	1.89
392.750	0.00	0.01	1.788	O	|	|	|	1.89
392.833	0.00	0.01	1.788	O	|	|	|	1.89
392.917	0.00	0.01	1.788	O	|	|	|	1.89
393.000	0.00	0.01	1.788	O	|	|	|	1.89
393.083	0.00	0.01	1.788	O	|	|	|	1.89
393.167	0.00	0.01	1.788	O	|	|	|	1.89
393.250	0.00	0.01	1.788	O	|	|	|	1.89
393.333	0.00	0.01	1.787	O	|	|	|	1.89
393.417	0.00	0.01	1.787	O	|	|	|	1.89
393.500	0.00	0.01	1.787	O	|	|	|	1.89
393.583	0.00	0.01	1.787	O	|	|	|	1.89
393.667	0.00	0.01	1.787	O	|	|	|	1.89
393.750	0.00	0.01	1.787	O	|	|	|	1.89
393.833	0.00	0.01	1.787	O	|	|	|	1.89

393.917	0.00	0.01	1.787	O				1.89
394.000	0.00	0.01	1.787	O				1.89
394.083	0.00	0.01	1.787	O				1.89
394.167	0.00	0.01	1.787	O				1.89
394.250	0.00	0.01	1.787	O				1.89
394.333	0.00	0.01	1.787	O				1.89
394.417	0.00	0.01	1.787	O				1.89
394.500	0.00	0.01	1.787	O				1.89
394.583	0.00	0.01	1.787	O				1.89
394.667	0.00	0.01	1.787	O				1.89
394.750	0.00	0.01	1.787	O				1.89
394.833	0.00	0.01	1.786	O				1.89
394.917	0.00	0.01	1.786	O				1.89
395.000	0.00	0.01	1.786	O				1.89
395.083	0.00	0.01	1.786	O				1.89
395.167	0.00	0.01	1.786	O				1.89
395.250	0.00	0.01	1.786	O				1.89
395.333	0.00	0.01	1.786	O				1.89
395.417	0.00	0.01	1.786	O				1.89
395.500	0.00	0.01	1.786	O				1.89
395.583	0.00	0.01	1.786	O				1.89
395.667	0.00	0.01	1.786	O				1.89
395.750	0.00	0.01	1.786	O				1.89
395.833	0.00	0.01	1.786	O				1.89
395.917	0.00	0.01	1.786	O				1.89
396.000	0.00	0.01	1.786	O				1.89
396.083	0.00	0.01	1.786	O				1.89
396.167	0.00	0.01	1.786	O				1.89
396.250	0.00	0.01	1.786	O				1.89
396.333	0.00	0.01	1.785	O				1.89
396.417	0.00	0.01	1.785	O				1.89
396.500	0.00	0.01	1.785	O				1.89
396.583	0.00	0.01	1.785	O				1.89
396.667	0.00	0.01	1.785	O				1.89
396.750	0.00	0.01	1.785	O				1.89
396.833	0.00	0.01	1.785	O				1.89
396.917	0.00	0.01	1.785	O				1.89
397.000	0.00	0.01	1.785	O				1.89
397.083	0.00	0.01	1.785	O				1.89
397.167	0.00	0.01	1.785	O				1.89
397.250	0.00	0.01	1.785	O				1.89
397.333	0.00	0.01	1.785	O				1.89
397.417	0.00	0.01	1.785	O				1.89
397.500	0.00	0.01	1.785	O				1.89
397.583	0.00	0.01	1.785	O				1.89
397.667	0.00	0.01	1.785	O				1.89
397.750	0.00	0.01	1.785	O				1.89
397.833	0.00	0.01	1.784	O				1.89
397.917	0.00	0.01	1.784	O				1.89
398.000	0.00	0.01	1.784	O				1.89

398.083	0.00	0.01	1.784	O				1.89
398.167	0.00	0.01	1.784	O				1.89
398.250	0.00	0.01	1.784	O				1.89
398.333	0.00	0.01	1.784	O				1.89
398.417	0.00	0.01	1.784	O				1.89
398.500	0.00	0.01	1.784	O				1.89
398.583	0.00	0.01	1.784	O				1.89
398.667	0.00	0.01	1.784	O				1.89
398.750	0.00	0.01	1.784	O				1.89
398.833	0.00	0.01	1.784	O				1.89
398.917	0.00	0.01	1.784	O				1.89
399.000	0.00	0.01	1.784	O				1.89
399.083	0.00	0.01	1.784	O				1.89
399.167	0.00	0.01	1.784	O				1.89
399.250	0.00	0.01	1.784	O				1.89
399.333	0.00	0.01	1.783	O				1.89
399.417	0.00	0.01	1.783	O				1.89
399.500	0.00	0.01	1.783	O				1.89
399.583	0.00	0.01	1.783	O				1.89
399.667	0.00	0.01	1.783	O				1.89
399.750	0.00	0.01	1.783	O				1.89
399.833	0.00	0.01	1.783	O				1.89
399.917	0.00	0.01	1.783	O				1.89
400.000	0.00	0.01	1.783	O				1.89
400.083	0.00	0.01	1.783	O				1.89
400.167	0.00	0.01	1.783	O				1.89
400.250	0.00	0.01	1.783	O				1.89
400.333	0.00	0.01	1.783	O				1.89
400.417	0.00	0.01	1.783	O				1.89
400.500	0.00	0.01	1.783	O				1.89
400.583	0.00	0.01	1.783	O				1.89
400.667	0.00	0.01	1.783	O				1.89
400.750	0.00	0.01	1.783	O				1.89
400.833	0.00	0.01	1.783	O				1.89
400.917	0.00	0.01	1.782	O				1.89
401.000	0.00	0.01	1.782	O				1.89
401.083	0.00	0.01	1.782	O				1.89
401.167	0.00	0.01	1.782	O				1.89
401.250	0.00	0.01	1.782	O				1.89
401.333	0.00	0.01	1.782	O				1.89
401.417	0.00	0.01	1.782	O				1.89
401.500	0.00	0.01	1.782	O				1.89
401.583	0.00	0.01	1.782	O				1.89
401.667	0.00	0.01	1.782	O				1.89
401.750	0.00	0.01	1.782	O				1.89
401.833	0.00	0.01	1.782	O				1.89
401.917	0.00	0.01	1.782	O				1.89
402.000	0.00	0.01	1.782	O				1.89
402.083	0.00	0.01	1.782	O				1.89
402.167	0.00	0.01	1.782	O				1.89

402.250	0.00	0.01	1.782	O				1.89
402.333	0.00	0.01	1.782	O				1.89
402.417	0.00	0.01	1.781	O				1.89
402.500	0.00	0.01	1.781	O				1.89
402.583	0.00	0.01	1.781	O				1.89
402.667	0.00	0.01	1.781	O				1.89
402.750	0.00	0.01	1.781	O				1.89
402.833	0.00	0.01	1.781	O				1.89
402.917	0.00	0.01	1.781	O				1.89
403.000	0.00	0.01	1.781	O				1.89
403.083	0.00	0.01	1.781	O				1.89
403.167	0.00	0.01	1.781	O				1.89
403.250	0.00	0.01	1.781	O				1.89
403.333	0.00	0.01	1.781	O				1.89
403.417	0.00	0.01	1.781	O				1.89
403.500	0.00	0.01	1.781	O				1.89
403.583	0.00	0.01	1.781	O				1.89
403.667	0.00	0.01	1.781	O				1.89
403.750	0.00	0.01	1.781	O				1.89
403.833	0.00	0.01	1.781	O				1.89
403.917	0.00	0.01	1.780	O				1.89
404.000	0.00	0.01	1.780	O				1.89
404.083	0.00	0.01	1.780	O				1.89
404.167	0.00	0.01	1.780	O				1.89
404.250	0.00	0.01	1.780	O				1.89
404.333	0.00	0.01	1.780	O				1.89
404.417	0.00	0.01	1.780	O				1.89
404.500	0.00	0.01	1.780	O				1.89
404.583	0.00	0.01	1.780	O				1.89
404.667	0.00	0.01	1.780	O				1.89
404.750	0.00	0.01	1.780	O				1.89
404.833	0.00	0.01	1.780	O				1.89
404.917	0.00	0.01	1.780	O				1.89
405.000	0.00	0.01	1.780	O				1.89
405.083	0.00	0.01	1.780	O				1.89
405.167	0.00	0.01	1.780	O				1.89
405.250	0.00	0.01	1.780	O				1.88
405.333	0.00	0.01	1.780	O				1.88
405.417	0.00	0.01	1.779	O				1.88
405.500	0.00	0.01	1.779	O				1.88
405.583	0.00	0.01	1.779	O				1.88
405.667	0.00	0.01	1.779	O				1.88
405.750	0.00	0.01	1.779	O				1.88
405.833	0.00	0.01	1.779	O				1.88
405.917	0.00	0.01	1.779	O				1.88
406.000	0.00	0.01	1.779	O				1.88
406.083	0.00	0.01	1.779	O				1.88
406.167	0.00	0.01	1.779	O				1.88
406.250	0.00	0.01	1.779	O				1.88
406.333	0.00	0.01	1.779	O				1.88

406.417	0.00	0.01	1.779	O	|	|	|	1.88
406.500	0.00	0.01	1.779	O	|	|	|	1.88
406.583	0.00	0.01	1.779	O	|	|	|	1.88
406.667	0.00	0.01	1.779	O	|	|	|	1.88
406.750	0.00	0.01	1.779	O	|	|	|	1.88
406.833	0.00	0.01	1.779	O	|	|	|	1.88
406.917	0.00	0.01	1.779	O	|	|	|	1.88
407.000	0.00	0.01	1.778	O	|	|	|	1.88
407.083	0.00	0.01	1.778	O	|	|	|	1.88
407.167	0.00	0.01	1.778	O	|	|	|	1.88
407.250	0.00	0.01	1.778	O	|	|	|	1.88
407.333	0.00	0.01	1.778	O	|	|	|	1.88
407.417	0.00	0.01	1.778	O	|	|	|	1.88
407.500	0.00	0.01	1.778	O	|	|	|	1.88
407.583	0.00	0.01	1.778	O	|	|	|	1.88
407.667	0.00	0.01	1.778	O	|	|	|	1.88
407.750	0.00	0.01	1.778	O	|	|	|	1.88
407.833	0.00	0.01	1.778	O	|	|	|	1.88
407.917	0.00	0.01	1.778	O	|	|	|	1.88
408.000	0.00	0.01	1.778	O	|	|	|	1.88
408.083	0.00	0.01	1.778	O	|	|	|	1.88
408.167	0.00	0.01	1.778	O	|	|	|	1.88
408.250	0.00	0.01	1.778	O	|	|	|	1.88
408.333	0.00	0.01	1.778	O	|	|	|	1.88
408.417	0.00	0.01	1.778	O	|	|	|	1.88
408.500	0.00	0.01	1.777	O	|	|	|	1.88
408.583	0.00	0.01	1.777	O	|	|	|	1.88
408.667	0.00	0.01	1.777	O	|	|	|	1.88
408.750	0.00	0.01	1.777	O	|	|	|	1.88
408.833	0.00	0.01	1.777	O	|	|	|	1.88
408.917	0.00	0.01	1.777	O	|	|	|	1.88
409.000	0.00	0.01	1.777	O	|	|	|	1.88
409.083	0.00	0.01	1.777	O	|	|	|	1.88
409.167	0.00	0.01	1.777	O	|	|	|	1.88
409.250	0.00	0.01	1.777	O	|	|	|	1.88
409.333	0.00	0.01	1.777	O	|	|	|	1.88
409.417	0.00	0.01	1.777	O	|	|	|	1.88
409.500	0.00	0.01	1.777	O	|	|	|	1.88
409.583	0.00	0.01	1.777	O	|	|	|	1.88
409.667	0.00	0.01	1.777	O	|	|	|	1.88
409.750	0.00	0.01	1.777	O	|	|	|	1.88
409.833	0.00	0.01	1.777	O	|	|	|	1.88
409.917	0.00	0.01	1.777	O	|	|	|	1.88
410.000	0.00	0.01	1.776	O	|	|	|	1.88
410.083	0.00	0.01	1.776	O	|	|	|	1.88
410.167	0.00	0.01	1.776	O	|	|	|	1.88
410.250	0.00	0.01	1.776	O	|	|	|	1.88
410.333	0.00	0.01	1.776	O	|	|	|	1.88
410.417	0.00	0.01	1.776	O	|	|	|	1.88
410.500	0.00	0.01	1.776	O	|	|	|	1.88

410.583	0.00	0.01	1.776	O				1.88
410.667	0.00	0.01	1.776	O				1.88
410.750	0.00	0.01	1.776	O				1.88
410.833	0.00	0.01	1.776	O				1.88
410.917	0.00	0.01	1.776	O				1.88
411.000	0.00	0.01	1.776	O				1.88
411.083	0.00	0.01	1.776	O				1.88
411.167	0.00	0.01	1.776	O				1.88
411.250	0.00	0.01	1.776	O				1.88
411.333	0.00	0.01	1.776	O				1.88
411.417	0.00	0.01	1.776	O				1.88
411.500	0.00	0.01	1.776	O				1.88
411.583	0.00	0.01	1.775	O				1.88
411.667	0.00	0.01	1.775	O				1.88
411.750	0.00	0.01	1.775	O				1.88
411.833	0.00	0.01	1.775	O				1.88
411.917	0.00	0.01	1.775	O				1.88
412.000	0.00	0.01	1.775	O				1.88
412.083	0.00	0.01	1.775	O				1.88
412.167	0.00	0.01	1.775	O				1.88
412.250	0.00	0.01	1.775	O				1.88
412.333	0.00	0.01	1.775	O				1.88
412.417	0.00	0.01	1.775	O				1.88
412.500	0.00	0.01	1.775	O				1.88
412.583	0.00	0.01	1.775	O				1.88
412.667	0.00	0.01	1.775	O				1.88
412.750	0.00	0.01	1.775	O				1.88
412.833	0.00	0.01	1.775	O				1.88
412.917	0.00	0.01	1.775	O				1.88
413.000	0.00	0.01	1.775	O				1.88
413.083	0.00	0.01	1.774	O				1.88
413.167	0.00	0.01	1.774	O				1.88
413.250	0.00	0.01	1.774	O				1.88
413.333	0.00	0.01	1.774	O				1.88
413.417	0.00	0.01	1.774	O				1.88
413.500	0.00	0.01	1.774	O				1.88
413.583	0.00	0.01	1.774	O				1.88
413.667	0.00	0.01	1.774	O				1.88
413.750	0.00	0.01	1.774	O				1.88
413.833	0.00	0.01	1.774	O				1.88
413.917	0.00	0.01	1.774	O				1.88
414.000	0.00	0.01	1.774	O				1.88
414.083	0.00	0.01	1.774	O				1.88
414.167	0.00	0.01	1.774	O				1.88
414.250	0.00	0.01	1.774	O				1.88
414.333	0.00	0.01	1.774	O				1.88
414.417	0.00	0.01	1.774	O				1.88
414.500	0.00	0.01	1.774	O				1.88
414.583	0.00	0.01	1.774	O				1.88
414.667	0.00	0.01	1.773	O				1.88

414.750	0.00	0.01	1.773	O	|	|	|	1.88
414.833	0.00	0.01	1.773	O	|	|	|	1.88
414.917	0.00	0.01	1.773	O	|	|	|	1.88
415.000	0.00	0.01	1.773	O	|	|	|	1.88
415.083	0.00	0.01	1.773	O	|	|	|	1.88
415.167	0.00	0.01	1.773	O	|	|	|	1.88
415.250	0.00	0.01	1.773	O	|	|	|	1.88
415.333	0.00	0.01	1.773	O	|	|	|	1.88
415.417	0.00	0.01	1.773	O	|	|	|	1.88
415.500	0.00	0.01	1.773	O	|	|	|	1.88
415.583	0.00	0.01	1.773	O	|	|	|	1.88
415.667	0.00	0.01	1.773	O	|	|	|	1.88
415.750	0.00	0.01	1.773	O	|	|	|	1.88
415.833	0.00	0.01	1.773	O	|	|	|	1.88
415.917	0.00	0.01	1.773	O	|	|	|	1.88
416.000	0.00	0.01	1.773	O	|	|	|	1.88
416.083	0.00	0.01	1.773	O	|	|	|	1.88
416.167	0.00	0.01	1.773	O	|	|	|	1.88
416.250	0.00	0.01	1.772	O	|	|	|	1.88
416.333	0.00	0.01	1.772	O	|	|	|	1.88
416.417	0.00	0.01	1.772	O	|	|	|	1.88
416.500	0.00	0.01	1.772	O	|	|	|	1.88
416.583	0.00	0.01	1.772	O	|	|	|	1.88
416.667	0.00	0.01	1.772	O	|	|	|	1.88

Remaining water in basin = 1.77 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 5001
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 10.150 (CFS)
Total volume = 3.867 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 08/08/22

IEN
Basin A
100- year Developed

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: BasinA100yr.rte
**********HYDROGRAPH DATA**********
Number of intervals = 304
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 116.097 (CFS)
Total volume = 12.479 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 10.000 to Point/Station 40.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 304
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)

Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.780	0.001	1.780	1.780
2.000	2.370	0.001	2.370	2.370
2.500	2.960	0.010	2.960	2.960
3.000	3.560	0.010	3.560	3.560
3.500	4.150	45.000	3.995	4.305
4.000	4.740	75.000	4.482	4.998
4.500	5.100	85.000	4.807	5.393
5.000	5.220	90.000	4.910	5.530

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 29.0 58.05 87.07 116.10	Depth (Ft.)
0.083	0.08	0.00	0.000	O | | | |	0.00
0.167	0.62	0.00	0.003	O | | | |	0.00
0.250	1.32	0.00	0.009	O | | | |	0.01
0.333	1.64	0.00	0.020	O | | | |	0.02
0.417	1.83	0.00	0.032	O | | | |	0.03
0.500	1.96	0.00	0.045	O | | | |	0.04
0.583	2.06	0.00	0.058	O | | | |	0.05
0.667	2.12	0.00	0.073	O | | | |	0.06
0.750	2.18	0.00	0.088	O | | | |	0.07
0.833	2.22	0.00	0.103	O | | | |	0.09
0.917	2.26	0.00	0.118	O | | | |	0.10
1.000	2.29	0.00	0.134	O | | | |	0.11
1.083	2.31	0.00	0.150	O | | | |	0.13
1.167	2.33	0.00	0.166	O | | | |	0.14
1.250	2.35	0.00	0.182	O | | | |	0.15
1.333	2.37	0.00	0.198	O | | | |	0.17
1.417	2.38	0.00	0.214	O | | | |	0.18
1.500	2.39	0.00	0.231	O | | | |	0.19
1.583	2.40	0.00	0.247	O | | | |	0.21
1.667	2.41	0.00	0.264	O | | | |	0.22
1.750	2.42	0.00	0.281	O | | | |	0.24
1.833	2.43	0.00	0.297	O | | | |	0.25
1.917	2.43	0.00	0.314	O | | | |	0.26
2.000	2.44	0.00	0.331	O | | | |	0.28
2.083	2.45	0.00	0.348	O | | | |	0.29
2.167	2.46	0.00	0.365	O | | | |	0.31

2.250	2.47	0.00	0.382	O	|	|	|	0.32
2.333	2.48	0.00	0.399	O	|	|	|	0.34
2.417	2.49	0.00	0.416	O	|	|	|	0.35
2.500	2.50	0.00	0.433	O	|	|	|	0.36
2.583	2.51	0.00	0.450	O	|	|	|	0.38
2.667	2.52	0.00	0.467	O	|	|	|	0.39
2.750	2.53	0.00	0.485	O	|	|	|	0.41
2.833	2.54	0.00	0.502	O	|	|	|	0.42
2.917	2.55	0.00	0.520	O	|	|	|	0.44
3.000	2.56	0.00	0.537	O	|	|	|	0.45
3.083	2.57	0.00	0.555	O	|	|	|	0.47
3.167	2.58	0.00	0.573	O	|	|	|	0.48
3.250	2.59	0.00	0.590	O	|	|	|	0.50
3.333	2.60	0.00	0.608	O	|	|	|	0.51
3.417	2.61	0.00	0.626	O	|	|	|	0.53
3.500	2.62	0.00	0.644	O	|	|	|	0.54
3.583	2.63	0.00	0.662	O	|	|	|	0.56
3.667	2.64	0.00	0.680	O	|	|	|	0.57
3.750	2.65	0.00	0.699	O	|	|	|	0.59
3.833	2.66	0.00	0.717	O	|	|	|	0.60
3.917	2.67	0.00	0.735	O	|	|	|	0.62
4.000	2.69	0.00	0.754	O	|	|	|	0.64
4.083	2.70	0.00	0.772	O	|	|	|	0.65
4.167	2.71	0.00	0.791	O	|	|	|	0.67
4.250	2.72	0.00	0.810	O	|	|	|	0.68
4.333	2.73	0.00	0.828	O	|	|	|	0.70
4.417	2.74	0.00	0.847	O	|	|	|	0.71
4.500	2.76	0.00	0.866	O	|	|	|	0.73
4.583	2.77	0.00	0.885	O	|	|	|	0.75
4.667	2.78	0.00	0.904	O	|	|	|	0.76
4.750	2.79	0.00	0.923	O	|	|	|	0.78
4.833	2.81	0.00	0.943	O	|	|	|	0.79
4.917	2.82	0.00	0.962	O	|	|	|	0.81
5.000	2.83	0.00	0.982	O	|	|	|	0.83
5.083	2.84	0.00	1.001	O	|	|	|	0.84
5.167	2.86	0.00	1.021	O	|	|	|	0.86
5.250	2.87	0.00	1.040	O	|	|	|	0.88
5.333	2.89	0.00	1.060	O	|	|	|	0.89
5.417	2.90	0.00	1.080	O	|	|	|	0.91
5.500	2.91	0.00	1.100	O	|	|	|	0.93
5.583	2.93	0.00	1.120	O	|	|	|	0.94
5.667	2.94	0.00	1.141	O	|	|	|	0.96
5.750	2.96	0.00	1.161	O	|	|	|	0.98
5.833	2.97	0.00	1.181	O	|	|	|	1.00
5.917	2.99	0.00	1.202	O	|	|	|	1.01
6.000	3.00	0.00	1.222	O	|	|	|	1.03
6.083	3.02	0.00	1.243	O	|	|	|	1.05
6.167	3.03	0.00	1.264	O	|	|	|	1.07
6.250	3.05	0.00	1.285	O	|	|	|	1.08
6.333	3.06	0.00	1.306	O	|	|	|	1.10

6.417	3.08	0.00	1.327	O				1.12
6.500	3.10	0.00	1.348	O				1.14
6.583	3.11	0.00	1.370	O				1.15
6.667	3.13	0.00	1.391	O				1.17
6.750	3.15	0.00	1.413	O				1.19
6.833	3.16	0.00	1.434	O				1.21
6.917	3.18	0.00	1.456	O				1.23
7.000	3.20	0.00	1.478	O				1.25
7.083	3.22	0.00	1.500	O				1.26
7.167	3.23	0.00	1.523	O				1.28
7.250	3.25	0.00	1.545	O				1.30
7.333	3.27	0.00	1.567	O				1.32
7.417	3.29	0.00	1.590	O				1.34
7.500	3.31	0.00	1.613	O				1.36
7.583	3.33	0.00	1.636	O				1.38
7.667	3.35	0.00	1.659	O				1.40
7.750	3.37	0.00	1.682	O				1.42
7.833	3.39	0.00	1.705	O				1.44
7.917	3.41	0.00	1.728	O				1.46
8.000	3.43	0.00	1.752	O				1.48
8.083	3.46	0.00	1.776	O				1.50
8.167	3.48	0.00	1.800	O				1.52
8.250	3.50	0.00	1.824	O				1.54
8.333	3.52	0.00	1.848	O				1.56
8.417	3.55	0.00	1.872	O				1.58
8.500	3.57	0.00	1.897	O				1.60
8.583	3.59	0.00	1.921	O				1.62
8.667	3.62	0.00	1.946	O				1.64
8.750	3.64	0.00	1.971	OI				1.66
8.833	3.67	0.00	1.996	OI				1.68
8.917	3.70	0.00	2.022	OI				1.70
9.000	3.72	0.00	2.047	OI				1.73
9.083	3.75	0.00	2.073	OI				1.75
9.167	3.78	0.00	2.099	OI				1.77
9.250	3.80	0.00	2.125	OI				1.79
9.333	3.83	0.00	2.151	OI				1.81
9.417	3.86	0.00	2.178	OI				1.84
9.500	3.89	0.00	2.204	OI				1.86
9.583	3.92	0.00	2.231	OI				1.88
9.667	3.95	0.00	2.258	OI				1.91
9.750	3.98	0.00	2.286	OI				1.93
9.833	4.01	0.00	2.313	OI				1.95
9.917	4.05	0.00	2.341	OI				1.98
10.000	4.08	0.00	2.369	OI				2.00
10.083	4.12	0.00	2.397	OI				2.02
10.167	4.15	0.00	2.426	OI				2.05
10.250	4.19	0.00	2.454	OI				2.07
10.333	4.22	0.00	2.483	OI				2.10
10.417	4.26	0.00	2.512	OI				2.12
10.500	4.30	0.00	2.542	OI				2.15

10.583	4.34	0.00	2.572	OI				2.17
10.667	4.38	0.00	2.602	OI				2.20
10.750	4.42	0.00	2.632	OI				2.22
10.833	4.46	0.01	2.662	OI				2.25
10.917	4.50	0.01	2.693	OI				2.27
11.000	4.55	0.01	2.724	OI				2.30
11.083	4.59	0.01	2.756	OI				2.33
11.167	4.64	0.01	2.787	OI				2.35
11.250	4.69	0.01	2.819	OI				2.38
11.333	4.74	0.01	2.852	OI				2.41
11.417	4.79	0.01	2.885	OI				2.44
11.500	4.84	0.01	2.918	OI				2.46
11.583	4.89	0.01	2.951	OI				2.49
11.667	4.95	0.01	2.985	OI				2.52
11.750	5.00	0.01	3.019	OI				2.55
11.833	5.06	0.01	3.054	OI				2.58
11.917	5.12	0.01	3.089	OI				2.61
12.000	5.18	0.01	3.124	OI				2.64
12.083	5.24	0.01	3.160	OI				2.67
12.167	5.24	0.01	3.196	OI				2.70
12.250	5.23	0.01	3.232	OI				2.73
12.333	5.26	0.01	3.268	OI				2.76
12.417	5.31	0.01	3.304	OI				2.79
12.500	5.38	0.01	3.341	OI				2.82
12.583	5.44	0.01	3.378	OI				2.85
12.667	5.51	0.01	3.416	OI				2.88
12.750	5.59	0.01	3.454	OI				2.91
12.833	5.67	0.01	3.493	OI				2.94
12.917	5.76	0.01	3.532	OI				2.98
13.000	5.85	0.73	3.569	OI				3.01
13.083	5.95	2.88	3.598	OI				3.03
13.167	6.05	4.18	3.615	|O				3.05
13.250	6.15	4.98	3.625	|O				3.06
13.333	6.26	5.49	3.632	|O				3.06
13.417	6.38	5.83	3.636	|O				3.06
13.500	6.50	6.08	3.640	|O				3.07
13.583	6.62	6.28	3.642	|O				3.07
13.667	6.76	6.45	3.644	|O				3.07
13.750	6.90	6.61	3.647	|O				3.07
13.833	7.05	6.76	3.649	|O				3.08
13.917	7.21	6.91	3.651	|O				3.08
14.000	7.37	7.07	3.653	|OI				3.08
14.083	7.55	7.23	3.655	|OI				3.08
14.167	7.75	7.41	3.657	| O				3.08
14.250	7.96	7.59	3.659	| O				3.08
14.333	8.18	7.79	3.662	| O				3.09
14.417	8.42	8.00	3.665	| O				3.09
14.500	8.67	8.23	3.668	| O				3.09
14.583	8.94	8.47	3.671	| O				3.09
14.667	9.23	8.73	3.674	| O				3.10

14.750	9.55	9.00	3.678	O				3.10
14.833	9.90	9.31	3.682	O				3.10
14.917	10.29	9.63	3.686	O				3.11
15.000	10.73	10.00	3.691	O				3.11
15.083	11.24	10.41	3.696	OI				3.12
15.167	11.82	10.88	3.703	OI				3.12
15.250	12.49	11.41	3.709	O				3.13
15.333	13.25	12.02	3.717	O				3.13
15.417	14.04	12.69	3.726	O				3.14
15.500	14.39	13.33	3.735	O				3.15
15.583	14.72	13.84	3.741	OI				3.15
15.667	15.81	14.43	3.749	OI				3.16
15.750	17.46	15.35	3.761	O				3.17
15.833	19.91	16.73	3.779	OI				3.19
15.917	23.61	18.82	3.807	OI				3.21
16.000	30.45	22.24	3.851	O I				3.25
16.083	49.64	29.64	3.949	O I				3.33
16.167	102.93	47.90	4.207	I O			I	3.55
16.250	116.10	66.26	4.568	O			I	3.85
16.333	68.47	74.01	4.721	I O				3.98
16.417	47.72	69.27	4.627	I O				3.90
16.500	36.83	61.22	4.469	I O				3.77
16.583	30.43	53.00	4.307	I O				3.63
16.667	25.13	45.49	4.160	I O				3.51
16.750	21.61	36.48	4.038	I O				3.41
16.833	18.63	29.68	3.949	I O				3.33
16.917	16.28	24.59	3.882	I O				3.27
17.000	14.20	20.70	3.831	I O				3.23
17.083	12.42	17.63	3.791	IO				3.20
17.167	11.57	15.28	3.760	IO				3.17
17.250	10.89	13.60	3.738	O				3.15
17.333	9.80	12.25	3.720	IO				3.14
17.417	8.94	11.05	3.705	IO				3.12
17.500	7.67	9.91	3.690	O				3.11
17.583	7.26	8.89	3.676	O				3.10
17.667	6.92	8.14	3.667	IO				3.09
17.750	6.63	7.57	3.659	IO				3.08
17.833	6.36	7.12	3.653	O				3.08
17.917	6.13	6.76	3.648	O				3.07
18.000	5.91	6.45	3.644	O				3.07
18.083	5.73	6.19	3.641	O				3.07
18.167	5.61	5.97	3.638	O				3.07
18.250	5.53	5.80	3.636	O				3.06
18.333	5.41	5.66	3.634	O				3.06
18.417	5.29	5.53	3.632	O				3.06
18.500	5.17	5.41	3.631	O				3.06
18.583	5.05	5.28	3.629	O				3.06
18.667	4.94	5.17	3.628	O				3.06
18.750	4.84	5.05	3.626	O				3.06
18.833	4.74	4.94	3.625	O				3.05

18.917	4.65	4.84	3.623	|O	|	|	|	3.05
19.000	4.55	4.74	3.622	|O	|	|	|	3.05
19.083	4.47	4.64	3.621	|O	|	|	|	3.05
19.167	4.38	4.55	3.620	|O	|	|	|	3.05
19.250	4.31	4.47	3.618	|O	|	|	|	3.05
19.333	4.23	4.38	3.617	|O	|	|	|	3.05
19.417	4.16	4.31	3.616	|O	|	|	|	3.05
19.500	4.09	4.23	3.615	|O	|	|	|	3.05
19.583	4.02	4.16	3.614	|O	|	|	|	3.05
19.667	3.96	4.09	3.613	|O	|	|	|	3.05
19.750	3.90	4.02	3.613	|O	|	|	|	3.04
19.833	3.84	3.96	3.612	|O	|	|	|	3.04
19.917	3.78	3.90	3.611	|O	|	|	|	3.04
20.000	3.73	3.84	3.610	|O	|	|	|	3.04
20.083	3.67	3.78	3.609	|O	|	|	|	3.04
20.167	3.62	3.73	3.609	IO	|	|	|	3.04
20.250	3.57	3.67	3.608	IO	|	|	|	3.04
20.333	3.53	3.62	3.607	O	|	|	|	3.04
20.417	3.48	3.57	3.607	O	|	|	|	3.04
20.500	3.44	3.53	3.606	O	|	|	|	3.04
20.583	3.40	3.48	3.606	O	|	|	|	3.04
20.667	3.35	3.44	3.605	O	|	|	|	3.04
20.750	3.31	3.39	3.604	O	|	|	|	3.04
20.833	3.27	3.35	3.604	O	|	|	|	3.04
20.917	3.24	3.31	3.603	O	|	|	|	3.04
21.000	3.20	3.27	3.603	O	|	|	|	3.04
21.083	3.17	3.24	3.602	O	|	|	|	3.04
21.167	3.13	3.20	3.602	O	|	|	|	3.04
21.250	3.10	3.16	3.601	O	|	|	|	3.04
21.333	3.06	3.13	3.601	O	|	|	|	3.03
21.417	3.03	3.10	3.600	O	|	|	|	3.03
21.500	3.00	3.06	3.600	O	|	|	|	3.03
21.583	2.97	3.03	3.600	O	|	|	|	3.03
21.667	2.94	3.00	3.599	O	|	|	|	3.03
21.750	2.91	2.97	3.599	O	|	|	|	3.03
21.833	2.89	2.94	3.598	O	|	|	|	3.03
21.917	2.86	2.91	3.598	O	|	|	|	3.03
22.000	2.83	2.88	3.598	O	|	|	|	3.03
22.083	2.81	2.86	3.597	O	|	|	|	3.03
22.167	2.78	2.83	3.597	O	|	|	|	3.03
22.250	2.76	2.81	3.597	O	|	|	|	3.03
22.333	2.73	2.78	3.596	O	|	|	|	3.03
22.417	2.71	2.76	3.596	O	|	|	|	3.03
22.500	2.69	2.73	3.596	O	|	|	|	3.03
22.583	2.66	2.71	3.595	O	|	|	|	3.03
22.667	2.64	2.68	3.595	O	|	|	|	3.03
22.750	2.62	2.66	3.595	O	|	|	|	3.03
22.833	2.60	2.64	3.594	O	|	|	|	3.03
22.917	2.58	2.62	3.594	O	|	|	|	3.03
23.000	2.56	2.60	3.594	O	|	|	|	3.03

23.083	2.54	2.58	3.594	O				3.03
23.167	2.52	2.56	3.593	O				3.03
23.250	2.50	2.54	3.593	O				3.03
23.333	2.48	2.52	3.593	O				3.03
23.417	2.46	2.50	3.593	O				3.03
23.500	2.44	2.48	3.592	O				3.03
23.583	2.43	2.46	3.592	O				3.03
23.667	2.41	2.44	3.592	O				3.03
23.750	2.39	2.43	3.592	O				3.03
23.833	2.38	2.41	3.591	O				3.03
23.917	2.36	2.39	3.591	O				3.03
24.000	2.34	2.37	3.591	O				3.03
24.083	2.24	2.34	3.591	O				3.03
24.167	1.69	2.19	3.589	O				3.02
24.250	0.98	1.83	3.584	O				3.02
24.333	0.66	1.41	3.578	O				3.02
24.417	0.47	1.06	3.574	O				3.01
24.500	0.35	0.79	3.570	O				3.01
24.583	0.26	0.59	3.568	O				3.01
24.667	0.19	0.44	3.566	O				3.00
24.750	0.14	0.32	3.564	O				3.00
24.833	0.11	0.24	3.563	O				3.00
24.917	0.08	0.18	3.562	O				3.00
25.000	0.05	0.13	3.562	O				3.00
25.083	0.04	0.10	3.561	O				3.00
25.167	0.03	0.07	3.561	O				3.00
25.250	0.02	0.05	3.561	O				3.00
25.333	0.01	0.03	3.560	O				3.00
25.417	0.00	0.02	3.560	O				3.00
25.500	0.00	0.01	3.560	O				3.00
25.583	0.00	0.01	3.560	O				3.00
25.667	0.00	0.01	3.560	O				3.00
25.750	0.00	0.01	3.560	O				3.00
25.833	0.00	0.01	3.560	O				3.00
25.917	0.00	0.01	3.560	O				3.00
26.000	0.00	0.01	3.560	O				3.00
26.083	0.00	0.01	3.560	O				3.00
26.167	0.00	0.01	3.559	O				3.00
26.250	0.00	0.01	3.559	O				3.00
26.333	0.00	0.01	3.559	O				3.00
26.417	0.00	0.01	3.559	O				3.00
26.500	0.00	0.01	3.559	O				3.00
26.583	0.00	0.01	3.559	O				3.00
26.667	0.00	0.01	3.559	O				3.00
26.750	0.00	0.01	3.559	O				3.00
26.833	0.00	0.01	3.559	O				3.00
26.917	0.00	0.01	3.559	O				3.00
27.000	0.00	0.01	3.559	O				3.00
27.083	0.00	0.01	3.559	O				3.00
27.167	0.00	0.01	3.559	O				3.00

27.250	0.00	0.01	3.559	O				3.00
27.333	0.00	0.01	3.559	O				3.00
27.417	0.00	0.01	3.558	O				3.00
27.500	0.00	0.01	3.558	O				3.00
27.583	0.00	0.01	3.558	O				3.00
27.667	0.00	0.01	3.558	O				3.00
27.750	0.00	0.01	3.558	O				3.00
27.833	0.00	0.01	3.558	O				3.00
27.917	0.00	0.01	3.558	O				3.00
28.000	0.00	0.01	3.558	O				3.00
28.083	0.00	0.01	3.558	O				3.00
28.167	0.00	0.01	3.558	O				3.00
28.250	0.00	0.01	3.558	O				3.00
28.333	0.00	0.01	3.558	O				3.00
28.417	0.00	0.01	3.558	O				3.00
28.500	0.00	0.01	3.558	O				3.00
28.583	0.00	0.01	3.557	O				3.00
28.667	0.00	0.01	3.557	O				3.00
28.750	0.00	0.01	3.557	O				3.00
28.833	0.00	0.01	3.557	O				3.00
28.917	0.00	0.01	3.557	O				3.00
29.000	0.00	0.01	3.557	O				3.00
29.083	0.00	0.01	3.557	O				3.00
29.167	0.00	0.01	3.557	O				3.00
29.250	0.00	0.01	3.557	O				3.00
29.333	0.00	0.01	3.557	O				3.00
29.417	0.00	0.01	3.557	O				3.00
29.500	0.00	0.01	3.557	O				3.00
29.583	0.00	0.01	3.557	O				3.00
29.667	0.00	0.01	3.557	O				3.00
29.750	0.00	0.01	3.557	O				3.00
29.833	0.00	0.01	3.556	O				3.00
29.917	0.00	0.01	3.556	O				3.00
30.000	0.00	0.01	3.556	O				3.00
30.083	0.00	0.01	3.556	O				3.00
30.167	0.00	0.01	3.556	O				3.00
30.250	0.00	0.01	3.556	O				3.00
30.333	0.00	0.01	3.556	O				3.00
30.417	0.00	0.01	3.556	O				3.00
30.500	0.00	0.01	3.556	O				3.00
30.583	0.00	0.01	3.556	O				3.00
30.667	0.00	0.01	3.556	O				3.00
30.750	0.00	0.01	3.556	O				3.00
30.833	0.00	0.01	3.556	O				3.00
30.917	0.00	0.01	3.556	O				3.00
31.000	0.00	0.01	3.555	O				3.00
31.083	0.00	0.01	3.555	O				3.00
31.167	0.00	0.01	3.555	O				3.00
31.250	0.00	0.01	3.555	O				3.00
31.333	0.00	0.01	3.555	O				3.00

31.417	0.00	0.01	3.555	O				3.00
31.500	0.00	0.01	3.555	O				3.00
31.583	0.00	0.01	3.555	O				3.00
31.667	0.00	0.01	3.555	O				3.00
31.750	0.00	0.01	3.555	O				3.00
31.833	0.00	0.01	3.555	O				3.00
31.917	0.00	0.01	3.555	O				3.00
32.000	0.00	0.01	3.555	O				3.00
32.083	0.00	0.01	3.555	O				3.00
32.167	0.00	0.01	3.555	O				3.00
32.250	0.00	0.01	3.554	O				3.00
32.333	0.00	0.01	3.554	O				3.00
32.417	0.00	0.01	3.554	O				3.00
32.500	0.00	0.01	3.554	O				3.00
32.583	0.00	0.01	3.554	O				3.00
32.667	0.00	0.01	3.554	O				3.00
32.750	0.00	0.01	3.554	O				3.00
32.833	0.00	0.01	3.554	O				2.99
32.917	0.00	0.01	3.554	O				2.99
33.000	0.00	0.01	3.554	O				2.99
33.083	0.00	0.01	3.554	O				2.99
33.167	0.00	0.01	3.554	O				2.99
33.250	0.00	0.01	3.554	O				2.99
33.333	0.00	0.01	3.554	O				2.99
33.417	0.00	0.01	3.553	O				2.99
33.500	0.00	0.01	3.553	O				2.99
33.583	0.00	0.01	3.553	O				2.99
33.667	0.00	0.01	3.553	O				2.99
33.750	0.00	0.01	3.553	O				2.99
33.833	0.00	0.01	3.553	O				2.99
33.917	0.00	0.01	3.553	O				2.99
34.000	0.00	0.01	3.553	O				2.99
34.083	0.00	0.01	3.553	O				2.99
34.167	0.00	0.01	3.553	O				2.99
34.250	0.00	0.01	3.553	O				2.99
34.333	0.00	0.01	3.553	O				2.99
34.417	0.00	0.01	3.553	O				2.99
34.500	0.00	0.01	3.553	O				2.99
34.583	0.00	0.01	3.553	O				2.99
34.667	0.00	0.01	3.552	O				2.99
34.750	0.00	0.01	3.552	O				2.99
34.833	0.00	0.01	3.552	O				2.99
34.917	0.00	0.01	3.552	O				2.99
35.000	0.00	0.01	3.552	O				2.99
35.083	0.00	0.01	3.552	O				2.99
35.167	0.00	0.01	3.552	O				2.99
35.250	0.00	0.01	3.552	O				2.99
35.333	0.00	0.01	3.552	O				2.99
35.417	0.00	0.01	3.552	O				2.99
35.500	0.00	0.01	3.552	O				2.99

35.583	0.00	0.01	3.552	O				2.99
35.667	0.00	0.01	3.552	O				2.99
35.750	0.00	0.01	3.552	O				2.99
35.833	0.00	0.01	3.551	O				2.99
35.917	0.00	0.01	3.551	O				2.99
36.000	0.00	0.01	3.551	O				2.99
36.083	0.00	0.01	3.551	O				2.99
36.167	0.00	0.01	3.551	O				2.99
36.250	0.00	0.01	3.551	O				2.99
36.333	0.00	0.01	3.551	O				2.99
36.417	0.00	0.01	3.551	O				2.99
36.500	0.00	0.01	3.551	O				2.99
36.583	0.00	0.01	3.551	O				2.99
36.667	0.00	0.01	3.551	O				2.99
36.750	0.00	0.01	3.551	O				2.99
36.833	0.00	0.01	3.551	O				2.99
36.917	0.00	0.01	3.551	O				2.99
37.000	0.00	0.01	3.551	O				2.99
37.083	0.00	0.01	3.550	O				2.99
37.167	0.00	0.01	3.550	O				2.99
37.250	0.00	0.01	3.550	O				2.99
37.333	0.00	0.01	3.550	O				2.99
37.417	0.00	0.01	3.550	O				2.99
37.500	0.00	0.01	3.550	O				2.99
37.583	0.00	0.01	3.550	O				2.99
37.667	0.00	0.01	3.550	O				2.99
37.750	0.00	0.01	3.550	O				2.99
37.833	0.00	0.01	3.550	O				2.99
37.917	0.00	0.01	3.550	O				2.99
38.000	0.00	0.01	3.550	O				2.99
38.083	0.00	0.01	3.550	O				2.99
38.167	0.00	0.01	3.550	O				2.99
38.250	0.00	0.01	3.549	O				2.99
38.333	0.00	0.01	3.549	O				2.99
38.417	0.00	0.01	3.549	O				2.99
38.500	0.00	0.01	3.549	O				2.99
38.583	0.00	0.01	3.549	O				2.99
38.667	0.00	0.01	3.549	O				2.99
38.750	0.00	0.01	3.549	O				2.99
38.833	0.00	0.01	3.549	O				2.99
38.917	0.00	0.01	3.549	O				2.99
39.000	0.00	0.01	3.549	O				2.99
39.083	0.00	0.01	3.549	O				2.99
39.167	0.00	0.01	3.549	O				2.99
39.250	0.00	0.01	3.549	O				2.99
39.333	0.00	0.01	3.549	O				2.99
39.417	0.00	0.01	3.549	O				2.99
39.500	0.00	0.01	3.548	O				2.99
39.583	0.00	0.01	3.548	O				2.99
39.667	0.00	0.01	3.548	O				2.99

39.750	0.00	0.01	3.548	O	|	|	|	2.99
39.833	0.00	0.01	3.548	O	|	|	|	2.99
39.917	0.00	0.01	3.548	O	|	|	|	2.99
40.000	0.00	0.01	3.548	O	|	|	|	2.99
40.083	0.00	0.01	3.548	O	|	|	|	2.99
40.167	0.00	0.01	3.548	O	|	|	|	2.99
40.250	0.00	0.01	3.548	O	|	|	|	2.99
40.333	0.00	0.01	3.548	O	|	|	|	2.99
40.417	0.00	0.01	3.548	O	|	|	|	2.99
40.500	0.00	0.01	3.548	O	|	|	|	2.99
40.583	0.00	0.01	3.548	O	|	|	|	2.99
40.667	0.00	0.01	3.547	O	|	|	|	2.99
40.750	0.00	0.01	3.547	O	|	|	|	2.99
40.833	0.00	0.01	3.547	O	|	|	|	2.99
40.917	0.00	0.01	3.547	O	|	|	|	2.99
41.000	0.00	0.01	3.547	O	|	|	|	2.99
41.083	0.00	0.01	3.547	O	|	|	|	2.99
41.167	0.00	0.01	3.547	O	|	|	|	2.99
41.250	0.00	0.01	3.547	O	|	|	|	2.99
41.333	0.00	0.01	3.547	O	|	|	|	2.99
41.417	0.00	0.01	3.547	O	|	|	|	2.99
41.500	0.00	0.01	3.547	O	|	|	|	2.99
41.583	0.00	0.01	3.547	O	|	|	|	2.99
41.667	0.00	0.01	3.547	O	|	|	|	2.99
41.750	0.00	0.01	3.547	O	|	|	|	2.99
41.833	0.00	0.01	3.547	O	|	|	|	2.99
41.917	0.00	0.01	3.546	O	|	|	|	2.99
42.000	0.00	0.01	3.546	O	|	|	|	2.99
42.083	0.00	0.01	3.546	O	|	|	|	2.99
42.167	0.00	0.01	3.546	O	|	|	|	2.99
42.250	0.00	0.01	3.546	O	|	|	|	2.99
42.333	0.00	0.01	3.546	O	|	|	|	2.99
42.417	0.00	0.01	3.546	O	|	|	|	2.99
42.500	0.00	0.01	3.546	O	|	|	|	2.99
42.583	0.00	0.01	3.546	O	|	|	|	2.99
42.667	0.00	0.01	3.546	O	|	|	|	2.99
42.750	0.00	0.01	3.546	O	|	|	|	2.99
42.833	0.00	0.01	3.546	O	|	|	|	2.99
42.917	0.00	0.01	3.546	O	|	|	|	2.99
43.000	0.00	0.01	3.546	O	|	|	|	2.99
43.083	0.00	0.01	3.545	O	|	|	|	2.99
43.167	0.00	0.01	3.545	O	|	|	|	2.99
43.250	0.00	0.01	3.545	O	|	|	|	2.99
43.333	0.00	0.01	3.545	O	|	|	|	2.99
43.417	0.00	0.01	3.545	O	|	|	|	2.99
43.500	0.00	0.01	3.545	O	|	|	|	2.99
43.583	0.00	0.01	3.545	O	|	|	|	2.99
43.667	0.00	0.01	3.545	O	|	|	|	2.99
43.750	0.00	0.01	3.545	O	|	|	|	2.99
43.833	0.00	0.01	3.545	O	|	|	|	2.99

43.917	0.00	0.01	3.545	O				2.99
44.000	0.00	0.01	3.545	O				2.99
44.083	0.00	0.01	3.545	O				2.99
44.167	0.00	0.01	3.545	O				2.99
44.250	0.00	0.01	3.545	O				2.99
44.333	0.00	0.01	3.544	O				2.99
44.417	0.00	0.01	3.544	O				2.99
44.500	0.00	0.01	3.544	O				2.99
44.583	0.00	0.01	3.544	O				2.99
44.667	0.00	0.01	3.544	O				2.99
44.750	0.00	0.01	3.544	O				2.99
44.833	0.00	0.01	3.544	O				2.99
44.917	0.00	0.01	3.544	O				2.99
45.000	0.00	0.01	3.544	O				2.99
45.083	0.00	0.01	3.544	O				2.99
45.167	0.00	0.01	3.544	O				2.99
45.250	0.00	0.01	3.544	O				2.99
45.333	0.00	0.01	3.544	O				2.99
45.417	0.00	0.01	3.544	O				2.99
45.500	0.00	0.01	3.543	O				2.99
45.583	0.00	0.01	3.543	O				2.99
45.667	0.00	0.01	3.543	O				2.99
45.750	0.00	0.01	3.543	O				2.99
45.833	0.00	0.01	3.543	O				2.99
45.917	0.00	0.01	3.543	O				2.99
46.000	0.00	0.01	3.543	O				2.99
46.083	0.00	0.01	3.543	O				2.99
46.167	0.00	0.01	3.543	O				2.99
46.250	0.00	0.01	3.543	O				2.99
46.333	0.00	0.01	3.543	O				2.99
46.417	0.00	0.01	3.543	O				2.99
46.500	0.00	0.01	3.543	O				2.99
46.583	0.00	0.01	3.543	O				2.99
46.667	0.00	0.01	3.543	O				2.99
46.750	0.00	0.01	3.542	O				2.99
46.833	0.00	0.01	3.542	O				2.99
46.917	0.00	0.01	3.542	O				2.99
47.000	0.00	0.01	3.542	O				2.99
47.083	0.00	0.01	3.542	O				2.99
47.167	0.00	0.01	3.542	O				2.99
47.250	0.00	0.01	3.542	O				2.99
47.333	0.00	0.01	3.542	O				2.98
47.417	0.00	0.01	3.542	O				2.98
47.500	0.00	0.01	3.542	O				2.98
47.583	0.00	0.01	3.542	O				2.98
47.667	0.00	0.01	3.542	O				2.98
47.750	0.00	0.01	3.542	O				2.98
47.833	0.00	0.01	3.542	O				2.98
47.917	0.00	0.01	3.541	O				2.98
48.000	0.00	0.01	3.541	O				2.98

48.083	0.00	0.01	3.541	O	|	|	|	2.98
48.167	0.00	0.01	3.541	O	|	|	|	2.98
48.250	0.00	0.01	3.541	O	|	|	|	2.98
48.333	0.00	0.01	3.541	O	|	|	|	2.98
48.417	0.00	0.01	3.541	O	|	|	|	2.98
48.500	0.00	0.01	3.541	O	|	|	|	2.98
48.583	0.00	0.01	3.541	O	|	|	|	2.98
48.667	0.00	0.01	3.541	O	|	|	|	2.98
48.750	0.00	0.01	3.541	O	|	|	|	2.98
48.833	0.00	0.01	3.541	O	|	|	|	2.98
48.917	0.00	0.01	3.541	O	|	|	|	2.98
49.000	0.00	0.01	3.541	O	|	|	|	2.98
49.083	0.00	0.01	3.541	O	|	|	|	2.98
49.167	0.00	0.01	3.540	O	|	|	|	2.98
49.250	0.00	0.01	3.540	O	|	|	|	2.98
49.333	0.00	0.01	3.540	O	|	|	|	2.98
49.417	0.00	0.01	3.540	O	|	|	|	2.98
49.500	0.00	0.01	3.540	O	|	|	|	2.98
49.583	0.00	0.01	3.540	O	|	|	|	2.98
49.667	0.00	0.01	3.540	O	|	|	|	2.98
49.750	0.00	0.01	3.540	O	|	|	|	2.98
49.833	0.00	0.01	3.540	O	|	|	|	2.98
49.917	0.00	0.01	3.540	O	|	|	|	2.98
50.000	0.00	0.01	3.540	O	|	|	|	2.98
50.083	0.00	0.01	3.540	O	|	|	|	2.98
50.167	0.00	0.01	3.540	O	|	|	|	2.98
50.250	0.00	0.01	3.540	O	|	|	|	2.98
50.333	0.00	0.01	3.540	O	|	|	|	2.98
50.417	0.00	0.01	3.539	O	|	|	|	2.98
50.500	0.00	0.01	3.539	O	|	|	|	2.98
50.583	0.00	0.01	3.539	O	|	|	|	2.98
50.667	0.00	0.01	3.539	O	|	|	|	2.98
50.750	0.00	0.01	3.539	O	|	|	|	2.98
50.833	0.00	0.01	3.539	O	|	|	|	2.98
50.917	0.00	0.01	3.539	O	|	|	|	2.98
51.000	0.00	0.01	3.539	O	|	|	|	2.98
51.083	0.00	0.01	3.539	O	|	|	|	2.98
51.167	0.00	0.01	3.539	O	|	|	|	2.98
51.250	0.00	0.01	3.539	O	|	|	|	2.98
51.333	0.00	0.01	3.539	O	|	|	|	2.98
51.417	0.00	0.01	3.539	O	|	|	|	2.98
51.500	0.00	0.01	3.539	O	|	|	|	2.98
51.583	0.00	0.01	3.538	O	|	|	|	2.98
51.667	0.00	0.01	3.538	O	|	|	|	2.98
51.750	0.00	0.01	3.538	O	|	|	|	2.98
51.833	0.00	0.01	3.538	O	|	|	|	2.98
51.917	0.00	0.01	3.538	O	|	|	|	2.98
52.000	0.00	0.01	3.538	O	|	|	|	2.98
52.083	0.00	0.01	3.538	O	|	|	|	2.98
52.167	0.00	0.01	3.538	O	|	|	|	2.98

52.250	0.00	0.01	3.538	O				2.98
52.333	0.00	0.01	3.538	O				2.98
52.417	0.00	0.01	3.538	O				2.98
52.500	0.00	0.01	3.538	O				2.98
52.583	0.00	0.01	3.538	O				2.98
52.667	0.00	0.01	3.538	O				2.98
52.750	0.00	0.01	3.538	O				2.98
52.833	0.00	0.01	3.537	O				2.98
52.917	0.00	0.01	3.537	O				2.98
53.000	0.00	0.01	3.537	O				2.98
53.083	0.00	0.01	3.537	O				2.98
53.167	0.00	0.01	3.537	O				2.98
53.250	0.00	0.01	3.537	O				2.98
53.333	0.00	0.01	3.537	O				2.98
53.417	0.00	0.01	3.537	O				2.98
53.500	0.00	0.01	3.537	O				2.98
53.583	0.00	0.01	3.537	O				2.98
53.667	0.00	0.01	3.537	O				2.98
53.750	0.00	0.01	3.537	O				2.98
53.833	0.00	0.01	3.537	O				2.98
53.917	0.00	0.01	3.537	O				2.98
54.000	0.00	0.01	3.536	O				2.98
54.083	0.00	0.01	3.536	O				2.98
54.167	0.00	0.01	3.536	O				2.98
54.250	0.00	0.01	3.536	O				2.98
54.333	0.00	0.01	3.536	O				2.98
54.417	0.00	0.01	3.536	O				2.98
54.500	0.00	0.01	3.536	O				2.98
54.583	0.00	0.01	3.536	O				2.98
54.667	0.00	0.01	3.536	O				2.98
54.750	0.00	0.01	3.536	O				2.98
54.833	0.00	0.01	3.536	O				2.98
54.917	0.00	0.01	3.536	O				2.98
55.000	0.00	0.01	3.536	O				2.98
55.083	0.00	0.01	3.536	O				2.98
55.167	0.00	0.01	3.536	O				2.98
55.250	0.00	0.01	3.535	O				2.98
55.333	0.00	0.01	3.535	O				2.98
55.417	0.00	0.01	3.535	O				2.98
55.500	0.00	0.01	3.535	O				2.98
55.583	0.00	0.01	3.535	O				2.98
55.667	0.00	0.01	3.535	O				2.98
55.750	0.00	0.01	3.535	O				2.98
55.833	0.00	0.01	3.535	O				2.98
55.917	0.00	0.01	3.535	O				2.98
56.000	0.00	0.01	3.535	O				2.98
56.083	0.00	0.01	3.535	O				2.98
56.167	0.00	0.01	3.535	O				2.98
56.250	0.00	0.01	3.535	O				2.98
56.333	0.00	0.01	3.535	O				2.98

56.417	0.00	0.01	3.534	O				2.98
56.500	0.00	0.01	3.534	O				2.98
56.583	0.00	0.01	3.534	O				2.98
56.667	0.00	0.01	3.534	O				2.98
56.750	0.00	0.01	3.534	O				2.98
56.833	0.00	0.01	3.534	O				2.98
56.917	0.00	0.01	3.534	O				2.98
57.000	0.00	0.01	3.534	O				2.98
57.083	0.00	0.01	3.534	O				2.98
57.167	0.00	0.01	3.534	O				2.98
57.250	0.00	0.01	3.534	O				2.98
57.333	0.00	0.01	3.534	O				2.98
57.417	0.00	0.01	3.534	O				2.98
57.500	0.00	0.01	3.534	O				2.98
57.583	0.00	0.01	3.534	O				2.98
57.667	0.00	0.01	3.533	O				2.98
57.750	0.00	0.01	3.533	O				2.98
57.833	0.00	0.01	3.533	O				2.98
57.917	0.00	0.01	3.533	O				2.98
58.000	0.00	0.01	3.533	O				2.98
58.083	0.00	0.01	3.533	O				2.98
58.167	0.00	0.01	3.533	O				2.98
58.250	0.00	0.01	3.533	O				2.98
58.333	0.00	0.01	3.533	O				2.98
58.417	0.00	0.01	3.533	O				2.98
58.500	0.00	0.01	3.533	O				2.98
58.583	0.00	0.01	3.533	O				2.98
58.667	0.00	0.01	3.533	O				2.98
58.750	0.00	0.01	3.533	O				2.98
58.833	0.00	0.01	3.532	O				2.98
58.917	0.00	0.01	3.532	O				2.98
59.000	0.00	0.01	3.532	O				2.98
59.083	0.00	0.01	3.532	O				2.98
59.167	0.00	0.01	3.532	O				2.98
59.250	0.00	0.01	3.532	O				2.98
59.333	0.00	0.01	3.532	O				2.98
59.417	0.00	0.01	3.532	O				2.98
59.500	0.00	0.01	3.532	O				2.98
59.583	0.00	0.01	3.532	O				2.98
59.667	0.00	0.01	3.532	O				2.98
59.750	0.00	0.01	3.532	O				2.98
59.833	0.00	0.01	3.532	O				2.98
59.917	0.00	0.01	3.532	O				2.98
60.000	0.00	0.01	3.532	O				2.98
60.083	0.00	0.01	3.531	O				2.98
60.167	0.00	0.01	3.531	O				2.98
60.250	0.00	0.01	3.531	O				2.98
60.333	0.00	0.01	3.531	O				2.98
60.417	0.00	0.01	3.531	O				2.98
60.500	0.00	0.01	3.531	O				2.98

60.583	0.00	0.01	3.531	O				2.98
60.667	0.00	0.01	3.531	O				2.98
60.750	0.00	0.01	3.531	O				2.98
60.833	0.00	0.01	3.531	O				2.98
60.917	0.00	0.01	3.531	O				2.98
61.000	0.00	0.01	3.531	O				2.98
61.083	0.00	0.01	3.531	O				2.98
61.167	0.00	0.01	3.531	O				2.98
61.250	0.00	0.01	3.530	O				2.98
61.333	0.00	0.01	3.530	O				2.98
61.417	0.00	0.01	3.530	O				2.98
61.500	0.00	0.01	3.530	O				2.98
61.583	0.00	0.01	3.530	O				2.98
61.667	0.00	0.01	3.530	O				2.98
61.750	0.00	0.01	3.530	O				2.98
61.833	0.00	0.01	3.530	O				2.97
61.917	0.00	0.01	3.530	O				2.97
62.000	0.00	0.01	3.530	O				2.97
62.083	0.00	0.01	3.530	O				2.97
62.167	0.00	0.01	3.530	O				2.97
62.250	0.00	0.01	3.530	O				2.97
62.333	0.00	0.01	3.530	O				2.97
62.417	0.00	0.01	3.530	O				2.97
62.500	0.00	0.01	3.529	O				2.97
62.583	0.00	0.01	3.529	O				2.97
62.667	0.00	0.01	3.529	O				2.97
62.750	0.00	0.01	3.529	O				2.97
62.833	0.00	0.01	3.529	O				2.97
62.917	0.00	0.01	3.529	O				2.97
63.000	0.00	0.01	3.529	O				2.97
63.083	0.00	0.01	3.529	O				2.97
63.167	0.00	0.01	3.529	O				2.97
63.250	0.00	0.01	3.529	O				2.97
63.333	0.00	0.01	3.529	O				2.97
63.417	0.00	0.01	3.529	O				2.97
63.500	0.00	0.01	3.529	O				2.97
63.583	0.00	0.01	3.529	O				2.97
63.667	0.00	0.01	3.528	O				2.97
63.750	0.00	0.01	3.528	O				2.97
63.833	0.00	0.01	3.528	O				2.97
63.917	0.00	0.01	3.528	O				2.97
64.000	0.00	0.01	3.528	O				2.97
64.083	0.00	0.01	3.528	O				2.97
64.167	0.00	0.01	3.528	O				2.97
64.250	0.00	0.01	3.528	O				2.97
64.333	0.00	0.01	3.528	O				2.97
64.417	0.00	0.01	3.528	O				2.97
64.500	0.00	0.01	3.528	O				2.97
64.583	0.00	0.01	3.528	O				2.97
64.667	0.00	0.01	3.528	O				2.97

64.750	0.00	0.01	3.528	O				2.97
64.833	0.00	0.01	3.528	O				2.97
64.917	0.00	0.01	3.527	O				2.97
65.000	0.00	0.01	3.527	O				2.97
65.083	0.00	0.01	3.527	O				2.97
65.167	0.00	0.01	3.527	O				2.97
65.250	0.00	0.01	3.527	O				2.97
65.333	0.00	0.01	3.527	O				2.97
65.417	0.00	0.01	3.527	O				2.97
65.500	0.00	0.01	3.527	O				2.97
65.583	0.00	0.01	3.527	O				2.97
65.667	0.00	0.01	3.527	O				2.97
65.750	0.00	0.01	3.527	O				2.97
65.833	0.00	0.01	3.527	O				2.97
65.917	0.00	0.01	3.527	O				2.97
66.000	0.00	0.01	3.527	O				2.97
66.083	0.00	0.01	3.526	O				2.97
66.167	0.00	0.01	3.526	O				2.97
66.250	0.00	0.01	3.526	O				2.97
66.333	0.00	0.01	3.526	O				2.97
66.417	0.00	0.01	3.526	O				2.97
66.500	0.00	0.01	3.526	O				2.97
66.583	0.00	0.01	3.526	O				2.97
66.667	0.00	0.01	3.526	O				2.97
66.750	0.00	0.01	3.526	O				2.97
66.833	0.00	0.01	3.526	O				2.97
66.917	0.00	0.01	3.526	O				2.97
67.000	0.00	0.01	3.526	O				2.97
67.083	0.00	0.01	3.526	O				2.97
67.167	0.00	0.01	3.526	O				2.97
67.250	0.00	0.01	3.526	O				2.97
67.333	0.00	0.01	3.525	O				2.97
67.417	0.00	0.01	3.525	O				2.97
67.500	0.00	0.01	3.525	O				2.97
67.583	0.00	0.01	3.525	O				2.97
67.667	0.00	0.01	3.525	O				2.97
67.750	0.00	0.01	3.525	O				2.97
67.833	0.00	0.01	3.525	O				2.97
67.917	0.00	0.01	3.525	O				2.97
68.000	0.00	0.01	3.525	O				2.97
68.083	0.00	0.01	3.525	O				2.97
68.167	0.00	0.01	3.525	O				2.97
68.250	0.00	0.01	3.525	O				2.97
68.333	0.00	0.01	3.525	O				2.97
68.417	0.00	0.01	3.525	O				2.97
68.500	0.00	0.01	3.524	O				2.97
68.583	0.00	0.01	3.524	O				2.97
68.667	0.00	0.01	3.524	O				2.97
68.750	0.00	0.01	3.524	O				2.97
68.833	0.00	0.01	3.524	O				2.97

68.917	0.00	0.01	3.524	O					2.97
69.000	0.00	0.01	3.524	O					2.97
69.083	0.00	0.01	3.524	O					2.97
69.167	0.00	0.01	3.524	O					2.97
69.250	0.00	0.01	3.524	O					2.97
69.333	0.00	0.01	3.524	O					2.97
69.417	0.00	0.01	3.524	O					2.97
69.500	0.00	0.01	3.524	O					2.97
69.583	0.00	0.01	3.524	O					2.97
69.667	0.00	0.01	3.524	O					2.97
69.750	0.00	0.01	3.523	O					2.97
69.833	0.00	0.01	3.523	O					2.97
69.917	0.00	0.01	3.523	O					2.97
70.000	0.00	0.01	3.523	O					2.97
70.083	0.00	0.01	3.523	O					2.97
70.167	0.00	0.01	3.523	O					2.97
70.250	0.00	0.01	3.523	O					2.97
70.333	0.00	0.01	3.523	O					2.97
70.417	0.00	0.01	3.523	O					2.97
70.500	0.00	0.01	3.523	O					2.97
70.583	0.00	0.01	3.523	O					2.97
70.667	0.00	0.01	3.523	O					2.97
70.750	0.00	0.01	3.523	O					2.97
70.833	0.00	0.01	3.523	O					2.97
70.917	0.00	0.01	3.522	O					2.97
71.000	0.00	0.01	3.522	O					2.97
71.083	0.00	0.01	3.522	O					2.97
71.167	0.00	0.01	3.522	O					2.97
71.250	0.00	0.01	3.522	O					2.97
71.333	0.00	0.01	3.522	O					2.97
71.417	0.00	0.01	3.522	O					2.97
71.500	0.00	0.01	3.522	O					2.97
71.583	0.00	0.01	3.522	O					2.97
71.667	0.00	0.01	3.522	O					2.97
71.750	0.00	0.01	3.522	O					2.97
71.833	0.00	0.01	3.522	O					2.97
71.917	0.00	0.01	3.522	O					2.97
72.000	0.00	0.01	3.522	O					2.97
72.083	0.00	0.01	3.522	O					2.97
72.167	0.00	0.01	3.521	O					2.97
72.250	0.00	0.01	3.521	O					2.97
72.333	0.00	0.01	3.521	O					2.97
72.417	0.00	0.01	3.521	O					2.97
72.500	0.00	0.01	3.521	O					2.97
72.583	0.00	0.01	3.521	O					2.97
72.667	0.00	0.01	3.521	O					2.97
72.750	0.00	0.01	3.521	O					2.97
72.833	0.00	0.01	3.521	O					2.97
72.917	0.00	0.01	3.521	O					2.97
73.000	0.00	0.01	3.521	O					2.97

73.083	0.00	0.01	3.521	O				2.97
73.167	0.00	0.01	3.521	O				2.97
73.250	0.00	0.01	3.521	O				2.97
73.333	0.00	0.01	3.520	O				2.97
73.417	0.00	0.01	3.520	O				2.97
73.500	0.00	0.01	3.520	O				2.97
73.583	0.00	0.01	3.520	O				2.97
73.667	0.00	0.01	3.520	O				2.97
73.750	0.00	0.01	3.520	O				2.97
73.833	0.00	0.01	3.520	O				2.97
73.917	0.00	0.01	3.520	O				2.97
74.000	0.00	0.01	3.520	O				2.97
74.083	0.00	0.01	3.520	O				2.97
74.167	0.00	0.01	3.520	O				2.97
74.250	0.00	0.01	3.520	O				2.97
74.333	0.00	0.01	3.520	O				2.97
74.417	0.00	0.01	3.520	O				2.97
74.500	0.00	0.01	3.520	O				2.97
74.583	0.00	0.01	3.519	O				2.97
74.667	0.00	0.01	3.519	O				2.97
74.750	0.00	0.01	3.519	O				2.97
74.833	0.00	0.01	3.519	O				2.97
74.917	0.00	0.01	3.519	O				2.97
75.000	0.00	0.01	3.519	O				2.97
75.083	0.00	0.01	3.519	O				2.97
75.167	0.00	0.01	3.519	O				2.97
75.250	0.00	0.01	3.519	O				2.97
75.333	0.00	0.01	3.519	O				2.97
75.417	0.00	0.01	3.519	O				2.97
75.500	0.00	0.01	3.519	O				2.97
75.583	0.00	0.01	3.519	O				2.97
75.667	0.00	0.01	3.519	O				2.97
75.750	0.00	0.01	3.518	O				2.97
75.833	0.00	0.01	3.518	O				2.97
75.917	0.00	0.01	3.518	O				2.97
76.000	0.00	0.01	3.518	O				2.97
76.083	0.00	0.01	3.518	O				2.97
76.167	0.00	0.01	3.518	O				2.97
76.250	0.00	0.01	3.518	O				2.97
76.333	0.00	0.01	3.518	O				2.97
76.417	0.00	0.01	3.518	O				2.96
76.500	0.00	0.01	3.518	O				2.96
76.583	0.00	0.01	3.518	O				2.96
76.667	0.00	0.01	3.518	O				2.96
76.750	0.00	0.01	3.518	O				2.96
76.833	0.00	0.01	3.518	O				2.96
76.917	0.00	0.01	3.518	O				2.96
77.000	0.00	0.01	3.517	O				2.96
77.083	0.00	0.01	3.517	O				2.96
77.167	0.00	0.01	3.517	O				2.96

77.250	0.00	0.01	3.517	O				2.96
77.333	0.00	0.01	3.517	O				2.96
77.417	0.00	0.01	3.517	O				2.96
77.500	0.00	0.01	3.517	O				2.96
77.583	0.00	0.01	3.517	O				2.96
77.667	0.00	0.01	3.517	O				2.96
77.750	0.00	0.01	3.517	O				2.96
77.833	0.00	0.01	3.517	O				2.96
77.917	0.00	0.01	3.517	O				2.96
78.000	0.00	0.01	3.517	O				2.96
78.083	0.00	0.01	3.517	O				2.96
78.167	0.00	0.01	3.516	O				2.96
78.250	0.00	0.01	3.516	O				2.96
78.333	0.00	0.01	3.516	O				2.96
78.417	0.00	0.01	3.516	O				2.96
78.500	0.00	0.01	3.516	O				2.96
78.583	0.00	0.01	3.516	O				2.96
78.667	0.00	0.01	3.516	O				2.96
78.750	0.00	0.01	3.516	O				2.96
78.833	0.00	0.01	3.516	O				2.96
78.917	0.00	0.01	3.516	O				2.96
79.000	0.00	0.01	3.516	O				2.96
79.083	0.00	0.01	3.516	O				2.96
79.167	0.00	0.01	3.516	O				2.96
79.250	0.00	0.01	3.516	O				2.96
79.333	0.00	0.01	3.516	O				2.96
79.417	0.00	0.01	3.515	O				2.96
79.500	0.00	0.01	3.515	O				2.96
79.583	0.00	0.01	3.515	O				2.96
79.667	0.00	0.01	3.515	O				2.96
79.750	0.00	0.01	3.515	O				2.96
79.833	0.00	0.01	3.515	O				2.96
79.917	0.00	0.01	3.515	O				2.96
80.000	0.00	0.01	3.515	O				2.96
80.083	0.00	0.01	3.515	O				2.96
80.167	0.00	0.01	3.515	O				2.96
80.250	0.00	0.01	3.515	O				2.96
80.333	0.00	0.01	3.515	O				2.96
80.417	0.00	0.01	3.515	O				2.96
80.500	0.00	0.01	3.515	O				2.96
80.583	0.00	0.01	3.515	O				2.96
80.667	0.00	0.01	3.514	O				2.96
80.750	0.00	0.01	3.514	O				2.96
80.833	0.00	0.01	3.514	O				2.96
80.917	0.00	0.01	3.514	O				2.96
81.000	0.00	0.01	3.514	O				2.96
81.083	0.00	0.01	3.514	O				2.96
81.167	0.00	0.01	3.514	O				2.96
81.250	0.00	0.01	3.514	O				2.96
81.333	0.00	0.01	3.514	O				2.96

81.417	0.00	0.01	3.514	O					2.96
81.500	0.00	0.01	3.514	O					2.96
81.583	0.00	0.01	3.514	O					2.96
81.667	0.00	0.01	3.514	O					2.96
81.750	0.00	0.01	3.514	O					2.96
81.833	0.00	0.01	3.513	O					2.96
81.917	0.00	0.01	3.513	O					2.96
82.000	0.00	0.01	3.513	O					2.96
82.083	0.00	0.01	3.513	O					2.96
82.167	0.00	0.01	3.513	O					2.96
82.250	0.00	0.01	3.513	O					2.96
82.333	0.00	0.01	3.513	O					2.96
82.417	0.00	0.01	3.513	O					2.96
82.500	0.00	0.01	3.513	O					2.96
82.583	0.00	0.01	3.513	O					2.96
82.667	0.00	0.01	3.513	O					2.96
82.750	0.00	0.01	3.513	O					2.96
82.833	0.00	0.01	3.513	O					2.96
82.917	0.00	0.01	3.513	O					2.96
83.000	0.00	0.01	3.513	O					2.96
83.083	0.00	0.01	3.512	O					2.96
83.167	0.00	0.01	3.512	O					2.96
83.250	0.00	0.01	3.512	O					2.96
83.333	0.00	0.01	3.512	O					2.96
83.417	0.00	0.01	3.512	O					2.96
83.500	0.00	0.01	3.512	O					2.96
83.583	0.00	0.01	3.512	O					2.96
83.667	0.00	0.01	3.512	O					2.96
83.750	0.00	0.01	3.512	O					2.96
83.833	0.00	0.01	3.512	O					2.96
83.917	0.00	0.01	3.512	O					2.96
84.000	0.00	0.01	3.512	O					2.96
84.083	0.00	0.01	3.512	O					2.96
84.167	0.00	0.01	3.512	O					2.96
84.250	0.00	0.01	3.511	O					2.96
84.333	0.00	0.01	3.511	O					2.96
84.417	0.00	0.01	3.511	O					2.96
84.500	0.00	0.01	3.511	O					2.96
84.583	0.00	0.01	3.511	O					2.96
84.667	0.00	0.01	3.511	O					2.96
84.750	0.00	0.01	3.511	O					2.96
84.833	0.00	0.01	3.511	O					2.96
84.917	0.00	0.01	3.511	O					2.96
85.000	0.00	0.01	3.511	O					2.96
85.083	0.00	0.01	3.511	O					2.96
85.167	0.00	0.01	3.511	O					2.96
85.250	0.00	0.01	3.511	O					2.96
85.333	0.00	0.01	3.511	O					2.96
85.417	0.00	0.01	3.511	O					2.96
85.500	0.00	0.01	3.510	O					2.96

85.583	0.00	0.01	3.510	O	|	|	|	2.96
85.667	0.00	0.01	3.510	O	|	|	|	2.96
85.750	0.00	0.01	3.510	O	|	|	|	2.96
85.833	0.00	0.01	3.510	O	|	|	|	2.96
85.917	0.00	0.01	3.510	O	|	|	|	2.96
86.000	0.00	0.01	3.510	O	|	|	|	2.96
86.083	0.00	0.01	3.510	O	|	|	|	2.96
86.167	0.00	0.01	3.510	O	|	|	|	2.96
86.250	0.00	0.01	3.510	O	|	|	|	2.96
86.333	0.00	0.01	3.510	O	|	|	|	2.96
86.417	0.00	0.01	3.510	O	|	|	|	2.96
86.500	0.00	0.01	3.510	O	|	|	|	2.96
86.583	0.00	0.01	3.510	O	|	|	|	2.96
86.667	0.00	0.01	3.509	O	|	|	|	2.96
86.750	0.00	0.01	3.509	O	|	|	|	2.96
86.833	0.00	0.01	3.509	O	|	|	|	2.96
86.917	0.00	0.01	3.509	O	|	|	|	2.96
87.000	0.00	0.01	3.509	O	|	|	|	2.96
87.083	0.00	0.01	3.509	O	|	|	|	2.96
87.167	0.00	0.01	3.509	O	|	|	|	2.96
87.250	0.00	0.01	3.509	O	|	|	|	2.96
87.333	0.00	0.01	3.509	O	|	|	|	2.96
87.417	0.00	0.01	3.509	O	|	|	|	2.96
87.500	0.00	0.01	3.509	O	|	|	|	2.96
87.583	0.00	0.01	3.509	O	|	|	|	2.96
87.667	0.00	0.01	3.509	O	|	|	|	2.96
87.750	0.00	0.01	3.509	O	|	|	|	2.96
87.833	0.00	0.01	3.509	O	|	|	|	2.96
87.917	0.00	0.01	3.508	O	|	|	|	2.96
88.000	0.00	0.01	3.508	O	|	|	|	2.96
88.083	0.00	0.01	3.508	O	|	|	|	2.96
88.167	0.00	0.01	3.508	O	|	|	|	2.96
88.250	0.00	0.01	3.508	O	|	|	|	2.96
88.333	0.00	0.01	3.508	O	|	|	|	2.96
88.417	0.00	0.01	3.508	O	|	|	|	2.96
88.500	0.00	0.01	3.508	O	|	|	|	2.96
88.583	0.00	0.01	3.508	O	|	|	|	2.96
88.667	0.00	0.01	3.508	O	|	|	|	2.96
88.750	0.00	0.01	3.508	O	|	|	|	2.96
88.833	0.00	0.01	3.508	O	|	|	|	2.96
88.917	0.00	0.01	3.508	O	|	|	|	2.96
89.000	0.00	0.01	3.508	O	|	|	|	2.96
89.083	0.00	0.01	3.507	O	|	|	|	2.96
89.167	0.00	0.01	3.507	O	|	|	|	2.96
89.250	0.00	0.01	3.507	O	|	|	|	2.96
89.333	0.00	0.01	3.507	O	|	|	|	2.96
89.417	0.00	0.01	3.507	O	|	|	|	2.96
89.500	0.00	0.01	3.507	O	|	|	|	2.96
89.583	0.00	0.01	3.507	O	|	|	|	2.96
89.667	0.00	0.01	3.507	O	|	|	|	2.96

89.750	0.00	0.01	3.507	O				2.96
89.833	0.00	0.01	3.507	O				2.96
89.917	0.00	0.01	3.507	O				2.96
90.000	0.00	0.01	3.507	O				2.96
90.083	0.00	0.01	3.507	O				2.96
90.167	0.00	0.01	3.507	O				2.96
90.250	0.00	0.01	3.507	O				2.96
90.333	0.00	0.01	3.506	O				2.96
90.417	0.00	0.01	3.506	O				2.96
90.500	0.00	0.01	3.506	O				2.96
90.583	0.00	0.01	3.506	O				2.96
90.667	0.00	0.01	3.506	O				2.96
90.750	0.00	0.01	3.506	O				2.96
90.833	0.00	0.01	3.506	O				2.96
90.917	0.00	0.01	3.506	O				2.95
91.000	0.00	0.01	3.506	O				2.95
91.083	0.00	0.01	3.506	O				2.95
91.167	0.00	0.01	3.506	O				2.95
91.250	0.00	0.01	3.506	O				2.95
91.333	0.00	0.01	3.506	O				2.95
91.417	0.00	0.01	3.506	O				2.95
91.500	0.00	0.01	3.505	O				2.95
91.583	0.00	0.01	3.505	O				2.95
91.667	0.00	0.01	3.505	O				2.95
91.750	0.00	0.01	3.505	O				2.95
91.833	0.00	0.01	3.505	O				2.95
91.917	0.00	0.01	3.505	O				2.95
92.000	0.00	0.01	3.505	O				2.95
92.083	0.00	0.01	3.505	O				2.95
92.167	0.00	0.01	3.505	O				2.95
92.250	0.00	0.01	3.505	O				2.95
92.333	0.00	0.01	3.505	O				2.95
92.417	0.00	0.01	3.505	O				2.95
92.500	0.00	0.01	3.505	O				2.95
92.583	0.00	0.01	3.505	O				2.95
92.667	0.00	0.01	3.505	O				2.95
92.750	0.00	0.01	3.504	O				2.95
92.833	0.00	0.01	3.504	O				2.95
92.917	0.00	0.01	3.504	O				2.95
93.000	0.00	0.01	3.504	O				2.95
93.083	0.00	0.01	3.504	O				2.95
93.167	0.00	0.01	3.504	O				2.95
93.250	0.00	0.01	3.504	O				2.95
93.333	0.00	0.01	3.504	O				2.95
93.417	0.00	0.01	3.504	O				2.95
93.500	0.00	0.01	3.504	O				2.95
93.583	0.00	0.01	3.504	O				2.95
93.667	0.00	0.01	3.504	O				2.95
93.750	0.00	0.01	3.504	O				2.95
93.833	0.00	0.01	3.504	O				2.95

93.917	0.00	0.01	3.503	O				2.95
94.000	0.00	0.01	3.503	O				2.95
94.083	0.00	0.01	3.503	O				2.95
94.167	0.00	0.01	3.503	O				2.95
94.250	0.00	0.01	3.503	O				2.95
94.333	0.00	0.01	3.503	O				2.95
94.417	0.00	0.01	3.503	O				2.95
94.500	0.00	0.01	3.503	O				2.95
94.583	0.00	0.01	3.503	O				2.95
94.667	0.00	0.01	3.503	O				2.95
94.750	0.00	0.01	3.503	O				2.95
94.833	0.00	0.01	3.503	O				2.95
94.917	0.00	0.01	3.503	O				2.95
95.000	0.00	0.01	3.503	O				2.95
95.083	0.00	0.01	3.503	O				2.95
95.167	0.00	0.01	3.502	O				2.95
95.250	0.00	0.01	3.502	O				2.95
95.333	0.00	0.01	3.502	O				2.95
95.417	0.00	0.01	3.502	O				2.95
95.500	0.00	0.01	3.502	O				2.95
95.583	0.00	0.01	3.502	O				2.95
95.667	0.00	0.01	3.502	O				2.95
95.750	0.00	0.01	3.502	O				2.95
95.833	0.00	0.01	3.502	O				2.95
95.917	0.00	0.01	3.502	O				2.95
96.000	0.00	0.01	3.502	O				2.95
96.083	0.00	0.01	3.502	O				2.95
96.167	0.00	0.01	3.502	O				2.95
96.250	0.00	0.01	3.502	O				2.95
96.333	0.00	0.01	3.501	O				2.95
96.417	0.00	0.01	3.501	O				2.95
96.500	0.00	0.01	3.501	O				2.95
96.583	0.00	0.01	3.501	O				2.95
96.667	0.00	0.01	3.501	O				2.95
96.750	0.00	0.01	3.501	O				2.95
96.833	0.00	0.01	3.501	O				2.95
96.917	0.00	0.01	3.501	O				2.95
97.000	0.00	0.01	3.501	O				2.95
97.083	0.00	0.01	3.501	O				2.95
97.167	0.00	0.01	3.501	O				2.95
97.250	0.00	0.01	3.501	O				2.95
97.333	0.00	0.01	3.501	O				2.95
97.417	0.00	0.01	3.501	O				2.95
97.500	0.00	0.01	3.501	O				2.95
97.583	0.00	0.01	3.500	O				2.95
97.667	0.00	0.01	3.500	O				2.95
97.750	0.00	0.01	3.500	O				2.95
97.833	0.00	0.01	3.500	O				2.95
97.917	0.00	0.01	3.500	O				2.95
98.000	0.00	0.01	3.500	O				2.95

98.083	0.00	0.01	3.500	O				2.95
98.167	0.00	0.01	3.500	O				2.95
98.250	0.00	0.01	3.500	O				2.95
98.333	0.00	0.01	3.500	O				2.95
98.417	0.00	0.01	3.500	O				2.95
98.500	0.00	0.01	3.500	O				2.95
98.583	0.00	0.01	3.500	O				2.95
98.667	0.00	0.01	3.500	O				2.95
98.750	0.00	0.01	3.499	O				2.95
98.833	0.00	0.01	3.499	O				2.95
98.917	0.00	0.01	3.499	O				2.95
99.000	0.00	0.01	3.499	O				2.95
99.083	0.00	0.01	3.499	O				2.95
99.167	0.00	0.01	3.499	O				2.95
99.250	0.00	0.01	3.499	O				2.95
99.333	0.00	0.01	3.499	O				2.95
99.417	0.00	0.01	3.499	O				2.95
99.500	0.00	0.01	3.499	O				2.95
99.583	0.00	0.01	3.499	O				2.95
99.667	0.00	0.01	3.499	O				2.95
99.750	0.00	0.01	3.499	O				2.95
99.833	0.00	0.01	3.499	O				2.95
99.917	0.00	0.01	3.499	O				2.95
100.000	0.00	0.01	3.498	O				2.95
100.083	0.00	0.01	3.498	O				2.95
100.167	0.00	0.01	3.498	O				2.95
100.250	0.00	0.01	3.498	O				2.95
100.333	0.00	0.01	3.498	O				2.95
100.417	0.00	0.01	3.498	O				2.95
100.500	0.00	0.01	3.498	O				2.95
100.583	0.00	0.01	3.498	O				2.95
100.667	0.00	0.01	3.498	O				2.95
100.750	0.00	0.01	3.498	O				2.95
100.833	0.00	0.01	3.498	O				2.95
100.917	0.00	0.01	3.498	O				2.95
101.000	0.00	0.01	3.498	O				2.95
101.083	0.00	0.01	3.498	O				2.95
101.167	0.00	0.01	3.497	O				2.95
101.250	0.00	0.01	3.497	O				2.95
101.333	0.00	0.01	3.497	O				2.95
101.417	0.00	0.01	3.497	O				2.95
101.500	0.00	0.01	3.497	O				2.95
101.583	0.00	0.01	3.497	O				2.95
101.667	0.00	0.01	3.497	O				2.95
101.750	0.00	0.01	3.497	O				2.95
101.833	0.00	0.01	3.497	O				2.95
101.917	0.00	0.01	3.497	O				2.95
102.000	0.00	0.01	3.497	O				2.95
102.083	0.00	0.01	3.497	O				2.95
102.167	0.00	0.01	3.497	O				2.95

102.250	0.00	0.01	3.497	O				2.95
102.333	0.00	0.01	3.497	O				2.95
102.417	0.00	0.01	3.496	O				2.95
102.500	0.00	0.01	3.496	O				2.95
102.583	0.00	0.01	3.496	O				2.95
102.667	0.00	0.01	3.496	O				2.95
102.750	0.00	0.01	3.496	O				2.95
102.833	0.00	0.01	3.496	O				2.95
102.917	0.00	0.01	3.496	O				2.95
103.000	0.00	0.01	3.496	O				2.95
103.083	0.00	0.01	3.496	O				2.95
103.167	0.00	0.01	3.496	O				2.95
103.250	0.00	0.01	3.496	O				2.95
103.333	0.00	0.01	3.496	O				2.95
103.417	0.00	0.01	3.496	O				2.95
103.500	0.00	0.01	3.496	O				2.95
103.583	0.00	0.01	3.495	O				2.95
103.667	0.00	0.01	3.495	O				2.95
103.750	0.00	0.01	3.495	O				2.95
103.833	0.00	0.01	3.495	O				2.95
103.917	0.00	0.01	3.495	O				2.95
104.000	0.00	0.01	3.495	O				2.95
104.083	0.00	0.01	3.495	O				2.95
104.167	0.00	0.01	3.495	O				2.95
104.250	0.00	0.01	3.495	O				2.95
104.333	0.00	0.01	3.495	O				2.95
104.417	0.00	0.01	3.495	O				2.95
104.500	0.00	0.01	3.495	O				2.95
104.583	0.00	0.01	3.495	O				2.95
104.667	0.00	0.01	3.495	O				2.95
104.750	0.00	0.01	3.495	O				2.95
104.833	0.00	0.01	3.494	O				2.95
104.917	0.00	0.01	3.494	O				2.95
105.000	0.00	0.01	3.494	O				2.95
105.083	0.00	0.01	3.494	O				2.95
105.167	0.00	0.01	3.494	O				2.95
105.250	0.00	0.01	3.494	O				2.95
105.333	0.00	0.01	3.494	O				2.95
105.417	0.00	0.01	3.494	O				2.94
105.500	0.00	0.01	3.494	O				2.94
105.583	0.00	0.01	3.494	O				2.94
105.667	0.00	0.01	3.494	O				2.94
105.750	0.00	0.01	3.494	O				2.94
105.833	0.00	0.01	3.494	O				2.94
105.917	0.00	0.01	3.494	O				2.94
106.000	0.00	0.01	3.493	O				2.94
106.083	0.00	0.01	3.493	O				2.94
106.167	0.00	0.01	3.493	O				2.94
106.250	0.00	0.01	3.493	O				2.94
106.333	0.00	0.01	3.493	O				2.94

106.417	0.00	0.01	3.493	O	|	|	|	2.94
106.500	0.00	0.01	3.493	O	|	|	|	2.94
106.583	0.00	0.01	3.493	O	|	|	|	2.94
106.667	0.00	0.01	3.493	O	|	|	|	2.94
106.750	0.00	0.01	3.493	O	|	|	|	2.94
106.833	0.00	0.01	3.493	O	|	|	|	2.94
106.917	0.00	0.01	3.493	O	|	|	|	2.94
107.000	0.00	0.01	3.493	O	|	|	|	2.94
107.083	0.00	0.01	3.493	O	|	|	|	2.94
107.167	0.00	0.01	3.493	O	|	|	|	2.94
107.250	0.00	0.01	3.492	O	|	|	|	2.94
107.333	0.00	0.01	3.492	O	|	|	|	2.94
107.417	0.00	0.01	3.492	O	|	|	|	2.94
107.500	0.00	0.01	3.492	O	|	|	|	2.94
107.583	0.00	0.01	3.492	O	|	|	|	2.94
107.667	0.00	0.01	3.492	O	|	|	|	2.94
107.750	0.00	0.01	3.492	O	|	|	|	2.94
107.833	0.00	0.01	3.492	O	|	|	|	2.94
107.917	0.00	0.01	3.492	O	|	|	|	2.94
108.000	0.00	0.01	3.492	O	|	|	|	2.94
108.083	0.00	0.01	3.492	O	|	|	|	2.94
108.167	0.00	0.01	3.492	O	|	|	|	2.94
108.250	0.00	0.01	3.492	O	|	|	|	2.94
108.333	0.00	0.01	3.492	O	|	|	|	2.94
108.417	0.00	0.01	3.491	O	|	|	|	2.94
108.500	0.00	0.01	3.491	O	|	|	|	2.94
108.583	0.00	0.01	3.491	O	|	|	|	2.94
108.667	0.00	0.01	3.491	O	|	|	|	2.94
108.750	0.00	0.01	3.491	O	|	|	|	2.94
108.833	0.00	0.01	3.491	O	|	|	|	2.94
108.917	0.00	0.01	3.491	O	|	|	|	2.94
109.000	0.00	0.01	3.491	O	|	|	|	2.94
109.083	0.00	0.01	3.491	O	|	|	|	2.94
109.167	0.00	0.01	3.491	O	|	|	|	2.94
109.250	0.00	0.01	3.491	O	|	|	|	2.94
109.333	0.00	0.01	3.491	O	|	|	|	2.94
109.417	0.00	0.01	3.491	O	|	|	|	2.94
109.500	0.00	0.01	3.491	O	|	|	|	2.94
109.583	0.00	0.01	3.491	O	|	|	|	2.94
109.667	0.00	0.01	3.490	O	|	|	|	2.94
109.750	0.00	0.01	3.490	O	|	|	|	2.94
109.833	0.00	0.01	3.490	O	|	|	|	2.94
109.917	0.00	0.01	3.490	O	|	|	|	2.94
110.000	0.00	0.01	3.490	O	|	|	|	2.94
110.083	0.00	0.01	3.490	O	|	|	|	2.94
110.167	0.00	0.01	3.490	O	|	|	|	2.94
110.250	0.00	0.01	3.490	O	|	|	|	2.94
110.333	0.00	0.01	3.490	O	|	|	|	2.94
110.417	0.00	0.01	3.490	O	|	|	|	2.94
110.500	0.00	0.01	3.490	O	|	|	|	2.94

110.583	0.00	0.01	3.490	O	|	|	|	2.94
110.667	0.00	0.01	3.490	O	|	|	|	2.94
110.750	0.00	0.01	3.490	O	|	|	|	2.94
110.833	0.00	0.01	3.490	O	|	|	|	2.94
110.917	0.00	0.01	3.489	O	|	|	|	2.94
111.000	0.00	0.01	3.489	O	|	|	|	2.94
111.083	0.00	0.01	3.489	O	|	|	|	2.94
111.167	0.00	0.01	3.489	O	|	|	|	2.94
111.250	0.00	0.01	3.489	O	|	|	|	2.94
111.333	0.00	0.01	3.489	O	|	|	|	2.94
111.417	0.00	0.01	3.489	O	|	|	|	2.94
111.500	0.00	0.01	3.489	O	|	|	|	2.94
111.583	0.00	0.01	3.489	O	|	|	|	2.94
111.667	0.00	0.01	3.489	O	|	|	|	2.94
111.750	0.00	0.01	3.489	O	|	|	|	2.94
111.833	0.00	0.01	3.489	O	|	|	|	2.94
111.917	0.00	0.01	3.489	O	|	|	|	2.94
112.000	0.00	0.01	3.489	O	|	|	|	2.94
112.083	0.00	0.01	3.488	O	|	|	|	2.94
112.167	0.00	0.01	3.488	O	|	|	|	2.94
112.250	0.00	0.01	3.488	O	|	|	|	2.94
112.333	0.00	0.01	3.488	O	|	|	|	2.94
112.417	0.00	0.01	3.488	O	|	|	|	2.94
112.500	0.00	0.01	3.488	O	|	|	|	2.94
112.583	0.00	0.01	3.488	O	|	|	|	2.94
112.667	0.00	0.01	3.488	O	|	|	|	2.94
112.750	0.00	0.01	3.488	O	|	|	|	2.94
112.833	0.00	0.01	3.488	O	|	|	|	2.94
112.917	0.00	0.01	3.488	O	|	|	|	2.94
113.000	0.00	0.01	3.488	O	|	|	|	2.94
113.083	0.00	0.01	3.488	O	|	|	|	2.94
113.167	0.00	0.01	3.488	O	|	|	|	2.94
113.250	0.00	0.01	3.488	O	|	|	|	2.94
113.333	0.00	0.01	3.487	O	|	|	|	2.94
113.417	0.00	0.01	3.487	O	|	|	|	2.94
113.500	0.00	0.01	3.487	O	|	|	|	2.94
113.583	0.00	0.01	3.487	O	|	|	|	2.94
113.667	0.00	0.01	3.487	O	|	|	|	2.94
113.750	0.00	0.01	3.487	O	|	|	|	2.94
113.833	0.00	0.01	3.487	O	|	|	|	2.94
113.917	0.00	0.01	3.487	O	|	|	|	2.94
114.000	0.00	0.01	3.487	O	|	|	|	2.94
114.083	0.00	0.01	3.487	O	|	|	|	2.94
114.167	0.00	0.01	3.487	O	|	|	|	2.94
114.250	0.00	0.01	3.487	O	|	|	|	2.94
114.333	0.00	0.01	3.487	O	|	|	|	2.94
114.417	0.00	0.01	3.487	O	|	|	|	2.94
114.500	0.00	0.01	3.486	O	|	|	|	2.94
114.583	0.00	0.01	3.486	O	|	|	|	2.94
114.667	0.00	0.01	3.486	O	|	|	|	2.94

114.750	0.00	0.01	3.486	O				2.94
114.833	0.00	0.01	3.486	O				2.94
114.917	0.00	0.01	3.486	O				2.94
115.000	0.00	0.01	3.486	O				2.94
115.083	0.00	0.01	3.486	O				2.94
115.167	0.00	0.01	3.486	O				2.94
115.250	0.00	0.01	3.486	O				2.94
115.333	0.00	0.01	3.486	O				2.94
115.417	0.00	0.01	3.486	O				2.94
115.500	0.00	0.01	3.486	O				2.94
115.583	0.00	0.01	3.486	O				2.94
115.667	0.00	0.01	3.486	O				2.94
115.750	0.00	0.01	3.485	O				2.94
115.833	0.00	0.01	3.485	O				2.94
115.917	0.00	0.01	3.485	O				2.94
116.000	0.00	0.01	3.485	O				2.94
116.083	0.00	0.01	3.485	O				2.94
116.167	0.00	0.01	3.485	O				2.94
116.250	0.00	0.01	3.485	O				2.94
116.333	0.00	0.01	3.485	O				2.94
116.417	0.00	0.01	3.485	O				2.94
116.500	0.00	0.01	3.485	O				2.94
116.583	0.00	0.01	3.485	O				2.94
116.667	0.00	0.01	3.485	O				2.94
116.750	0.00	0.01	3.485	O				2.94
116.833	0.00	0.01	3.485	O				2.94
116.917	0.00	0.01	3.484	O				2.94
117.000	0.00	0.01	3.484	O				2.94
117.083	0.00	0.01	3.484	O				2.94
117.167	0.00	0.01	3.484	O				2.94
117.250	0.00	0.01	3.484	O				2.94
117.333	0.00	0.01	3.484	O				2.94
117.417	0.00	0.01	3.484	O				2.94
117.500	0.00	0.01	3.484	O				2.94
117.583	0.00	0.01	3.484	O				2.94
117.667	0.00	0.01	3.484	O				2.94
117.750	0.00	0.01	3.484	O				2.94
117.833	0.00	0.01	3.484	O				2.94
117.917	0.00	0.01	3.484	O				2.94
118.000	0.00	0.01	3.484	O				2.94
118.083	0.00	0.01	3.484	O				2.94
118.167	0.00	0.01	3.483	O				2.94
118.250	0.00	0.01	3.483	O				2.94
118.333	0.00	0.01	3.483	O				2.94
118.417	0.00	0.01	3.483	O				2.94
118.500	0.00	0.01	3.483	O				2.94
118.583	0.00	0.01	3.483	O				2.94
118.667	0.00	0.01	3.483	O				2.94
118.750	0.00	0.01	3.483	O				2.94
118.833	0.00	0.01	3.483	O				2.94

118.917	0.00	0.01	3.483	O					2.94
119.000	0.00	0.01	3.483	O					2.94
119.083	0.00	0.01	3.483	O					2.94
119.167	0.00	0.01	3.483	O					2.94
119.250	0.00	0.01	3.483	O					2.94
119.333	0.00	0.01	3.482	O					2.94
119.417	0.00	0.01	3.482	O					2.94
119.500	0.00	0.01	3.482	O					2.94
119.583	0.00	0.01	3.482	O					2.94
119.667	0.00	0.01	3.482	O					2.94
119.750	0.00	0.01	3.482	O					2.94
119.833	0.00	0.01	3.482	O					2.94
119.917	0.00	0.01	3.482	O					2.93
120.000	0.00	0.01	3.482	O					2.93
120.083	0.00	0.01	3.482	O					2.93
120.167	0.00	0.01	3.482	O					2.93
120.250	0.00	0.01	3.482	O					2.93
120.333	0.00	0.01	3.482	O					2.93
120.417	0.00	0.01	3.482	O					2.93
120.500	0.00	0.01	3.482	O					2.93
120.583	0.00	0.01	3.481	O					2.93
120.667	0.00	0.01	3.481	O					2.93
120.750	0.00	0.01	3.481	O					2.93
120.833	0.00	0.01	3.481	O					2.93
120.917	0.00	0.01	3.481	O					2.93
121.000	0.00	0.01	3.481	O					2.93
121.083	0.00	0.01	3.481	O					2.93
121.167	0.00	0.01	3.481	O					2.93
121.250	0.00	0.01	3.481	O					2.93
121.333	0.00	0.01	3.481	O					2.93
121.417	0.00	0.01	3.481	O					2.93
121.500	0.00	0.01	3.481	O					2.93
121.583	0.00	0.01	3.481	O					2.93
121.667	0.00	0.01	3.481	O					2.93
121.750	0.00	0.01	3.480	O					2.93
121.833	0.00	0.01	3.480	O					2.93
121.917	0.00	0.01	3.480	O					2.93
122.000	0.00	0.01	3.480	O					2.93
122.083	0.00	0.01	3.480	O					2.93
122.167	0.00	0.01	3.480	O					2.93
122.250	0.00	0.01	3.480	O					2.93
122.333	0.00	0.01	3.480	O					2.93
122.417	0.00	0.01	3.480	O					2.93
122.500	0.00	0.01	3.480	O					2.93
122.583	0.00	0.01	3.480	O					2.93
122.667	0.00	0.01	3.480	O					2.93
122.750	0.00	0.01	3.480	O					2.93
122.833	0.00	0.01	3.480	O					2.93
122.917	0.00	0.01	3.480	O					2.93
123.000	0.00	0.01	3.479	O					2.93

123.083	0.00	0.01	3.479	O				2.93
123.167	0.00	0.01	3.479	O				2.93
123.250	0.00	0.01	3.479	O				2.93
123.333	0.00	0.01	3.479	O				2.93
123.417	0.00	0.01	3.479	O				2.93
123.500	0.00	0.01	3.479	O				2.93
123.583	0.00	0.01	3.479	O				2.93
123.667	0.00	0.01	3.479	O				2.93
123.750	0.00	0.01	3.479	O				2.93
123.833	0.00	0.01	3.479	O				2.93
123.917	0.00	0.01	3.479	O				2.93
124.000	0.00	0.01	3.479	O				2.93
124.083	0.00	0.01	3.479	O				2.93
124.167	0.00	0.01	3.478	O				2.93
124.250	0.00	0.01	3.478	O				2.93
124.333	0.00	0.01	3.478	O				2.93
124.417	0.00	0.01	3.478	O				2.93
124.500	0.00	0.01	3.478	O				2.93
124.583	0.00	0.01	3.478	O				2.93
124.667	0.00	0.01	3.478	O				2.93
124.750	0.00	0.01	3.478	O				2.93
124.833	0.00	0.01	3.478	O				2.93
124.917	0.00	0.01	3.478	O				2.93
125.000	0.00	0.01	3.478	O				2.93
125.083	0.00	0.01	3.478	O				2.93
125.167	0.00	0.01	3.478	O				2.93
125.250	0.00	0.01	3.478	O				2.93
125.333	0.00	0.01	3.478	O				2.93
125.417	0.00	0.01	3.477	O				2.93
125.500	0.00	0.01	3.477	O				2.93
125.583	0.00	0.01	3.477	O				2.93
125.667	0.00	0.01	3.477	O				2.93
125.750	0.00	0.01	3.477	O				2.93
125.833	0.00	0.01	3.477	O				2.93
125.917	0.00	0.01	3.477	O				2.93
126.000	0.00	0.01	3.477	O				2.93
126.083	0.00	0.01	3.477	O				2.93
126.167	0.00	0.01	3.477	O				2.93
126.250	0.00	0.01	3.477	O				2.93
126.333	0.00	0.01	3.477	O				2.93
126.417	0.00	0.01	3.477	O				2.93
126.500	0.00	0.01	3.477	O				2.93
126.583	0.00	0.01	3.476	O				2.93
126.667	0.00	0.01	3.476	O				2.93
126.750	0.00	0.01	3.476	O				2.93
126.833	0.00	0.01	3.476	O				2.93
126.917	0.00	0.01	3.476	O				2.93
127.000	0.00	0.01	3.476	O				2.93
127.083	0.00	0.01	3.476	O				2.93
127.167	0.00	0.01	3.476	O				2.93

127.250	0.00	0.01	3.476	O				2.93
127.333	0.00	0.01	3.476	O				2.93
127.417	0.00	0.01	3.476	O				2.93
127.500	0.00	0.01	3.476	O				2.93
127.583	0.00	0.01	3.476	O				2.93
127.667	0.00	0.01	3.476	O				2.93
127.750	0.00	0.01	3.476	O				2.93
127.833	0.00	0.01	3.475	O				2.93
127.917	0.00	0.01	3.475	O				2.93
128.000	0.00	0.01	3.475	O				2.93
128.083	0.00	0.01	3.475	O				2.93
128.167	0.00	0.01	3.475	O				2.93
128.250	0.00	0.01	3.475	O				2.93
128.333	0.00	0.01	3.475	O				2.93
128.417	0.00	0.01	3.475	O				2.93
128.500	0.00	0.01	3.475	O				2.93
128.583	0.00	0.01	3.475	O				2.93
128.667	0.00	0.01	3.475	O				2.93
128.750	0.00	0.01	3.475	O				2.93
128.833	0.00	0.01	3.475	O				2.93
128.917	0.00	0.01	3.475	O				2.93
129.000	0.00	0.01	3.474	O				2.93
129.083	0.00	0.01	3.474	O				2.93
129.167	0.00	0.01	3.474	O				2.93
129.250	0.00	0.01	3.474	O				2.93
129.333	0.00	0.01	3.474	O				2.93
129.417	0.00	0.01	3.474	O				2.93
129.500	0.00	0.01	3.474	O				2.93
129.583	0.00	0.01	3.474	O				2.93
129.667	0.00	0.01	3.474	O				2.93
129.750	0.00	0.01	3.474	O				2.93
129.833	0.00	0.01	3.474	O				2.93
129.917	0.00	0.01	3.474	O				2.93
130.000	0.00	0.01	3.474	O				2.93
130.083	0.00	0.01	3.474	O				2.93
130.167	0.00	0.01	3.474	O				2.93
130.250	0.00	0.01	3.473	O				2.93
130.333	0.00	0.01	3.473	O				2.93
130.417	0.00	0.01	3.473	O				2.93
130.500	0.00	0.01	3.473	O				2.93
130.583	0.00	0.01	3.473	O				2.93
130.667	0.00	0.01	3.473	O				2.93
130.750	0.00	0.01	3.473	O				2.93
130.833	0.00	0.01	3.473	O				2.93
130.917	0.00	0.01	3.473	O				2.93
131.000	0.00	0.01	3.473	O				2.93
131.083	0.00	0.01	3.473	O				2.93
131.167	0.00	0.01	3.473	O				2.93
131.250	0.00	0.01	3.473	O				2.93
131.333	0.00	0.01	3.473	O				2.93

131.417	0.00	0.01	3.472	O				2.93
131.500	0.00	0.01	3.472	O				2.93
131.583	0.00	0.01	3.472	O				2.93
131.667	0.00	0.01	3.472	O				2.93
131.750	0.00	0.01	3.472	O				2.93
131.833	0.00	0.01	3.472	O				2.93
131.917	0.00	0.01	3.472	O				2.93
132.000	0.00	0.01	3.472	O				2.93
132.083	0.00	0.01	3.472	O				2.93
132.167	0.00	0.01	3.472	O				2.93
132.250	0.00	0.01	3.472	O				2.93
132.333	0.00	0.01	3.472	O				2.93
132.417	0.00	0.01	3.472	O				2.93
132.500	0.00	0.01	3.472	O				2.93
132.583	0.00	0.01	3.472	O				2.93
132.667	0.00	0.01	3.471	O				2.93
132.750	0.00	0.01	3.471	O				2.93
132.833	0.00	0.01	3.471	O				2.93
132.917	0.00	0.01	3.471	O				2.93
133.000	0.00	0.01	3.471	O				2.93
133.083	0.00	0.01	3.471	O				2.93
133.167	0.00	0.01	3.471	O				2.93
133.250	0.00	0.01	3.471	O				2.93
133.333	0.00	0.01	3.471	O				2.93
133.417	0.00	0.01	3.471	O				2.93
133.500	0.00	0.01	3.471	O				2.93
133.583	0.00	0.01	3.471	O				2.93
133.667	0.00	0.01	3.471	O				2.93
133.750	0.00	0.01	3.471	O				2.93
133.833	0.00	0.01	3.470	O				2.93
133.917	0.00	0.01	3.470	O				2.93
134.000	0.00	0.01	3.470	O				2.93
134.083	0.00	0.01	3.470	O				2.93
134.167	0.00	0.01	3.470	O				2.93
134.250	0.00	0.01	3.470	O				2.93
134.333	0.00	0.01	3.470	O				2.93
134.417	0.00	0.01	3.470	O				2.93
134.500	0.00	0.01	3.470	O				2.92
134.583	0.00	0.01	3.470	O				2.92
134.667	0.00	0.01	3.470	O				2.92
134.750	0.00	0.01	3.470	O				2.92
134.833	0.00	0.01	3.470	O				2.92
134.917	0.00	0.01	3.470	O				2.92
135.000	0.00	0.01	3.470	O				2.92
135.083	0.00	0.01	3.469	O				2.92
135.167	0.00	0.01	3.469	O				2.92
135.250	0.00	0.01	3.469	O				2.92
135.333	0.00	0.01	3.469	O				2.92
135.417	0.00	0.01	3.469	O				2.92
135.500	0.00	0.01	3.469	O				2.92

135.583	0.00	0.01	3.469	O				2.92
135.667	0.00	0.01	3.469	O				2.92
135.750	0.00	0.01	3.469	O				2.92
135.833	0.00	0.01	3.469	O				2.92
135.917	0.00	0.01	3.469	O				2.92
136.000	0.00	0.01	3.469	O				2.92
136.083	0.00	0.01	3.469	O				2.92
136.167	0.00	0.01	3.469	O				2.92
136.250	0.00	0.01	3.468	O				2.92
136.333	0.00	0.01	3.468	O				2.92
136.417	0.00	0.01	3.468	O				2.92
136.500	0.00	0.01	3.468	O				2.92
136.583	0.00	0.01	3.468	O				2.92
136.667	0.00	0.01	3.468	O				2.92
136.750	0.00	0.01	3.468	O				2.92
136.833	0.00	0.01	3.468	O				2.92
136.917	0.00	0.01	3.468	O				2.92
137.000	0.00	0.01	3.468	O				2.92
137.083	0.00	0.01	3.468	O				2.92
137.167	0.00	0.01	3.468	O				2.92
137.250	0.00	0.01	3.468	O				2.92
137.333	0.00	0.01	3.468	O				2.92
137.417	0.00	0.01	3.468	O				2.92
137.500	0.00	0.01	3.467	O				2.92
137.583	0.00	0.01	3.467	O				2.92
137.667	0.00	0.01	3.467	O				2.92
137.750	0.00	0.01	3.467	O				2.92
137.833	0.00	0.01	3.467	O				2.92
137.917	0.00	0.01	3.467	O				2.92
138.000	0.00	0.01	3.467	O				2.92
138.083	0.00	0.01	3.467	O				2.92
138.167	0.00	0.01	3.467	O				2.92
138.250	0.00	0.01	3.467	O				2.92
138.333	0.00	0.01	3.467	O				2.92
138.417	0.00	0.01	3.467	O				2.92
138.500	0.00	0.01	3.467	O				2.92
138.583	0.00	0.01	3.467	O				2.92
138.667	0.00	0.01	3.466	O				2.92
138.750	0.00	0.01	3.466	O				2.92
138.833	0.00	0.01	3.466	O				2.92
138.917	0.00	0.01	3.466	O				2.92
139.000	0.00	0.01	3.466	O				2.92
139.083	0.00	0.01	3.466	O				2.92
139.167	0.00	0.01	3.466	O				2.92
139.250	0.00	0.01	3.466	O				2.92
139.333	0.00	0.01	3.466	O				2.92
139.417	0.00	0.01	3.466	O				2.92
139.500	0.00	0.01	3.466	O				2.92
139.583	0.00	0.01	3.466	O				2.92
139.667	0.00	0.01	3.466	O				2.92

139.750	0.00	0.01	3.466	O	|	|	|	2.92
139.833	0.00	0.01	3.466	O	|	|	|	2.92
139.917	0.00	0.01	3.465	O	|	|	|	2.92
140.000	0.00	0.01	3.465	O	|	|	|	2.92
140.083	0.00	0.01	3.465	O	|	|	|	2.92
140.167	0.00	0.01	3.465	O	|	|	|	2.92
140.250	0.00	0.01	3.465	O	|	|	|	2.92
140.333	0.00	0.01	3.465	O	|	|	|	2.92
140.417	0.00	0.01	3.465	O	|	|	|	2.92
140.500	0.00	0.01	3.465	O	|	|	|	2.92
140.583	0.00	0.01	3.465	O	|	|	|	2.92
140.667	0.00	0.01	3.465	O	|	|	|	2.92
140.750	0.00	0.01	3.465	O	|	|	|	2.92
140.833	0.00	0.01	3.465	O	|	|	|	2.92
140.917	0.00	0.01	3.465	O	|	|	|	2.92
141.000	0.00	0.01	3.465	O	|	|	|	2.92
141.083	0.00	0.01	3.465	O	|	|	|	2.92
141.167	0.00	0.01	3.464	O	|	|	|	2.92
141.250	0.00	0.01	3.464	O	|	|	|	2.92
141.333	0.00	0.01	3.464	O	|	|	|	2.92
141.417	0.00	0.01	3.464	O	|	|	|	2.92
141.500	0.00	0.01	3.464	O	|	|	|	2.92
141.583	0.00	0.01	3.464	O	|	|	|	2.92
141.667	0.00	0.01	3.464	O	|	|	|	2.92
141.750	0.00	0.01	3.464	O	|	|	|	2.92
141.833	0.00	0.01	3.464	O	|	|	|	2.92
141.917	0.00	0.01	3.464	O	|	|	|	2.92
142.000	0.00	0.01	3.464	O	|	|	|	2.92
142.083	0.00	0.01	3.464	O	|	|	|	2.92
142.167	0.00	0.01	3.464	O	|	|	|	2.92
142.250	0.00	0.01	3.464	O	|	|	|	2.92
142.333	0.00	0.01	3.463	O	|	|	|	2.92
142.417	0.00	0.01	3.463	O	|	|	|	2.92
142.500	0.00	0.01	3.463	O	|	|	|	2.92
142.583	0.00	0.01	3.463	O	|	|	|	2.92
142.667	0.00	0.01	3.463	O	|	|	|	2.92
142.750	0.00	0.01	3.463	O	|	|	|	2.92
142.833	0.00	0.01	3.463	O	|	|	|	2.92
142.917	0.00	0.01	3.463	O	|	|	|	2.92
143.000	0.00	0.01	3.463	O	|	|	|	2.92
143.083	0.00	0.01	3.463	O	|	|	|	2.92
143.167	0.00	0.01	3.463	O	|	|	|	2.92
143.250	0.00	0.01	3.463	O	|	|	|	2.92
143.333	0.00	0.01	3.463	O	|	|	|	2.92
143.417	0.00	0.01	3.463	O	|	|	|	2.92
143.500	0.00	0.01	3.463	O	|	|	|	2.92
143.583	0.00	0.01	3.462	O	|	|	|	2.92
143.667	0.00	0.01	3.462	O	|	|	|	2.92
143.750	0.00	0.01	3.462	O	|	|	|	2.92
143.833	0.00	0.01	3.462	O	|	|	|	2.92

143.917	0.00	0.01	3.462	O	|	|	|	|	2.92
144.000	0.00	0.01	3.462	O	|	|	|	|	2.92
144.083	0.00	0.01	3.462	O	|	|	|	|	2.92
144.167	0.00	0.01	3.462	O	|	|	|	|	2.92
144.250	0.00	0.01	3.462	O	|	|	|	|	2.92
144.333	0.00	0.01	3.462	O	|	|	|	|	2.92
144.417	0.00	0.01	3.462	O	|	|	|	|	2.92
144.500	0.00	0.01	3.462	O	|	|	|	|	2.92
144.583	0.00	0.01	3.462	O	|	|	|	|	2.92
144.667	0.00	0.01	3.462	O	|	|	|	|	2.92
144.750	0.00	0.01	3.461	O	|	|	|	|	2.92
144.833	0.00	0.01	3.461	O	|	|	|	|	2.92
144.917	0.00	0.01	3.461	O	|	|	|	|	2.92
145.000	0.00	0.01	3.461	O	|	|	|	|	2.92
145.083	0.00	0.01	3.461	O	|	|	|	|	2.92
145.167	0.00	0.01	3.461	O	|	|	|	|	2.92
145.250	0.00	0.01	3.461	O	|	|	|	|	2.92
145.333	0.00	0.01	3.461	O	|	|	|	|	2.92
145.417	0.00	0.01	3.461	O	|	|	|	|	2.92
145.500	0.00	0.01	3.461	O	|	|	|	|	2.92
145.583	0.00	0.01	3.461	O	|	|	|	|	2.92
145.667	0.00	0.01	3.461	O	|	|	|	|	2.92
145.750	0.00	0.01	3.461	O	|	|	|	|	2.92
145.833	0.00	0.01	3.461	O	|	|	|	|	2.92
145.917	0.00	0.01	3.461	O	|	|	|	|	2.92
146.000	0.00	0.01	3.460	O	|	|	|	|	2.92
146.083	0.00	0.01	3.460	O	|	|	|	|	2.92
146.167	0.00	0.01	3.460	O	|	|	|	|	2.92
146.250	0.00	0.01	3.460	O	|	|	|	|	2.92
146.333	0.00	0.01	3.460	O	|	|	|	|	2.92
146.417	0.00	0.01	3.460	O	|	|	|	|	2.92
146.500	0.00	0.01	3.460	O	|	|	|	|	2.92
146.583	0.00	0.01	3.460	O	|	|	|	|	2.92
146.667	0.00	0.01	3.460	O	|	|	|	|	2.92
146.750	0.00	0.01	3.460	O	|	|	|	|	2.92
146.833	0.00	0.01	3.460	O	|	|	|	|	2.92
146.917	0.00	0.01	3.460	O	|	|	|	|	2.92
147.000	0.00	0.01	3.460	O	|	|	|	|	2.92
147.083	0.00	0.01	3.460	O	|	|	|	|	2.92
147.167	0.00	0.01	3.459	O	|	|	|	|	2.92
147.250	0.00	0.01	3.459	O	|	|	|	|	2.92
147.333	0.00	0.01	3.459	O	|	|	|	|	2.92
147.417	0.00	0.01	3.459	O	|	|	|	|	2.92
147.500	0.00	0.01	3.459	O	|	|	|	|	2.92
147.583	0.00	0.01	3.459	O	|	|	|	|	2.92
147.667	0.00	0.01	3.459	O	|	|	|	|	2.92
147.750	0.00	0.01	3.459	O	|	|	|	|	2.92
147.833	0.00	0.01	3.459	O	|	|	|	|	2.92
147.917	0.00	0.01	3.459	O	|	|	|	|	2.92
148.000	0.00	0.01	3.459	O	|	|	|	|	2.92

148.083	0.00	0.01	3.459	O				2.92
148.167	0.00	0.01	3.459	O				2.92
148.250	0.00	0.01	3.459	O				2.92
148.333	0.00	0.01	3.459	O				2.92
148.417	0.00	0.01	3.458	O				2.92
148.500	0.00	0.01	3.458	O				2.92
148.583	0.00	0.01	3.458	O				2.92
148.667	0.00	0.01	3.458	O				2.92
148.750	0.00	0.01	3.458	O				2.92
148.833	0.00	0.01	3.458	O				2.92
148.917	0.00	0.01	3.458	O				2.92
149.000	0.00	0.01	3.458	O				2.91
149.083	0.00	0.01	3.458	O				2.91
149.167	0.00	0.01	3.458	O				2.91
149.250	0.00	0.01	3.458	O				2.91
149.333	0.00	0.01	3.458	O				2.91
149.417	0.00	0.01	3.458	O				2.91
149.500	0.00	0.01	3.458	O				2.91
149.583	0.00	0.01	3.457	O				2.91
149.667	0.00	0.01	3.457	O				2.91
149.750	0.00	0.01	3.457	O				2.91
149.833	0.00	0.01	3.457	O				2.91
149.917	0.00	0.01	3.457	O				2.91
150.000	0.00	0.01	3.457	O				2.91
150.083	0.00	0.01	3.457	O				2.91
150.167	0.00	0.01	3.457	O				2.91
150.250	0.00	0.01	3.457	O				2.91
150.333	0.00	0.01	3.457	O				2.91
150.417	0.00	0.01	3.457	O				2.91
150.500	0.00	0.01	3.457	O				2.91
150.583	0.00	0.01	3.457	O				2.91
150.667	0.00	0.01	3.457	O				2.91
150.750	0.00	0.01	3.457	O				2.91
150.833	0.00	0.01	3.456	O				2.91
150.917	0.00	0.01	3.456	O				2.91
151.000	0.00	0.01	3.456	O				2.91
151.083	0.00	0.01	3.456	O				2.91
151.167	0.00	0.01	3.456	O				2.91
151.250	0.00	0.01	3.456	O				2.91
151.333	0.00	0.01	3.456	O				2.91
151.417	0.00	0.01	3.456	O				2.91
151.500	0.00	0.01	3.456	O				2.91
151.583	0.00	0.01	3.456	O				2.91
151.667	0.00	0.01	3.456	O				2.91
151.750	0.00	0.01	3.456	O				2.91
151.833	0.00	0.01	3.456	O				2.91
151.917	0.00	0.01	3.456	O				2.91
152.000	0.00	0.01	3.455	O				2.91
152.083	0.00	0.01	3.455	O				2.91
152.167	0.00	0.01	3.455	O				2.91

152.250	0.00	0.01	3.455	O				2.91
152.333	0.00	0.01	3.455	O				2.91
152.417	0.00	0.01	3.455	O				2.91
152.500	0.00	0.01	3.455	O				2.91
152.583	0.00	0.01	3.455	O				2.91
152.667	0.00	0.01	3.455	O				2.91
152.750	0.00	0.01	3.455	O				2.91
152.833	0.00	0.01	3.455	O				2.91
152.917	0.00	0.01	3.455	O				2.91
153.000	0.00	0.01	3.455	O				2.91
153.083	0.00	0.01	3.455	O				2.91
153.167	0.00	0.01	3.455	O				2.91
153.250	0.00	0.01	3.454	O				2.91
153.333	0.00	0.01	3.454	O				2.91
153.417	0.00	0.01	3.454	O				2.91
153.500	0.00	0.01	3.454	O				2.91
153.583	0.00	0.01	3.454	O				2.91
153.667	0.00	0.01	3.454	O				2.91
153.750	0.00	0.01	3.454	O				2.91
153.833	0.00	0.01	3.454	O				2.91
153.917	0.00	0.01	3.454	O				2.91
154.000	0.00	0.01	3.454	O				2.91
154.083	0.00	0.01	3.454	O				2.91
154.167	0.00	0.01	3.454	O				2.91
154.250	0.00	0.01	3.454	O				2.91
154.333	0.00	0.01	3.454	O				2.91
154.417	0.00	0.01	3.453	O				2.91
154.500	0.00	0.01	3.453	O				2.91
154.583	0.00	0.01	3.453	O				2.91
154.667	0.00	0.01	3.453	O				2.91
154.750	0.00	0.01	3.453	O				2.91
154.833	0.00	0.01	3.453	O				2.91
154.917	0.00	0.01	3.453	O				2.91
155.000	0.00	0.01	3.453	O				2.91
155.083	0.00	0.01	3.453	O				2.91
155.167	0.00	0.01	3.453	O				2.91
155.250	0.00	0.01	3.453	O				2.91
155.333	0.00	0.01	3.453	O				2.91
155.417	0.00	0.01	3.453	O				2.91
155.500	0.00	0.01	3.453	O				2.91
155.583	0.00	0.01	3.453	O				2.91
155.667	0.00	0.01	3.452	O				2.91
155.750	0.00	0.01	3.452	O				2.91
155.833	0.00	0.01	3.452	O				2.91
155.917	0.00	0.01	3.452	O				2.91
156.000	0.00	0.01	3.452	O				2.91
156.083	0.00	0.01	3.452	O				2.91
156.167	0.00	0.01	3.452	O				2.91
156.250	0.00	0.01	3.452	O				2.91
156.333	0.00	0.01	3.452	O				2.91

156.417	0.00	0.01	3.452	O				2.91
156.500	0.00	0.01	3.452	O				2.91
156.583	0.00	0.01	3.452	O				2.91
156.667	0.00	0.01	3.452	O				2.91
156.750	0.00	0.01	3.452	O				2.91
156.833	0.00	0.01	3.451	O				2.91
156.917	0.00	0.01	3.451	O				2.91
157.000	0.00	0.01	3.451	O				2.91
157.083	0.00	0.01	3.451	O				2.91
157.167	0.00	0.01	3.451	O				2.91
157.250	0.00	0.01	3.451	O				2.91
157.333	0.00	0.01	3.451	O				2.91
157.417	0.00	0.01	3.451	O				2.91
157.500	0.00	0.01	3.451	O				2.91
157.583	0.00	0.01	3.451	O				2.91
157.667	0.00	0.01	3.451	O				2.91
157.750	0.00	0.01	3.451	O				2.91
157.833	0.00	0.01	3.451	O				2.91
157.917	0.00	0.01	3.451	O				2.91
158.000	0.00	0.01	3.451	O				2.91
158.083	0.00	0.01	3.450	O				2.91
158.167	0.00	0.01	3.450	O				2.91
158.250	0.00	0.01	3.450	O				2.91
158.333	0.00	0.01	3.450	O				2.91
158.417	0.00	0.01	3.450	O				2.91
158.500	0.00	0.01	3.450	O				2.91
158.583	0.00	0.01	3.450	O				2.91
158.667	0.00	0.01	3.450	O				2.91
158.750	0.00	0.01	3.450	O				2.91
158.833	0.00	0.01	3.450	O				2.91
158.917	0.00	0.01	3.450	O				2.91
159.000	0.00	0.01	3.450	O				2.91
159.083	0.00	0.01	3.450	O				2.91
159.167	0.00	0.01	3.450	O				2.91
159.250	0.00	0.01	3.449	O				2.91
159.333	0.00	0.01	3.449	O				2.91
159.417	0.00	0.01	3.449	O				2.91
159.500	0.00	0.01	3.449	O				2.91
159.583	0.00	0.01	3.449	O				2.91
159.667	0.00	0.01	3.449	O				2.91
159.750	0.00	0.01	3.449	O				2.91
159.833	0.00	0.01	3.449	O				2.91
159.917	0.00	0.01	3.449	O				2.91
160.000	0.00	0.01	3.449	O				2.91
160.083	0.00	0.01	3.449	O				2.91
160.167	0.00	0.01	3.449	O				2.91
160.250	0.00	0.01	3.449	O				2.91
160.333	0.00	0.01	3.449	O				2.91
160.417	0.00	0.01	3.449	O				2.91
160.500	0.00	0.01	3.448	O				2.91

160.583	0.00	0.01	3.448	O	|	|	|	2.91
160.667	0.00	0.01	3.448	O	|	|	|	2.91
160.750	0.00	0.01	3.448	O	|	|	|	2.91
160.833	0.00	0.01	3.448	O	|	|	|	2.91
160.917	0.00	0.01	3.448	O	|	|	|	2.91
161.000	0.00	0.01	3.448	O	|	|	|	2.91
161.083	0.00	0.01	3.448	O	|	|	|	2.91
161.167	0.00	0.01	3.448	O	|	|	|	2.91
161.250	0.00	0.01	3.448	O	|	|	|	2.91
161.333	0.00	0.01	3.448	O	|	|	|	2.91
161.417	0.00	0.01	3.448	O	|	|	|	2.91
161.500	0.00	0.01	3.448	O	|	|	|	2.91
161.583	0.00	0.01	3.448	O	|	|	|	2.91
161.667	0.00	0.01	3.447	O	|	|	|	2.91
161.750	0.00	0.01	3.447	O	|	|	|	2.91
161.833	0.00	0.01	3.447	O	|	|	|	2.91
161.917	0.00	0.01	3.447	O	|	|	|	2.91
162.000	0.00	0.01	3.447	O	|	|	|	2.91
162.083	0.00	0.01	3.447	O	|	|	|	2.91
162.167	0.00	0.01	3.447	O	|	|	|	2.91
162.250	0.00	0.01	3.447	O	|	|	|	2.91
162.333	0.00	0.01	3.447	O	|	|	|	2.91
162.417	0.00	0.01	3.447	O	|	|	|	2.91
162.500	0.00	0.01	3.447	O	|	|	|	2.91
162.583	0.00	0.01	3.447	O	|	|	|	2.91
162.667	0.00	0.01	3.447	O	|	|	|	2.91
162.750	0.00	0.01	3.447	O	|	|	|	2.91
162.833	0.00	0.01	3.447	O	|	|	|	2.91
162.917	0.00	0.01	3.446	O	|	|	|	2.91
163.000	0.00	0.01	3.446	O	|	|	|	2.91
163.083	0.00	0.01	3.446	O	|	|	|	2.91
163.167	0.00	0.01	3.446	O	|	|	|	2.91
163.250	0.00	0.01	3.446	O	|	|	|	2.91
163.333	0.00	0.01	3.446	O	|	|	|	2.91
163.417	0.00	0.01	3.446	O	|	|	|	2.91
163.500	0.00	0.01	3.446	O	|	|	|	2.90
163.583	0.00	0.01	3.446	O	|	|	|	2.90
163.667	0.00	0.01	3.446	O	|	|	|	2.90
163.750	0.00	0.01	3.446	O	|	|	|	2.90
163.833	0.00	0.01	3.446	O	|	|	|	2.90
163.917	0.00	0.01	3.446	O	|	|	|	2.90
164.000	0.00	0.01	3.446	O	|	|	|	2.90
164.083	0.00	0.01	3.445	O	|	|	|	2.90
164.167	0.00	0.01	3.445	O	|	|	|	2.90
164.250	0.00	0.01	3.445	O	|	|	|	2.90
164.333	0.00	0.01	3.445	O	|	|	|	2.90
164.417	0.00	0.01	3.445	O	|	|	|	2.90
164.500	0.00	0.01	3.445	O	|	|	|	2.90
164.583	0.00	0.01	3.445	O	|	|	|	2.90
164.667	0.00	0.01	3.445	O	|	|	|	2.90

164.750	0.00	0.01	3.445	O	|	|	|	|	2.90
164.833	0.00	0.01	3.445	O	|	|	|	|	2.90
164.917	0.00	0.01	3.445	O	|	|	|	|	2.90
165.000	0.00	0.01	3.445	O	|	|	|	|	2.90
165.083	0.00	0.01	3.445	O	|	|	|	|	2.90
165.167	0.00	0.01	3.445	O	|	|	|	|	2.90
165.250	0.00	0.01	3.445	O	|	|	|	|	2.90
165.333	0.00	0.01	3.444	O	|	|	|	|	2.90
165.417	0.00	0.01	3.444	O	|	|	|	|	2.90
165.500	0.00	0.01	3.444	O	|	|	|	|	2.90
165.583	0.00	0.01	3.444	O	|	|	|	|	2.90
165.667	0.00	0.01	3.444	O	|	|	|	|	2.90
165.750	0.00	0.01	3.444	O	|	|	|	|	2.90
165.833	0.00	0.01	3.444	O	|	|	|	|	2.90
165.917	0.00	0.01	3.444	O	|	|	|	|	2.90
166.000	0.00	0.01	3.444	O	|	|	|	|	2.90
166.083	0.00	0.01	3.444	O	|	|	|	|	2.90
166.167	0.00	0.01	3.444	O	|	|	|	|	2.90
166.250	0.00	0.01	3.444	O	|	|	|	|	2.90
166.333	0.00	0.01	3.444	O	|	|	|	|	2.90
166.417	0.00	0.01	3.444	O	|	|	|	|	2.90
166.500	0.00	0.01	3.443	O	|	|	|	|	2.90
166.583	0.00	0.01	3.443	O	|	|	|	|	2.90
166.667	0.00	0.01	3.443	O	|	|	|	|	2.90
166.750	0.00	0.01	3.443	O	|	|	|	|	2.90
166.833	0.00	0.01	3.443	O	|	|	|	|	2.90
166.917	0.00	0.01	3.443	O	|	|	|	|	2.90
167.000	0.00	0.01	3.443	O	|	|	|	|	2.90
167.083	0.00	0.01	3.443	O	|	|	|	|	2.90
167.167	0.00	0.01	3.443	O	|	|	|	|	2.90
167.250	0.00	0.01	3.443	O	|	|	|	|	2.90
167.333	0.00	0.01	3.443	O	|	|	|	|	2.90
167.417	0.00	0.01	3.443	O	|	|	|	|	2.90
167.500	0.00	0.01	3.443	O	|	|	|	|	2.90
167.583	0.00	0.01	3.443	O	|	|	|	|	2.90
167.667	0.00	0.01	3.443	O	|	|	|	|	2.90
167.750	0.00	0.01	3.442	O	|	|	|	|	2.90
167.833	0.00	0.01	3.442	O	|	|	|	|	2.90
167.917	0.00	0.01	3.442	O	|	|	|	|	2.90
168.000	0.00	0.01	3.442	O	|	|	|	|	2.90
168.083	0.00	0.01	3.442	O	|	|	|	|	2.90
168.167	0.00	0.01	3.442	O	|	|	|	|	2.90
168.250	0.00	0.01	3.442	O	|	|	|	|	2.90
168.333	0.00	0.01	3.442	O	|	|	|	|	2.90
168.417	0.00	0.01	3.442	O	|	|	|	|	2.90
168.500	0.00	0.01	3.442	O	|	|	|	|	2.90
168.583	0.00	0.01	3.442	O	|	|	|	|	2.90
168.667	0.00	0.01	3.442	O	|	|	|	|	2.90
168.750	0.00	0.01	3.442	O	|	|	|	|	2.90
168.833	0.00	0.01	3.442	O	|	|	|	|	2.90

168.917	0.00	0.01	3.441	O	|	|	|	2.90
169.000	0.00	0.01	3.441	O	|	|	|	2.90
169.083	0.00	0.01	3.441	O	|	|	|	2.90
169.167	0.00	0.01	3.441	O	|	|	|	2.90
169.250	0.00	0.01	3.441	O	|	|	|	2.90
169.333	0.00	0.01	3.441	O	|	|	|	2.90
169.417	0.00	0.01	3.441	O	|	|	|	2.90
169.500	0.00	0.01	3.441	O	|	|	|	2.90
169.583	0.00	0.01	3.441	O	|	|	|	2.90
169.667	0.00	0.01	3.441	O	|	|	|	2.90
169.750	0.00	0.01	3.441	O	|	|	|	2.90
169.833	0.00	0.01	3.441	O	|	|	|	2.90
169.917	0.00	0.01	3.441	O	|	|	|	2.90
170.000	0.00	0.01	3.441	O	|	|	|	2.90
170.083	0.00	0.01	3.441	O	|	|	|	2.90
170.167	0.00	0.01	3.440	O	|	|	|	2.90
170.250	0.00	0.01	3.440	O	|	|	|	2.90
170.333	0.00	0.01	3.440	O	|	|	|	2.90
170.417	0.00	0.01	3.440	O	|	|	|	2.90
170.500	0.00	0.01	3.440	O	|	|	|	2.90
170.583	0.00	0.01	3.440	O	|	|	|	2.90
170.667	0.00	0.01	3.440	O	|	|	|	2.90
170.750	0.00	0.01	3.440	O	|	|	|	2.90
170.833	0.00	0.01	3.440	O	|	|	|	2.90
170.917	0.00	0.01	3.440	O	|	|	|	2.90
171.000	0.00	0.01	3.440	O	|	|	|	2.90
171.083	0.00	0.01	3.440	O	|	|	|	2.90
171.167	0.00	0.01	3.440	O	|	|	|	2.90
171.250	0.00	0.01	3.440	O	|	|	|	2.90
171.333	0.00	0.01	3.440	O	|	|	|	2.90
171.417	0.00	0.01	3.439	O	|	|	|	2.90
171.500	0.00	0.01	3.439	O	|	|	|	2.90
171.583	0.00	0.01	3.439	O	|	|	|	2.90
171.667	0.00	0.01	3.439	O	|	|	|	2.90
171.750	0.00	0.01	3.439	O	|	|	|	2.90
171.833	0.00	0.01	3.439	O	|	|	|	2.90
171.917	0.00	0.01	3.439	O	|	|	|	2.90
172.000	0.00	0.01	3.439	O	|	|	|	2.90
172.083	0.00	0.01	3.439	O	|	|	|	2.90
172.167	0.00	0.01	3.439	O	|	|	|	2.90
172.250	0.00	0.01	3.439	O	|	|	|	2.90
172.333	0.00	0.01	3.439	O	|	|	|	2.90
172.417	0.00	0.01	3.439	O	|	|	|	2.90
172.500	0.00	0.01	3.439	O	|	|	|	2.90
172.583	0.00	0.01	3.438	O	|	|	|	2.90
172.667	0.00	0.01	3.438	O	|	|	|	2.90
172.750	0.00	0.01	3.438	O	|	|	|	2.90
172.833	0.00	0.01	3.438	O	|	|	|	2.90
172.917	0.00	0.01	3.438	O	|	|	|	2.90
173.000	0.00	0.01	3.438	O	|	|	|	2.90

173.083	0.00	0.01	3.438	O				2.90
173.167	0.00	0.01	3.438	O				2.90
173.250	0.00	0.01	3.438	O				2.90
173.333	0.00	0.01	3.438	O				2.90
173.417	0.00	0.01	3.438	O				2.90
173.500	0.00	0.01	3.438	O				2.90
173.583	0.00	0.01	3.438	O				2.90
173.667	0.00	0.01	3.438	O				2.90
173.750	0.00	0.01	3.438	O				2.90
173.833	0.00	0.01	3.437	O				2.90
173.917	0.00	0.01	3.437	O				2.90
174.000	0.00	0.01	3.437	O				2.90
174.083	0.00	0.01	3.437	O				2.90
174.167	0.00	0.01	3.437	O				2.90
174.250	0.00	0.01	3.437	O				2.90
174.333	0.00	0.01	3.437	O				2.90
174.417	0.00	0.01	3.437	O				2.90
174.500	0.00	0.01	3.437	O				2.90
174.583	0.00	0.01	3.437	O				2.90
174.667	0.00	0.01	3.437	O				2.90
174.750	0.00	0.01	3.437	O				2.90
174.833	0.00	0.01	3.437	O				2.90
174.917	0.00	0.01	3.437	O				2.90
175.000	0.00	0.01	3.436	O				2.90
175.083	0.00	0.01	3.436	O				2.90
175.167	0.00	0.01	3.436	O				2.90
175.250	0.00	0.01	3.436	O				2.90
175.333	0.00	0.01	3.436	O				2.90
175.417	0.00	0.01	3.436	O				2.90
175.500	0.00	0.01	3.436	O				2.90
175.583	0.00	0.01	3.436	O				2.90
175.667	0.00	0.01	3.436	O				2.90
175.750	0.00	0.01	3.436	O				2.90
175.833	0.00	0.01	3.436	O				2.90
175.917	0.00	0.01	3.436	O				2.90
176.000	0.00	0.01	3.436	O				2.90
176.083	0.00	0.01	3.436	O				2.90
176.167	0.00	0.01	3.436	O				2.90
176.250	0.00	0.01	3.435	O				2.90
176.333	0.00	0.01	3.435	O				2.90
176.417	0.00	0.01	3.435	O				2.90
176.500	0.00	0.01	3.435	O				2.90
176.583	0.00	0.01	3.435	O				2.90
176.667	0.00	0.01	3.435	O				2.90
176.750	0.00	0.01	3.435	O				2.90
176.833	0.00	0.01	3.435	O				2.90
176.917	0.00	0.01	3.435	O				2.90
177.000	0.00	0.01	3.435	O				2.90
177.083	0.00	0.01	3.435	O				2.90
177.167	0.00	0.01	3.435	O				2.90

177.250	0.00	0.01	3.435	O				2.90
177.333	0.00	0.01	3.435	O				2.90
177.417	0.00	0.01	3.434	O				2.90
177.500	0.00	0.01	3.434	O				2.90
177.583	0.00	0.01	3.434	O				2.90
177.667	0.00	0.01	3.434	O				2.90
177.750	0.00	0.01	3.434	O				2.90
177.833	0.00	0.01	3.434	O				2.90
177.917	0.00	0.01	3.434	O				2.90
178.000	0.00	0.01	3.434	O				2.89
178.083	0.00	0.01	3.434	O				2.89
178.167	0.00	0.01	3.434	O				2.89
178.250	0.00	0.01	3.434	O				2.89
178.333	0.00	0.01	3.434	O				2.89
178.417	0.00	0.01	3.434	O				2.89
178.500	0.00	0.01	3.434	O				2.89
178.583	0.00	0.01	3.434	O				2.89
178.667	0.00	0.01	3.433	O				2.89
178.750	0.00	0.01	3.433	O				2.89
178.833	0.00	0.01	3.433	O				2.89
178.917	0.00	0.01	3.433	O				2.89
179.000	0.00	0.01	3.433	O				2.89
179.083	0.00	0.01	3.433	O				2.89
179.167	0.00	0.01	3.433	O				2.89
179.250	0.00	0.01	3.433	O				2.89
179.333	0.00	0.01	3.433	O				2.89
179.417	0.00	0.01	3.433	O				2.89
179.500	0.00	0.01	3.433	O				2.89
179.583	0.00	0.01	3.433	O				2.89
179.667	0.00	0.01	3.433	O				2.89
179.750	0.00	0.01	3.433	O				2.89
179.833	0.00	0.01	3.432	O				2.89
179.917	0.00	0.01	3.432	O				2.89
180.000	0.00	0.01	3.432	O				2.89
180.083	0.00	0.01	3.432	O				2.89
180.167	0.00	0.01	3.432	O				2.89
180.250	0.00	0.01	3.432	O				2.89
180.333	0.00	0.01	3.432	O				2.89
180.417	0.00	0.01	3.432	O				2.89
180.500	0.00	0.01	3.432	O				2.89
180.583	0.00	0.01	3.432	O				2.89
180.667	0.00	0.01	3.432	O				2.89
180.750	0.00	0.01	3.432	O				2.89
180.833	0.00	0.01	3.432	O				2.89
180.917	0.00	0.01	3.432	O				2.89
181.000	0.00	0.01	3.432	O				2.89
181.083	0.00	0.01	3.431	O				2.89
181.167	0.00	0.01	3.431	O				2.89
181.250	0.00	0.01	3.431	O				2.89
181.333	0.00	0.01	3.431	O				2.89

181.417	0.00	0.01	3.431	O					2.89
181.500	0.00	0.01	3.431	O					2.89
181.583	0.00	0.01	3.431	O					2.89
181.667	0.00	0.01	3.431	O					2.89
181.750	0.00	0.01	3.431	O					2.89
181.833	0.00	0.01	3.431	O					2.89
181.917	0.00	0.01	3.431	O					2.89
182.000	0.00	0.01	3.431	O					2.89
182.083	0.00	0.01	3.431	O					2.89
182.167	0.00	0.01	3.431	O					2.89
182.250	0.00	0.01	3.430	O					2.89
182.333	0.00	0.01	3.430	O					2.89
182.417	0.00	0.01	3.430	O					2.89
182.500	0.00	0.01	3.430	O					2.89
182.583	0.00	0.01	3.430	O					2.89
182.667	0.00	0.01	3.430	O					2.89
182.750	0.00	0.01	3.430	O					2.89
182.833	0.00	0.01	3.430	O					2.89
182.917	0.00	0.01	3.430	O					2.89
183.000	0.00	0.01	3.430	O					2.89
183.083	0.00	0.01	3.430	O					2.89
183.167	0.00	0.01	3.430	O					2.89
183.250	0.00	0.01	3.430	O					2.89
183.333	0.00	0.01	3.430	O					2.89
183.417	0.00	0.01	3.430	O					2.89
183.500	0.00	0.01	3.429	O					2.89
183.583	0.00	0.01	3.429	O					2.89
183.667	0.00	0.01	3.429	O					2.89
183.750	0.00	0.01	3.429	O					2.89
183.833	0.00	0.01	3.429	O					2.89
183.917	0.00	0.01	3.429	O					2.89
184.000	0.00	0.01	3.429	O					2.89
184.083	0.00	0.01	3.429	O					2.89
184.167	0.00	0.01	3.429	O					2.89
184.250	0.00	0.01	3.429	O					2.89
184.333	0.00	0.01	3.429	O					2.89
184.417	0.00	0.01	3.429	O					2.89
184.500	0.00	0.01	3.429	O					2.89
184.583	0.00	0.01	3.429	O					2.89
184.667	0.00	0.01	3.428	O					2.89
184.750	0.00	0.01	3.428	O					2.89
184.833	0.00	0.01	3.428	O					2.89
184.917	0.00	0.01	3.428	O					2.89
185.000	0.00	0.01	3.428	O					2.89
185.083	0.00	0.01	3.428	O					2.89
185.167	0.00	0.01	3.428	O					2.89
185.250	0.00	0.01	3.428	O					2.89
185.333	0.00	0.01	3.428	O					2.89
185.417	0.00	0.01	3.428	O					2.89
185.500	0.00	0.01	3.428	O					2.89

185.583	0.00	0.01	3.428	O					2.89
185.667	0.00	0.01	3.428	O					2.89
185.750	0.00	0.01	3.428	O					2.89
185.833	0.00	0.01	3.428	O					2.89
185.917	0.00	0.01	3.427	O					2.89
186.000	0.00	0.01	3.427	O					2.89
186.083	0.00	0.01	3.427	O					2.89
186.167	0.00	0.01	3.427	O					2.89
186.250	0.00	0.01	3.427	O					2.89
186.333	0.00	0.01	3.427	O					2.89
186.417	0.00	0.01	3.427	O					2.89
186.500	0.00	0.01	3.427	O					2.89
186.583	0.00	0.01	3.427	O					2.89
186.667	0.00	0.01	3.427	O					2.89
186.750	0.00	0.01	3.427	O					2.89
186.833	0.00	0.01	3.427	O					2.89
186.917	0.00	0.01	3.427	O					2.89
187.000	0.00	0.01	3.427	O					2.89
187.083	0.00	0.01	3.426	O					2.89
187.167	0.00	0.01	3.426	O					2.89
187.250	0.00	0.01	3.426	O					2.89
187.333	0.00	0.01	3.426	O					2.89
187.417	0.00	0.01	3.426	O					2.89
187.500	0.00	0.01	3.426	O					2.89
187.583	0.00	0.01	3.426	O					2.89
187.667	0.00	0.01	3.426	O					2.89
187.750	0.00	0.01	3.426	O					2.89
187.833	0.00	0.01	3.426	O					2.89
187.917	0.00	0.01	3.426	O					2.89
188.000	0.00	0.01	3.426	O					2.89
188.083	0.00	0.01	3.426	O					2.89
188.167	0.00	0.01	3.426	O					2.89
188.250	0.00	0.01	3.426	O					2.89
188.333	0.00	0.01	3.425	O					2.89
188.417	0.00	0.01	3.425	O					2.89
188.500	0.00	0.01	3.425	O					2.89
188.583	0.00	0.01	3.425	O					2.89
188.667	0.00	0.01	3.425	O					2.89
188.750	0.00	0.01	3.425	O					2.89
188.833	0.00	0.01	3.425	O					2.89
188.917	0.00	0.01	3.425	O					2.89
189.000	0.00	0.01	3.425	O					2.89
189.083	0.00	0.01	3.425	O					2.89
189.167	0.00	0.01	3.425	O					2.89
189.250	0.00	0.01	3.425	O					2.89
189.333	0.00	0.01	3.425	O					2.89
189.417	0.00	0.01	3.425	O					2.89
189.500	0.00	0.01	3.424	O					2.89
189.583	0.00	0.01	3.424	O					2.89
189.667	0.00	0.01	3.424	O					2.89

189.750	0.00	0.01	3.424	O				2.89
189.833	0.00	0.01	3.424	O				2.89
189.917	0.00	0.01	3.424	O				2.89
190.000	0.00	0.01	3.424	O				2.89
190.083	0.00	0.01	3.424	O				2.89
190.167	0.00	0.01	3.424	O				2.89
190.250	0.00	0.01	3.424	O				2.89
190.333	0.00	0.01	3.424	O				2.89
190.417	0.00	0.01	3.424	O				2.89
190.500	0.00	0.01	3.424	O				2.89
190.583	0.00	0.01	3.424	O				2.89
190.667	0.00	0.01	3.424	O				2.89
190.750	0.00	0.01	3.423	O				2.89
190.833	0.00	0.01	3.423	O				2.89
190.917	0.00	0.01	3.423	O				2.89
191.000	0.00	0.01	3.423	O				2.89
191.083	0.00	0.01	3.423	O				2.89
191.167	0.00	0.01	3.423	O				2.89
191.250	0.00	0.01	3.423	O				2.89
191.333	0.00	0.01	3.423	O				2.89
191.417	0.00	0.01	3.423	O				2.89
191.500	0.00	0.01	3.423	O				2.89
191.583	0.00	0.01	3.423	O				2.89
191.667	0.00	0.01	3.423	O				2.89
191.750	0.00	0.01	3.423	O				2.89
191.833	0.00	0.01	3.423	O				2.89
191.917	0.00	0.01	3.422	O				2.89
192.000	0.00	0.01	3.422	O				2.89
192.083	0.00	0.01	3.422	O				2.89
192.167	0.00	0.01	3.422	O				2.89
192.250	0.00	0.01	3.422	O				2.89
192.333	0.00	0.01	3.422	O				2.89
192.417	0.00	0.01	3.422	O				2.89
192.500	0.00	0.01	3.422	O				2.89
192.583	0.00	0.01	3.422	O				2.88
192.667	0.00	0.01	3.422	O				2.88
192.750	0.00	0.01	3.422	O				2.88
192.833	0.00	0.01	3.422	O				2.88
192.917	0.00	0.01	3.422	O				2.88
193.000	0.00	0.01	3.422	O				2.88
193.083	0.00	0.01	3.422	O				2.88
193.167	0.00	0.01	3.421	O				2.88
193.250	0.00	0.01	3.421	O				2.88
193.333	0.00	0.01	3.421	O				2.88
193.417	0.00	0.01	3.421	O				2.88
193.500	0.00	0.01	3.421	O				2.88
193.583	0.00	0.01	3.421	O				2.88
193.667	0.00	0.01	3.421	O				2.88
193.750	0.00	0.01	3.421	O				2.88
193.833	0.00	0.01	3.421	O				2.88

193.917	0.00	0.01	3.421	O					2.88
194.000	0.00	0.01	3.421	O					2.88
194.083	0.00	0.01	3.421	O					2.88
194.167	0.00	0.01	3.421	O					2.88
194.250	0.00	0.01	3.421	O					2.88
194.333	0.00	0.01	3.420	O					2.88
194.417	0.00	0.01	3.420	O					2.88
194.500	0.00	0.01	3.420	O					2.88
194.583	0.00	0.01	3.420	O					2.88
194.667	0.00	0.01	3.420	O					2.88
194.750	0.00	0.01	3.420	O					2.88
194.833	0.00	0.01	3.420	O					2.88
194.917	0.00	0.01	3.420	O					2.88
195.000	0.00	0.01	3.420	O					2.88
195.083	0.00	0.01	3.420	O					2.88
195.167	0.00	0.01	3.420	O					2.88
195.250	0.00	0.01	3.420	O					2.88
195.333	0.00	0.01	3.420	O					2.88
195.417	0.00	0.01	3.420	O					2.88
195.500	0.00	0.01	3.420	O					2.88
195.583	0.00	0.01	3.419	O					2.88
195.667	0.00	0.01	3.419	O					2.88
195.750	0.00	0.01	3.419	O					2.88
195.833	0.00	0.01	3.419	O					2.88
195.917	0.00	0.01	3.419	O					2.88
196.000	0.00	0.01	3.419	O					2.88
196.083	0.00	0.01	3.419	O					2.88
196.167	0.00	0.01	3.419	O					2.88
196.250	0.00	0.01	3.419	O					2.88
196.333	0.00	0.01	3.419	O					2.88
196.417	0.00	0.01	3.419	O					2.88
196.500	0.00	0.01	3.419	O					2.88
196.583	0.00	0.01	3.419	O					2.88
196.667	0.00	0.01	3.419	O					2.88
196.750	0.00	0.01	3.418	O					2.88
196.833	0.00	0.01	3.418	O					2.88
196.917	0.00	0.01	3.418	O					2.88
197.000	0.00	0.01	3.418	O					2.88
197.083	0.00	0.01	3.418	O					2.88
197.167	0.00	0.01	3.418	O					2.88
197.250	0.00	0.01	3.418	O					2.88
197.333	0.00	0.01	3.418	O					2.88
197.417	0.00	0.01	3.418	O					2.88
197.500	0.00	0.01	3.418	O					2.88
197.583	0.00	0.01	3.418	O					2.88
197.667	0.00	0.01	3.418	O					2.88
197.750	0.00	0.01	3.418	O					2.88
197.833	0.00	0.01	3.418	O					2.88
197.917	0.00	0.01	3.418	O					2.88
198.000	0.00	0.01	3.417	O					2.88

198.083	0.00	0.01	3.417	O				2.88
198.167	0.00	0.01	3.417	O				2.88
198.250	0.00	0.01	3.417	O				2.88
198.333	0.00	0.01	3.417	O				2.88
198.417	0.00	0.01	3.417	O				2.88
198.500	0.00	0.01	3.417	O				2.88
198.583	0.00	0.01	3.417	O				2.88
198.667	0.00	0.01	3.417	O				2.88
198.750	0.00	0.01	3.417	O				2.88
198.833	0.00	0.01	3.417	O				2.88
198.917	0.00	0.01	3.417	O				2.88
199.000	0.00	0.01	3.417	O				2.88
199.083	0.00	0.01	3.417	O				2.88
199.167	0.00	0.01	3.416	O				2.88
199.250	0.00	0.01	3.416	O				2.88
199.333	0.00	0.01	3.416	O				2.88
199.417	0.00	0.01	3.416	O				2.88
199.500	0.00	0.01	3.416	O				2.88
199.583	0.00	0.01	3.416	O				2.88
199.667	0.00	0.01	3.416	O				2.88
199.750	0.00	0.01	3.416	O				2.88
199.833	0.00	0.01	3.416	O				2.88
199.917	0.00	0.01	3.416	O				2.88
200.000	0.00	0.01	3.416	O				2.88
200.083	0.00	0.01	3.416	O				2.88
200.167	0.00	0.01	3.416	O				2.88
200.250	0.00	0.01	3.416	O				2.88
200.333	0.00	0.01	3.416	O				2.88
200.417	0.00	0.01	3.415	O				2.88
200.500	0.00	0.01	3.415	O				2.88
200.583	0.00	0.01	3.415	O				2.88
200.667	0.00	0.01	3.415	O				2.88
200.750	0.00	0.01	3.415	O				2.88
200.833	0.00	0.01	3.415	O				2.88
200.917	0.00	0.01	3.415	O				2.88
201.000	0.00	0.01	3.415	O				2.88
201.083	0.00	0.01	3.415	O				2.88
201.167	0.00	0.01	3.415	O				2.88
201.250	0.00	0.01	3.415	O				2.88
201.333	0.00	0.01	3.415	O				2.88
201.417	0.00	0.01	3.415	O				2.88
201.500	0.00	0.01	3.415	O				2.88
201.583	0.00	0.01	3.415	O				2.88
201.667	0.00	0.01	3.414	O				2.88
201.750	0.00	0.01	3.414	O				2.88
201.833	0.00	0.01	3.414	O				2.88
201.917	0.00	0.01	3.414	O				2.88
202.000	0.00	0.01	3.414	O				2.88
202.083	0.00	0.01	3.414	O				2.88
202.167	0.00	0.01	3.414	O				2.88

202.250	0.00	0.01	3.414	O				2.88
202.333	0.00	0.01	3.414	O				2.88
202.417	0.00	0.01	3.414	O				2.88
202.500	0.00	0.01	3.414	O				2.88
202.583	0.00	0.01	3.414	O				2.88
202.667	0.00	0.01	3.414	O				2.88
202.750	0.00	0.01	3.414	O				2.88
202.833	0.00	0.01	3.413	O				2.88
202.917	0.00	0.01	3.413	O				2.88
203.000	0.00	0.01	3.413	O				2.88
203.083	0.00	0.01	3.413	O				2.88
203.167	0.00	0.01	3.413	O				2.88
203.250	0.00	0.01	3.413	O				2.88
203.333	0.00	0.01	3.413	O				2.88
203.417	0.00	0.01	3.413	O				2.88
203.500	0.00	0.01	3.413	O				2.88
203.583	0.00	0.01	3.413	O				2.88
203.667	0.00	0.01	3.413	O				2.88
203.750	0.00	0.01	3.413	O				2.88
203.833	0.00	0.01	3.413	O				2.88
203.917	0.00	0.01	3.413	O				2.88
204.000	0.00	0.01	3.413	O				2.88
204.083	0.00	0.01	3.412	O				2.88
204.167	0.00	0.01	3.412	O				2.88
204.250	0.00	0.01	3.412	O				2.88
204.333	0.00	0.01	3.412	O				2.88
204.417	0.00	0.01	3.412	O				2.88
204.500	0.00	0.01	3.412	O				2.88
204.583	0.00	0.01	3.412	O				2.88
204.667	0.00	0.01	3.412	O				2.88
204.750	0.00	0.01	3.412	O				2.88
204.833	0.00	0.01	3.412	O				2.88
204.917	0.00	0.01	3.412	O				2.88
205.000	0.00	0.01	3.412	O				2.88
205.083	0.00	0.01	3.412	O				2.88
205.167	0.00	0.01	3.412	O				2.88
205.250	0.00	0.01	3.411	O				2.88
205.333	0.00	0.01	3.411	O				2.88
205.417	0.00	0.01	3.411	O				2.88
205.500	0.00	0.01	3.411	O				2.88
205.583	0.00	0.01	3.411	O				2.88
205.667	0.00	0.01	3.411	O				2.88
205.750	0.00	0.01	3.411	O				2.88
205.833	0.00	0.01	3.411	O				2.88
205.917	0.00	0.01	3.411	O				2.88
206.000	0.00	0.01	3.411	O				2.88
206.083	0.00	0.01	3.411	O				2.88
206.167	0.00	0.01	3.411	O				2.88
206.250	0.00	0.01	3.411	O				2.88
206.333	0.00	0.01	3.411	O				2.88

206.417	0.00	0.01	3.411	O	|	|	|	2.88
206.500	0.00	0.01	3.410	O	|	|	|	2.88
206.583	0.00	0.01	3.410	O	|	|	|	2.88
206.667	0.00	0.01	3.410	O	|	|	|	2.88
206.750	0.00	0.01	3.410	O	|	|	|	2.88
206.833	0.00	0.01	3.410	O	|	|	|	2.88
206.917	0.00	0.01	3.410	O	|	|	|	2.88
207.000	0.00	0.01	3.410	O	|	|	|	2.88
207.083	0.00	0.01	3.410	O	|	|	|	2.87
207.167	0.00	0.01	3.410	O	|	|	|	2.87
207.250	0.00	0.01	3.410	O	|	|	|	2.87
207.333	0.00	0.01	3.410	O	|	|	|	2.87
207.417	0.00	0.01	3.410	O	|	|	|	2.87
207.500	0.00	0.01	3.410	O	|	|	|	2.87
207.583	0.00	0.01	3.410	O	|	|	|	2.87
207.667	0.00	0.01	3.409	O	|	|	|	2.87
207.750	0.00	0.01	3.409	O	|	|	|	2.87
207.833	0.00	0.01	3.409	O	|	|	|	2.87
207.917	0.00	0.01	3.409	O	|	|	|	2.87
208.000	0.00	0.01	3.409	O	|	|	|	2.87
208.083	0.00	0.01	3.409	O	|	|	|	2.87
208.167	0.00	0.01	3.409	O	|	|	|	2.87
208.250	0.00	0.01	3.409	O	|	|	|	2.87
208.333	0.00	0.01	3.409	O	|	|	|	2.87
208.417	0.00	0.01	3.409	O	|	|	|	2.87
208.500	0.00	0.01	3.409	O	|	|	|	2.87
208.583	0.00	0.01	3.409	O	|	|	|	2.87
208.667	0.00	0.01	3.409	O	|	|	|	2.87
208.750	0.00	0.01	3.409	O	|	|	|	2.87
208.833	0.00	0.01	3.409	O	|	|	|	2.87
208.917	0.00	0.01	3.408	O	|	|	|	2.87
209.000	0.00	0.01	3.408	O	|	|	|	2.87
209.083	0.00	0.01	3.408	O	|	|	|	2.87
209.167	0.00	0.01	3.408	O	|	|	|	2.87
209.250	0.00	0.01	3.408	O	|	|	|	2.87
209.333	0.00	0.01	3.408	O	|	|	|	2.87
209.417	0.00	0.01	3.408	O	|	|	|	2.87
209.500	0.00	0.01	3.408	O	|	|	|	2.87
209.583	0.00	0.01	3.408	O	|	|	|	2.87
209.667	0.00	0.01	3.408	O	|	|	|	2.87
209.750	0.00	0.01	3.408	O	|	|	|	2.87
209.833	0.00	0.01	3.408	O	|	|	|	2.87
209.917	0.00	0.01	3.408	O	|	|	|	2.87
210.000	0.00	0.01	3.408	O	|	|	|	2.87
210.083	0.00	0.01	3.407	O	|	|	|	2.87
210.167	0.00	0.01	3.407	O	|	|	|	2.87
210.250	0.00	0.01	3.407	O	|	|	|	2.87
210.333	0.00	0.01	3.407	O	|	|	|	2.87
210.417	0.00	0.01	3.407	O	|	|	|	2.87
210.500	0.00	0.01	3.407	O	|	|	|	2.87

210.583	0.00	0.01	3.407	O				2.87
210.667	0.00	0.01	3.407	O				2.87
210.750	0.00	0.01	3.407	O				2.87
210.833	0.00	0.01	3.407	O				2.87
210.917	0.00	0.01	3.407	O				2.87
211.000	0.00	0.01	3.407	O				2.87
211.083	0.00	0.01	3.407	O				2.87
211.167	0.00	0.01	3.407	O				2.87
211.250	0.00	0.01	3.407	O				2.87
211.333	0.00	0.01	3.406	O				2.87
211.417	0.00	0.01	3.406	O				2.87
211.500	0.00	0.01	3.406	O				2.87
211.583	0.00	0.01	3.406	O				2.87
211.667	0.00	0.01	3.406	O				2.87
211.750	0.00	0.01	3.406	O				2.87
211.833	0.00	0.01	3.406	O				2.87
211.917	0.00	0.01	3.406	O				2.87
212.000	0.00	0.01	3.406	O				2.87
212.083	0.00	0.01	3.406	O				2.87
212.167	0.00	0.01	3.406	O				2.87
212.250	0.00	0.01	3.406	O				2.87
212.333	0.00	0.01	3.406	O				2.87
212.417	0.00	0.01	3.406	O				2.87
212.500	0.00	0.01	3.405	O				2.87
212.583	0.00	0.01	3.405	O				2.87
212.667	0.00	0.01	3.405	O				2.87
212.750	0.00	0.01	3.405	O				2.87
212.833	0.00	0.01	3.405	O				2.87
212.917	0.00	0.01	3.405	O				2.87
213.000	0.00	0.01	3.405	O				2.87
213.083	0.00	0.01	3.405	O				2.87
213.167	0.00	0.01	3.405	O				2.87
213.250	0.00	0.01	3.405	O				2.87
213.333	0.00	0.01	3.405	O				2.87
213.417	0.00	0.01	3.405	O				2.87
213.500	0.00	0.01	3.405	O				2.87
213.583	0.00	0.01	3.405	O				2.87
213.667	0.00	0.01	3.405	O				2.87
213.750	0.00	0.01	3.404	O				2.87
213.833	0.00	0.01	3.404	O				2.87
213.917	0.00	0.01	3.404	O				2.87
214.000	0.00	0.01	3.404	O				2.87
214.083	0.00	0.01	3.404	O				2.87
214.167	0.00	0.01	3.404	O				2.87
214.250	0.00	0.01	3.404	O				2.87
214.333	0.00	0.01	3.404	O				2.87
214.417	0.00	0.01	3.404	O				2.87
214.500	0.00	0.01	3.404	O				2.87
214.583	0.00	0.01	3.404	O				2.87
214.667	0.00	0.01	3.404	O				2.87

214.750	0.00	0.01	3.404	O					2.87
214.833	0.00	0.01	3.404	O					2.87
214.917	0.00	0.01	3.403	O					2.87
215.000	0.00	0.01	3.403	O					2.87
215.083	0.00	0.01	3.403	O					2.87
215.167	0.00	0.01	3.403	O					2.87
215.250	0.00	0.01	3.403	O					2.87
215.333	0.00	0.01	3.403	O					2.87
215.417	0.00	0.01	3.403	O					2.87
215.500	0.00	0.01	3.403	O					2.87
215.583	0.00	0.01	3.403	O					2.87
215.667	0.00	0.01	3.403	O					2.87
215.750	0.00	0.01	3.403	O					2.87
215.833	0.00	0.01	3.403	O					2.87
215.917	0.00	0.01	3.403	O					2.87
216.000	0.00	0.01	3.403	O					2.87
216.083	0.00	0.01	3.403	O					2.87
216.167	0.00	0.01	3.402	O					2.87
216.250	0.00	0.01	3.402	O					2.87
216.333	0.00	0.01	3.402	O					2.87
216.417	0.00	0.01	3.402	O					2.87
216.500	0.00	0.01	3.402	O					2.87
216.583	0.00	0.01	3.402	O					2.87
216.667	0.00	0.01	3.402	O					2.87
216.750	0.00	0.01	3.402	O					2.87
216.833	0.00	0.01	3.402	O					2.87
216.917	0.00	0.01	3.402	O					2.87
217.000	0.00	0.01	3.402	O					2.87
217.083	0.00	0.01	3.402	O					2.87
217.167	0.00	0.01	3.402	O					2.87
217.250	0.00	0.01	3.402	O					2.87
217.333	0.00	0.01	3.401	O					2.87
217.417	0.00	0.01	3.401	O					2.87
217.500	0.00	0.01	3.401	O					2.87
217.583	0.00	0.01	3.401	O					2.87
217.667	0.00	0.01	3.401	O					2.87
217.750	0.00	0.01	3.401	O					2.87
217.833	0.00	0.01	3.401	O					2.87
217.917	0.00	0.01	3.401	O					2.87
218.000	0.00	0.01	3.401	O					2.87
218.083	0.00	0.01	3.401	O					2.87
218.167	0.00	0.01	3.401	O					2.87
218.250	0.00	0.01	3.401	O					2.87
218.333	0.00	0.01	3.401	O					2.87
218.417	0.00	0.01	3.401	O					2.87
218.500	0.00	0.01	3.401	O					2.87
218.583	0.00	0.01	3.400	O					2.87
218.667	0.00	0.01	3.400	O					2.87
218.750	0.00	0.01	3.400	O					2.87
218.833	0.00	0.01	3.400	O					2.87

218.917	0.00	0.01	3.400	O	|	|	|	2.87
219.000	0.00	0.01	3.400	O	|	|	|	2.87
219.083	0.00	0.01	3.400	O	|	|	|	2.87
219.167	0.00	0.01	3.400	O	|	|	|	2.87
219.250	0.00	0.01	3.400	O	|	|	|	2.87
219.333	0.00	0.01	3.400	O	|	|	|	2.87
219.417	0.00	0.01	3.400	O	|	|	|	2.87
219.500	0.00	0.01	3.400	O	|	|	|	2.87
219.583	0.00	0.01	3.400	O	|	|	|	2.87
219.667	0.00	0.01	3.400	O	|	|	|	2.87
219.750	0.00	0.01	3.399	O	|	|	|	2.87
219.833	0.00	0.01	3.399	O	|	|	|	2.87
219.917	0.00	0.01	3.399	O	|	|	|	2.87
220.000	0.00	0.01	3.399	O	|	|	|	2.87
220.083	0.00	0.01	3.399	O	|	|	|	2.87
220.167	0.00	0.01	3.399	O	|	|	|	2.87
220.250	0.00	0.01	3.399	O	|	|	|	2.87
220.333	0.00	0.01	3.399	O	|	|	|	2.87
220.417	0.00	0.01	3.399	O	|	|	|	2.87
220.500	0.00	0.01	3.399	O	|	|	|	2.87
220.583	0.00	0.01	3.399	O	|	|	|	2.87
220.667	0.00	0.01	3.399	O	|	|	|	2.87
220.750	0.00	0.01	3.399	O	|	|	|	2.87
220.833	0.00	0.01	3.399	O	|	|	|	2.87
220.917	0.00	0.01	3.399	O	|	|	|	2.87
221.000	0.00	0.01	3.398	O	|	|	|	2.87
221.083	0.00	0.01	3.398	O	|	|	|	2.87
221.167	0.00	0.01	3.398	O	|	|	|	2.87
221.250	0.00	0.01	3.398	O	|	|	|	2.87
221.333	0.00	0.01	3.398	O	|	|	|	2.87
221.417	0.00	0.01	3.398	O	|	|	|	2.87
221.500	0.00	0.01	3.398	O	|	|	|	2.87
221.583	0.00	0.01	3.398	O	|	|	|	2.86
221.667	0.00	0.01	3.398	O	|	|	|	2.86
221.750	0.00	0.01	3.398	O	|	|	|	2.86
221.833	0.00	0.01	3.398	O	|	|	|	2.86
221.917	0.00	0.01	3.398	O	|	|	|	2.86
222.000	0.00	0.01	3.398	O	|	|	|	2.86
222.083	0.00	0.01	3.398	O	|	|	|	2.86
222.167	0.00	0.01	3.397	O	|	|	|	2.86
222.250	0.00	0.01	3.397	O	|	|	|	2.86
222.333	0.00	0.01	3.397	O	|	|	|	2.86
222.417	0.00	0.01	3.397	O	|	|	|	2.86
222.500	0.00	0.01	3.397	O	|	|	|	2.86
222.583	0.00	0.01	3.397	O	|	|	|	2.86
222.667	0.00	0.01	3.397	O	|	|	|	2.86
222.750	0.00	0.01	3.397	O	|	|	|	2.86
222.833	0.00	0.01	3.397	O	|	|	|	2.86
222.917	0.00	0.01	3.397	O	|	|	|	2.86
223.000	0.00	0.01	3.397	O	|	|	|	2.86

223.083	0.00	0.01	3.397	O				2.86
223.167	0.00	0.01	3.397	O				2.86
223.250	0.00	0.01	3.397	O				2.86
223.333	0.00	0.01	3.397	O				2.86
223.417	0.00	0.01	3.396	O				2.86
223.500	0.00	0.01	3.396	O				2.86
223.583	0.00	0.01	3.396	O				2.86
223.667	0.00	0.01	3.396	O				2.86
223.750	0.00	0.01	3.396	O				2.86
223.833	0.00	0.01	3.396	O				2.86
223.917	0.00	0.01	3.396	O				2.86
224.000	0.00	0.01	3.396	O				2.86
224.083	0.00	0.01	3.396	O				2.86
224.167	0.00	0.01	3.396	O				2.86
224.250	0.00	0.01	3.396	O				2.86
224.333	0.00	0.01	3.396	O				2.86
224.417	0.00	0.01	3.396	O				2.86
224.500	0.00	0.01	3.396	O				2.86
224.583	0.00	0.01	3.395	O				2.86
224.667	0.00	0.01	3.395	O				2.86
224.750	0.00	0.01	3.395	O				2.86
224.833	0.00	0.01	3.395	O				2.86
224.917	0.00	0.01	3.395	O				2.86
225.000	0.00	0.01	3.395	O				2.86
225.083	0.00	0.01	3.395	O				2.86
225.167	0.00	0.01	3.395	O				2.86
225.250	0.00	0.01	3.395	O				2.86
225.333	0.00	0.01	3.395	O				2.86
225.417	0.00	0.01	3.395	O				2.86
225.500	0.00	0.01	3.395	O				2.86
225.583	0.00	0.01	3.395	O				2.86
225.667	0.00	0.01	3.395	O				2.86
225.750	0.00	0.01	3.395	O				2.86
225.833	0.00	0.01	3.394	O				2.86
225.917	0.00	0.01	3.394	O				2.86
226.000	0.00	0.01	3.394	O				2.86
226.083	0.00	0.01	3.394	O				2.86
226.167	0.00	0.01	3.394	O				2.86
226.250	0.00	0.01	3.394	O				2.86
226.333	0.00	0.01	3.394	O				2.86
226.417	0.00	0.01	3.394	O				2.86
226.500	0.00	0.01	3.394	O				2.86
226.583	0.00	0.01	3.394	O				2.86
226.667	0.00	0.01	3.394	O				2.86
226.750	0.00	0.01	3.394	O				2.86
226.833	0.00	0.01	3.394	O				2.86
226.917	0.00	0.01	3.394	O				2.86
227.000	0.00	0.01	3.393	O				2.86
227.083	0.00	0.01	3.393	O				2.86
227.167	0.00	0.01	3.393	O				2.86

227.250	0.00	0.01	3.393	O				2.86
227.333	0.00	0.01	3.393	O				2.86
227.417	0.00	0.01	3.393	O				2.86
227.500	0.00	0.01	3.393	O				2.86
227.583	0.00	0.01	3.393	O				2.86
227.667	0.00	0.01	3.393	O				2.86
227.750	0.00	0.01	3.393	O				2.86
227.833	0.00	0.01	3.393	O				2.86
227.917	0.00	0.01	3.393	O				2.86
228.000	0.00	0.01	3.393	O				2.86
228.083	0.00	0.01	3.393	O				2.86
228.167	0.00	0.01	3.393	O				2.86
228.250	0.00	0.01	3.392	O				2.86
228.333	0.00	0.01	3.392	O				2.86
228.417	0.00	0.01	3.392	O				2.86
228.500	0.00	0.01	3.392	O				2.86
228.583	0.00	0.01	3.392	O				2.86
228.667	0.00	0.01	3.392	O				2.86
228.750	0.00	0.01	3.392	O				2.86
228.833	0.00	0.01	3.392	O				2.86
228.917	0.00	0.01	3.392	O				2.86
229.000	0.00	0.01	3.392	O				2.86
229.083	0.00	0.01	3.392	O				2.86
229.167	0.00	0.01	3.392	O				2.86
229.250	0.00	0.01	3.392	O				2.86
229.333	0.00	0.01	3.392	O				2.86
229.417	0.00	0.01	3.391	O				2.86
229.500	0.00	0.01	3.391	O				2.86
229.583	0.00	0.01	3.391	O				2.86
229.667	0.00	0.01	3.391	O				2.86
229.750	0.00	0.01	3.391	O				2.86
229.833	0.00	0.01	3.391	O				2.86
229.917	0.00	0.01	3.391	O				2.86
230.000	0.00	0.01	3.391	O				2.86
230.083	0.00	0.01	3.391	O				2.86
230.167	0.00	0.01	3.391	O				2.86
230.250	0.00	0.01	3.391	O				2.86
230.333	0.00	0.01	3.391	O				2.86
230.417	0.00	0.01	3.391	O				2.86
230.500	0.00	0.01	3.391	O				2.86
230.583	0.00	0.01	3.391	O				2.86
230.667	0.00	0.01	3.390	O				2.86
230.750	0.00	0.01	3.390	O				2.86
230.833	0.00	0.01	3.390	O				2.86
230.917	0.00	0.01	3.390	O				2.86
231.000	0.00	0.01	3.390	O				2.86
231.083	0.00	0.01	3.390	O				2.86
231.167	0.00	0.01	3.390	O				2.86
231.250	0.00	0.01	3.390	O				2.86
231.333	0.00	0.01	3.390	O				2.86

231.417	0.00	0.01	3.390	O	|	|	|	2.86
231.500	0.00	0.01	3.390	O	|	|	|	2.86
231.583	0.00	0.01	3.390	O	|	|	|	2.86
231.667	0.00	0.01	3.390	O	|	|	|	2.86
231.750	0.00	0.01	3.390	O	|	|	|	2.86
231.833	0.00	0.01	3.390	O	|	|	|	2.86
231.917	0.00	0.01	3.389	O	|	|	|	2.86
232.000	0.00	0.01	3.389	O	|	|	|	2.86
232.083	0.00	0.01	3.389	O	|	|	|	2.86
232.167	0.00	0.01	3.389	O	|	|	|	2.86
232.250	0.00	0.01	3.389	O	|	|	|	2.86
232.333	0.00	0.01	3.389	O	|	|	|	2.86
232.417	0.00	0.01	3.389	O	|	|	|	2.86
232.500	0.00	0.01	3.389	O	|	|	|	2.86
232.583	0.00	0.01	3.389	O	|	|	|	2.86
232.667	0.00	0.01	3.389	O	|	|	|	2.86
232.750	0.00	0.01	3.389	O	|	|	|	2.86
232.833	0.00	0.01	3.389	O	|	|	|	2.86
232.917	0.00	0.01	3.389	O	|	|	|	2.86
233.000	0.00	0.01	3.389	O	|	|	|	2.86
233.083	0.00	0.01	3.388	O	|	|	|	2.86
233.167	0.00	0.01	3.388	O	|	|	|	2.86
233.250	0.00	0.01	3.388	O	|	|	|	2.86
233.333	0.00	0.01	3.388	O	|	|	|	2.86
233.417	0.00	0.01	3.388	O	|	|	|	2.86
233.500	0.00	0.01	3.388	O	|	|	|	2.86
233.583	0.00	0.01	3.388	O	|	|	|	2.86
233.667	0.00	0.01	3.388	O	|	|	|	2.86
233.750	0.00	0.01	3.388	O	|	|	|	2.86
233.833	0.00	0.01	3.388	O	|	|	|	2.86
233.917	0.00	0.01	3.388	O	|	|	|	2.86
234.000	0.00	0.01	3.388	O	|	|	|	2.86
234.083	0.00	0.01	3.388	O	|	|	|	2.86
234.167	0.00	0.01	3.388	O	|	|	|	2.86
234.250	0.00	0.01	3.388	O	|	|	|	2.86
234.333	0.00	0.01	3.387	O	|	|	|	2.86
234.417	0.00	0.01	3.387	O	|	|	|	2.86
234.500	0.00	0.01	3.387	O	|	|	|	2.86
234.583	0.00	0.01	3.387	O	|	|	|	2.86
234.667	0.00	0.01	3.387	O	|	|	|	2.86
234.750	0.00	0.01	3.387	O	|	|	|	2.86
234.833	0.00	0.01	3.387	O	|	|	|	2.86
234.917	0.00	0.01	3.387	O	|	|	|	2.86
235.000	0.00	0.01	3.387	O	|	|	|	2.86
235.083	0.00	0.01	3.387	O	|	|	|	2.86
235.167	0.00	0.01	3.387	O	|	|	|	2.86
235.250	0.00	0.01	3.387	O	|	|	|	2.86
235.333	0.00	0.01	3.387	O	|	|	|	2.86
235.417	0.00	0.01	3.387	O	|	|	|	2.86
235.500	0.00	0.01	3.386	O	|	|	|	2.86

235.583	0.00	0.01	3.386	O				2.86
235.667	0.00	0.01	3.386	O				2.86
235.750	0.00	0.01	3.386	O				2.86
235.833	0.00	0.01	3.386	O				2.86
235.917	0.00	0.01	3.386	O				2.86
236.000	0.00	0.01	3.386	O				2.86
236.083	0.00	0.01	3.386	O				2.85
236.167	0.00	0.01	3.386	O				2.85
236.250	0.00	0.01	3.386	O				2.85
236.333	0.00	0.01	3.386	O				2.85
236.417	0.00	0.01	3.386	O				2.85
236.500	0.00	0.01	3.386	O				2.85
236.583	0.00	0.01	3.386	O				2.85
236.667	0.00	0.01	3.386	O				2.85
236.750	0.00	0.01	3.385	O				2.85
236.833	0.00	0.01	3.385	O				2.85
236.917	0.00	0.01	3.385	O				2.85
237.000	0.00	0.01	3.385	O				2.85
237.083	0.00	0.01	3.385	O				2.85
237.167	0.00	0.01	3.385	O				2.85
237.250	0.00	0.01	3.385	O				2.85
237.333	0.00	0.01	3.385	O				2.85
237.417	0.00	0.01	3.385	O				2.85
237.500	0.00	0.01	3.385	O				2.85
237.583	0.00	0.01	3.385	O				2.85
237.667	0.00	0.01	3.385	O				2.85
237.750	0.00	0.01	3.385	O				2.85
237.833	0.00	0.01	3.385	O				2.85
237.917	0.00	0.01	3.384	O				2.85
238.000	0.00	0.01	3.384	O				2.85
238.083	0.00	0.01	3.384	O				2.85
238.167	0.00	0.01	3.384	O				2.85
238.250	0.00	0.01	3.384	O				2.85
238.333	0.00	0.01	3.384	O				2.85
238.417	0.00	0.01	3.384	O				2.85
238.500	0.00	0.01	3.384	O				2.85
238.583	0.00	0.01	3.384	O				2.85
238.667	0.00	0.01	3.384	O				2.85
238.750	0.00	0.01	3.384	O				2.85
238.833	0.00	0.01	3.384	O				2.85
238.917	0.00	0.01	3.384	O				2.85
239.000	0.00	0.01	3.384	O				2.85
239.083	0.00	0.01	3.384	O				2.85
239.167	0.00	0.01	3.383	O				2.85
239.250	0.00	0.01	3.383	O				2.85
239.333	0.00	0.01	3.383	O				2.85
239.417	0.00	0.01	3.383	O				2.85
239.500	0.00	0.01	3.383	O				2.85
239.583	0.00	0.01	3.383	O				2.85
239.667	0.00	0.01	3.383	O				2.85

239.750	0.00	0.01	3.383	O	|	|	|	2.85
239.833	0.00	0.01	3.383	O	|	|	|	2.85
239.917	0.00	0.01	3.383	O	|	|	|	2.85
240.000	0.00	0.01	3.383	O	|	|	|	2.85
240.083	0.00	0.01	3.383	O	|	|	|	2.85
240.167	0.00	0.01	3.383	O	|	|	|	2.85
240.250	0.00	0.01	3.383	O	|	|	|	2.85
240.333	0.00	0.01	3.382	O	|	|	|	2.85
240.417	0.00	0.01	3.382	O	|	|	|	2.85
240.500	0.00	0.01	3.382	O	|	|	|	2.85
240.583	0.00	0.01	3.382	O	|	|	|	2.85
240.667	0.00	0.01	3.382	O	|	|	|	2.85
240.750	0.00	0.01	3.382	O	|	|	|	2.85
240.833	0.00	0.01	3.382	O	|	|	|	2.85
240.917	0.00	0.01	3.382	O	|	|	|	2.85
241.000	0.00	0.01	3.382	O	|	|	|	2.85
241.083	0.00	0.01	3.382	O	|	|	|	2.85
241.167	0.00	0.01	3.382	O	|	|	|	2.85
241.250	0.00	0.01	3.382	O	|	|	|	2.85
241.333	0.00	0.01	3.382	O	|	|	|	2.85
241.417	0.00	0.01	3.382	O	|	|	|	2.85
241.500	0.00	0.01	3.382	O	|	|	|	2.85
241.583	0.00	0.01	3.381	O	|	|	|	2.85
241.667	0.00	0.01	3.381	O	|	|	|	2.85
241.750	0.00	0.01	3.381	O	|	|	|	2.85
241.833	0.00	0.01	3.381	O	|	|	|	2.85
241.917	0.00	0.01	3.381	O	|	|	|	2.85
242.000	0.00	0.01	3.381	O	|	|	|	2.85
242.083	0.00	0.01	3.381	O	|	|	|	2.85
242.167	0.00	0.01	3.381	O	|	|	|	2.85
242.250	0.00	0.01	3.381	O	|	|	|	2.85
242.333	0.00	0.01	3.381	O	|	|	|	2.85
242.417	0.00	0.01	3.381	O	|	|	|	2.85
242.500	0.00	0.01	3.381	O	|	|	|	2.85
242.583	0.00	0.01	3.381	O	|	|	|	2.85
242.667	0.00	0.01	3.381	O	|	|	|	2.85
242.750	0.00	0.01	3.380	O	|	|	|	2.85
242.833	0.00	0.01	3.380	O	|	|	|	2.85
242.917	0.00	0.01	3.380	O	|	|	|	2.85
243.000	0.00	0.01	3.380	O	|	|	|	2.85
243.083	0.00	0.01	3.380	O	|	|	|	2.85
243.167	0.00	0.01	3.380	O	|	|	|	2.85
243.250	0.00	0.01	3.380	O	|	|	|	2.85
243.333	0.00	0.01	3.380	O	|	|	|	2.85
243.417	0.00	0.01	3.380	O	|	|	|	2.85
243.500	0.00	0.01	3.380	O	|	|	|	2.85
243.583	0.00	0.01	3.380	O	|	|	|	2.85
243.667	0.00	0.01	3.380	O	|	|	|	2.85
243.750	0.00	0.01	3.380	O	|	|	|	2.85
243.833	0.00	0.01	3.380	O	|	|	|	2.85

243.917	0.00	0.01	3.380	O				2.85
244.000	0.00	0.01	3.379	O				2.85
244.083	0.00	0.01	3.379	O				2.85
244.167	0.00	0.01	3.379	O				2.85
244.250	0.00	0.01	3.379	O				2.85
244.333	0.00	0.01	3.379	O				2.85
244.417	0.00	0.01	3.379	O				2.85
244.500	0.00	0.01	3.379	O				2.85
244.583	0.00	0.01	3.379	O				2.85
244.667	0.00	0.01	3.379	O				2.85
244.750	0.00	0.01	3.379	O				2.85
244.833	0.00	0.01	3.379	O				2.85
244.917	0.00	0.01	3.379	O				2.85
245.000	0.00	0.01	3.379	O				2.85
245.083	0.00	0.01	3.379	O				2.85
245.167	0.00	0.01	3.378	O				2.85
245.250	0.00	0.01	3.378	O				2.85
245.333	0.00	0.01	3.378	O				2.85
245.417	0.00	0.01	3.378	O				2.85
245.500	0.00	0.01	3.378	O				2.85
245.583	0.00	0.01	3.378	O				2.85
245.667	0.00	0.01	3.378	O				2.85
245.750	0.00	0.01	3.378	O				2.85
245.833	0.00	0.01	3.378	O				2.85
245.917	0.00	0.01	3.378	O				2.85
246.000	0.00	0.01	3.378	O				2.85
246.083	0.00	0.01	3.378	O				2.85
246.167	0.00	0.01	3.378	O				2.85
246.250	0.00	0.01	3.378	O				2.85
246.333	0.00	0.01	3.378	O				2.85
246.417	0.00	0.01	3.377	O				2.85
246.500	0.00	0.01	3.377	O				2.85
246.583	0.00	0.01	3.377	O				2.85
246.667	0.00	0.01	3.377	O				2.85
246.750	0.00	0.01	3.377	O				2.85
246.833	0.00	0.01	3.377	O				2.85
246.917	0.00	0.01	3.377	O				2.85
247.000	0.00	0.01	3.377	O				2.85
247.083	0.00	0.01	3.377	O				2.85
247.167	0.00	0.01	3.377	O				2.85
247.250	0.00	0.01	3.377	O				2.85
247.333	0.00	0.01	3.377	O				2.85
247.417	0.00	0.01	3.377	O				2.85
247.500	0.00	0.01	3.377	O				2.85
247.583	0.00	0.01	3.376	O				2.85
247.667	0.00	0.01	3.376	O				2.85
247.750	0.00	0.01	3.376	O				2.85
247.833	0.00	0.01	3.376	O				2.85
247.917	0.00	0.01	3.376	O				2.85
248.000	0.00	0.01	3.376	O				2.85

248.083	0.00	0.01	3.376	O				2.85
248.167	0.00	0.01	3.376	O				2.85
248.250	0.00	0.01	3.376	O				2.85
248.333	0.00	0.01	3.376	O				2.85
248.417	0.00	0.01	3.376	O				2.85
248.500	0.00	0.01	3.376	O				2.85
248.583	0.00	0.01	3.376	O				2.85
248.667	0.00	0.01	3.376	O				2.85
248.750	0.00	0.01	3.376	O				2.85
248.833	0.00	0.01	3.375	O				2.85
248.917	0.00	0.01	3.375	O				2.85
249.000	0.00	0.01	3.375	O				2.85
249.083	0.00	0.01	3.375	O				2.85
249.167	0.00	0.01	3.375	O				2.85
249.250	0.00	0.01	3.375	O				2.85
249.333	0.00	0.01	3.375	O				2.85
249.417	0.00	0.01	3.375	O				2.85
249.500	0.00	0.01	3.375	O				2.85
249.583	0.00	0.01	3.375	O				2.85
249.667	0.00	0.01	3.375	O				2.85
249.750	0.00	0.01	3.375	O				2.85
249.833	0.00	0.01	3.375	O				2.85
249.917	0.00	0.01	3.375	O				2.85
250.000	0.00	0.01	3.374	O				2.85
250.083	0.00	0.01	3.374	O				2.85
250.167	0.00	0.01	3.374	O				2.85
250.250	0.00	0.01	3.374	O				2.85
250.333	0.00	0.01	3.374	O				2.85
250.417	0.00	0.01	3.374	O				2.85
250.500	0.00	0.01	3.374	O				2.85
250.583	0.00	0.01	3.374	O				2.85
250.667	0.00	0.01	3.374	O				2.84
250.750	0.00	0.01	3.374	O				2.84
250.833	0.00	0.01	3.374	O				2.84
250.917	0.00	0.01	3.374	O				2.84
251.000	0.00	0.01	3.374	O				2.84
251.083	0.00	0.01	3.374	O				2.84
251.167	0.00	0.01	3.374	O				2.84
251.250	0.00	0.01	3.373	O				2.84
251.333	0.00	0.01	3.373	O				2.84
251.417	0.00	0.01	3.373	O				2.84
251.500	0.00	0.01	3.373	O				2.84
251.583	0.00	0.01	3.373	O				2.84
251.667	0.00	0.01	3.373	O				2.84
251.750	0.00	0.01	3.373	O				2.84
251.833	0.00	0.01	3.373	O				2.84
251.917	0.00	0.01	3.373	O				2.84
252.000	0.00	0.01	3.373	O				2.84
252.083	0.00	0.01	3.373	O				2.84
252.167	0.00	0.01	3.373	O				2.84

252.250	0.00	0.01	3.373	O				2.84
252.333	0.00	0.01	3.373	O				2.84
252.417	0.00	0.01	3.372	O				2.84
252.500	0.00	0.01	3.372	O				2.84
252.583	0.00	0.01	3.372	O				2.84
252.667	0.00	0.01	3.372	O				2.84
252.750	0.00	0.01	3.372	O				2.84
252.833	0.00	0.01	3.372	O				2.84
252.917	0.00	0.01	3.372	O				2.84
253.000	0.00	0.01	3.372	O				2.84
253.083	0.00	0.01	3.372	O				2.84
253.167	0.00	0.01	3.372	O				2.84
253.250	0.00	0.01	3.372	O				2.84
253.333	0.00	0.01	3.372	O				2.84
253.417	0.00	0.01	3.372	O				2.84
253.500	0.00	0.01	3.372	O				2.84
253.583	0.00	0.01	3.372	O				2.84
253.667	0.00	0.01	3.371	O				2.84
253.750	0.00	0.01	3.371	O				2.84
253.833	0.00	0.01	3.371	O				2.84
253.917	0.00	0.01	3.371	O				2.84
254.000	0.00	0.01	3.371	O				2.84
254.083	0.00	0.01	3.371	O				2.84
254.167	0.00	0.01	3.371	O				2.84
254.250	0.00	0.01	3.371	O				2.84
254.333	0.00	0.01	3.371	O				2.84
254.417	0.00	0.01	3.371	O				2.84
254.500	0.00	0.01	3.371	O				2.84
254.583	0.00	0.01	3.371	O				2.84
254.667	0.00	0.01	3.371	O				2.84
254.750	0.00	0.01	3.371	O				2.84
254.833	0.00	0.01	3.370	O				2.84
254.917	0.00	0.01	3.370	O				2.84
255.000	0.00	0.01	3.370	O				2.84
255.083	0.00	0.01	3.370	O				2.84
255.167	0.00	0.01	3.370	O				2.84
255.250	0.00	0.01	3.370	O				2.84
255.333	0.00	0.01	3.370	O				2.84
255.417	0.00	0.01	3.370	O				2.84
255.500	0.00	0.01	3.370	O				2.84
255.583	0.00	0.01	3.370	O				2.84
255.667	0.00	0.01	3.370	O				2.84
255.750	0.00	0.01	3.370	O				2.84
255.833	0.00	0.01	3.370	O				2.84
255.917	0.00	0.01	3.370	O				2.84
256.000	0.00	0.01	3.370	O				2.84
256.083	0.00	0.01	3.369	O				2.84
256.167	0.00	0.01	3.369	O				2.84
256.250	0.00	0.01	3.369	O				2.84
256.333	0.00	0.01	3.369	O				2.84

256.417	0.00	0.01	3.369	O				2.84
256.500	0.00	0.01	3.369	O				2.84
256.583	0.00	0.01	3.369	O				2.84
256.667	0.00	0.01	3.369	O				2.84
256.750	0.00	0.01	3.369	O				2.84
256.833	0.00	0.01	3.369	O				2.84
256.917	0.00	0.01	3.369	O				2.84
257.000	0.00	0.01	3.369	O				2.84
257.083	0.00	0.01	3.369	O				2.84
257.167	0.00	0.01	3.369	O				2.84
257.250	0.00	0.01	3.368	O				2.84
257.333	0.00	0.01	3.368	O				2.84
257.417	0.00	0.01	3.368	O				2.84
257.500	0.00	0.01	3.368	O				2.84
257.583	0.00	0.01	3.368	O				2.84
257.667	0.00	0.01	3.368	O				2.84
257.750	0.00	0.01	3.368	O				2.84
257.833	0.00	0.01	3.368	O				2.84
257.917	0.00	0.01	3.368	O				2.84
258.000	0.00	0.01	3.368	O				2.84
258.083	0.00	0.01	3.368	O				2.84
258.167	0.00	0.01	3.368	O				2.84
258.250	0.00	0.01	3.368	O				2.84
258.333	0.00	0.01	3.368	O				2.84
258.417	0.00	0.01	3.368	O				2.84
258.500	0.00	0.01	3.367	O				2.84
258.583	0.00	0.01	3.367	O				2.84
258.667	0.00	0.01	3.367	O				2.84
258.750	0.00	0.01	3.367	O				2.84
258.833	0.00	0.01	3.367	O				2.84
258.917	0.00	0.01	3.367	O				2.84
259.000	0.00	0.01	3.367	O				2.84
259.083	0.00	0.01	3.367	O				2.84
259.167	0.00	0.01	3.367	O				2.84
259.250	0.00	0.01	3.367	O				2.84
259.333	0.00	0.01	3.367	O				2.84
259.417	0.00	0.01	3.367	O				2.84
259.500	0.00	0.01	3.367	O				2.84
259.583	0.00	0.01	3.367	O				2.84
259.667	0.00	0.01	3.366	O				2.84
259.750	0.00	0.01	3.366	O				2.84
259.833	0.00	0.01	3.366	O				2.84
259.917	0.00	0.01	3.366	O				2.84
260.000	0.00	0.01	3.366	O				2.84
260.083	0.00	0.01	3.366	O				2.84
260.167	0.00	0.01	3.366	O				2.84
260.250	0.00	0.01	3.366	O				2.84
260.333	0.00	0.01	3.366	O				2.84
260.417	0.00	0.01	3.366	O				2.84
260.500	0.00	0.01	3.366	O				2.84

260.583	0.00	0.01	3.366	O	|	|	|	2.84
260.667	0.00	0.01	3.366	O	|	|	|	2.84
260.750	0.00	0.01	3.366	O	|	|	|	2.84
260.833	0.00	0.01	3.366	O	|	|	|	2.84
260.917	0.00	0.01	3.365	O	|	|	|	2.84
261.000	0.00	0.01	3.365	O	|	|	|	2.84
261.083	0.00	0.01	3.365	O	|	|	|	2.84
261.167	0.00	0.01	3.365	O	|	|	|	2.84
261.250	0.00	0.01	3.365	O	|	|	|	2.84
261.333	0.00	0.01	3.365	O	|	|	|	2.84
261.417	0.00	0.01	3.365	O	|	|	|	2.84
261.500	0.00	0.01	3.365	O	|	|	|	2.84
261.583	0.00	0.01	3.365	O	|	|	|	2.84
261.667	0.00	0.01	3.365	O	|	|	|	2.84
261.750	0.00	0.01	3.365	O	|	|	|	2.84
261.833	0.00	0.01	3.365	O	|	|	|	2.84
261.917	0.00	0.01	3.365	O	|	|	|	2.84
262.000	0.00	0.01	3.365	O	|	|	|	2.84
262.083	0.00	0.01	3.365	O	|	|	|	2.84
262.167	0.00	0.01	3.364	O	|	|	|	2.84
262.250	0.00	0.01	3.364	O	|	|	|	2.84
262.333	0.00	0.01	3.364	O	|	|	|	2.84
262.417	0.00	0.01	3.364	O	|	|	|	2.84
262.500	0.00	0.01	3.364	O	|	|	|	2.84
262.583	0.00	0.01	3.364	O	|	|	|	2.84
262.667	0.00	0.01	3.364	O	|	|	|	2.84
262.750	0.00	0.01	3.364	O	|	|	|	2.84
262.833	0.00	0.01	3.364	O	|	|	|	2.84
262.917	0.00	0.01	3.364	O	|	|	|	2.84
263.000	0.00	0.01	3.364	O	|	|	|	2.84
263.083	0.00	0.01	3.364	O	|	|	|	2.84
263.167	0.00	0.01	3.364	O	|	|	|	2.84
263.250	0.00	0.01	3.364	O	|	|	|	2.84
263.333	0.00	0.01	3.363	O	|	|	|	2.84
263.417	0.00	0.01	3.363	O	|	|	|	2.84
263.500	0.00	0.01	3.363	O	|	|	|	2.84
263.583	0.00	0.01	3.363	O	|	|	|	2.84
263.667	0.00	0.01	3.363	O	|	|	|	2.84
263.750	0.00	0.01	3.363	O	|	|	|	2.84
263.833	0.00	0.01	3.363	O	|	|	|	2.84
263.917	0.00	0.01	3.363	O	|	|	|	2.84
264.000	0.00	0.01	3.363	O	|	|	|	2.84
264.083	0.00	0.01	3.363	O	|	|	|	2.84
264.167	0.00	0.01	3.363	O	|	|	|	2.84
264.250	0.00	0.01	3.363	O	|	|	|	2.84
264.333	0.00	0.01	3.363	O	|	|	|	2.84
264.417	0.00	0.01	3.363	O	|	|	|	2.84
264.500	0.00	0.01	3.363	O	|	|	|	2.84
264.583	0.00	0.01	3.362	O	|	|	|	2.84
264.667	0.00	0.01	3.362	O	|	|	|	2.84

264.750	0.00	0.01	3.362	O	|	|	|	2.84
264.833	0.00	0.01	3.362	O	|	|	|	2.84
264.917	0.00	0.01	3.362	O	|	|	|	2.84
265.000	0.00	0.01	3.362	O	|	|	|	2.84
265.083	0.00	0.01	3.362	O	|	|	|	2.84
265.167	0.00	0.01	3.362	O	|	|	|	2.83
265.250	0.00	0.01	3.362	O	|	|	|	2.83
265.333	0.00	0.01	3.362	O	|	|	|	2.83
265.417	0.00	0.01	3.362	O	|	|	|	2.83
265.500	0.00	0.01	3.362	O	|	|	|	2.83
265.583	0.00	0.01	3.362	O	|	|	|	2.83
265.667	0.00	0.01	3.362	O	|	|	|	2.83
265.750	0.00	0.01	3.361	O	|	|	|	2.83
265.833	0.00	0.01	3.361	O	|	|	|	2.83
265.917	0.00	0.01	3.361	O	|	|	|	2.83
266.000	0.00	0.01	3.361	O	|	|	|	2.83
266.083	0.00	0.01	3.361	O	|	|	|	2.83
266.167	0.00	0.01	3.361	O	|	|	|	2.83
266.250	0.00	0.01	3.361	O	|	|	|	2.83
266.333	0.00	0.01	3.361	O	|	|	|	2.83
266.417	0.00	0.01	3.361	O	|	|	|	2.83
266.500	0.00	0.01	3.361	O	|	|	|	2.83
266.583	0.00	0.01	3.361	O	|	|	|	2.83
266.667	0.00	0.01	3.361	O	|	|	|	2.83
266.750	0.00	0.01	3.361	O	|	|	|	2.83
266.833	0.00	0.01	3.361	O	|	|	|	2.83
266.917	0.00	0.01	3.361	O	|	|	|	2.83
267.000	0.00	0.01	3.360	O	|	|	|	2.83
267.083	0.00	0.01	3.360	O	|	|	|	2.83
267.167	0.00	0.01	3.360	O	|	|	|	2.83
267.250	0.00	0.01	3.360	O	|	|	|	2.83
267.333	0.00	0.01	3.360	O	|	|	|	2.83
267.417	0.00	0.01	3.360	O	|	|	|	2.83
267.500	0.00	0.01	3.360	O	|	|	|	2.83
267.583	0.00	0.01	3.360	O	|	|	|	2.83
267.667	0.00	0.01	3.360	O	|	|	|	2.83
267.750	0.00	0.01	3.360	O	|	|	|	2.83
267.833	0.00	0.01	3.360	O	|	|	|	2.83
267.917	0.00	0.01	3.360	O	|	|	|	2.83
268.000	0.00	0.01	3.360	O	|	|	|	2.83
268.083	0.00	0.01	3.360	O	|	|	|	2.83
268.167	0.00	0.01	3.359	O	|	|	|	2.83
268.250	0.00	0.01	3.359	O	|	|	|	2.83
268.333	0.00	0.01	3.359	O	|	|	|	2.83
268.417	0.00	0.01	3.359	O	|	|	|	2.83
268.500	0.00	0.01	3.359	O	|	|	|	2.83
268.583	0.00	0.01	3.359	O	|	|	|	2.83
268.667	0.00	0.01	3.359	O	|	|	|	2.83
268.750	0.00	0.01	3.359	O	|	|	|	2.83
268.833	0.00	0.01	3.359	O	|	|	|	2.83

268.917	0.00	0.01	3.359	O	|	|	|	2.83
269.000	0.00	0.01	3.359	O	|	|	|	2.83
269.083	0.00	0.01	3.359	O	|	|	|	2.83
269.167	0.00	0.01	3.359	O	|	|	|	2.83
269.250	0.00	0.01	3.359	O	|	|	|	2.83
269.333	0.00	0.01	3.359	O	|	|	|	2.83
269.417	0.00	0.01	3.358	O	|	|	|	2.83
269.500	0.00	0.01	3.358	O	|	|	|	2.83
269.583	0.00	0.01	3.358	O	|	|	|	2.83
269.667	0.00	0.01	3.358	O	|	|	|	2.83
269.750	0.00	0.01	3.358	O	|	|	|	2.83
269.833	0.00	0.01	3.358	O	|	|	|	2.83
269.917	0.00	0.01	3.358	O	|	|	|	2.83
270.000	0.00	0.01	3.358	O	|	|	|	2.83
270.083	0.00	0.01	3.358	O	|	|	|	2.83
270.167	0.00	0.01	3.358	O	|	|	|	2.83
270.250	0.00	0.01	3.358	O	|	|	|	2.83
270.333	0.00	0.01	3.358	O	|	|	|	2.83
270.417	0.00	0.01	3.358	O	|	|	|	2.83
270.500	0.00	0.01	3.358	O	|	|	|	2.83
270.583	0.00	0.01	3.357	O	|	|	|	2.83
270.667	0.00	0.01	3.357	O	|	|	|	2.83
270.750	0.00	0.01	3.357	O	|	|	|	2.83
270.833	0.00	0.01	3.357	O	|	|	|	2.83
270.917	0.00	0.01	3.357	O	|	|	|	2.83
271.000	0.00	0.01	3.357	O	|	|	|	2.83
271.083	0.00	0.01	3.357	O	|	|	|	2.83
271.167	0.00	0.01	3.357	O	|	|	|	2.83
271.250	0.00	0.01	3.357	O	|	|	|	2.83
271.333	0.00	0.01	3.357	O	|	|	|	2.83
271.417	0.00	0.01	3.357	O	|	|	|	2.83
271.500	0.00	0.01	3.357	O	|	|	|	2.83
271.583	0.00	0.01	3.357	O	|	|	|	2.83
271.667	0.00	0.01	3.357	O	|	|	|	2.83
271.750	0.00	0.01	3.357	O	|	|	|	2.83
271.833	0.00	0.01	3.356	O	|	|	|	2.83
271.917	0.00	0.01	3.356	O	|	|	|	2.83
272.000	0.00	0.01	3.356	O	|	|	|	2.83
272.083	0.00	0.01	3.356	O	|	|	|	2.83
272.167	0.00	0.01	3.356	O	|	|	|	2.83
272.250	0.00	0.01	3.356	O	|	|	|	2.83
272.333	0.00	0.01	3.356	O	|	|	|	2.83
272.417	0.00	0.01	3.356	O	|	|	|	2.83
272.500	0.00	0.01	3.356	O	|	|	|	2.83
272.583	0.00	0.01	3.356	O	|	|	|	2.83
272.667	0.00	0.01	3.356	O	|	|	|	2.83
272.750	0.00	0.01	3.356	O	|	|	|	2.83
272.833	0.00	0.01	3.356	O	|	|	|	2.83
272.917	0.00	0.01	3.356	O	|	|	|	2.83
273.000	0.00	0.01	3.355	O	|	|	|	2.83

273.083	0.00	0.01	3.355	O				2.83
273.167	0.00	0.01	3.355	O				2.83
273.250	0.00	0.01	3.355	O				2.83
273.333	0.00	0.01	3.355	O				2.83
273.417	0.00	0.01	3.355	O				2.83
273.500	0.00	0.01	3.355	O				2.83
273.583	0.00	0.01	3.355	O				2.83
273.667	0.00	0.01	3.355	O				2.83
273.750	0.00	0.01	3.355	O				2.83
273.833	0.00	0.01	3.355	O				2.83
273.917	0.00	0.01	3.355	O				2.83
274.000	0.00	0.01	3.355	O				2.83
274.083	0.00	0.01	3.355	O				2.83
274.167	0.00	0.01	3.355	O				2.83
274.250	0.00	0.01	3.354	O				2.83
274.333	0.00	0.01	3.354	O				2.83
274.417	0.00	0.01	3.354	O				2.83
274.500	0.00	0.01	3.354	O				2.83
274.583	0.00	0.01	3.354	O				2.83
274.667	0.00	0.01	3.354	O				2.83
274.750	0.00	0.01	3.354	O				2.83
274.833	0.00	0.01	3.354	O				2.83
274.917	0.00	0.01	3.354	O				2.83
275.000	0.00	0.01	3.354	O				2.83
275.083	0.00	0.01	3.354	O				2.83
275.167	0.00	0.01	3.354	O				2.83
275.250	0.00	0.01	3.354	O				2.83
275.333	0.00	0.01	3.354	O				2.83
275.417	0.00	0.01	3.353	O				2.83
275.500	0.00	0.01	3.353	O				2.83
275.583	0.00	0.01	3.353	O				2.83
275.667	0.00	0.01	3.353	O				2.83
275.750	0.00	0.01	3.353	O				2.83
275.833	0.00	0.01	3.353	O				2.83
275.917	0.00	0.01	3.353	O				2.83
276.000	0.00	0.01	3.353	O				2.83
276.083	0.00	0.01	3.353	O				2.83
276.167	0.00	0.01	3.353	O				2.83
276.250	0.00	0.01	3.353	O				2.83
276.333	0.00	0.01	3.353	O				2.83
276.417	0.00	0.01	3.353	O				2.83
276.500	0.00	0.01	3.353	O				2.83
276.583	0.00	0.01	3.353	O				2.83
276.667	0.00	0.01	3.352	O				2.83
276.750	0.00	0.01	3.352	O				2.83
276.833	0.00	0.01	3.352	O				2.83
276.917	0.00	0.01	3.352	O				2.83
277.000	0.00	0.01	3.352	O				2.83
277.083	0.00	0.01	3.352	O				2.83
277.167	0.00	0.01	3.352	O				2.83

277.250	0.00	0.01	3.352	O	|	|	|	2.83
277.333	0.00	0.01	3.352	O	|	|	|	2.83
277.417	0.00	0.01	3.352	O	|	|	|	2.83
277.500	0.00	0.01	3.352	O	|	|	|	2.83
277.583	0.00	0.01	3.352	O	|	|	|	2.83
277.667	0.00	0.01	3.352	O	|	|	|	2.83
277.750	0.00	0.01	3.352	O	|	|	|	2.83
277.833	0.00	0.01	3.351	O	|	|	|	2.83
277.917	0.00	0.01	3.351	O	|	|	|	2.83
278.000	0.00	0.01	3.351	O	|	|	|	2.83
278.083	0.00	0.01	3.351	O	|	|	|	2.83
278.167	0.00	0.01	3.351	O	|	|	|	2.83
278.250	0.00	0.01	3.351	O	|	|	|	2.83
278.333	0.00	0.01	3.351	O	|	|	|	2.83
278.417	0.00	0.01	3.351	O	|	|	|	2.83
278.500	0.00	0.01	3.351	O	|	|	|	2.83
278.583	0.00	0.01	3.351	O	|	|	|	2.83
278.667	0.00	0.01	3.351	O	|	|	|	2.83
278.750	0.00	0.01	3.351	O	|	|	|	2.83
278.833	0.00	0.01	3.351	O	|	|	|	2.83
278.917	0.00	0.01	3.351	O	|	|	|	2.83
279.000	0.00	0.01	3.351	O	|	|	|	2.83
279.083	0.00	0.01	3.350	O	|	|	|	2.83
279.167	0.00	0.01	3.350	O	|	|	|	2.83
279.250	0.00	0.01	3.350	O	|	|	|	2.83
279.333	0.00	0.01	3.350	O	|	|	|	2.83
279.417	0.00	0.01	3.350	O	|	|	|	2.83
279.500	0.00	0.01	3.350	O	|	|	|	2.83
279.583	0.00	0.01	3.350	O	|	|	|	2.83
279.667	0.00	0.01	3.350	O	|	|	|	2.82
279.750	0.00	0.01	3.350	O	|	|	|	2.82
279.833	0.00	0.01	3.350	O	|	|	|	2.82
279.917	0.00	0.01	3.350	O	|	|	|	2.82
280.000	0.00	0.01	3.350	O	|	|	|	2.82
280.083	0.00	0.01	3.350	O	|	|	|	2.82
280.167	0.00	0.01	3.350	O	|	|	|	2.82
280.250	0.00	0.01	3.349	O	|	|	|	2.82
280.333	0.00	0.01	3.349	O	|	|	|	2.82
280.417	0.00	0.01	3.349	O	|	|	|	2.82
280.500	0.00	0.01	3.349	O	|	|	|	2.82
280.583	0.00	0.01	3.349	O	|	|	|	2.82
280.667	0.00	0.01	3.349	O	|	|	|	2.82
280.750	0.00	0.01	3.349	O	|	|	|	2.82
280.833	0.00	0.01	3.349	O	|	|	|	2.82
280.917	0.00	0.01	3.349	O	|	|	|	2.82
281.000	0.00	0.01	3.349	O	|	|	|	2.82
281.083	0.00	0.01	3.349	O	|	|	|	2.82
281.167	0.00	0.01	3.349	O	|	|	|	2.82
281.250	0.00	0.01	3.349	O	|	|	|	2.82
281.333	0.00	0.01	3.349	O	|	|	|	2.82

281.417	0.00	0.01	3.349	O	|	|	|	2.82
281.500	0.00	0.01	3.348	O	|	|	|	2.82
281.583	0.00	0.01	3.348	O	|	|	|	2.82
281.667	0.00	0.01	3.348	O	|	|	|	2.82
281.750	0.00	0.01	3.348	O	|	|	|	2.82
281.833	0.00	0.01	3.348	O	|	|	|	2.82
281.917	0.00	0.01	3.348	O	|	|	|	2.82
282.000	0.00	0.01	3.348	O	|	|	|	2.82
282.083	0.00	0.01	3.348	O	|	|	|	2.82
282.167	0.00	0.01	3.348	O	|	|	|	2.82
282.250	0.00	0.01	3.348	O	|	|	|	2.82
282.333	0.00	0.01	3.348	O	|	|	|	2.82
282.417	0.00	0.01	3.348	O	|	|	|	2.82
282.500	0.00	0.01	3.348	O	|	|	|	2.82
282.583	0.00	0.01	3.348	O	|	|	|	2.82
282.667	0.00	0.01	3.347	O	|	|	|	2.82
282.750	0.00	0.01	3.347	O	|	|	|	2.82
282.833	0.00	0.01	3.347	O	|	|	|	2.82
282.917	0.00	0.01	3.347	O	|	|	|	2.82
283.000	0.00	0.01	3.347	O	|	|	|	2.82
283.083	0.00	0.01	3.347	O	|	|	|	2.82
283.167	0.00	0.01	3.347	O	|	|	|	2.82
283.250	0.00	0.01	3.347	O	|	|	|	2.82
283.333	0.00	0.01	3.347	O	|	|	|	2.82
283.417	0.00	0.01	3.347	O	|	|	|	2.82
283.500	0.00	0.01	3.347	O	|	|	|	2.82
283.583	0.00	0.01	3.347	O	|	|	|	2.82
283.667	0.00	0.01	3.347	O	|	|	|	2.82
283.750	0.00	0.01	3.347	O	|	|	|	2.82
283.833	0.00	0.01	3.347	O	|	|	|	2.82
283.917	0.00	0.01	3.346	O	|	|	|	2.82
284.000	0.00	0.01	3.346	O	|	|	|	2.82
284.083	0.00	0.01	3.346	O	|	|	|	2.82
284.167	0.00	0.01	3.346	O	|	|	|	2.82
284.250	0.00	0.01	3.346	O	|	|	|	2.82
284.333	0.00	0.01	3.346	O	|	|	|	2.82
284.417	0.00	0.01	3.346	O	|	|	|	2.82
284.500	0.00	0.01	3.346	O	|	|	|	2.82
284.583	0.00	0.01	3.346	O	|	|	|	2.82
284.667	0.00	0.01	3.346	O	|	|	|	2.82
284.750	0.00	0.01	3.346	O	|	|	|	2.82
284.833	0.00	0.01	3.346	O	|	|	|	2.82
284.917	0.00	0.01	3.346	O	|	|	|	2.82
285.000	0.00	0.01	3.346	O	|	|	|	2.82
285.083	0.00	0.01	3.345	O	|	|	|	2.82
285.167	0.00	0.01	3.345	O	|	|	|	2.82
285.250	0.00	0.01	3.345	O	|	|	|	2.82
285.333	0.00	0.01	3.345	O	|	|	|	2.82
285.417	0.00	0.01	3.345	O	|	|	|	2.82
285.500	0.00	0.01	3.345	O	|	|	|	2.82

285.583	0.00	0.01	3.345	O	|	|	|	2.82
285.667	0.00	0.01	3.345	O	|	|	|	2.82
285.750	0.00	0.01	3.345	O	|	|	|	2.82
285.833	0.00	0.01	3.345	O	|	|	|	2.82
285.917	0.00	0.01	3.345	O	|	|	|	2.82
286.000	0.00	0.01	3.345	O	|	|	|	2.82
286.083	0.00	0.01	3.345	O	|	|	|	2.82
286.167	0.00	0.01	3.345	O	|	|	|	2.82
286.250	0.00	0.01	3.345	O	|	|	|	2.82
286.333	0.00	0.01	3.344	O	|	|	|	2.82
286.417	0.00	0.01	3.344	O	|	|	|	2.82
286.500	0.00	0.01	3.344	O	|	|	|	2.82
286.583	0.00	0.01	3.344	O	|	|	|	2.82
286.667	0.00	0.01	3.344	O	|	|	|	2.82
286.750	0.00	0.01	3.344	O	|	|	|	2.82
286.833	0.00	0.01	3.344	O	|	|	|	2.82
286.917	0.00	0.01	3.344	O	|	|	|	2.82
287.000	0.00	0.01	3.344	O	|	|	|	2.82
287.083	0.00	0.01	3.344	O	|	|	|	2.82
287.167	0.00	0.01	3.344	O	|	|	|	2.82
287.250	0.00	0.01	3.344	O	|	|	|	2.82
287.333	0.00	0.01	3.344	O	|	|	|	2.82
287.417	0.00	0.01	3.344	O	|	|	|	2.82
287.500	0.00	0.01	3.343	O	|	|	|	2.82
287.583	0.00	0.01	3.343	O	|	|	|	2.82
287.667	0.00	0.01	3.343	O	|	|	|	2.82
287.750	0.00	0.01	3.343	O	|	|	|	2.82
287.833	0.00	0.01	3.343	O	|	|	|	2.82
287.917	0.00	0.01	3.343	O	|	|	|	2.82
288.000	0.00	0.01	3.343	O	|	|	|	2.82
288.083	0.00	0.01	3.343	O	|	|	|	2.82
288.167	0.00	0.01	3.343	O	|	|	|	2.82
288.250	0.00	0.01	3.343	O	|	|	|	2.82
288.333	0.00	0.01	3.343	O	|	|	|	2.82
288.417	0.00	0.01	3.343	O	|	|	|	2.82
288.500	0.00	0.01	3.343	O	|	|	|	2.82
288.583	0.00	0.01	3.343	O	|	|	|	2.82
288.667	0.00	0.01	3.343	O	|	|	|	2.82
288.750	0.00	0.01	3.342	O	|	|	|	2.82
288.833	0.00	0.01	3.342	O	|	|	|	2.82
288.917	0.00	0.01	3.342	O	|	|	|	2.82
289.000	0.00	0.01	3.342	O	|	|	|	2.82
289.083	0.00	0.01	3.342	O	|	|	|	2.82
289.167	0.00	0.01	3.342	O	|	|	|	2.82
289.250	0.00	0.01	3.342	O	|	|	|	2.82
289.333	0.00	0.01	3.342	O	|	|	|	2.82
289.417	0.00	0.01	3.342	O	|	|	|	2.82
289.500	0.00	0.01	3.342	O	|	|	|	2.82
289.583	0.00	0.01	3.342	O	|	|	|	2.82
289.667	0.00	0.01	3.342	O	|	|	|	2.82

289.750	0.00	0.01	3.342	O	|	|	|	2.82
289.833	0.00	0.01	3.342	O	|	|	|	2.82
289.917	0.00	0.01	3.341	O	|	|	|	2.82
290.000	0.00	0.01	3.341	O	|	|	|	2.82
290.083	0.00	0.01	3.341	O	|	|	|	2.82
290.167	0.00	0.01	3.341	O	|	|	|	2.82
290.250	0.00	0.01	3.341	O	|	|	|	2.82
290.333	0.00	0.01	3.341	O	|	|	|	2.82
290.417	0.00	0.01	3.341	O	|	|	|	2.82
290.500	0.00	0.01	3.341	O	|	|	|	2.82
290.583	0.00	0.01	3.341	O	|	|	|	2.82
290.667	0.00	0.01	3.341	O	|	|	|	2.82
290.750	0.00	0.01	3.341	O	|	|	|	2.82
290.833	0.00	0.01	3.341	O	|	|	|	2.82
290.917	0.00	0.01	3.341	O	|	|	|	2.82
291.000	0.00	0.01	3.341	O	|	|	|	2.82
291.083	0.00	0.01	3.341	O	|	|	|	2.82
291.167	0.00	0.01	3.340	O	|	|	|	2.82
291.250	0.00	0.01	3.340	O	|	|	|	2.82
291.333	0.00	0.01	3.340	O	|	|	|	2.82
291.417	0.00	0.01	3.340	O	|	|	|	2.82
291.500	0.00	0.01	3.340	O	|	|	|	2.82
291.583	0.00	0.01	3.340	O	|	|	|	2.82
291.667	0.00	0.01	3.340	O	|	|	|	2.82
291.750	0.00	0.01	3.340	O	|	|	|	2.82
291.833	0.00	0.01	3.340	O	|	|	|	2.82
291.917	0.00	0.01	3.340	O	|	|	|	2.82
292.000	0.00	0.01	3.340	O	|	|	|	2.82
292.083	0.00	0.01	3.340	O	|	|	|	2.82
292.167	0.00	0.01	3.340	O	|	|	|	2.82
292.250	0.00	0.01	3.340	O	|	|	|	2.82
292.333	0.00	0.01	3.340	O	|	|	|	2.82
292.417	0.00	0.01	3.339	O	|	|	|	2.82
292.500	0.00	0.01	3.339	O	|	|	|	2.82
292.583	0.00	0.01	3.339	O	|	|	|	2.82
292.667	0.00	0.01	3.339	O	|	|	|	2.82
292.750	0.00	0.01	3.339	O	|	|	|	2.82
292.833	0.00	0.01	3.339	O	|	|	|	2.82
292.917	0.00	0.01	3.339	O	|	|	|	2.82
293.000	0.00	0.01	3.339	O	|	|	|	2.82
293.083	0.00	0.01	3.339	O	|	|	|	2.82
293.167	0.00	0.01	3.339	O	|	|	|	2.82
293.250	0.00	0.01	3.339	O	|	|	|	2.82
293.333	0.00	0.01	3.339	O	|	|	|	2.82
293.417	0.00	0.01	3.339	O	|	|	|	2.82
293.500	0.00	0.01	3.339	O	|	|	|	2.82
293.583	0.00	0.01	3.338	O	|	|	|	2.82
293.667	0.00	0.01	3.338	O	|	|	|	2.82
293.750	0.00	0.01	3.338	O	|	|	|	2.82
293.833	0.00	0.01	3.338	O	|	|	|	2.82

293.917	0.00	0.01	3.338	O				2.82
294.000	0.00	0.01	3.338	O				2.82
294.083	0.00	0.01	3.338	O				2.82
294.167	0.00	0.01	3.338	O				2.81
294.250	0.00	0.01	3.338	O				2.81
294.333	0.00	0.01	3.338	O				2.81
294.417	0.00	0.01	3.338	O				2.81
294.500	0.00	0.01	3.338	O				2.81
294.583	0.00	0.01	3.338	O				2.81
294.667	0.00	0.01	3.338	O				2.81
294.750	0.00	0.01	3.338	O				2.81
294.833	0.00	0.01	3.337	O				2.81
294.917	0.00	0.01	3.337	O				2.81
295.000	0.00	0.01	3.337	O				2.81
295.083	0.00	0.01	3.337	O				2.81
295.167	0.00	0.01	3.337	O				2.81
295.250	0.00	0.01	3.337	O				2.81
295.333	0.00	0.01	3.337	O				2.81
295.417	0.00	0.01	3.337	O				2.81
295.500	0.00	0.01	3.337	O				2.81
295.583	0.00	0.01	3.337	O				2.81
295.667	0.00	0.01	3.337	O				2.81
295.750	0.00	0.01	3.337	O				2.81
295.833	0.00	0.01	3.337	O				2.81
295.917	0.00	0.01	3.337	O				2.81
296.000	0.00	0.01	3.336	O				2.81
296.083	0.00	0.01	3.336	O				2.81
296.167	0.00	0.01	3.336	O				2.81
296.250	0.00	0.01	3.336	O				2.81
296.333	0.00	0.01	3.336	O				2.81
296.417	0.00	0.01	3.336	O				2.81
296.500	0.00	0.01	3.336	O				2.81
296.583	0.00	0.01	3.336	O				2.81
296.667	0.00	0.01	3.336	O				2.81
296.750	0.00	0.01	3.336	O				2.81
296.833	0.00	0.01	3.336	O				2.81
296.917	0.00	0.01	3.336	O				2.81
297.000	0.00	0.01	3.336	O				2.81
297.083	0.00	0.01	3.336	O				2.81
297.167	0.00	0.01	3.336	O				2.81
297.250	0.00	0.01	3.335	O				2.81
297.333	0.00	0.01	3.335	O				2.81
297.417	0.00	0.01	3.335	O				2.81
297.500	0.00	0.01	3.335	O				2.81
297.583	0.00	0.01	3.335	O				2.81
297.667	0.00	0.01	3.335	O				2.81
297.750	0.00	0.01	3.335	O				2.81
297.833	0.00	0.01	3.335	O				2.81
297.917	0.00	0.01	3.335	O				2.81
298.000	0.00	0.01	3.335	O				2.81

298.083	0.00	0.01	3.335	O				2.81
298.167	0.00	0.01	3.335	O				2.81
298.250	0.00	0.01	3.335	O				2.81
298.333	0.00	0.01	3.335	O				2.81
298.417	0.00	0.01	3.334	O				2.81
298.500	0.00	0.01	3.334	O				2.81
298.583	0.00	0.01	3.334	O				2.81
298.667	0.00	0.01	3.334	O				2.81
298.750	0.00	0.01	3.334	O				2.81
298.833	0.00	0.01	3.334	O				2.81
298.917	0.00	0.01	3.334	O				2.81
299.000	0.00	0.01	3.334	O				2.81
299.083	0.00	0.01	3.334	O				2.81
299.167	0.00	0.01	3.334	O				2.81
299.250	0.00	0.01	3.334	O				2.81
299.333	0.00	0.01	3.334	O				2.81
299.417	0.00	0.01	3.334	O				2.81
299.500	0.00	0.01	3.334	O				2.81
299.583	0.00	0.01	3.334	O				2.81
299.667	0.00	0.01	3.333	O				2.81
299.750	0.00	0.01	3.333	O				2.81
299.833	0.00	0.01	3.333	O				2.81
299.917	0.00	0.01	3.333	O				2.81
300.000	0.00	0.01	3.333	O				2.81
300.083	0.00	0.01	3.333	O				2.81
300.167	0.00	0.01	3.333	O				2.81
300.250	0.00	0.01	3.333	O				2.81
300.333	0.00	0.01	3.333	O				2.81
300.417	0.00	0.01	3.333	O				2.81
300.500	0.00	0.01	3.333	O				2.81
300.583	0.00	0.01	3.333	O				2.81
300.667	0.00	0.01	3.333	O				2.81
300.750	0.00	0.01	3.333	O				2.81
300.833	0.00	0.01	3.332	O				2.81
300.917	0.00	0.01	3.332	O				2.81
301.000	0.00	0.01	3.332	O				2.81
301.083	0.00	0.01	3.332	O				2.81
301.167	0.00	0.01	3.332	O				2.81
301.250	0.00	0.01	3.332	O				2.81
301.333	0.00	0.01	3.332	O				2.81
301.417	0.00	0.01	3.332	O				2.81
301.500	0.00	0.01	3.332	O				2.81
301.583	0.00	0.01	3.332	O				2.81
301.667	0.00	0.01	3.332	O				2.81
301.750	0.00	0.01	3.332	O				2.81
301.833	0.00	0.01	3.332	O				2.81
301.917	0.00	0.01	3.332	O				2.81
302.000	0.00	0.01	3.332	O				2.81
302.083	0.00	0.01	3.331	O				2.81
302.167	0.00	0.01	3.331	O				2.81

302.250	0.00	0.01	3.331	O				2.81
302.333	0.00	0.01	3.331	O				2.81
302.417	0.00	0.01	3.331	O				2.81
302.500	0.00	0.01	3.331	O				2.81
302.583	0.00	0.01	3.331	O				2.81
302.667	0.00	0.01	3.331	O				2.81
302.750	0.00	0.01	3.331	O				2.81
302.833	0.00	0.01	3.331	O				2.81
302.917	0.00	0.01	3.331	O				2.81
303.000	0.00	0.01	3.331	O				2.81
303.083	0.00	0.01	3.331	O				2.81
303.167	0.00	0.01	3.331	O				2.81
303.250	0.00	0.01	3.330	O				2.81
303.333	0.00	0.01	3.330	O				2.81
303.417	0.00	0.01	3.330	O				2.81
303.500	0.00	0.01	3.330	O				2.81
303.583	0.00	0.01	3.330	O				2.81
303.667	0.00	0.01	3.330	O				2.81
303.750	0.00	0.01	3.330	O				2.81
303.833	0.00	0.01	3.330	O				2.81
303.917	0.00	0.01	3.330	O				2.81
304.000	0.00	0.01	3.330	O				2.81
304.083	0.00	0.01	3.330	O				2.81
304.167	0.00	0.01	3.330	O				2.81
304.250	0.00	0.01	3.330	O				2.81
304.333	0.00	0.01	3.330	O				2.81
304.417	0.00	0.01	3.330	O				2.81
304.500	0.00	0.01	3.329	O				2.81
304.583	0.00	0.01	3.329	O				2.81
304.667	0.00	0.01	3.329	O				2.81
304.750	0.00	0.01	3.329	O				2.81
304.833	0.00	0.01	3.329	O				2.81
304.917	0.00	0.01	3.329	O				2.81
305.000	0.00	0.01	3.329	O				2.81
305.083	0.00	0.01	3.329	O				2.81
305.167	0.00	0.01	3.329	O				2.81
305.250	0.00	0.01	3.329	O				2.81
305.333	0.00	0.01	3.329	O				2.81
305.417	0.00	0.01	3.329	O				2.81
305.500	0.00	0.01	3.329	O				2.81
305.583	0.00	0.01	3.329	O				2.81
305.667	0.00	0.01	3.328	O				2.81
305.750	0.00	0.01	3.328	O				2.81
305.833	0.00	0.01	3.328	O				2.81
305.917	0.00	0.01	3.328	O				2.81
306.000	0.00	0.01	3.328	O				2.81
306.083	0.00	0.01	3.328	O				2.81
306.167	0.00	0.01	3.328	O				2.81
306.250	0.00	0.01	3.328	O				2.81
306.333	0.00	0.01	3.328	O				2.81

306.417	0.00	0.01	3.328	O				2.81
306.500	0.00	0.01	3.328	O				2.81
306.583	0.00	0.01	3.328	O				2.81
306.667	0.00	0.01	3.328	O				2.81
306.750	0.00	0.01	3.328	O				2.81
306.833	0.00	0.01	3.328	O				2.81
306.917	0.00	0.01	3.327	O				2.81
307.000	0.00	0.01	3.327	O				2.81
307.083	0.00	0.01	3.327	O				2.81
307.167	0.00	0.01	3.327	O				2.81
307.250	0.00	0.01	3.327	O				2.81
307.333	0.00	0.01	3.327	O				2.81
307.417	0.00	0.01	3.327	O				2.81
307.500	0.00	0.01	3.327	O				2.81
307.583	0.00	0.01	3.327	O				2.81
307.667	0.00	0.01	3.327	O				2.81
307.750	0.00	0.01	3.327	O				2.81
307.833	0.00	0.01	3.327	O				2.81
307.917	0.00	0.01	3.327	O				2.81
308.000	0.00	0.01	3.327	O				2.81
308.083	0.00	0.01	3.326	O				2.81
308.167	0.00	0.01	3.326	O				2.81
308.250	0.00	0.01	3.326	O				2.81
308.333	0.00	0.01	3.326	O				2.81
308.417	0.00	0.01	3.326	O				2.81
308.500	0.00	0.01	3.326	O				2.81
308.583	0.00	0.01	3.326	O				2.81
308.667	0.00	0.01	3.326	O				2.81
308.750	0.00	0.01	3.326	O				2.80
308.833	0.00	0.01	3.326	O				2.80
308.917	0.00	0.01	3.326	O				2.80
309.000	0.00	0.01	3.326	O				2.80
309.083	0.00	0.01	3.326	O				2.80
309.167	0.00	0.01	3.326	O				2.80
309.250	0.00	0.01	3.326	O				2.80
309.333	0.00	0.01	3.325	O				2.80
309.417	0.00	0.01	3.325	O				2.80
309.500	0.00	0.01	3.325	O				2.80
309.583	0.00	0.01	3.325	O				2.80
309.667	0.00	0.01	3.325	O				2.80
309.750	0.00	0.01	3.325	O				2.80
309.833	0.00	0.01	3.325	O				2.80
309.917	0.00	0.01	3.325	O				2.80
310.000	0.00	0.01	3.325	O				2.80
310.083	0.00	0.01	3.325	O				2.80
310.167	0.00	0.01	3.325	O				2.80
310.250	0.00	0.01	3.325	O				2.80
310.333	0.00	0.01	3.325	O				2.80
310.417	0.00	0.01	3.325	O				2.80
310.500	0.00	0.01	3.324	O				2.80

310.583	0.00	0.01	3.324	O				2.80
310.667	0.00	0.01	3.324	O				2.80
310.750	0.00	0.01	3.324	O				2.80
310.833	0.00	0.01	3.324	O				2.80
310.917	0.00	0.01	3.324	O				2.80
311.000	0.00	0.01	3.324	O				2.80
311.083	0.00	0.01	3.324	O				2.80
311.167	0.00	0.01	3.324	O				2.80
311.250	0.00	0.01	3.324	O				2.80
311.333	0.00	0.01	3.324	O				2.80
311.417	0.00	0.01	3.324	O				2.80
311.500	0.00	0.01	3.324	O				2.80
311.583	0.00	0.01	3.324	O				2.80
311.667	0.00	0.01	3.324	O				2.80
311.750	0.00	0.01	3.323	O				2.80
311.833	0.00	0.01	3.323	O				2.80
311.917	0.00	0.01	3.323	O				2.80
312.000	0.00	0.01	3.323	O				2.80
312.083	0.00	0.01	3.323	O				2.80
312.167	0.00	0.01	3.323	O				2.80
312.250	0.00	0.01	3.323	O				2.80
312.333	0.00	0.01	3.323	O				2.80
312.417	0.00	0.01	3.323	O				2.80
312.500	0.00	0.01	3.323	O				2.80
312.583	0.00	0.01	3.323	O				2.80
312.667	0.00	0.01	3.323	O				2.80
312.750	0.00	0.01	3.323	O				2.80
312.833	0.00	0.01	3.323	O				2.80
312.917	0.00	0.01	3.322	O				2.80
313.000	0.00	0.01	3.322	O				2.80
313.083	0.00	0.01	3.322	O				2.80
313.167	0.00	0.01	3.322	O				2.80
313.250	0.00	0.01	3.322	O				2.80
313.333	0.00	0.01	3.322	O				2.80
313.417	0.00	0.01	3.322	O				2.80
313.500	0.00	0.01	3.322	O				2.80
313.583	0.00	0.01	3.322	O				2.80
313.667	0.00	0.01	3.322	O				2.80
313.750	0.00	0.01	3.322	O				2.80
313.833	0.00	0.01	3.322	O				2.80
313.917	0.00	0.01	3.322	O				2.80
314.000	0.00	0.01	3.322	O				2.80
314.083	0.00	0.01	3.322	O				2.80
314.167	0.00	0.01	3.321	O				2.80
314.250	0.00	0.01	3.321	O				2.80
314.333	0.00	0.01	3.321	O				2.80
314.417	0.00	0.01	3.321	O				2.80
314.500	0.00	0.01	3.321	O				2.80
314.583	0.00	0.01	3.321	O				2.80
314.667	0.00	0.01	3.321	O				2.80

314.750	0.00	0.01	3.321	O	|	|	|	2.80
314.833	0.00	0.01	3.321	O	|	|	|	2.80
314.917	0.00	0.01	3.321	O	|	|	|	2.80
315.000	0.00	0.01	3.321	O	|	|	|	2.80
315.083	0.00	0.01	3.321	O	|	|	|	2.80
315.167	0.00	0.01	3.321	O	|	|	|	2.80
315.250	0.00	0.01	3.321	O	|	|	|	2.80
315.333	0.00	0.01	3.320	O	|	|	|	2.80
315.417	0.00	0.01	3.320	O	|	|	|	2.80
315.500	0.00	0.01	3.320	O	|	|	|	2.80
315.583	0.00	0.01	3.320	O	|	|	|	2.80
315.667	0.00	0.01	3.320	O	|	|	|	2.80
315.750	0.00	0.01	3.320	O	|	|	|	2.80
315.833	0.00	0.01	3.320	O	|	|	|	2.80
315.917	0.00	0.01	3.320	O	|	|	|	2.80
316.000	0.00	0.01	3.320	O	|	|	|	2.80
316.083	0.00	0.01	3.320	O	|	|	|	2.80
316.167	0.00	0.01	3.320	O	|	|	|	2.80
316.250	0.00	0.01	3.320	O	|	|	|	2.80
316.333	0.00	0.01	3.320	O	|	|	|	2.80
316.417	0.00	0.01	3.320	O	|	|	|	2.80
316.500	0.00	0.01	3.320	O	|	|	|	2.80
316.583	0.00	0.01	3.319	O	|	|	|	2.80
316.667	0.00	0.01	3.319	O	|	|	|	2.80
316.750	0.00	0.01	3.319	O	|	|	|	2.80
316.833	0.00	0.01	3.319	O	|	|	|	2.80
316.917	0.00	0.01	3.319	O	|	|	|	2.80
317.000	0.00	0.01	3.319	O	|	|	|	2.80
317.083	0.00	0.01	3.319	O	|	|	|	2.80
317.167	0.00	0.01	3.319	O	|	|	|	2.80
317.250	0.00	0.01	3.319	O	|	|	|	2.80
317.333	0.00	0.01	3.319	O	|	|	|	2.80
317.417	0.00	0.01	3.319	O	|	|	|	2.80
317.500	0.00	0.01	3.319	O	|	|	|	2.80
317.583	0.00	0.01	3.319	O	|	|	|	2.80
317.667	0.00	0.01	3.319	O	|	|	|	2.80
317.750	0.00	0.01	3.318	O	|	|	|	2.80
317.833	0.00	0.01	3.318	O	|	|	|	2.80
317.917	0.00	0.01	3.318	O	|	|	|	2.80
318.000	0.00	0.01	3.318	O	|	|	|	2.80
318.083	0.00	0.01	3.318	O	|	|	|	2.80
318.167	0.00	0.01	3.318	O	|	|	|	2.80
318.250	0.00	0.01	3.318	O	|	|	|	2.80
318.333	0.00	0.01	3.318	O	|	|	|	2.80
318.417	0.00	0.01	3.318	O	|	|	|	2.80
318.500	0.00	0.01	3.318	O	|	|	|	2.80
318.583	0.00	0.01	3.318	O	|	|	|	2.80
318.667	0.00	0.01	3.318	O	|	|	|	2.80
318.750	0.00	0.01	3.318	O	|	|	|	2.80
318.833	0.00	0.01	3.318	O	|	|	|	2.80

318.917	0.00	0.01	3.318	O				2.80
319.000	0.00	0.01	3.317	O				2.80
319.083	0.00	0.01	3.317	O				2.80
319.167	0.00	0.01	3.317	O				2.80
319.250	0.00	0.01	3.317	O				2.80
319.333	0.00	0.01	3.317	O				2.80
319.417	0.00	0.01	3.317	O				2.80
319.500	0.00	0.01	3.317	O				2.80
319.583	0.00	0.01	3.317	O				2.80
319.667	0.00	0.01	3.317	O				2.80
319.750	0.00	0.01	3.317	O				2.80
319.833	0.00	0.01	3.317	O				2.80
319.917	0.00	0.01	3.317	O				2.80
320.000	0.00	0.01	3.317	O				2.80
320.083	0.00	0.01	3.317	O				2.80
320.167	0.00	0.01	3.316	O				2.80
320.250	0.00	0.01	3.316	O				2.80
320.333	0.00	0.01	3.316	O				2.80
320.417	0.00	0.01	3.316	O				2.80
320.500	0.00	0.01	3.316	O				2.80
320.583	0.00	0.01	3.316	O				2.80
320.667	0.00	0.01	3.316	O				2.80
320.750	0.00	0.01	3.316	O				2.80
320.833	0.00	0.01	3.316	O				2.80
320.917	0.00	0.01	3.316	O				2.80
321.000	0.00	0.01	3.316	O				2.80
321.083	0.00	0.01	3.316	O				2.80
321.167	0.00	0.01	3.316	O				2.80
321.250	0.00	0.01	3.316	O				2.80
321.333	0.00	0.01	3.316	O				2.80
321.417	0.00	0.01	3.315	O				2.80
321.500	0.00	0.01	3.315	O				2.80
321.583	0.00	0.01	3.315	O				2.80
321.667	0.00	0.01	3.315	O				2.80
321.750	0.00	0.01	3.315	O				2.80
321.833	0.00	0.01	3.315	O				2.80
321.917	0.00	0.01	3.315	O				2.80
322.000	0.00	0.01	3.315	O				2.80
322.083	0.00	0.01	3.315	O				2.80
322.167	0.00	0.01	3.315	O				2.80
322.250	0.00	0.01	3.315	O				2.80
322.333	0.00	0.01	3.315	O				2.80
322.417	0.00	0.01	3.315	O				2.80
322.500	0.00	0.01	3.315	O				2.80
322.583	0.00	0.01	3.315	O				2.80
322.667	0.00	0.01	3.314	O				2.80
322.750	0.00	0.01	3.314	O				2.80
322.833	0.00	0.01	3.314	O				2.80
322.917	0.00	0.01	3.314	O				2.80
323.000	0.00	0.01	3.314	O				2.80

323.083	0.00	0.01	3.314	O				2.80
323.167	0.00	0.01	3.314	O				2.80
323.250	0.00	0.01	3.314	O				2.79
323.333	0.00	0.01	3.314	O				2.79
323.417	0.00	0.01	3.314	O				2.79
323.500	0.00	0.01	3.314	O				2.79
323.583	0.00	0.01	3.314	O				2.79
323.667	0.00	0.01	3.314	O				2.79
323.750	0.00	0.01	3.314	O				2.79
323.833	0.00	0.01	3.313	O				2.79
323.917	0.00	0.01	3.313	O				2.79
324.000	0.00	0.01	3.313	O				2.79
324.083	0.00	0.01	3.313	O				2.79
324.167	0.00	0.01	3.313	O				2.79
324.250	0.00	0.01	3.313	O				2.79
324.333	0.00	0.01	3.313	O				2.79
324.417	0.00	0.01	3.313	O				2.79
324.500	0.00	0.01	3.313	O				2.79
324.583	0.00	0.01	3.313	O				2.79
324.667	0.00	0.01	3.313	O				2.79
324.750	0.00	0.01	3.313	O				2.79
324.833	0.00	0.01	3.313	O				2.79
324.917	0.00	0.01	3.313	O				2.79
325.000	0.00	0.01	3.313	O				2.79
325.083	0.00	0.01	3.312	O				2.79
325.167	0.00	0.01	3.312	O				2.79
325.250	0.00	0.01	3.312	O				2.79
325.333	0.00	0.01	3.312	O				2.79
325.417	0.00	0.01	3.312	O				2.79
325.500	0.00	0.01	3.312	O				2.79
325.583	0.00	0.01	3.312	O				2.79
325.667	0.00	0.01	3.312	O				2.79
325.750	0.00	0.01	3.312	O				2.79
325.833	0.00	0.01	3.312	O				2.79
325.917	0.00	0.01	3.312	O				2.79
326.000	0.00	0.01	3.312	O				2.79
326.083	0.00	0.01	3.312	O				2.79
326.167	0.00	0.01	3.312	O				2.79
326.250	0.00	0.01	3.311	O				2.79
326.333	0.00	0.01	3.311	O				2.79
326.417	0.00	0.01	3.311	O				2.79
326.500	0.00	0.01	3.311	O				2.79
326.583	0.00	0.01	3.311	O				2.79
326.667	0.00	0.01	3.311	O				2.79
326.750	0.00	0.01	3.311	O				2.79
326.833	0.00	0.01	3.311	O				2.79
326.917	0.00	0.01	3.311	O				2.79
327.000	0.00	0.01	3.311	O				2.79
327.083	0.00	0.01	3.311	O				2.79
327.167	0.00	0.01	3.311	O				2.79

327.250	0.00	0.01	3.311	O				2.79
327.333	0.00	0.01	3.311	O				2.79
327.417	0.00	0.01	3.311	O				2.79
327.500	0.00	0.01	3.310	O				2.79
327.583	0.00	0.01	3.310	O				2.79
327.667	0.00	0.01	3.310	O				2.79
327.750	0.00	0.01	3.310	O				2.79
327.833	0.00	0.01	3.310	O				2.79
327.917	0.00	0.01	3.310	O				2.79
328.000	0.00	0.01	3.310	O				2.79
328.083	0.00	0.01	3.310	O				2.79
328.167	0.00	0.01	3.310	O				2.79
328.250	0.00	0.01	3.310	O				2.79
328.333	0.00	0.01	3.310	O				2.79
328.417	0.00	0.01	3.310	O				2.79
328.500	0.00	0.01	3.310	O				2.79
328.583	0.00	0.01	3.310	O				2.79
328.667	0.00	0.01	3.309	O				2.79
328.750	0.00	0.01	3.309	O				2.79
328.833	0.00	0.01	3.309	O				2.79
328.917	0.00	0.01	3.309	O				2.79
329.000	0.00	0.01	3.309	O				2.79
329.083	0.00	0.01	3.309	O				2.79
329.167	0.00	0.01	3.309	O				2.79
329.250	0.00	0.01	3.309	O				2.79
329.333	0.00	0.01	3.309	O				2.79
329.417	0.00	0.01	3.309	O				2.79
329.500	0.00	0.01	3.309	O				2.79
329.583	0.00	0.01	3.309	O				2.79
329.667	0.00	0.01	3.309	O				2.79
329.750	0.00	0.01	3.309	O				2.79
329.833	0.00	0.01	3.309	O				2.79
329.917	0.00	0.01	3.308	O				2.79
330.000	0.00	0.01	3.308	O				2.79
330.083	0.00	0.01	3.308	O				2.79
330.167	0.00	0.01	3.308	O				2.79
330.250	0.00	0.01	3.308	O				2.79
330.333	0.00	0.01	3.308	O				2.79
330.417	0.00	0.01	3.308	O				2.79
330.500	0.00	0.01	3.308	O				2.79
330.583	0.00	0.01	3.308	O				2.79
330.667	0.00	0.01	3.308	O				2.79
330.750	0.00	0.01	3.308	O				2.79
330.833	0.00	0.01	3.308	O				2.79
330.917	0.00	0.01	3.308	O				2.79
331.000	0.00	0.01	3.308	O				2.79
331.083	0.00	0.01	3.307	O				2.79
331.167	0.00	0.01	3.307	O				2.79
331.250	0.00	0.01	3.307	O				2.79
331.333	0.00	0.01	3.307	O				2.79

331.417	0.00	0.01	3.307	O				2.79
331.500	0.00	0.01	3.307	O				2.79
331.583	0.00	0.01	3.307	O				2.79
331.667	0.00	0.01	3.307	O				2.79
331.750	0.00	0.01	3.307	O				2.79
331.833	0.00	0.01	3.307	O				2.79
331.917	0.00	0.01	3.307	O				2.79
332.000	0.00	0.01	3.307	O				2.79
332.083	0.00	0.01	3.307	O				2.79
332.167	0.00	0.01	3.307	O				2.79
332.250	0.00	0.01	3.307	O				2.79
332.333	0.00	0.01	3.306	O				2.79
332.417	0.00	0.01	3.306	O				2.79
332.500	0.00	0.01	3.306	O				2.79
332.583	0.00	0.01	3.306	O				2.79
332.667	0.00	0.01	3.306	O				2.79
332.750	0.00	0.01	3.306	O				2.79
332.833	0.00	0.01	3.306	O				2.79
332.917	0.00	0.01	3.306	O				2.79
333.000	0.00	0.01	3.306	O				2.79
333.083	0.00	0.01	3.306	O				2.79
333.167	0.00	0.01	3.306	O				2.79
333.250	0.00	0.01	3.306	O				2.79
333.333	0.00	0.01	3.306	O				2.79
333.417	0.00	0.01	3.306	O				2.79
333.500	0.00	0.01	3.305	O				2.79
333.583	0.00	0.01	3.305	O				2.79
333.667	0.00	0.01	3.305	O				2.79
333.750	0.00	0.01	3.305	O				2.79
333.833	0.00	0.01	3.305	O				2.79
333.917	0.00	0.01	3.305	O				2.79
334.000	0.00	0.01	3.305	O				2.79
334.083	0.00	0.01	3.305	O				2.79
334.167	0.00	0.01	3.305	O				2.79
334.250	0.00	0.01	3.305	O				2.79
334.333	0.00	0.01	3.305	O				2.79
334.417	0.00	0.01	3.305	O				2.79
334.500	0.00	0.01	3.305	O				2.79
334.583	0.00	0.01	3.305	O				2.79
334.667	0.00	0.01	3.305	O				2.79
334.750	0.00	0.01	3.304	O				2.79
334.833	0.00	0.01	3.304	O				2.79
334.917	0.00	0.01	3.304	O				2.79
335.000	0.00	0.01	3.304	O				2.79
335.083	0.00	0.01	3.304	O				2.79
335.167	0.00	0.01	3.304	O				2.79
335.250	0.00	0.01	3.304	O				2.79
335.333	0.00	0.01	3.304	O				2.79
335.417	0.00	0.01	3.304	O				2.79
335.500	0.00	0.01	3.304	O				2.79

335.583	0.00	0.01	3.304	O	|	|	|	2.79
335.667	0.00	0.01	3.304	O	|	|	|	2.79
335.750	0.00	0.01	3.304	O	|	|	|	2.79
335.833	0.00	0.01	3.304	O	|	|	|	2.79
335.917	0.00	0.01	3.303	O	|	|	|	2.79
336.000	0.00	0.01	3.303	O	|	|	|	2.79
336.083	0.00	0.01	3.303	O	|	|	|	2.79
336.167	0.00	0.01	3.303	O	|	|	|	2.79
336.250	0.00	0.01	3.303	O	|	|	|	2.79
336.333	0.00	0.01	3.303	O	|	|	|	2.79
336.417	0.00	0.01	3.303	O	|	|	|	2.79
336.500	0.00	0.01	3.303	O	|	|	|	2.79
336.583	0.00	0.01	3.303	O	|	|	|	2.79
336.667	0.00	0.01	3.303	O	|	|	|	2.79
336.750	0.00	0.01	3.303	O	|	|	|	2.79
336.833	0.00	0.01	3.303	O	|	|	|	2.79
336.917	0.00	0.01	3.303	O	|	|	|	2.79
337.000	0.00	0.01	3.303	O	|	|	|	2.79
337.083	0.00	0.01	3.303	O	|	|	|	2.79
337.167	0.00	0.01	3.302	O	|	|	|	2.79
337.250	0.00	0.01	3.302	O	|	|	|	2.79
337.333	0.00	0.01	3.302	O	|	|	|	2.79
337.417	0.00	0.01	3.302	O	|	|	|	2.79
337.500	0.00	0.01	3.302	O	|	|	|	2.79
337.583	0.00	0.01	3.302	O	|	|	|	2.79
337.667	0.00	0.01	3.302	O	|	|	|	2.79
337.750	0.00	0.01	3.302	O	|	|	|	2.78
337.833	0.00	0.01	3.302	O	|	|	|	2.78
337.917	0.00	0.01	3.302	O	|	|	|	2.78
338.000	0.00	0.01	3.302	O	|	|	|	2.78
338.083	0.00	0.01	3.302	O	|	|	|	2.78
338.167	0.00	0.01	3.302	O	|	|	|	2.78
338.250	0.00	0.01	3.302	O	|	|	|	2.78
338.333	0.00	0.01	3.301	O	|	|	|	2.78
338.417	0.00	0.01	3.301	O	|	|	|	2.78
338.500	0.00	0.01	3.301	O	|	|	|	2.78
338.583	0.00	0.01	3.301	O	|	|	|	2.78
338.667	0.00	0.01	3.301	O	|	|	|	2.78
338.750	0.00	0.01	3.301	O	|	|	|	2.78
338.833	0.00	0.01	3.301	O	|	|	|	2.78
338.917	0.00	0.01	3.301	O	|	|	|	2.78
339.000	0.00	0.01	3.301	O	|	|	|	2.78
339.083	0.00	0.01	3.301	O	|	|	|	2.78
339.167	0.00	0.01	3.301	O	|	|	|	2.78
339.250	0.00	0.01	3.301	O	|	|	|	2.78
339.333	0.00	0.01	3.301	O	|	|	|	2.78
339.417	0.00	0.01	3.301	O	|	|	|	2.78
339.500	0.00	0.01	3.301	O	|	|	|	2.78
339.583	0.00	0.01	3.300	O	|	|	|	2.78
339.667	0.00	0.01	3.300	O	|	|	|	2.78

339.750	0.00	0.01	3.300	O				2.78
339.833	0.00	0.01	3.300	O				2.78
339.917	0.00	0.01	3.300	O				2.78
340.000	0.00	0.01	3.300	O				2.78
340.083	0.00	0.01	3.300	O				2.78
340.167	0.00	0.01	3.300	O				2.78
340.250	0.00	0.01	3.300	O				2.78
340.333	0.00	0.01	3.300	O				2.78
340.417	0.00	0.01	3.300	O				2.78
340.500	0.00	0.01	3.300	O				2.78
340.583	0.00	0.01	3.300	O				2.78
340.667	0.00	0.01	3.300	O				2.78
340.750	0.00	0.01	3.299	O				2.78
340.833	0.00	0.01	3.299	O				2.78
340.917	0.00	0.01	3.299	O				2.78
341.000	0.00	0.01	3.299	O				2.78
341.083	0.00	0.01	3.299	O				2.78
341.167	0.00	0.01	3.299	O				2.78
341.250	0.00	0.01	3.299	O				2.78
341.333	0.00	0.01	3.299	O				2.78
341.417	0.00	0.01	3.299	O				2.78
341.500	0.00	0.01	3.299	O				2.78
341.583	0.00	0.01	3.299	O				2.78
341.667	0.00	0.01	3.299	O				2.78
341.750	0.00	0.01	3.299	O				2.78
341.833	0.00	0.01	3.299	O				2.78
341.917	0.00	0.01	3.299	O				2.78
342.000	0.00	0.01	3.298	O				2.78
342.083	0.00	0.01	3.298	O				2.78
342.167	0.00	0.01	3.298	O				2.78
342.250	0.00	0.01	3.298	O				2.78
342.333	0.00	0.01	3.298	O				2.78
342.417	0.00	0.01	3.298	O				2.78
342.500	0.00	0.01	3.298	O				2.78
342.583	0.00	0.01	3.298	O				2.78
342.667	0.00	0.01	3.298	O				2.78
342.750	0.00	0.01	3.298	O				2.78
342.833	0.00	0.01	3.298	O				2.78
342.917	0.00	0.01	3.298	O				2.78
343.000	0.00	0.01	3.298	O				2.78
343.083	0.00	0.01	3.298	O				2.78
343.167	0.00	0.01	3.297	O				2.78
343.250	0.00	0.01	3.297	O				2.78
343.333	0.00	0.01	3.297	O				2.78
343.417	0.00	0.01	3.297	O				2.78
343.500	0.00	0.01	3.297	O				2.78
343.583	0.00	0.01	3.297	O				2.78
343.667	0.00	0.01	3.297	O				2.78
343.750	0.00	0.01	3.297	O				2.78
343.833	0.00	0.01	3.297	O				2.78

343.917	0.00	0.01	3.297	O					2.78
344.000	0.00	0.01	3.297	O					2.78
344.083	0.00	0.01	3.297	O					2.78
344.167	0.00	0.01	3.297	O					2.78
344.250	0.00	0.01	3.297	O					2.78
344.333	0.00	0.01	3.297	O					2.78
344.417	0.00	0.01	3.296	O					2.78
344.500	0.00	0.01	3.296	O					2.78
344.583	0.00	0.01	3.296	O					2.78
344.667	0.00	0.01	3.296	O					2.78
344.750	0.00	0.01	3.296	O					2.78
344.833	0.00	0.01	3.296	O					2.78
344.917	0.00	0.01	3.296	O					2.78
345.000	0.00	0.01	3.296	O					2.78
345.083	0.00	0.01	3.296	O					2.78
345.167	0.00	0.01	3.296	O					2.78
345.250	0.00	0.01	3.296	O					2.78
345.333	0.00	0.01	3.296	O					2.78
345.417	0.00	0.01	3.296	O					2.78
345.500	0.00	0.01	3.296	O					2.78
345.583	0.00	0.01	3.295	O					2.78
345.667	0.00	0.01	3.295	O					2.78
345.750	0.00	0.01	3.295	O					2.78
345.833	0.00	0.01	3.295	O					2.78
345.917	0.00	0.01	3.295	O					2.78
346.000	0.00	0.01	3.295	O					2.78
346.083	0.00	0.01	3.295	O					2.78
346.167	0.00	0.01	3.295	O					2.78
346.250	0.00	0.01	3.295	O					2.78
346.333	0.00	0.01	3.295	O					2.78
346.417	0.00	0.01	3.295	O					2.78
346.500	0.00	0.01	3.295	O					2.78
346.583	0.00	0.01	3.295	O					2.78
346.667	0.00	0.01	3.295	O					2.78
346.750	0.00	0.01	3.295	O					2.78
346.833	0.00	0.01	3.294	O					2.78
346.917	0.00	0.01	3.294	O					2.78
347.000	0.00	0.01	3.294	O					2.78
347.083	0.00	0.01	3.294	O					2.78
347.167	0.00	0.01	3.294	O					2.78
347.250	0.00	0.01	3.294	O					2.78
347.333	0.00	0.01	3.294	O					2.78
347.417	0.00	0.01	3.294	O					2.78
347.500	0.00	0.01	3.294	O					2.78
347.583	0.00	0.01	3.294	O					2.78
347.667	0.00	0.01	3.294	O					2.78
347.750	0.00	0.01	3.294	O					2.78
347.833	0.00	0.01	3.294	O					2.78
347.917	0.00	0.01	3.294	O					2.78
348.000	0.00	0.01	3.293	O					2.78

348.083	0.00	0.01	3.293	O				2.78
348.167	0.00	0.01	3.293	O				2.78
348.250	0.00	0.01	3.293	O				2.78
348.333	0.00	0.01	3.293	O				2.78
348.417	0.00	0.01	3.293	O				2.78
348.500	0.00	0.01	3.293	O				2.78
348.583	0.00	0.01	3.293	O				2.78
348.667	0.00	0.01	3.293	O				2.78
348.750	0.00	0.01	3.293	O				2.78
348.833	0.00	0.01	3.293	O				2.78
348.917	0.00	0.01	3.293	O				2.78
349.000	0.00	0.01	3.293	O				2.78
349.083	0.00	0.01	3.293	O				2.78
349.167	0.00	0.01	3.293	O				2.78
349.250	0.00	0.01	3.292	O				2.78
349.333	0.00	0.01	3.292	O				2.78
349.417	0.00	0.01	3.292	O				2.78
349.500	0.00	0.01	3.292	O				2.78
349.583	0.00	0.01	3.292	O				2.78
349.667	0.00	0.01	3.292	O				2.78
349.750	0.00	0.01	3.292	O				2.78
349.833	0.00	0.01	3.292	O				2.78
349.917	0.00	0.01	3.292	O				2.78
350.000	0.00	0.01	3.292	O				2.78
350.083	0.00	0.01	3.292	O				2.78
350.167	0.00	0.01	3.292	O				2.78
350.250	0.00	0.01	3.292	O				2.78
350.333	0.00	0.01	3.292	O				2.78
350.417	0.00	0.01	3.291	O				2.78
350.500	0.00	0.01	3.291	O				2.78
350.583	0.00	0.01	3.291	O				2.78
350.667	0.00	0.01	3.291	O				2.78
350.750	0.00	0.01	3.291	O				2.78
350.833	0.00	0.01	3.291	O				2.78
350.917	0.00	0.01	3.291	O				2.78
351.000	0.00	0.01	3.291	O				2.78
351.083	0.00	0.01	3.291	O				2.78
351.167	0.00	0.01	3.291	O				2.78
351.250	0.00	0.01	3.291	O				2.78
351.333	0.00	0.01	3.291	O				2.78
351.417	0.00	0.01	3.291	O				2.78
351.500	0.00	0.01	3.291	O				2.78
351.583	0.00	0.01	3.291	O				2.78
351.667	0.00	0.01	3.290	O				2.78
351.750	0.00	0.01	3.290	O				2.78
351.833	0.00	0.01	3.290	O				2.78
351.917	0.00	0.01	3.290	O				2.78
352.000	0.00	0.01	3.290	O				2.78
352.083	0.00	0.01	3.290	O				2.78
352.167	0.00	0.01	3.290	O				2.78

352.250	0.00	0.01	3.290	O				2.77
352.333	0.00	0.01	3.290	O				2.77
352.417	0.00	0.01	3.290	O				2.77
352.500	0.00	0.01	3.290	O				2.77
352.583	0.00	0.01	3.290	O				2.77
352.667	0.00	0.01	3.290	O				2.77
352.750	0.00	0.01	3.290	O				2.77
352.833	0.00	0.01	3.290	O				2.77
352.917	0.00	0.01	3.289	O				2.77
353.000	0.00	0.01	3.289	O				2.77
353.083	0.00	0.01	3.289	O				2.77
353.167	0.00	0.01	3.289	O				2.77
353.250	0.00	0.01	3.289	O				2.77
353.333	0.00	0.01	3.289	O				2.77
353.417	0.00	0.01	3.289	O				2.77
353.500	0.00	0.01	3.289	O				2.77
353.583	0.00	0.01	3.289	O				2.77
353.667	0.00	0.01	3.289	O				2.77
353.750	0.00	0.01	3.289	O				2.77
353.833	0.00	0.01	3.289	O				2.77
353.917	0.00	0.01	3.289	O				2.77
354.000	0.00	0.01	3.289	O				2.77
354.083	0.00	0.01	3.288	O				2.77
354.167	0.00	0.01	3.288	O				2.77
354.250	0.00	0.01	3.288	O				2.77
354.333	0.00	0.01	3.288	O				2.77
354.417	0.00	0.01	3.288	O				2.77
354.500	0.00	0.01	3.288	O				2.77
354.583	0.00	0.01	3.288	O				2.77
354.667	0.00	0.01	3.288	O				2.77
354.750	0.00	0.01	3.288	O				2.77
354.833	0.00	0.01	3.288	O				2.77
354.917	0.00	0.01	3.288	O				2.77
355.000	0.00	0.01	3.288	O				2.77
355.083	0.00	0.01	3.288	O				2.77
355.167	0.00	0.01	3.288	O				2.77
355.250	0.00	0.01	3.288	O				2.77
355.333	0.00	0.01	3.287	O				2.77
355.417	0.00	0.01	3.287	O				2.77
355.500	0.00	0.01	3.287	O				2.77
355.583	0.00	0.01	3.287	O				2.77
355.667	0.00	0.01	3.287	O				2.77
355.750	0.00	0.01	3.287	O				2.77
355.833	0.00	0.01	3.287	O				2.77
355.917	0.00	0.01	3.287	O				2.77
356.000	0.00	0.01	3.287	O				2.77
356.083	0.00	0.01	3.287	O				2.77
356.167	0.00	0.01	3.287	O				2.77
356.250	0.00	0.01	3.287	O				2.77
356.333	0.00	0.01	3.287	O				2.77

356.417	0.00	0.01	3.287	O				2.77
356.500	0.00	0.01	3.286	O				2.77
356.583	0.00	0.01	3.286	O				2.77
356.667	0.00	0.01	3.286	O				2.77
356.750	0.00	0.01	3.286	O				2.77
356.833	0.00	0.01	3.286	O				2.77
356.917	0.00	0.01	3.286	O				2.77
357.000	0.00	0.01	3.286	O				2.77
357.083	0.00	0.01	3.286	O				2.77
357.167	0.00	0.01	3.286	O				2.77
357.250	0.00	0.01	3.286	O				2.77
357.333	0.00	0.01	3.286	O				2.77
357.417	0.00	0.01	3.286	O				2.77
357.500	0.00	0.01	3.286	O				2.77
357.583	0.00	0.01	3.286	O				2.77
357.667	0.00	0.01	3.286	O				2.77
357.750	0.00	0.01	3.285	O				2.77
357.833	0.00	0.01	3.285	O				2.77
357.917	0.00	0.01	3.285	O				2.77
358.000	0.00	0.01	3.285	O				2.77
358.083	0.00	0.01	3.285	O				2.77
358.167	0.00	0.01	3.285	O				2.77
358.250	0.00	0.01	3.285	O				2.77
358.333	0.00	0.01	3.285	O				2.77
358.417	0.00	0.01	3.285	O				2.77
358.500	0.00	0.01	3.285	O				2.77
358.583	0.00	0.01	3.285	O				2.77
358.667	0.00	0.01	3.285	O				2.77
358.750	0.00	0.01	3.285	O				2.77
358.833	0.00	0.01	3.285	O				2.77
358.917	0.00	0.01	3.284	O				2.77
359.000	0.00	0.01	3.284	O				2.77
359.083	0.00	0.01	3.284	O				2.77
359.167	0.00	0.01	3.284	O				2.77
359.250	0.00	0.01	3.284	O				2.77
359.333	0.00	0.01	3.284	O				2.77
359.417	0.00	0.01	3.284	O				2.77
359.500	0.00	0.01	3.284	O				2.77
359.583	0.00	0.01	3.284	O				2.77
359.667	0.00	0.01	3.284	O				2.77
359.750	0.00	0.01	3.284	O				2.77
359.833	0.00	0.01	3.284	O				2.77
359.917	0.00	0.01	3.284	O				2.77
360.000	0.00	0.01	3.284	O				2.77
360.083	0.00	0.01	3.284	O				2.77
360.167	0.00	0.01	3.283	O				2.77
360.250	0.00	0.01	3.283	O				2.77
360.333	0.00	0.01	3.283	O				2.77
360.417	0.00	0.01	3.283	O				2.77
360.500	0.00	0.01	3.283	O				2.77

360.583	0.00	0.01	3.283	O	|	|	|	2.77
360.667	0.00	0.01	3.283	O	|	|	|	2.77
360.750	0.00	0.01	3.283	O	|	|	|	2.77
360.833	0.00	0.01	3.283	O	|	|	|	2.77
360.917	0.00	0.01	3.283	O	|	|	|	2.77
361.000	0.00	0.01	3.283	O	|	|	|	2.77
361.083	0.00	0.01	3.283	O	|	|	|	2.77
361.167	0.00	0.01	3.283	O	|	|	|	2.77
361.250	0.00	0.01	3.283	O	|	|	|	2.77
361.333	0.00	0.01	3.282	O	|	|	|	2.77
361.417	0.00	0.01	3.282	O	|	|	|	2.77
361.500	0.00	0.01	3.282	O	|	|	|	2.77
361.583	0.00	0.01	3.282	O	|	|	|	2.77
361.667	0.00	0.01	3.282	O	|	|	|	2.77
361.750	0.00	0.01	3.282	O	|	|	|	2.77
361.833	0.00	0.01	3.282	O	|	|	|	2.77
361.917	0.00	0.01	3.282	O	|	|	|	2.77
362.000	0.00	0.01	3.282	O	|	|	|	2.77
362.083	0.00	0.01	3.282	O	|	|	|	2.77
362.167	0.00	0.01	3.282	O	|	|	|	2.77
362.250	0.00	0.01	3.282	O	|	|	|	2.77
362.333	0.00	0.01	3.282	O	|	|	|	2.77
362.417	0.00	0.01	3.282	O	|	|	|	2.77
362.500	0.00	0.01	3.282	O	|	|	|	2.77
362.583	0.00	0.01	3.281	O	|	|	|	2.77
362.667	0.00	0.01	3.281	O	|	|	|	2.77
362.750	0.00	0.01	3.281	O	|	|	|	2.77
362.833	0.00	0.01	3.281	O	|	|	|	2.77
362.917	0.00	0.01	3.281	O	|	|	|	2.77
363.000	0.00	0.01	3.281	O	|	|	|	2.77
363.083	0.00	0.01	3.281	O	|	|	|	2.77
363.167	0.00	0.01	3.281	O	|	|	|	2.77
363.250	0.00	0.01	3.281	O	|	|	|	2.77
363.333	0.00	0.01	3.281	O	|	|	|	2.77
363.417	0.00	0.01	3.281	O	|	|	|	2.77
363.500	0.00	0.01	3.281	O	|	|	|	2.77
363.583	0.00	0.01	3.281	O	|	|	|	2.77
363.667	0.00	0.01	3.281	O	|	|	|	2.77
363.750	0.00	0.01	3.280	O	|	|	|	2.77
363.833	0.00	0.01	3.280	O	|	|	|	2.77
363.917	0.00	0.01	3.280	O	|	|	|	2.77
364.000	0.00	0.01	3.280	O	|	|	|	2.77
364.083	0.00	0.01	3.280	O	|	|	|	2.77
364.167	0.00	0.01	3.280	O	|	|	|	2.77
364.250	0.00	0.01	3.280	O	|	|	|	2.77
364.333	0.00	0.01	3.280	O	|	|	|	2.77
364.417	0.00	0.01	3.280	O	|	|	|	2.77
364.500	0.00	0.01	3.280	O	|	|	|	2.77
364.583	0.00	0.01	3.280	O	|	|	|	2.77
364.667	0.00	0.01	3.280	O	|	|	|	2.77

364.750	0.00	0.01	3.280	O				2.77
364.833	0.00	0.01	3.280	O				2.77
364.917	0.00	0.01	3.280	O				2.77
365.000	0.00	0.01	3.279	O				2.77
365.083	0.00	0.01	3.279	O				2.77
365.167	0.00	0.01	3.279	O				2.77
365.250	0.00	0.01	3.279	O				2.77
365.333	0.00	0.01	3.279	O				2.77
365.417	0.00	0.01	3.279	O				2.77
365.500	0.00	0.01	3.279	O				2.77
365.583	0.00	0.01	3.279	O				2.77
365.667	0.00	0.01	3.279	O				2.77
365.750	0.00	0.01	3.279	O				2.77
365.833	0.00	0.01	3.279	O				2.77
365.917	0.00	0.01	3.279	O				2.77
366.000	0.00	0.01	3.279	O				2.77
366.083	0.00	0.01	3.279	O				2.77
366.167	0.00	0.01	3.278	O				2.77
366.250	0.00	0.01	3.278	O				2.77
366.333	0.00	0.01	3.278	O				2.77
366.417	0.00	0.01	3.278	O				2.77
366.500	0.00	0.01	3.278	O				2.77
366.583	0.00	0.01	3.278	O				2.77
366.667	0.00	0.01	3.278	O				2.77
366.750	0.00	0.01	3.278	O				2.77
366.833	0.00	0.01	3.278	O				2.76
366.917	0.00	0.01	3.278	O				2.76
367.000	0.00	0.01	3.278	O				2.76
367.083	0.00	0.01	3.278	O				2.76
367.167	0.00	0.01	3.278	O				2.76
367.250	0.00	0.01	3.278	O				2.76
367.333	0.00	0.01	3.278	O				2.76
367.417	0.00	0.01	3.277	O				2.76
367.500	0.00	0.01	3.277	O				2.76
367.583	0.00	0.01	3.277	O				2.76
367.667	0.00	0.01	3.277	O				2.76
367.750	0.00	0.01	3.277	O				2.76
367.833	0.00	0.01	3.277	O				2.76
367.917	0.00	0.01	3.277	O				2.76
368.000	0.00	0.01	3.277	O				2.76
368.083	0.00	0.01	3.277	O				2.76
368.167	0.00	0.01	3.277	O				2.76
368.250	0.00	0.01	3.277	O				2.76
368.333	0.00	0.01	3.277	O				2.76
368.417	0.00	0.01	3.277	O				2.76
368.500	0.00	0.01	3.277	O				2.76
368.583	0.00	0.01	3.276	O				2.76
368.667	0.00	0.01	3.276	O				2.76
368.750	0.00	0.01	3.276	O				2.76
368.833	0.00	0.01	3.276	O				2.76

368.917	0.00	0.01	3.276	O				2.76
369.000	0.00	0.01	3.276	O				2.76
369.083	0.00	0.01	3.276	O				2.76
369.167	0.00	0.01	3.276	O				2.76
369.250	0.00	0.01	3.276	O				2.76
369.333	0.00	0.01	3.276	O				2.76
369.417	0.00	0.01	3.276	O				2.76
369.500	0.00	0.01	3.276	O				2.76
369.583	0.00	0.01	3.276	O				2.76
369.667	0.00	0.01	3.276	O				2.76
369.750	0.00	0.01	3.276	O				2.76
369.833	0.00	0.01	3.275	O				2.76
369.917	0.00	0.01	3.275	O				2.76
370.000	0.00	0.01	3.275	O				2.76
370.083	0.00	0.01	3.275	O				2.76
370.167	0.00	0.01	3.275	O				2.76
370.250	0.00	0.01	3.275	O				2.76
370.333	0.00	0.01	3.275	O				2.76
370.417	0.00	0.01	3.275	O				2.76
370.500	0.00	0.01	3.275	O				2.76
370.583	0.00	0.01	3.275	O				2.76
370.667	0.00	0.01	3.275	O				2.76
370.750	0.00	0.01	3.275	O				2.76
370.833	0.00	0.01	3.275	O				2.76
370.917	0.00	0.01	3.275	O				2.76
371.000	0.00	0.01	3.274	O				2.76
371.083	0.00	0.01	3.274	O				2.76
371.167	0.00	0.01	3.274	O				2.76
371.250	0.00	0.01	3.274	O				2.76
371.333	0.00	0.01	3.274	O				2.76
371.417	0.00	0.01	3.274	O				2.76
371.500	0.00	0.01	3.274	O				2.76
371.583	0.00	0.01	3.274	O				2.76
371.667	0.00	0.01	3.274	O				2.76
371.750	0.00	0.01	3.274	O				2.76
371.833	0.00	0.01	3.274	O				2.76
371.917	0.00	0.01	3.274	O				2.76
372.000	0.00	0.01	3.274	O				2.76
372.083	0.00	0.01	3.274	O				2.76
372.167	0.00	0.01	3.274	O				2.76
372.250	0.00	0.01	3.273	O				2.76
372.333	0.00	0.01	3.273	O				2.76
372.417	0.00	0.01	3.273	O				2.76
372.500	0.00	0.01	3.273	O				2.76
372.583	0.00	0.01	3.273	O				2.76
372.667	0.00	0.01	3.273	O				2.76
372.750	0.00	0.01	3.273	O				2.76
372.833	0.00	0.01	3.273	O				2.76
372.917	0.00	0.01	3.273	O				2.76
373.000	0.00	0.01	3.273	O				2.76

373.083	0.00	0.01	3.273	O				2.76
373.167	0.00	0.01	3.273	O				2.76
373.250	0.00	0.01	3.273	O				2.76
373.333	0.00	0.01	3.273	O				2.76
373.417	0.00	0.01	3.272	O				2.76
373.500	0.00	0.01	3.272	O				2.76
373.583	0.00	0.01	3.272	O				2.76
373.667	0.00	0.01	3.272	O				2.76
373.750	0.00	0.01	3.272	O				2.76
373.833	0.00	0.01	3.272	O				2.76
373.917	0.00	0.01	3.272	O				2.76
374.000	0.00	0.01	3.272	O				2.76
374.083	0.00	0.01	3.272	O				2.76
374.167	0.00	0.01	3.272	O				2.76
374.250	0.00	0.01	3.272	O				2.76
374.333	0.00	0.01	3.272	O				2.76
374.417	0.00	0.01	3.272	O				2.76
374.500	0.00	0.01	3.272	O				2.76
374.583	0.00	0.01	3.272	O				2.76
374.667	0.00	0.01	3.271	O				2.76
374.750	0.00	0.01	3.271	O				2.76
374.833	0.00	0.01	3.271	O				2.76
374.917	0.00	0.01	3.271	O				2.76
375.000	0.00	0.01	3.271	O				2.76
375.083	0.00	0.01	3.271	O				2.76
375.167	0.00	0.01	3.271	O				2.76
375.250	0.00	0.01	3.271	O				2.76
375.333	0.00	0.01	3.271	O				2.76
375.417	0.00	0.01	3.271	O				2.76
375.500	0.00	0.01	3.271	O				2.76
375.583	0.00	0.01	3.271	O				2.76
375.667	0.00	0.01	3.271	O				2.76
375.750	0.00	0.01	3.271	O				2.76
375.833	0.00	0.01	3.270	O				2.76
375.917	0.00	0.01	3.270	O				2.76
376.000	0.00	0.01	3.270	O				2.76
376.083	0.00	0.01	3.270	O				2.76
376.167	0.00	0.01	3.270	O				2.76
376.250	0.00	0.01	3.270	O				2.76
376.333	0.00	0.01	3.270	O				2.76
376.417	0.00	0.01	3.270	O				2.76
376.500	0.00	0.01	3.270	O				2.76
376.583	0.00	0.01	3.270	O				2.76
376.667	0.00	0.01	3.270	O				2.76
376.750	0.00	0.01	3.270	O				2.76
376.833	0.00	0.01	3.270	O				2.76
376.917	0.00	0.01	3.270	O				2.76
377.000	0.00	0.01	3.270	O				2.76
377.083	0.00	0.01	3.269	O				2.76
377.167	0.00	0.01	3.269	O				2.76

377.250	0.00	0.01	3.269	O				2.76
377.333	0.00	0.01	3.269	O				2.76
377.417	0.00	0.01	3.269	O				2.76
377.500	0.00	0.01	3.269	O				2.76
377.583	0.00	0.01	3.269	O				2.76
377.667	0.00	0.01	3.269	O				2.76
377.750	0.00	0.01	3.269	O				2.76
377.833	0.00	0.01	3.269	O				2.76
377.917	0.00	0.01	3.269	O				2.76
378.000	0.00	0.01	3.269	O				2.76
378.083	0.00	0.01	3.269	O				2.76
378.167	0.00	0.01	3.269	O				2.76
378.250	0.00	0.01	3.268	O				2.76
378.333	0.00	0.01	3.268	O				2.76
378.417	0.00	0.01	3.268	O				2.76
378.500	0.00	0.01	3.268	O				2.76
378.583	0.00	0.01	3.268	O				2.76
378.667	0.00	0.01	3.268	O				2.76
378.750	0.00	0.01	3.268	O				2.76
378.833	0.00	0.01	3.268	O				2.76
378.917	0.00	0.01	3.268	O				2.76
379.000	0.00	0.01	3.268	O				2.76
379.083	0.00	0.01	3.268	O				2.76
379.167	0.00	0.01	3.268	O				2.76
379.250	0.00	0.01	3.268	O				2.76
379.333	0.00	0.01	3.268	O				2.76
379.417	0.00	0.01	3.268	O				2.76
379.500	0.00	0.01	3.267	O				2.76
379.583	0.00	0.01	3.267	O				2.76
379.667	0.00	0.01	3.267	O				2.76
379.750	0.00	0.01	3.267	O				2.76
379.833	0.00	0.01	3.267	O				2.76
379.917	0.00	0.01	3.267	O				2.76
380.000	0.00	0.01	3.267	O				2.76
380.083	0.00	0.01	3.267	O				2.76
380.167	0.00	0.01	3.267	O				2.76
380.250	0.00	0.01	3.267	O				2.76
380.333	0.00	0.01	3.267	O				2.76
380.417	0.00	0.01	3.267	O				2.76
380.500	0.00	0.01	3.267	O				2.76
380.583	0.00	0.01	3.267	O				2.76
380.667	0.00	0.01	3.266	O				2.76
380.750	0.00	0.01	3.266	O				2.76
380.833	0.00	0.01	3.266	O				2.76
380.917	0.00	0.01	3.266	O				2.76
381.000	0.00	0.01	3.266	O				2.76
381.083	0.00	0.01	3.266	O				2.76
381.167	0.00	0.01	3.266	O				2.76
381.250	0.00	0.01	3.266	O				2.76
381.333	0.00	0.01	3.266	O				2.75

381.417	0.00	0.01	3.266	O				2.75
381.500	0.00	0.01	3.266	O				2.75
381.583	0.00	0.01	3.266	O				2.75
381.667	0.00	0.01	3.266	O				2.75
381.750	0.00	0.01	3.266	O				2.75
381.833	0.00	0.01	3.266	O				2.75
381.917	0.00	0.01	3.265	O				2.75
382.000	0.00	0.01	3.265	O				2.75
382.083	0.00	0.01	3.265	O				2.75
382.167	0.00	0.01	3.265	O				2.75
382.250	0.00	0.01	3.265	O				2.75
382.333	0.00	0.01	3.265	O				2.75
382.417	0.00	0.01	3.265	O				2.75
382.500	0.00	0.01	3.265	O				2.75
382.583	0.00	0.01	3.265	O				2.75
382.667	0.00	0.01	3.265	O				2.75
382.750	0.00	0.01	3.265	O				2.75
382.833	0.00	0.01	3.265	O				2.75
382.917	0.00	0.01	3.265	O				2.75
383.000	0.00	0.01	3.265	O				2.75
383.083	0.00	0.01	3.265	O				2.75
383.167	0.00	0.01	3.264	O				2.75
383.250	0.00	0.01	3.264	O				2.75
383.333	0.00	0.01	3.264	O				2.75
383.417	0.00	0.01	3.264	O				2.75
383.500	0.00	0.01	3.264	O				2.75
383.583	0.00	0.01	3.264	O				2.75
383.667	0.00	0.01	3.264	O				2.75
383.750	0.00	0.01	3.264	O				2.75
383.833	0.00	0.01	3.264	O				2.75
383.917	0.00	0.01	3.264	O				2.75
384.000	0.00	0.01	3.264	O				2.75
384.083	0.00	0.01	3.264	O				2.75
384.167	0.00	0.01	3.264	O				2.75
384.250	0.00	0.01	3.264	O				2.75
384.333	0.00	0.01	3.263	O				2.75
384.417	0.00	0.01	3.263	O				2.75
384.500	0.00	0.01	3.263	O				2.75
384.583	0.00	0.01	3.263	O				2.75
384.667	0.00	0.01	3.263	O				2.75
384.750	0.00	0.01	3.263	O				2.75
384.833	0.00	0.01	3.263	O				2.75
384.917	0.00	0.01	3.263	O				2.75
385.000	0.00	0.01	3.263	O				2.75
385.083	0.00	0.01	3.263	O				2.75
385.167	0.00	0.01	3.263	O				2.75
385.250	0.00	0.01	3.263	O				2.75
385.333	0.00	0.01	3.263	O				2.75
385.417	0.00	0.01	3.263	O				2.75
385.500	0.00	0.01	3.263	O				2.75

385.583	0.00	0.01	3.262	O				2.75
385.667	0.00	0.01	3.262	O				2.75
385.750	0.00	0.01	3.262	O				2.75
385.833	0.00	0.01	3.262	O				2.75
385.917	0.00	0.01	3.262	O				2.75
386.000	0.00	0.01	3.262	O				2.75
386.083	0.00	0.01	3.262	O				2.75
386.167	0.00	0.01	3.262	O				2.75
386.250	0.00	0.01	3.262	O				2.75
386.333	0.00	0.01	3.262	O				2.75
386.417	0.00	0.01	3.262	O				2.75
386.500	0.00	0.01	3.262	O				2.75
386.583	0.00	0.01	3.262	O				2.75
386.667	0.00	0.01	3.262	O				2.75
386.750	0.00	0.01	3.261	O				2.75
386.833	0.00	0.01	3.261	O				2.75
386.917	0.00	0.01	3.261	O				2.75
387.000	0.00	0.01	3.261	O				2.75
387.083	0.00	0.01	3.261	O				2.75
387.167	0.00	0.01	3.261	O				2.75
387.250	0.00	0.01	3.261	O				2.75
387.333	0.00	0.01	3.261	O				2.75
387.417	0.00	0.01	3.261	O				2.75
387.500	0.00	0.01	3.261	O				2.75
387.583	0.00	0.01	3.261	O				2.75
387.667	0.00	0.01	3.261	O				2.75
387.750	0.00	0.01	3.261	O				2.75
387.833	0.00	0.01	3.261	O				2.75
387.917	0.00	0.01	3.261	O				2.75
388.000	0.00	0.01	3.260	O				2.75
388.083	0.00	0.01	3.260	O				2.75
388.167	0.00	0.01	3.260	O				2.75
388.250	0.00	0.01	3.260	O				2.75
388.333	0.00	0.01	3.260	O				2.75
388.417	0.00	0.01	3.260	O				2.75
388.500	0.00	0.01	3.260	O				2.75
388.583	0.00	0.01	3.260	O				2.75
388.667	0.00	0.01	3.260	O				2.75
388.750	0.00	0.01	3.260	O				2.75
388.833	0.00	0.01	3.260	O				2.75
388.917	0.00	0.01	3.260	O				2.75
389.000	0.00	0.01	3.260	O				2.75
389.083	0.00	0.01	3.260	O				2.75
389.167	0.00	0.01	3.259	O				2.75
389.250	0.00	0.01	3.259	O				2.75
389.333	0.00	0.01	3.259	O				2.75
389.417	0.00	0.01	3.259	O				2.75
389.500	0.00	0.01	3.259	O				2.75
389.583	0.00	0.01	3.259	O				2.75
389.667	0.00	0.01	3.259	O				2.75

389.750	0.00	0.01	3.259	O				2.75
389.833	0.00	0.01	3.259	O				2.75
389.917	0.00	0.01	3.259	O				2.75
390.000	0.00	0.01	3.259	O				2.75
390.083	0.00	0.01	3.259	O				2.75
390.167	0.00	0.01	3.259	O				2.75
390.250	0.00	0.01	3.259	O				2.75
390.333	0.00	0.01	3.259	O				2.75
390.417	0.00	0.01	3.258	O				2.75
390.500	0.00	0.01	3.258	O				2.75
390.583	0.00	0.01	3.258	O				2.75
390.667	0.00	0.01	3.258	O				2.75
390.750	0.00	0.01	3.258	O				2.75
390.833	0.00	0.01	3.258	O				2.75
390.917	0.00	0.01	3.258	O				2.75
391.000	0.00	0.01	3.258	O				2.75
391.083	0.00	0.01	3.258	O				2.75
391.167	0.00	0.01	3.258	O				2.75
391.250	0.00	0.01	3.258	O				2.75
391.333	0.00	0.01	3.258	O				2.75
391.417	0.00	0.01	3.258	O				2.75
391.500	0.00	0.01	3.258	O				2.75
391.583	0.00	0.01	3.257	O				2.75
391.667	0.00	0.01	3.257	O				2.75
391.750	0.00	0.01	3.257	O				2.75
391.833	0.00	0.01	3.257	O				2.75
391.917	0.00	0.01	3.257	O				2.75
392.000	0.00	0.01	3.257	O				2.75
392.083	0.00	0.01	3.257	O				2.75
392.167	0.00	0.01	3.257	O				2.75
392.250	0.00	0.01	3.257	O				2.75
392.333	0.00	0.01	3.257	O				2.75
392.417	0.00	0.01	3.257	O				2.75
392.500	0.00	0.01	3.257	O				2.75
392.583	0.00	0.01	3.257	O				2.75
392.667	0.00	0.01	3.257	O				2.75
392.750	0.00	0.01	3.257	O				2.75
392.833	0.00	0.01	3.256	O				2.75
392.917	0.00	0.01	3.256	O				2.75
393.000	0.00	0.01	3.256	O				2.75
393.083	0.00	0.01	3.256	O				2.75
393.167	0.00	0.01	3.256	O				2.75
393.250	0.00	0.01	3.256	O				2.75
393.333	0.00	0.01	3.256	O				2.75
393.417	0.00	0.01	3.256	O				2.75
393.500	0.00	0.01	3.256	O				2.75
393.583	0.00	0.01	3.256	O				2.75
393.667	0.00	0.01	3.256	O				2.75
393.750	0.00	0.01	3.256	O				2.75
393.833	0.00	0.01	3.256	O				2.75

393.917	0.00	0.01	3.256	O				2.75
394.000	0.00	0.01	3.255	O				2.75
394.083	0.00	0.01	3.255	O				2.75
394.167	0.00	0.01	3.255	O				2.75
394.250	0.00	0.01	3.255	O				2.75
394.333	0.00	0.01	3.255	O				2.75
394.417	0.00	0.01	3.255	O				2.75
394.500	0.00	0.01	3.255	O				2.75
394.583	0.00	0.01	3.255	O				2.75
394.667	0.00	0.01	3.255	O				2.75
394.750	0.00	0.01	3.255	O				2.75
394.833	0.00	0.01	3.255	O				2.75
394.917	0.00	0.01	3.255	O				2.75
395.000	0.00	0.01	3.255	O				2.75
395.083	0.00	0.01	3.255	O				2.75
395.167	0.00	0.01	3.255	O				2.75
395.250	0.00	0.01	3.254	O				2.75
395.333	0.00	0.01	3.254	O				2.75
395.417	0.00	0.01	3.254	O				2.75
395.500	0.00	0.01	3.254	O				2.75
395.583	0.00	0.01	3.254	O				2.75
395.667	0.00	0.01	3.254	O				2.75
395.750	0.00	0.01	3.254	O				2.75
395.833	0.00	0.01	3.254	O				2.74
395.917	0.00	0.01	3.254	O				2.74
396.000	0.00	0.01	3.254	O				2.74
396.083	0.00	0.01	3.254	O				2.74
396.167	0.00	0.01	3.254	O				2.74
396.250	0.00	0.01	3.254	O				2.74
396.333	0.00	0.01	3.254	O				2.74
396.417	0.00	0.01	3.253	O				2.74
396.500	0.00	0.01	3.253	O				2.74
396.583	0.00	0.01	3.253	O				2.74
396.667	0.00	0.01	3.253	O				2.74
396.750	0.00	0.01	3.253	O				2.74
396.833	0.00	0.01	3.253	O				2.74
396.917	0.00	0.01	3.253	O				2.74
397.000	0.00	0.01	3.253	O				2.74
397.083	0.00	0.01	3.253	O				2.74
397.167	0.00	0.01	3.253	O				2.74
397.250	0.00	0.01	3.253	O				2.74
397.333	0.00	0.01	3.253	O				2.74
397.417	0.00	0.01	3.253	O				2.74
397.500	0.00	0.01	3.253	O				2.74
397.583	0.00	0.01	3.253	O				2.74
397.667	0.00	0.01	3.252	O				2.74
397.750	0.00	0.01	3.252	O				2.74
397.833	0.00	0.01	3.252	O				2.74
397.917	0.00	0.01	3.252	O				2.74
398.000	0.00	0.01	3.252	O				2.74

398.083	0.00	0.01	3.252	O	|	|	|	2.74
398.167	0.00	0.01	3.252	O	|	|	|	2.74
398.250	0.00	0.01	3.252	O	|	|	|	2.74
398.333	0.00	0.01	3.252	O	|	|	|	2.74
398.417	0.00	0.01	3.252	O	|	|	|	2.74
398.500	0.00	0.01	3.252	O	|	|	|	2.74
398.583	0.00	0.01	3.252	O	|	|	|	2.74
398.667	0.00	0.01	3.252	O	|	|	|	2.74
398.750	0.00	0.01	3.252	O	|	|	|	2.74
398.833	0.00	0.01	3.251	O	|	|	|	2.74
398.917	0.00	0.01	3.251	O	|	|	|	2.74
399.000	0.00	0.01	3.251	O	|	|	|	2.74
399.083	0.00	0.01	3.251	O	|	|	|	2.74
399.167	0.00	0.01	3.251	O	|	|	|	2.74
399.250	0.00	0.01	3.251	O	|	|	|	2.74
399.333	0.00	0.01	3.251	O	|	|	|	2.74
399.417	0.00	0.01	3.251	O	|	|	|	2.74
399.500	0.00	0.01	3.251	O	|	|	|	2.74
399.583	0.00	0.01	3.251	O	|	|	|	2.74
399.667	0.00	0.01	3.251	O	|	|	|	2.74
399.750	0.00	0.01	3.251	O	|	|	|	2.74
399.833	0.00	0.01	3.251	O	|	|	|	2.74
399.917	0.00	0.01	3.251	O	|	|	|	2.74
400.000	0.00	0.01	3.251	O	|	|	|	2.74
400.083	0.00	0.01	3.250	O	|	|	|	2.74
400.167	0.00	0.01	3.250	O	|	|	|	2.74
400.250	0.00	0.01	3.250	O	|	|	|	2.74
400.333	0.00	0.01	3.250	O	|	|	|	2.74
400.417	0.00	0.01	3.250	O	|	|	|	2.74
400.500	0.00	0.01	3.250	O	|	|	|	2.74
400.583	0.00	0.01	3.250	O	|	|	|	2.74
400.667	0.00	0.01	3.250	O	|	|	|	2.74
400.750	0.00	0.01	3.250	O	|	|	|	2.74
400.833	0.00	0.01	3.250	O	|	|	|	2.74
400.917	0.00	0.01	3.250	O	|	|	|	2.74
401.000	0.00	0.01	3.250	O	|	|	|	2.74
401.083	0.00	0.01	3.250	O	|	|	|	2.74
401.167	0.00	0.01	3.250	O	|	|	|	2.74
401.250	0.00	0.01	3.249	O	|	|	|	2.74
401.333	0.00	0.01	3.249	O	|	|	|	2.74
401.417	0.00	0.01	3.249	O	|	|	|	2.74
401.500	0.00	0.01	3.249	O	|	|	|	2.74
401.583	0.00	0.01	3.249	O	|	|	|	2.74
401.667	0.00	0.01	3.249	O	|	|	|	2.74
401.750	0.00	0.01	3.249	O	|	|	|	2.74
401.833	0.00	0.01	3.249	O	|	|	|	2.74
401.917	0.00	0.01	3.249	O	|	|	|	2.74
402.000	0.00	0.01	3.249	O	|	|	|	2.74
402.083	0.00	0.01	3.249	O	|	|	|	2.74
402.167	0.00	0.01	3.249	O	|	|	|	2.74

402.250	0.00	0.01	3.249	O	|	|	|	2.74
402.333	0.00	0.01	3.249	O	|	|	|	2.74
402.417	0.00	0.01	3.249	O	|	|	|	2.74
402.500	0.00	0.01	3.248	O	|	|	|	2.74
402.583	0.00	0.01	3.248	O	|	|	|	2.74
402.667	0.00	0.01	3.248	O	|	|	|	2.74
402.750	0.00	0.01	3.248	O	|	|	|	2.74
402.833	0.00	0.01	3.248	O	|	|	|	2.74
402.917	0.00	0.01	3.248	O	|	|	|	2.74
403.000	0.00	0.01	3.248	O	|	|	|	2.74
403.083	0.00	0.01	3.248	O	|	|	|	2.74
403.167	0.00	0.01	3.248	O	|	|	|	2.74
403.250	0.00	0.01	3.248	O	|	|	|	2.74
403.333	0.00	0.01	3.248	O	|	|	|	2.74
403.417	0.00	0.01	3.248	O	|	|	|	2.74
403.500	0.00	0.01	3.248	O	|	|	|	2.74
403.583	0.00	0.01	3.248	O	|	|	|	2.74
403.667	0.00	0.01	3.247	O	|	|	|	2.74
403.750	0.00	0.01	3.247	O	|	|	|	2.74
403.833	0.00	0.01	3.247	O	|	|	|	2.74
403.917	0.00	0.01	3.247	O	|	|	|	2.74
404.000	0.00	0.01	3.247	O	|	|	|	2.74
404.083	0.00	0.01	3.247	O	|	|	|	2.74
404.167	0.00	0.01	3.247	O	|	|	|	2.74
404.250	0.00	0.01	3.247	O	|	|	|	2.74
404.333	0.00	0.01	3.247	O	|	|	|	2.74
404.417	0.00	0.01	3.247	O	|	|	|	2.74
404.500	0.00	0.01	3.247	O	|	|	|	2.74
404.583	0.00	0.01	3.247	O	|	|	|	2.74
404.667	0.00	0.01	3.247	O	|	|	|	2.74
404.750	0.00	0.01	3.247	O	|	|	|	2.74
404.833	0.00	0.01	3.247	O	|	|	|	2.74
404.917	0.00	0.01	3.246	O	|	|	|	2.74
405.000	0.00	0.01	3.246	O	|	|	|	2.74
405.083	0.00	0.01	3.246	O	|	|	|	2.74
405.167	0.00	0.01	3.246	O	|	|	|	2.74
405.250	0.00	0.01	3.246	O	|	|	|	2.74
405.333	0.00	0.01	3.246	O	|	|	|	2.74
405.417	0.00	0.01	3.246	O	|	|	|	2.74
405.500	0.00	0.01	3.246	O	|	|	|	2.74
405.583	0.00	0.01	3.246	O	|	|	|	2.74
405.667	0.00	0.01	3.246	O	|	|	|	2.74
405.750	0.00	0.01	3.246	O	|	|	|	2.74
405.833	0.00	0.01	3.246	O	|	|	|	2.74
405.917	0.00	0.01	3.246	O	|	|	|	2.74
406.000	0.00	0.01	3.246	O	|	|	|	2.74
406.083	0.00	0.01	3.245	O	|	|	|	2.74
406.167	0.00	0.01	3.245	O	|	|	|	2.74
406.250	0.00	0.01	3.245	O	|	|	|	2.74
406.333	0.00	0.01	3.245	O	|	|	|	2.74

406.417	0.00	0.01	3.245	O	|	|	|	2.74
406.500	0.00	0.01	3.245	O	|	|	|	2.74
406.583	0.00	0.01	3.245	O	|	|	|	2.74
406.667	0.00	0.01	3.245	O	|	|	|	2.74
406.750	0.00	0.01	3.245	O	|	|	|	2.74
406.833	0.00	0.01	3.245	O	|	|	|	2.74
406.917	0.00	0.01	3.245	O	|	|	|	2.74
407.000	0.00	0.01	3.245	O	|	|	|	2.74
407.083	0.00	0.01	3.245	O	|	|	|	2.74
407.167	0.00	0.01	3.245	O	|	|	|	2.74
407.250	0.00	0.01	3.245	O	|	|	|	2.74
407.333	0.00	0.01	3.244	O	|	|	|	2.74
407.417	0.00	0.01	3.244	O	|	|	|	2.74
407.500	0.00	0.01	3.244	O	|	|	|	2.74
407.583	0.00	0.01	3.244	O	|	|	|	2.74
407.667	0.00	0.01	3.244	O	|	|	|	2.74
407.750	0.00	0.01	3.244	O	|	|	|	2.74
407.833	0.00	0.01	3.244	O	|	|	|	2.74
407.917	0.00	0.01	3.244	O	|	|	|	2.74
408.000	0.00	0.01	3.244	O	|	|	|	2.74
408.083	0.00	0.01	3.244	O	|	|	|	2.74
408.167	0.00	0.01	3.244	O	|	|	|	2.74
408.250	0.00	0.01	3.244	O	|	|	|	2.74
408.333	0.00	0.01	3.244	O	|	|	|	2.74
408.417	0.00	0.01	3.244	O	|	|	|	2.74
408.500	0.00	0.01	3.243	O	|	|	|	2.74
408.583	0.00	0.01	3.243	O	|	|	|	2.74
408.667	0.00	0.01	3.243	O	|	|	|	2.74
408.750	0.00	0.01	3.243	O	|	|	|	2.74
408.833	0.00	0.01	3.243	O	|	|	|	2.74
408.917	0.00	0.01	3.243	O	|	|	|	2.74
409.000	0.00	0.01	3.243	O	|	|	|	2.74
409.083	0.00	0.01	3.243	O	|	|	|	2.74
409.167	0.00	0.01	3.243	O	|	|	|	2.74
409.250	0.00	0.01	3.243	O	|	|	|	2.74
409.333	0.00	0.01	3.243	O	|	|	|	2.74
409.417	0.00	0.01	3.243	O	|	|	|	2.74
409.500	0.00	0.01	3.243	O	|	|	|	2.74
409.583	0.00	0.01	3.243	O	|	|	|	2.74
409.667	0.00	0.01	3.243	O	|	|	|	2.74
409.750	0.00	0.01	3.242	O	|	|	|	2.74
409.833	0.00	0.01	3.242	O	|	|	|	2.74
409.917	0.00	0.01	3.242	O	|	|	|	2.74
410.000	0.00	0.01	3.242	O	|	|	|	2.74
410.083	0.00	0.01	3.242	O	|	|	|	2.74
410.167	0.00	0.01	3.242	O	|	|	|	2.74
410.250	0.00	0.01	3.242	O	|	|	|	2.74
410.333	0.00	0.01	3.242	O	|	|	|	2.73
410.417	0.00	0.01	3.242	O	|	|	|	2.73
410.500	0.00	0.01	3.242	O	|	|	|	2.73

410.583	0.00	0.01	3.242	O	|	|	|	2.73
410.667	0.00	0.01	3.242	O	|	|	|	2.73
410.750	0.00	0.01	3.242	O	|	|	|	2.73
410.833	0.00	0.01	3.242	O	|	|	|	2.73
410.917	0.00	0.01	3.241	O	|	|	|	2.73
411.000	0.00	0.01	3.241	O	|	|	|	2.73
411.083	0.00	0.01	3.241	O	|	|	|	2.73
411.167	0.00	0.01	3.241	O	|	|	|	2.73
411.250	0.00	0.01	3.241	O	|	|	|	2.73
411.333	0.00	0.01	3.241	O	|	|	|	2.73
411.417	0.00	0.01	3.241	O	|	|	|	2.73
411.500	0.00	0.01	3.241	O	|	|	|	2.73
411.583	0.00	0.01	3.241	O	|	|	|	2.73
411.667	0.00	0.01	3.241	O	|	|	|	2.73
411.750	0.00	0.01	3.241	O	|	|	|	2.73
411.833	0.00	0.01	3.241	O	|	|	|	2.73
411.917	0.00	0.01	3.241	O	|	|	|	2.73
412.000	0.00	0.01	3.241	O	|	|	|	2.73
412.083	0.00	0.01	3.241	O	|	|	|	2.73
412.167	0.00	0.01	3.240	O	|	|	|	2.73
412.250	0.00	0.01	3.240	O	|	|	|	2.73
412.333	0.00	0.01	3.240	O	|	|	|	2.73
412.417	0.00	0.01	3.240	O	|	|	|	2.73
412.500	0.00	0.01	3.240	O	|	|	|	2.73
412.583	0.00	0.01	3.240	O	|	|	|	2.73
412.667	0.00	0.01	3.240	O	|	|	|	2.73
412.750	0.00	0.01	3.240	O	|	|	|	2.73
412.833	0.00	0.01	3.240	O	|	|	|	2.73
412.917	0.00	0.01	3.240	O	|	|	|	2.73
413.000	0.00	0.01	3.240	O	|	|	|	2.73
413.083	0.00	0.01	3.240	O	|	|	|	2.73
413.167	0.00	0.01	3.240	O	|	|	|	2.73
413.250	0.00	0.01	3.240	O	|	|	|	2.73
413.333	0.00	0.01	3.240	O	|	|	|	2.73
413.417	0.00	0.01	3.239	O	|	|	|	2.73
413.500	0.00	0.01	3.239	O	|	|	|	2.73
413.583	0.00	0.01	3.239	O	|	|	|	2.73
413.667	0.00	0.01	3.239	O	|	|	|	2.73
413.750	0.00	0.01	3.239	O	|	|	|	2.73
413.833	0.00	0.01	3.239	O	|	|	|	2.73
413.917	0.00	0.01	3.239	O	|	|	|	2.73
414.000	0.00	0.01	3.239	O	|	|	|	2.73
414.083	0.00	0.01	3.239	O	|	|	|	2.73
414.167	0.00	0.01	3.239	O	|	|	|	2.73
414.250	0.00	0.01	3.239	O	|	|	|	2.73
414.333	0.00	0.01	3.239	O	|	|	|	2.73
414.417	0.00	0.01	3.239	O	|	|	|	2.73
414.500	0.00	0.01	3.239	O	|	|	|	2.73
414.583	0.00	0.01	3.238	O	|	|	|	2.73
414.667	0.00	0.01	3.238	O	|	|	|	2.73

414.750	0.00	0.01	3.238	O	|	|	|	2.73
414.833	0.00	0.01	3.238	O	|	|	|	2.73
414.917	0.00	0.01	3.238	O	|	|	|	2.73
415.000	0.00	0.01	3.238	O	|	|	|	2.73
415.083	0.00	0.01	3.238	O	|	|	|	2.73
415.167	0.00	0.01	3.238	O	|	|	|	2.73
415.250	0.00	0.01	3.238	O	|	|	|	2.73
415.333	0.00	0.01	3.238	O	|	|	|	2.73
415.417	0.00	0.01	3.238	O	|	|	|	2.73
415.500	0.00	0.01	3.238	O	|	|	|	2.73
415.583	0.00	0.01	3.238	O	|	|	|	2.73
415.667	0.00	0.01	3.238	O	|	|	|	2.73
415.750	0.00	0.01	3.238	O	|	|	|	2.73
415.833	0.00	0.01	3.237	O	|	|	|	2.73
415.917	0.00	0.01	3.237	O	|	|	|	2.73
416.000	0.00	0.01	3.237	O	|	|	|	2.73
416.083	0.00	0.01	3.237	O	|	|	|	2.73
416.167	0.00	0.01	3.237	O	|	|	|	2.73
416.250	0.00	0.01	3.237	O	|	|	|	2.73
416.333	0.00	0.01	3.237	O	|	|	|	2.73
416.417	0.00	0.01	3.237	O	|	|	|	2.73
416.500	0.00	0.01	3.237	O	|	|	|	2.73
416.583	0.00	0.01	3.237	O	|	|	|	2.73
416.667	0.00	0.01	3.237	O	|	|	|	2.73

Remaining water in basin = 3.24 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 5001
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 74.014 (CFS)
Total volume = 9.243 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 08/08/22

IEN
Basin B
100-year Developed

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: BasinB100yr.rte
**********HYDROGRAPH DATA**********
Number of intervals = 304
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 117.489 (CFS)
Total volume = 12.640 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 10.000 to Point/Station 35.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 304
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)

Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.800	0.001	1.800	1.800
2.000	2.400	0.001	2.400	2.400
2.500	3.000	0.010	3.000	3.000
3.000	3.600	0.010	3.600	3.600
3.500	4.200	45.000	4.045	4.355
4.000	4.800	75.000	4.542	5.058
4.500	5.170	85.000	4.877	5.463
5.000	5.290	90.000	4.980	5.600

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 29.4 58.74 88.12 117.49	Depth (Ft.)
0.083	0.08	0.00	0.000	O | | | |	0.00
0.167	0.63	0.00	0.003	O | | | |	0.00
0.250	1.34	0.00	0.010	O | | | |	0.01
0.333	1.67	0.00	0.020	O | | | |	0.02
0.417	1.86	0.00	0.032	O | | | |	0.03
0.500	1.99	0.00	0.045	O | | | |	0.04
0.583	2.08	0.00	0.059	O | | | |	0.05
0.667	2.15	0.00	0.074	O | | | |	0.06
0.750	2.21	0.00	0.089	O | | | |	0.07
0.833	2.25	0.00	0.104	O | | | |	0.09
0.917	2.29	0.00	0.120	O | | | |	0.10
1.000	2.32	0.00	0.136	O | | | |	0.11
1.083	2.34	0.00	0.152	O | | | |	0.13
1.167	2.36	0.00	0.168	O | | | |	0.14
1.250	2.38	0.00	0.184	O | | | |	0.15
1.333	2.40	0.00	0.201	O | | | |	0.17
1.417	2.41	0.00	0.217	O | | | |	0.18
1.500	2.42	0.00	0.234	O | | | |	0.20
1.583	2.43	0.00	0.251	O | | | |	0.21
1.667	2.44	0.00	0.268	O | | | |	0.22
1.750	2.45	0.00	0.284	O | | | |	0.24
1.833	2.46	0.00	0.301	O | | | |	0.25
1.917	2.47	0.00	0.318	O | | | |	0.27
2.000	2.48	0.00	0.335	O | | | |	0.28
2.083	2.48	0.00	0.352	O | | | |	0.29
2.167	2.49	0.00	0.370	O | | | |	0.31

2.250	2.50	0.00	0.387	O	|	|	|	0.32
2.333	2.51	0.00	0.404	O	|	|	|	0.34
2.417	2.52	0.00	0.421	O	|	|	|	0.35
2.500	2.53	0.00	0.439	O	|	|	|	0.37
2.583	2.54	0.00	0.456	O	|	|	|	0.38
2.667	2.55	0.00	0.474	O	|	|	|	0.39
2.750	2.56	0.00	0.491	O	|	|	|	0.41
2.833	2.57	0.00	0.509	O	|	|	|	0.42
2.917	2.58	0.00	0.527	O	|	|	|	0.44
3.000	2.59	0.00	0.544	O	|	|	|	0.45
3.083	2.60	0.00	0.562	O	|	|	|	0.47
3.167	2.61	0.00	0.580	O	|	|	|	0.48
3.250	2.62	0.00	0.598	O	|	|	|	0.50
3.333	2.63	0.00	0.616	O	|	|	|	0.51
3.417	2.64	0.00	0.635	O	|	|	|	0.53
3.500	2.65	0.00	0.653	O	|	|	|	0.54
3.583	2.66	0.00	0.671	O	|	|	|	0.56
3.667	2.67	0.00	0.689	O	|	|	|	0.57
3.750	2.69	0.00	0.708	O	|	|	|	0.59
3.833	2.70	0.00	0.726	O	|	|	|	0.61
3.917	2.71	0.00	0.745	O	|	|	|	0.62
4.000	2.72	0.00	0.764	O	|	|	|	0.64
4.083	2.73	0.00	0.783	O	|	|	|	0.65
4.167	2.74	0.00	0.801	O	|	|	|	0.67
4.250	2.76	0.00	0.820	O	|	|	|	0.68
4.333	2.77	0.00	0.839	O	|	|	|	0.70
4.417	2.78	0.00	0.858	O	|	|	|	0.72
4.500	2.79	0.00	0.878	O	|	|	|	0.73
4.583	2.80	0.00	0.897	O	|	|	|	0.75
4.667	2.82	0.00	0.916	O	|	|	|	0.76
4.750	2.83	0.00	0.936	O	|	|	|	0.78
4.833	2.84	0.00	0.955	O	|	|	|	0.80
4.917	2.86	0.00	0.975	O	|	|	|	0.81
5.000	2.87	0.00	0.994	O	|	|	|	0.83
5.083	2.88	0.00	1.014	O	|	|	|	0.85
5.167	2.89	0.00	1.034	O	|	|	|	0.86
5.250	2.91	0.00	1.054	O	|	|	|	0.88
5.333	2.92	0.00	1.074	O	|	|	|	0.90
5.417	2.94	0.00	1.094	O	|	|	|	0.91
5.500	2.95	0.00	1.115	O	|	|	|	0.93
5.583	2.96	0.00	1.135	O	|	|	|	0.95
5.667	2.98	0.00	1.155	O	|	|	|	0.96
5.750	2.99	0.00	1.176	O	|	|	|	0.98
5.833	3.01	0.00	1.197	O	|	|	|	1.00
5.917	3.02	0.00	1.217	O	|	|	|	1.01
6.000	3.04	0.00	1.238	O	|	|	|	1.03
6.083	3.05	0.00	1.259	O	|	|	|	1.05
6.167	3.07	0.00	1.280	O	|	|	|	1.07
6.250	3.09	0.00	1.302	O	|	|	|	1.08
6.333	3.10	0.00	1.323	O	|	|	|	1.10

6.417	3.12	0.00	1.344	O				1.12
6.500	3.14	0.00	1.366	O				1.14
6.583	3.15	0.00	1.388	O				1.16
6.667	3.17	0.00	1.409	O				1.17
6.750	3.19	0.00	1.431	O				1.19
6.833	3.20	0.00	1.453	O				1.21
6.917	3.22	0.00	1.475	O				1.23
7.000	3.24	0.00	1.498	O				1.25
7.083	3.26	0.00	1.520	O				1.27
7.167	3.28	0.00	1.542	O				1.29
7.250	3.30	0.00	1.565	O				1.30
7.333	3.31	0.00	1.588	O				1.32
7.417	3.33	0.00	1.611	O				1.34
7.500	3.35	0.00	1.634	O				1.36
7.583	3.37	0.00	1.657	O				1.38
7.667	3.39	0.00	1.680	O				1.40
7.750	3.42	0.00	1.704	O				1.42
7.833	3.44	0.00	1.727	O				1.44
7.917	3.46	0.00	1.751	O				1.46
8.000	3.48	0.00	1.775	O				1.48
8.083	3.50	0.00	1.799	O				1.50
8.167	3.52	0.00	1.823	O				1.52
8.250	3.55	0.00	1.847	O				1.54
8.333	3.57	0.00	1.872	O				1.56
8.417	3.59	0.00	1.897	O				1.58
8.500	3.62	0.00	1.921	O				1.60
8.583	3.64	0.00	1.946	O				1.62
8.667	3.67	0.00	1.971	O				1.64
8.750	3.69	0.00	1.997	OI				1.66
8.833	3.72	0.00	2.022	OI				1.69
8.917	3.74	0.00	2.048	OI				1.71
9.000	3.77	0.00	2.074	OI				1.73
9.083	3.80	0.00	2.100	OI				1.75
9.167	3.82	0.00	2.126	OI				1.77
9.250	3.85	0.00	2.153	OI				1.79
9.333	3.88	0.00	2.179	OI				1.82
9.417	3.91	0.00	2.206	OI				1.84
9.500	3.94	0.00	2.233	OI				1.86
9.583	3.97	0.00	2.260	OI				1.88
9.667	4.00	0.00	2.288	OI				1.91
9.750	4.03	0.00	2.315	OI				1.93
9.833	4.07	0.00	2.343	OI				1.95
9.917	4.10	0.00	2.371	OI				1.98
10.000	4.13	0.00	2.400	OI				2.00
10.083	4.17	0.00	2.428	OI				2.02
10.167	4.20	0.00	2.457	OI				2.05
10.250	4.24	0.00	2.486	OI				2.07
10.333	4.28	0.00	2.516	OI				2.10
10.417	4.31	0.00	2.545	OI				2.12
10.500	4.35	0.00	2.575	OI				2.15

10.583	4.39	0.00	2.605	OI				2.17
10.667	4.43	0.00	2.635	OI				2.20
10.750	4.48	0.00	2.666	OI				2.22
10.833	4.52	0.01	2.697	OI				2.25
10.917	4.56	0.01	2.728	OI				2.27
11.000	4.61	0.01	2.760	OI				2.30
11.083	4.65	0.01	2.792	OI				2.33
11.167	4.70	0.01	2.824	OI				2.35
11.250	4.75	0.01	2.856	OI				2.38
11.333	4.80	0.01	2.889	OI				2.41
11.417	4.85	0.01	2.922	OI				2.44
11.500	4.90	0.01	2.956	OI				2.46
11.583	4.95	0.01	2.990	OI				2.49
11.667	5.01	0.01	3.024	OI				2.52
11.750	5.07	0.01	3.058	OI				2.55
11.833	5.13	0.01	3.093	OI				2.58
11.917	5.19	0.01	3.129	OI				2.61
12.000	5.25	0.01	3.165	OI				2.64
12.083	5.30	0.01	3.201	OI				2.67
12.167	5.31	0.01	3.238	OI				2.70
12.250	5.30	0.01	3.274	OI				2.73
12.333	5.33	0.01	3.310	OI				2.76
12.417	5.38	0.01	3.347	OI				2.79
12.500	5.44	0.01	3.385	OI				2.82
12.583	5.51	0.01	3.422	OI				2.85
12.667	5.59	0.01	3.460	OI				2.88
12.750	5.67	0.01	3.499	OI				2.92
12.833	5.75	0.01	3.538	OI				2.95
12.917	5.84	0.01	3.578	OI				2.98
13.000	5.93	1.11	3.615	OI				3.01
13.083	6.02	3.11	3.641	OI				3.03
13.167	6.12	4.33	3.658	|O				3.05
13.250	6.23	5.09	3.668	|O				3.06
13.333	6.34	5.58	3.674	|O				3.06
13.417	6.46	5.92	3.679	|O				3.07
13.500	6.58	6.16	3.682	|O				3.07
13.583	6.71	6.36	3.685	|O				3.07
13.667	6.85	6.53	3.687	|O				3.07
13.750	6.99	6.69	3.689	|O				3.07
13.833	7.14	6.85	3.691	|O				3.08
13.917	7.30	7.00	3.693	|O				3.08
14.000	7.47	7.16	3.695	|OI				3.08
14.083	7.65	7.32	3.698	|OI				3.08
14.167	7.85	7.50	3.700	| O				3.08
14.250	8.07	7.69	3.702	| O				3.09
14.333	8.29	7.89	3.705	| O				3.09
14.417	8.53	8.10	3.708	| O				3.09
14.500	8.79	8.33	3.711	| O				3.09
14.583	9.06	8.57	3.714	| O				3.10
14.667	9.36	8.83	3.718	| O				3.10

14.750	9.68	9.12	3.721	O				3.10
14.833	10.03	9.42	3.726	O				3.10
14.917	10.43	9.75	3.730	O				3.11
15.000	10.88	10.12	3.735	O				3.11
15.083	11.39	10.54	3.740	OI				3.12
15.167	11.98	11.01	3.747	OI				3.12
15.250	12.66	11.55	3.754	O				3.13
15.333	13.43	12.16	3.762	O				3.14
15.417	14.23	12.85	3.771	O				3.14
15.500	14.58	13.49	3.780	O				3.15
15.583	14.92	14.00	3.787	OI				3.16
15.667	16.02	14.61	3.795	OI				3.16
15.750	17.70	15.53	3.807	O				3.17
15.833	20.19	16.93	3.826	OI				3.19
15.917	23.95	19.04	3.854	OI				3.21
16.000	30.91	22.48	3.900	O I				3.25
16.083	50.44	29.95	3.999	O	I			3.33
16.167	104.85	48.24	4.265		O		I	3.55
16.250	117.49	66.73	4.635			O		I 3.86
16.333	69.17	74.54	4.791			I O		3.99
16.417	48.22	69.89	4.698		I	O		3.91
16.500	37.23	61.91	4.538		I O			3.78
16.583	30.74	53.70	4.374		I O			3.65
16.667	25.40	46.17	4.223	I	O			3.52
16.750	21.83	37.38	4.098	I	O			3.42
16.833	18.82	30.38	4.005	I O				3.34
16.917	16.44	25.15	3.935	I O				3.28
17.000	14.32	21.14	3.882	I O				3.23
17.083	12.54	17.98	3.840	IO				3.20
17.167	11.72	15.58	3.808	IO				3.17
17.250	11.01	13.85	3.785	IO				3.15
17.333	9.87	12.45	3.766	IO				3.14
17.417	8.99	11.21	3.749	IO				3.12
17.500	7.76	10.04	3.734	O				3.11
17.583	7.34	9.02	3.720	IO				3.10
17.667	7.00	8.26	3.710	IO				3.09
17.750	6.71	7.68	3.702	IO				3.09
17.833	6.44	7.23	3.696	O				3.08
17.917	6.20	6.85	3.691	O				3.08
18.000	5.98	6.54	3.687	O				3.07
18.083	5.80	6.27	3.684	O				3.07
18.167	5.68	6.06	3.681	O				3.07
18.250	5.60	5.88	3.678	O				3.07
18.333	5.48	5.74	3.676	O				3.06
18.417	5.35	5.61	3.675	O				3.06
18.500	5.23	5.48	3.673	O				3.06
18.583	5.12	5.35	3.671	O				3.06
18.667	5.01	5.23	3.670	O				3.06
18.750	4.90	5.12	3.668	O				3.06
18.833	4.80	5.01	3.667	O				3.06

18.917	4.70	4.90	3.665	|O	|	|	|	3.05
19.000	4.61	4.80	3.664	|O	|	|	|	3.05
19.083	4.52	4.71	3.663	|O	|	|	|	3.05
19.167	4.44	4.61	3.661	|O	|	|	|	3.05
19.250	4.36	4.53	3.660	|O	|	|	|	3.05
19.333	4.28	4.44	3.659	|O	|	|	|	3.05
19.417	4.21	4.36	3.658	|O	|	|	|	3.05
19.500	4.14	4.29	3.657	|O	|	|	|	3.05
19.583	4.07	4.21	3.656	|O	|	|	|	3.05
19.667	4.01	4.14	3.655	|O	|	|	|	3.05
19.750	3.95	4.07	3.654	|O	|	|	|	3.05
19.833	3.89	4.01	3.653	|O	|	|	|	3.04
19.917	3.83	3.95	3.653	|O	|	|	|	3.04
20.000	3.77	3.89	3.652	|O	|	|	|	3.04
20.083	3.72	3.83	3.651	|O	|	|	|	3.04
20.167	3.67	3.77	3.650	IO	|	|	|	3.04
20.250	3.62	3.72	3.649	IO	|	|	|	3.04
20.333	3.57	3.67	3.649	O	|	|	|	3.04
20.417	3.53	3.62	3.648	O	|	|	|	3.04
20.500	3.48	3.57	3.648	O	|	|	|	3.04
20.583	3.44	3.53	3.647	O	|	|	|	3.04
20.667	3.40	3.48	3.646	O	|	|	|	3.04
20.750	3.36	3.44	3.646	O	|	|	|	3.04
20.833	3.32	3.40	3.645	O	|	|	|	3.04
20.917	3.28	3.36	3.645	O	|	|	|	3.04
21.000	3.24	3.32	3.644	O	|	|	|	3.04
21.083	3.21	3.28	3.644	O	|	|	|	3.04
21.167	3.17	3.24	3.643	O	|	|	|	3.04
21.250	3.14	3.21	3.643	O	|	|	|	3.04
21.333	3.10	3.17	3.642	O	|	|	|	3.04
21.417	3.07	3.14	3.642	O	|	|	|	3.03
21.500	3.04	3.10	3.641	O	|	|	|	3.03
21.583	3.01	3.07	3.641	O	|	|	|	3.03
21.667	2.98	3.04	3.640	O	|	|	|	3.03
21.750	2.95	3.01	3.640	O	|	|	|	3.03
21.833	2.92	2.98	3.640	O	|	|	|	3.03
21.917	2.90	2.95	3.639	O	|	|	|	3.03
22.000	2.87	2.92	3.639	O	|	|	|	3.03
22.083	2.84	2.90	3.638	O	|	|	|	3.03
22.167	2.82	2.87	3.638	O	|	|	|	3.03
22.250	2.79	2.84	3.638	O	|	|	|	3.03
22.333	2.77	2.82	3.637	O	|	|	|	3.03
22.417	2.74	2.79	3.637	O	|	|	|	3.03
22.500	2.72	2.77	3.637	O	|	|	|	3.03
22.583	2.70	2.74	3.636	O	|	|	|	3.03
22.667	2.67	2.72	3.636	O	|	|	|	3.03
22.750	2.65	2.70	3.636	O	|	|	|	3.03
22.833	2.63	2.67	3.636	O	|	|	|	3.03
22.917	2.61	2.65	3.635	O	|	|	|	3.03
23.000	2.59	2.63	3.635	O	|	|	|	3.03

23.083	2.57	2.61	3.635	O				3.03
23.167	2.55	2.59	3.634	O				3.03
23.250	2.53	2.57	3.634	O				3.03
23.333	2.51	2.55	3.634	O				3.03
23.417	2.49	2.53	3.634	O				3.03
23.500	2.48	2.51	3.633	O				3.03
23.583	2.46	2.49	3.633	O				3.03
23.667	2.44	2.47	3.633	O				3.03
23.750	2.42	2.46	3.633	O				3.03
23.833	2.41	2.44	3.632	O				3.03
23.917	2.39	2.42	3.632	O				3.03
24.000	2.37	2.40	3.632	O				3.03
24.083	2.27	2.37	3.631	O				3.03
24.167	1.71	2.22	3.629	O				3.02
24.250	0.99	1.86	3.625	O				3.02
24.333	0.66	1.44	3.619	O				3.02
24.417	0.47	1.08	3.614	O				3.01
24.500	0.35	0.81	3.611	O				3.01
24.583	0.26	0.60	3.608	O				3.01
24.667	0.19	0.45	3.606	O				3.00
24.750	0.14	0.33	3.604	O				3.00
24.833	0.10	0.25	3.603	O				3.00
24.917	0.08	0.18	3.602	O				3.00
25.000	0.05	0.13	3.602	O				3.00
25.083	0.04	0.10	3.601	O				3.00
25.167	0.03	0.07	3.601	O				3.00
25.250	0.02	0.05	3.601	O				3.00
25.333	0.01	0.04	3.600	O				3.00
25.417	0.00	0.02	3.600	O				3.00
25.500	0.00	0.01	3.600	O				3.00
25.583	0.00	0.01	3.600	O				3.00
25.667	0.00	0.01	3.600	O				3.00
25.750	0.00	0.01	3.600	O				3.00
25.833	0.00	0.01	3.600	O				3.00
25.917	0.00	0.01	3.600	O				3.00
26.000	0.00	0.01	3.600	O				3.00
26.083	0.00	0.01	3.600	O				3.00
26.167	0.00	0.01	3.599	O				3.00
26.250	0.00	0.01	3.599	O				3.00
26.333	0.00	0.01	3.599	O				3.00
26.417	0.00	0.01	3.599	O				3.00
26.500	0.00	0.01	3.599	O				3.00
26.583	0.00	0.01	3.599	O				3.00
26.667	0.00	0.01	3.599	O				3.00
26.750	0.00	0.01	3.599	O				3.00
26.833	0.00	0.01	3.599	O				3.00
26.917	0.00	0.01	3.599	O				3.00
27.000	0.00	0.01	3.599	O				3.00
27.083	0.00	0.01	3.599	O				3.00
27.167	0.00	0.01	3.599	O				3.00

27.250	0.00	0.01	3.599	O				3.00
27.333	0.00	0.01	3.599	O				3.00
27.417	0.00	0.01	3.598	O				3.00
27.500	0.00	0.01	3.598	O				3.00
27.583	0.00	0.01	3.598	O				3.00
27.667	0.00	0.01	3.598	O				3.00
27.750	0.00	0.01	3.598	O				3.00
27.833	0.00	0.01	3.598	O				3.00
27.917	0.00	0.01	3.598	O				3.00
28.000	0.00	0.01	3.598	O				3.00
28.083	0.00	0.01	3.598	O				3.00
28.167	0.00	0.01	3.598	O				3.00
28.250	0.00	0.01	3.598	O				3.00
28.333	0.00	0.01	3.598	O				3.00
28.417	0.00	0.01	3.598	O				3.00
28.500	0.00	0.01	3.598	O				3.00
28.583	0.00	0.01	3.597	O				3.00
28.667	0.00	0.01	3.597	O				3.00
28.750	0.00	0.01	3.597	O				3.00
28.833	0.00	0.01	3.597	O				3.00
28.917	0.00	0.01	3.597	O				3.00
29.000	0.00	0.01	3.597	O				3.00
29.083	0.00	0.01	3.597	O				3.00
29.167	0.00	0.01	3.597	O				3.00
29.250	0.00	0.01	3.597	O				3.00
29.333	0.00	0.01	3.597	O				3.00
29.417	0.00	0.01	3.597	O				3.00
29.500	0.00	0.01	3.597	O				3.00
29.583	0.00	0.01	3.597	O				3.00
29.667	0.00	0.01	3.597	O				3.00
29.750	0.00	0.01	3.597	O				3.00
29.833	0.00	0.01	3.596	O				3.00
29.917	0.00	0.01	3.596	O				3.00
30.000	0.00	0.01	3.596	O				3.00
30.083	0.00	0.01	3.596	O				3.00
30.167	0.00	0.01	3.596	O				3.00
30.250	0.00	0.01	3.596	O				3.00
30.333	0.00	0.01	3.596	O				3.00
30.417	0.00	0.01	3.596	O				3.00
30.500	0.00	0.01	3.596	O				3.00
30.583	0.00	0.01	3.596	O				3.00
30.667	0.00	0.01	3.596	O				3.00
30.750	0.00	0.01	3.596	O				3.00
30.833	0.00	0.01	3.596	O				3.00
30.917	0.00	0.01	3.596	O				3.00
31.000	0.00	0.01	3.595	O				3.00
31.083	0.00	0.01	3.595	O				3.00
31.167	0.00	0.01	3.595	O				3.00
31.250	0.00	0.01	3.595	O				3.00
31.333	0.00	0.01	3.595	O				3.00

31.417	0.00	0.01	3.595	O				3.00
31.500	0.00	0.01	3.595	O				3.00
31.583	0.00	0.01	3.595	O				3.00
31.667	0.00	0.01	3.595	O				3.00
31.750	0.00	0.01	3.595	O				3.00
31.833	0.00	0.01	3.595	O				3.00
31.917	0.00	0.01	3.595	O				3.00
32.000	0.00	0.01	3.595	O				3.00
32.083	0.00	0.01	3.595	O				3.00
32.167	0.00	0.01	3.595	O				3.00
32.250	0.00	0.01	3.594	O				3.00
32.333	0.00	0.01	3.594	O				3.00
32.417	0.00	0.01	3.594	O				3.00
32.500	0.00	0.01	3.594	O				3.00
32.583	0.00	0.01	3.594	O				3.00
32.667	0.00	0.01	3.594	O				3.00
32.750	0.00	0.01	3.594	O				3.00
32.833	0.00	0.01	3.594	O				2.99
32.917	0.00	0.01	3.594	O				2.99
33.000	0.00	0.01	3.594	O				2.99
33.083	0.00	0.01	3.594	O				2.99
33.167	0.00	0.01	3.594	O				2.99
33.250	0.00	0.01	3.594	O				2.99
33.333	0.00	0.01	3.594	O				2.99
33.417	0.00	0.01	3.593	O				2.99
33.500	0.00	0.01	3.593	O				2.99
33.583	0.00	0.01	3.593	O				2.99
33.667	0.00	0.01	3.593	O				2.99
33.750	0.00	0.01	3.593	O				2.99
33.833	0.00	0.01	3.593	O				2.99
33.917	0.00	0.01	3.593	O				2.99
34.000	0.00	0.01	3.593	O				2.99
34.083	0.00	0.01	3.593	O				2.99
34.167	0.00	0.01	3.593	O				2.99
34.250	0.00	0.01	3.593	O				2.99
34.333	0.00	0.01	3.593	O				2.99
34.417	0.00	0.01	3.593	O				2.99
34.500	0.00	0.01	3.593	O				2.99
34.583	0.00	0.01	3.593	O				2.99
34.667	0.00	0.01	3.592	O				2.99
34.750	0.00	0.01	3.592	O				2.99
34.833	0.00	0.01	3.592	O				2.99
34.917	0.00	0.01	3.592	O				2.99
35.000	0.00	0.01	3.592	O				2.99
35.083	0.00	0.01	3.592	O				2.99
35.167	0.00	0.01	3.592	O				2.99
35.250	0.00	0.01	3.592	O				2.99
35.333	0.00	0.01	3.592	O				2.99
35.417	0.00	0.01	3.592	O				2.99
35.500	0.00	0.01	3.592	O				2.99

35.583	0.00	0.01	3.592	O				2.99
35.667	0.00	0.01	3.592	O				2.99
35.750	0.00	0.01	3.592	O				2.99
35.833	0.00	0.01	3.591	O				2.99
35.917	0.00	0.01	3.591	O				2.99
36.000	0.00	0.01	3.591	O				2.99
36.083	0.00	0.01	3.591	O				2.99
36.167	0.00	0.01	3.591	O				2.99
36.250	0.00	0.01	3.591	O				2.99
36.333	0.00	0.01	3.591	O				2.99
36.417	0.00	0.01	3.591	O				2.99
36.500	0.00	0.01	3.591	O				2.99
36.583	0.00	0.01	3.591	O				2.99
36.667	0.00	0.01	3.591	O				2.99
36.750	0.00	0.01	3.591	O				2.99
36.833	0.00	0.01	3.591	O				2.99
36.917	0.00	0.01	3.591	O				2.99
37.000	0.00	0.01	3.591	O				2.99
37.083	0.00	0.01	3.590	O				2.99
37.167	0.00	0.01	3.590	O				2.99
37.250	0.00	0.01	3.590	O				2.99
37.333	0.00	0.01	3.590	O				2.99
37.417	0.00	0.01	3.590	O				2.99
37.500	0.00	0.01	3.590	O				2.99
37.583	0.00	0.01	3.590	O				2.99
37.667	0.00	0.01	3.590	O				2.99
37.750	0.00	0.01	3.590	O				2.99
37.833	0.00	0.01	3.590	O				2.99
37.917	0.00	0.01	3.590	O				2.99
38.000	0.00	0.01	3.590	O				2.99
38.083	0.00	0.01	3.590	O				2.99
38.167	0.00	0.01	3.590	O				2.99
38.250	0.00	0.01	3.589	O				2.99
38.333	0.00	0.01	3.589	O				2.99
38.417	0.00	0.01	3.589	O				2.99
38.500	0.00	0.01	3.589	O				2.99
38.583	0.00	0.01	3.589	O				2.99
38.667	0.00	0.01	3.589	O				2.99
38.750	0.00	0.01	3.589	O				2.99
38.833	0.00	0.01	3.589	O				2.99
38.917	0.00	0.01	3.589	O				2.99
39.000	0.00	0.01	3.589	O				2.99
39.083	0.00	0.01	3.589	O				2.99
39.167	0.00	0.01	3.589	O				2.99
39.250	0.00	0.01	3.589	O				2.99
39.333	0.00	0.01	3.589	O				2.99
39.417	0.00	0.01	3.589	O				2.99
39.500	0.00	0.01	3.588	O				2.99
39.583	0.00	0.01	3.588	O				2.99
39.667	0.00	0.01	3.588	O				2.99

39.750	0.00	0.01	3.588	O	|	|	|	2.99
39.833	0.00	0.01	3.588	O	|	|	|	2.99
39.917	0.00	0.01	3.588	O	|	|	|	2.99
40.000	0.00	0.01	3.588	O	|	|	|	2.99
40.083	0.00	0.01	3.588	O	|	|	|	2.99
40.167	0.00	0.01	3.588	O	|	|	|	2.99
40.250	0.00	0.01	3.588	O	|	|	|	2.99
40.333	0.00	0.01	3.588	O	|	|	|	2.99
40.417	0.00	0.01	3.588	O	|	|	|	2.99
40.500	0.00	0.01	3.588	O	|	|	|	2.99
40.583	0.00	0.01	3.588	O	|	|	|	2.99
40.667	0.00	0.01	3.587	O	|	|	|	2.99
40.750	0.00	0.01	3.587	O	|	|	|	2.99
40.833	0.00	0.01	3.587	O	|	|	|	2.99
40.917	0.00	0.01	3.587	O	|	|	|	2.99
41.000	0.00	0.01	3.587	O	|	|	|	2.99
41.083	0.00	0.01	3.587	O	|	|	|	2.99
41.167	0.00	0.01	3.587	O	|	|	|	2.99
41.250	0.00	0.01	3.587	O	|	|	|	2.99
41.333	0.00	0.01	3.587	O	|	|	|	2.99
41.417	0.00	0.01	3.587	O	|	|	|	2.99
41.500	0.00	0.01	3.587	O	|	|	|	2.99
41.583	0.00	0.01	3.587	O	|	|	|	2.99
41.667	0.00	0.01	3.587	O	|	|	|	2.99
41.750	0.00	0.01	3.587	O	|	|	|	2.99
41.833	0.00	0.01	3.587	O	|	|	|	2.99
41.917	0.00	0.01	3.586	O	|	|	|	2.99
42.000	0.00	0.01	3.586	O	|	|	|	2.99
42.083	0.00	0.01	3.586	O	|	|	|	2.99
42.167	0.00	0.01	3.586	O	|	|	|	2.99
42.250	0.00	0.01	3.586	O	|	|	|	2.99
42.333	0.00	0.01	3.586	O	|	|	|	2.99
42.417	0.00	0.01	3.586	O	|	|	|	2.99
42.500	0.00	0.01	3.586	O	|	|	|	2.99
42.583	0.00	0.01	3.586	O	|	|	|	2.99
42.667	0.00	0.01	3.586	O	|	|	|	2.99
42.750	0.00	0.01	3.586	O	|	|	|	2.99
42.833	0.00	0.01	3.586	O	|	|	|	2.99
42.917	0.00	0.01	3.586	O	|	|	|	2.99
43.000	0.00	0.01	3.586	O	|	|	|	2.99
43.083	0.00	0.01	3.585	O	|	|	|	2.99
43.167	0.00	0.01	3.585	O	|	|	|	2.99
43.250	0.00	0.01	3.585	O	|	|	|	2.99
43.333	0.00	0.01	3.585	O	|	|	|	2.99
43.417	0.00	0.01	3.585	O	|	|	|	2.99
43.500	0.00	0.01	3.585	O	|	|	|	2.99
43.583	0.00	0.01	3.585	O	|	|	|	2.99
43.667	0.00	0.01	3.585	O	|	|	|	2.99
43.750	0.00	0.01	3.585	O	|	|	|	2.99
43.833	0.00	0.01	3.585	O	|	|	|	2.99

43.917	0.00	0.01	3.585	O				2.99
44.000	0.00	0.01	3.585	O				2.99
44.083	0.00	0.01	3.585	O				2.99
44.167	0.00	0.01	3.585	O				2.99
44.250	0.00	0.01	3.585	O				2.99
44.333	0.00	0.01	3.584	O				2.99
44.417	0.00	0.01	3.584	O				2.99
44.500	0.00	0.01	3.584	O				2.99
44.583	0.00	0.01	3.584	O				2.99
44.667	0.00	0.01	3.584	O				2.99
44.750	0.00	0.01	3.584	O				2.99
44.833	0.00	0.01	3.584	O				2.99
44.917	0.00	0.01	3.584	O				2.99
45.000	0.00	0.01	3.584	O				2.99
45.083	0.00	0.01	3.584	O				2.99
45.167	0.00	0.01	3.584	O				2.99
45.250	0.00	0.01	3.584	O				2.99
45.333	0.00	0.01	3.584	O				2.99
45.417	0.00	0.01	3.584	O				2.99
45.500	0.00	0.01	3.584	O				2.99
45.583	0.00	0.01	3.583	O				2.99
45.667	0.00	0.01	3.583	O				2.99
45.750	0.00	0.01	3.583	O				2.99
45.833	0.00	0.01	3.583	O				2.99
45.917	0.00	0.01	3.583	O				2.99
46.000	0.00	0.01	3.583	O				2.99
46.083	0.00	0.01	3.583	O				2.99
46.167	0.00	0.01	3.583	O				2.99
46.250	0.00	0.01	3.583	O				2.99
46.333	0.00	0.01	3.583	O				2.99
46.417	0.00	0.01	3.583	O				2.99
46.500	0.00	0.01	3.583	O				2.99
46.583	0.00	0.01	3.583	O				2.99
46.667	0.00	0.01	3.583	O				2.99
46.750	0.00	0.01	3.582	O				2.99
46.833	0.00	0.01	3.582	O				2.99
46.917	0.00	0.01	3.582	O				2.99
47.000	0.00	0.01	3.582	O				2.99
47.083	0.00	0.01	3.582	O				2.99
47.167	0.00	0.01	3.582	O				2.99
47.250	0.00	0.01	3.582	O				2.99
47.333	0.00	0.01	3.582	O				2.98
47.417	0.00	0.01	3.582	O				2.98
47.500	0.00	0.01	3.582	O				2.98
47.583	0.00	0.01	3.582	O				2.98
47.667	0.00	0.01	3.582	O				2.98
47.750	0.00	0.01	3.582	O				2.98
47.833	0.00	0.01	3.582	O				2.98
47.917	0.00	0.01	3.582	O				2.98
48.000	0.00	0.01	3.581	O				2.98

48.083	0.00	0.01	3.581	O				2.98
48.167	0.00	0.01	3.581	O				2.98
48.250	0.00	0.01	3.581	O				2.98
48.333	0.00	0.01	3.581	O				2.98
48.417	0.00	0.01	3.581	O				2.98
48.500	0.00	0.01	3.581	O				2.98
48.583	0.00	0.01	3.581	O				2.98
48.667	0.00	0.01	3.581	O				2.98
48.750	0.00	0.01	3.581	O				2.98
48.833	0.00	0.01	3.581	O				2.98
48.917	0.00	0.01	3.581	O				2.98
49.000	0.00	0.01	3.581	O				2.98
49.083	0.00	0.01	3.581	O				2.98
49.167	0.00	0.01	3.580	O				2.98
49.250	0.00	0.01	3.580	O				2.98
49.333	0.00	0.01	3.580	O				2.98
49.417	0.00	0.01	3.580	O				2.98
49.500	0.00	0.01	3.580	O				2.98
49.583	0.00	0.01	3.580	O				2.98
49.667	0.00	0.01	3.580	O				2.98
49.750	0.00	0.01	3.580	O				2.98
49.833	0.00	0.01	3.580	O				2.98
49.917	0.00	0.01	3.580	O				2.98
50.000	0.00	0.01	3.580	O				2.98
50.083	0.00	0.01	3.580	O				2.98
50.167	0.00	0.01	3.580	O				2.98
50.250	0.00	0.01	3.580	O				2.98
50.333	0.00	0.01	3.580	O				2.98
50.417	0.00	0.01	3.579	O				2.98
50.500	0.00	0.01	3.579	O				2.98
50.583	0.00	0.01	3.579	O				2.98
50.667	0.00	0.01	3.579	O				2.98
50.750	0.00	0.01	3.579	O				2.98
50.833	0.00	0.01	3.579	O				2.98
50.917	0.00	0.01	3.579	O				2.98
51.000	0.00	0.01	3.579	O				2.98
51.083	0.00	0.01	3.579	O				2.98
51.167	0.00	0.01	3.579	O				2.98
51.250	0.00	0.01	3.579	O				2.98
51.333	0.00	0.01	3.579	O				2.98
51.417	0.00	0.01	3.579	O				2.98
51.500	0.00	0.01	3.579	O				2.98
51.583	0.00	0.01	3.578	O				2.98
51.667	0.00	0.01	3.578	O				2.98
51.750	0.00	0.01	3.578	O				2.98
51.833	0.00	0.01	3.578	O				2.98
51.917	0.00	0.01	3.578	O				2.98
52.000	0.00	0.01	3.578	O				2.98
52.083	0.00	0.01	3.578	O				2.98
52.167	0.00	0.01	3.578	O				2.98

52.250	0.00	0.01	3.578	O	|	|	|	2.98
52.333	0.00	0.01	3.578	O	|	|	|	2.98
52.417	0.00	0.01	3.578	O	|	|	|	2.98
52.500	0.00	0.01	3.578	O	|	|	|	2.98
52.583	0.00	0.01	3.578	O	|	|	|	2.98
52.667	0.00	0.01	3.578	O	|	|	|	2.98
52.750	0.00	0.01	3.578	O	|	|	|	2.98
52.833	0.00	0.01	3.577	O	|	|	|	2.98
52.917	0.00	0.01	3.577	O	|	|	|	2.98
53.000	0.00	0.01	3.577	O	|	|	|	2.98
53.083	0.00	0.01	3.577	O	|	|	|	2.98
53.167	0.00	0.01	3.577	O	|	|	|	2.98
53.250	0.00	0.01	3.577	O	|	|	|	2.98
53.333	0.00	0.01	3.577	O	|	|	|	2.98
53.417	0.00	0.01	3.577	O	|	|	|	2.98
53.500	0.00	0.01	3.577	O	|	|	|	2.98
53.583	0.00	0.01	3.577	O	|	|	|	2.98
53.667	0.00	0.01	3.577	O	|	|	|	2.98
53.750	0.00	0.01	3.577	O	|	|	|	2.98
53.833	0.00	0.01	3.577	O	|	|	|	2.98
53.917	0.00	0.01	3.577	O	|	|	|	2.98
54.000	0.00	0.01	3.576	O	|	|	|	2.98
54.083	0.00	0.01	3.576	O	|	|	|	2.98
54.167	0.00	0.01	3.576	O	|	|	|	2.98
54.250	0.00	0.01	3.576	O	|	|	|	2.98
54.333	0.00	0.01	3.576	O	|	|	|	2.98
54.417	0.00	0.01	3.576	O	|	|	|	2.98
54.500	0.00	0.01	3.576	O	|	|	|	2.98
54.583	0.00	0.01	3.576	O	|	|	|	2.98
54.667	0.00	0.01	3.576	O	|	|	|	2.98
54.750	0.00	0.01	3.576	O	|	|	|	2.98
54.833	0.00	0.01	3.576	O	|	|	|	2.98
54.917	0.00	0.01	3.576	O	|	|	|	2.98
55.000	0.00	0.01	3.576	O	|	|	|	2.98
55.083	0.00	0.01	3.576	O	|	|	|	2.98
55.167	0.00	0.01	3.576	O	|	|	|	2.98
55.250	0.00	0.01	3.575	O	|	|	|	2.98
55.333	0.00	0.01	3.575	O	|	|	|	2.98
55.417	0.00	0.01	3.575	O	|	|	|	2.98
55.500	0.00	0.01	3.575	O	|	|	|	2.98
55.583	0.00	0.01	3.575	O	|	|	|	2.98
55.667	0.00	0.01	3.575	O	|	|	|	2.98
55.750	0.00	0.01	3.575	O	|	|	|	2.98
55.833	0.00	0.01	3.575	O	|	|	|	2.98
55.917	0.00	0.01	3.575	O	|	|	|	2.98
56.000	0.00	0.01	3.575	O	|	|	|	2.98
56.083	0.00	0.01	3.575	O	|	|	|	2.98
56.167	0.00	0.01	3.575	O	|	|	|	2.98
56.250	0.00	0.01	3.575	O	|	|	|	2.98
56.333	0.00	0.01	3.575	O	|	|	|	2.98

56.417	0.00	0.01	3.574	O				2.98
56.500	0.00	0.01	3.574	O				2.98
56.583	0.00	0.01	3.574	O				2.98
56.667	0.00	0.01	3.574	O				2.98
56.750	0.00	0.01	3.574	O				2.98
56.833	0.00	0.01	3.574	O				2.98
56.917	0.00	0.01	3.574	O				2.98
57.000	0.00	0.01	3.574	O				2.98
57.083	0.00	0.01	3.574	O				2.98
57.167	0.00	0.01	3.574	O				2.98
57.250	0.00	0.01	3.574	O				2.98
57.333	0.00	0.01	3.574	O				2.98
57.417	0.00	0.01	3.574	O				2.98
57.500	0.00	0.01	3.574	O				2.98
57.583	0.00	0.01	3.574	O				2.98
57.667	0.00	0.01	3.573	O				2.98
57.750	0.00	0.01	3.573	O				2.98
57.833	0.00	0.01	3.573	O				2.98
57.917	0.00	0.01	3.573	O				2.98
58.000	0.00	0.01	3.573	O				2.98
58.083	0.00	0.01	3.573	O				2.98
58.167	0.00	0.01	3.573	O				2.98
58.250	0.00	0.01	3.573	O				2.98
58.333	0.00	0.01	3.573	O				2.98
58.417	0.00	0.01	3.573	O				2.98
58.500	0.00	0.01	3.573	O				2.98
58.583	0.00	0.01	3.573	O				2.98
58.667	0.00	0.01	3.573	O				2.98
58.750	0.00	0.01	3.573	O				2.98
58.833	0.00	0.01	3.572	O				2.98
58.917	0.00	0.01	3.572	O				2.98
59.000	0.00	0.01	3.572	O				2.98
59.083	0.00	0.01	3.572	O				2.98
59.167	0.00	0.01	3.572	O				2.98
59.250	0.00	0.01	3.572	O				2.98
59.333	0.00	0.01	3.572	O				2.98
59.417	0.00	0.01	3.572	O				2.98
59.500	0.00	0.01	3.572	O				2.98
59.583	0.00	0.01	3.572	O				2.98
59.667	0.00	0.01	3.572	O				2.98
59.750	0.00	0.01	3.572	O				2.98
59.833	0.00	0.01	3.572	O				2.98
59.917	0.00	0.01	3.572	O				2.98
60.000	0.00	0.01	3.572	O				2.98
60.083	0.00	0.01	3.571	O				2.98
60.167	0.00	0.01	3.571	O				2.98
60.250	0.00	0.01	3.571	O				2.98
60.333	0.00	0.01	3.571	O				2.98
60.417	0.00	0.01	3.571	O				2.98
60.500	0.00	0.01	3.571	O				2.98

60.583	0.00	0.01	3.571	O	|	|	|	2.98
60.667	0.00	0.01	3.571	O	|	|	|	2.98
60.750	0.00	0.01	3.571	O	|	|	|	2.98
60.833	0.00	0.01	3.571	O	|	|	|	2.98
60.917	0.00	0.01	3.571	O	|	|	|	2.98
61.000	0.00	0.01	3.571	O	|	|	|	2.98
61.083	0.00	0.01	3.571	O	|	|	|	2.98
61.167	0.00	0.01	3.571	O	|	|	|	2.98
61.250	0.00	0.01	3.570	O	|	|	|	2.98
61.333	0.00	0.01	3.570	O	|	|	|	2.98
61.417	0.00	0.01	3.570	O	|	|	|	2.98
61.500	0.00	0.01	3.570	O	|	|	|	2.98
61.583	0.00	0.01	3.570	O	|	|	|	2.98
61.667	0.00	0.01	3.570	O	|	|	|	2.98
61.750	0.00	0.01	3.570	O	|	|	|	2.98
61.833	0.00	0.01	3.570	O	|	|	|	2.98
61.917	0.00	0.01	3.570	O	|	|	|	2.97
62.000	0.00	0.01	3.570	O	|	|	|	2.97
62.083	0.00	0.01	3.570	O	|	|	|	2.97
62.167	0.00	0.01	3.570	O	|	|	|	2.97
62.250	0.00	0.01	3.570	O	|	|	|	2.97
62.333	0.00	0.01	3.570	O	|	|	|	2.97
62.417	0.00	0.01	3.570	O	|	|	|	2.97
62.500	0.00	0.01	3.569	O	|	|	|	2.97
62.583	0.00	0.01	3.569	O	|	|	|	2.97
62.667	0.00	0.01	3.569	O	|	|	|	2.97
62.750	0.00	0.01	3.569	O	|	|	|	2.97
62.833	0.00	0.01	3.569	O	|	|	|	2.97
62.917	0.00	0.01	3.569	O	|	|	|	2.97
63.000	0.00	0.01	3.569	O	|	|	|	2.97
63.083	0.00	0.01	3.569	O	|	|	|	2.97
63.167	0.00	0.01	3.569	O	|	|	|	2.97
63.250	0.00	0.01	3.569	O	|	|	|	2.97
63.333	0.00	0.01	3.569	O	|	|	|	2.97
63.417	0.00	0.01	3.569	O	|	|	|	2.97
63.500	0.00	0.01	3.569	O	|	|	|	2.97
63.583	0.00	0.01	3.569	O	|	|	|	2.97
63.667	0.00	0.01	3.568	O	|	|	|	2.97
63.750	0.00	0.01	3.568	O	|	|	|	2.97
63.833	0.00	0.01	3.568	O	|	|	|	2.97
63.917	0.00	0.01	3.568	O	|	|	|	2.97
64.000	0.00	0.01	3.568	O	|	|	|	2.97
64.083	0.00	0.01	3.568	O	|	|	|	2.97
64.167	0.00	0.01	3.568	O	|	|	|	2.97
64.250	0.00	0.01	3.568	O	|	|	|	2.97
64.333	0.00	0.01	3.568	O	|	|	|	2.97
64.417	0.00	0.01	3.568	O	|	|	|	2.97
64.500	0.00	0.01	3.568	O	|	|	|	2.97
64.583	0.00	0.01	3.568	O	|	|	|	2.97
64.667	0.00	0.01	3.568	O	|	|	|	2.97

64.750	0.00	0.01	3.568	O				2.97
64.833	0.00	0.01	3.568	O				2.97
64.917	0.00	0.01	3.567	O				2.97
65.000	0.00	0.01	3.567	O				2.97
65.083	0.00	0.01	3.567	O				2.97
65.167	0.00	0.01	3.567	O				2.97
65.250	0.00	0.01	3.567	O				2.97
65.333	0.00	0.01	3.567	O				2.97
65.417	0.00	0.01	3.567	O				2.97
65.500	0.00	0.01	3.567	O				2.97
65.583	0.00	0.01	3.567	O				2.97
65.667	0.00	0.01	3.567	O				2.97
65.750	0.00	0.01	3.567	O				2.97
65.833	0.00	0.01	3.567	O				2.97
65.917	0.00	0.01	3.567	O				2.97
66.000	0.00	0.01	3.567	O				2.97
66.083	0.00	0.01	3.566	O				2.97
66.167	0.00	0.01	3.566	O				2.97
66.250	0.00	0.01	3.566	O				2.97
66.333	0.00	0.01	3.566	O				2.97
66.417	0.00	0.01	3.566	O				2.97
66.500	0.00	0.01	3.566	O				2.97
66.583	0.00	0.01	3.566	O				2.97
66.667	0.00	0.01	3.566	O				2.97
66.750	0.00	0.01	3.566	O				2.97
66.833	0.00	0.01	3.566	O				2.97
66.917	0.00	0.01	3.566	O				2.97
67.000	0.00	0.01	3.566	O				2.97
67.083	0.00	0.01	3.566	O				2.97
67.167	0.00	0.01	3.566	O				2.97
67.250	0.00	0.01	3.566	O				2.97
67.333	0.00	0.01	3.565	O				2.97
67.417	0.00	0.01	3.565	O				2.97
67.500	0.00	0.01	3.565	O				2.97
67.583	0.00	0.01	3.565	O				2.97
67.667	0.00	0.01	3.565	O				2.97
67.750	0.00	0.01	3.565	O				2.97
67.833	0.00	0.01	3.565	O				2.97
67.917	0.00	0.01	3.565	O				2.97
68.000	0.00	0.01	3.565	O				2.97
68.083	0.00	0.01	3.565	O				2.97
68.167	0.00	0.01	3.565	O				2.97
68.250	0.00	0.01	3.565	O				2.97
68.333	0.00	0.01	3.565	O				2.97
68.417	0.00	0.01	3.565	O				2.97
68.500	0.00	0.01	3.564	O				2.97
68.583	0.00	0.01	3.564	O				2.97
68.667	0.00	0.01	3.564	O				2.97
68.750	0.00	0.01	3.564	O				2.97
68.833	0.00	0.01	3.564	O				2.97

68.917	0.00	0.01	3.564	O				2.97
69.000	0.00	0.01	3.564	O				2.97
69.083	0.00	0.01	3.564	O				2.97
69.167	0.00	0.01	3.564	O				2.97
69.250	0.00	0.01	3.564	O				2.97
69.333	0.00	0.01	3.564	O				2.97
69.417	0.00	0.01	3.564	O				2.97
69.500	0.00	0.01	3.564	O				2.97
69.583	0.00	0.01	3.564	O				2.97
69.667	0.00	0.01	3.564	O				2.97
69.750	0.00	0.01	3.563	O				2.97
69.833	0.00	0.01	3.563	O				2.97
69.917	0.00	0.01	3.563	O				2.97
70.000	0.00	0.01	3.563	O				2.97
70.083	0.00	0.01	3.563	O				2.97
70.167	0.00	0.01	3.563	O				2.97
70.250	0.00	0.01	3.563	O				2.97
70.333	0.00	0.01	3.563	O				2.97
70.417	0.00	0.01	3.563	O				2.97
70.500	0.00	0.01	3.563	O				2.97
70.583	0.00	0.01	3.563	O				2.97
70.667	0.00	0.01	3.563	O				2.97
70.750	0.00	0.01	3.563	O				2.97
70.833	0.00	0.01	3.563	O				2.97
70.917	0.00	0.01	3.562	O				2.97
71.000	0.00	0.01	3.562	O				2.97
71.083	0.00	0.01	3.562	O				2.97
71.167	0.00	0.01	3.562	O				2.97
71.250	0.00	0.01	3.562	O				2.97
71.333	0.00	0.01	3.562	O				2.97
71.417	0.00	0.01	3.562	O				2.97
71.500	0.00	0.01	3.562	O				2.97
71.583	0.00	0.01	3.562	O				2.97
71.667	0.00	0.01	3.562	O				2.97
71.750	0.00	0.01	3.562	O				2.97
71.833	0.00	0.01	3.562	O				2.97
71.917	0.00	0.01	3.562	O				2.97
72.000	0.00	0.01	3.562	O				2.97
72.083	0.00	0.01	3.562	O				2.97
72.167	0.00	0.01	3.561	O				2.97
72.250	0.00	0.01	3.561	O				2.97
72.333	0.00	0.01	3.561	O				2.97
72.417	0.00	0.01	3.561	O				2.97
72.500	0.00	0.01	3.561	O				2.97
72.583	0.00	0.01	3.561	O				2.97
72.667	0.00	0.01	3.561	O				2.97
72.750	0.00	0.01	3.561	O				2.97
72.833	0.00	0.01	3.561	O				2.97
72.917	0.00	0.01	3.561	O				2.97
73.000	0.00	0.01	3.561	O				2.97

73.083	0.00	0.01	3.561	O				2.97
73.167	0.00	0.01	3.561	O				2.97
73.250	0.00	0.01	3.561	O				2.97
73.333	0.00	0.01	3.560	O				2.97
73.417	0.00	0.01	3.560	O				2.97
73.500	0.00	0.01	3.560	O				2.97
73.583	0.00	0.01	3.560	O				2.97
73.667	0.00	0.01	3.560	O				2.97
73.750	0.00	0.01	3.560	O				2.97
73.833	0.00	0.01	3.560	O				2.97
73.917	0.00	0.01	3.560	O				2.97
74.000	0.00	0.01	3.560	O				2.97
74.083	0.00	0.01	3.560	O				2.97
74.167	0.00	0.01	3.560	O				2.97
74.250	0.00	0.01	3.560	O				2.97
74.333	0.00	0.01	3.560	O				2.97
74.417	0.00	0.01	3.560	O				2.97
74.500	0.00	0.01	3.560	O				2.97
74.583	0.00	0.01	3.559	O				2.97
74.667	0.00	0.01	3.559	O				2.97
74.750	0.00	0.01	3.559	O				2.97
74.833	0.00	0.01	3.559	O				2.97
74.917	0.00	0.01	3.559	O				2.97
75.000	0.00	0.01	3.559	O				2.97
75.083	0.00	0.01	3.559	O				2.97
75.167	0.00	0.01	3.559	O				2.97
75.250	0.00	0.01	3.559	O				2.97
75.333	0.00	0.01	3.559	O				2.97
75.417	0.00	0.01	3.559	O				2.97
75.500	0.00	0.01	3.559	O				2.97
75.583	0.00	0.01	3.559	O				2.97
75.667	0.00	0.01	3.559	O				2.97
75.750	0.00	0.01	3.559	O				2.97
75.833	0.00	0.01	3.558	O				2.97
75.917	0.00	0.01	3.558	O				2.97
76.000	0.00	0.01	3.558	O				2.97
76.083	0.00	0.01	3.558	O				2.97
76.167	0.00	0.01	3.558	O				2.97
76.250	0.00	0.01	3.558	O				2.97
76.333	0.00	0.01	3.558	O				2.97
76.417	0.00	0.01	3.558	O				2.96
76.500	0.00	0.01	3.558	O				2.96
76.583	0.00	0.01	3.558	O				2.96
76.667	0.00	0.01	3.558	O				2.96
76.750	0.00	0.01	3.558	O				2.96
76.833	0.00	0.01	3.558	O				2.96
76.917	0.00	0.01	3.558	O				2.96
77.000	0.00	0.01	3.557	O				2.96
77.083	0.00	0.01	3.557	O				2.96
77.167	0.00	0.01	3.557	O				2.96

77.250	0.00	0.01	3.557	O				2.96
77.333	0.00	0.01	3.557	O				2.96
77.417	0.00	0.01	3.557	O				2.96
77.500	0.00	0.01	3.557	O				2.96
77.583	0.00	0.01	3.557	O				2.96
77.667	0.00	0.01	3.557	O				2.96
77.750	0.00	0.01	3.557	O				2.96
77.833	0.00	0.01	3.557	O				2.96
77.917	0.00	0.01	3.557	O				2.96
78.000	0.00	0.01	3.557	O				2.96
78.083	0.00	0.01	3.557	O				2.96
78.167	0.00	0.01	3.557	O				2.96
78.250	0.00	0.01	3.556	O				2.96
78.333	0.00	0.01	3.556	O				2.96
78.417	0.00	0.01	3.556	O				2.96
78.500	0.00	0.01	3.556	O				2.96
78.583	0.00	0.01	3.556	O				2.96
78.667	0.00	0.01	3.556	O				2.96
78.750	0.00	0.01	3.556	O				2.96
78.833	0.00	0.01	3.556	O				2.96
78.917	0.00	0.01	3.556	O				2.96
79.000	0.00	0.01	3.556	O				2.96
79.083	0.00	0.01	3.556	O				2.96
79.167	0.00	0.01	3.556	O				2.96
79.250	0.00	0.01	3.556	O				2.96
79.333	0.00	0.01	3.556	O				2.96
79.417	0.00	0.01	3.555	O				2.96
79.500	0.00	0.01	3.555	O				2.96
79.583	0.00	0.01	3.555	O				2.96
79.667	0.00	0.01	3.555	O				2.96
79.750	0.00	0.01	3.555	O				2.96
79.833	0.00	0.01	3.555	O				2.96
79.917	0.00	0.01	3.555	O				2.96
80.000	0.00	0.01	3.555	O				2.96
80.083	0.00	0.01	3.555	O				2.96
80.167	0.00	0.01	3.555	O				2.96
80.250	0.00	0.01	3.555	O				2.96
80.333	0.00	0.01	3.555	O				2.96
80.417	0.00	0.01	3.555	O				2.96
80.500	0.00	0.01	3.555	O				2.96
80.583	0.00	0.01	3.555	O				2.96
80.667	0.00	0.01	3.554	O				2.96
80.750	0.00	0.01	3.554	O				2.96
80.833	0.00	0.01	3.554	O				2.96
80.917	0.00	0.01	3.554	O				2.96
81.000	0.00	0.01	3.554	O				2.96
81.083	0.00	0.01	3.554	O				2.96
81.167	0.00	0.01	3.554	O				2.96
81.250	0.00	0.01	3.554	O				2.96
81.333	0.00	0.01	3.554	O				2.96

81.417	0.00	0.01	3.554	O					2.96
81.500	0.00	0.01	3.554	O					2.96
81.583	0.00	0.01	3.554	O					2.96
81.667	0.00	0.01	3.554	O					2.96
81.750	0.00	0.01	3.554	O					2.96
81.833	0.00	0.01	3.553	O					2.96
81.917	0.00	0.01	3.553	O					2.96
82.000	0.00	0.01	3.553	O					2.96
82.083	0.00	0.01	3.553	O					2.96
82.167	0.00	0.01	3.553	O					2.96
82.250	0.00	0.01	3.553	O					2.96
82.333	0.00	0.01	3.553	O					2.96
82.417	0.00	0.01	3.553	O					2.96
82.500	0.00	0.01	3.553	O					2.96
82.583	0.00	0.01	3.553	O					2.96
82.667	0.00	0.01	3.553	O					2.96
82.750	0.00	0.01	3.553	O					2.96
82.833	0.00	0.01	3.553	O					2.96
82.917	0.00	0.01	3.553	O					2.96
83.000	0.00	0.01	3.553	O					2.96
83.083	0.00	0.01	3.552	O					2.96
83.167	0.00	0.01	3.552	O					2.96
83.250	0.00	0.01	3.552	O					2.96
83.333	0.00	0.01	3.552	O					2.96
83.417	0.00	0.01	3.552	O					2.96
83.500	0.00	0.01	3.552	O					2.96
83.583	0.00	0.01	3.552	O					2.96
83.667	0.00	0.01	3.552	O					2.96
83.750	0.00	0.01	3.552	O					2.96
83.833	0.00	0.01	3.552	O					2.96
83.917	0.00	0.01	3.552	O					2.96
84.000	0.00	0.01	3.552	O					2.96
84.083	0.00	0.01	3.552	O					2.96
84.167	0.00	0.01	3.552	O					2.96
84.250	0.00	0.01	3.551	O					2.96
84.333	0.00	0.01	3.551	O					2.96
84.417	0.00	0.01	3.551	O					2.96
84.500	0.00	0.01	3.551	O					2.96
84.583	0.00	0.01	3.551	O					2.96
84.667	0.00	0.01	3.551	O					2.96
84.750	0.00	0.01	3.551	O					2.96
84.833	0.00	0.01	3.551	O					2.96
84.917	0.00	0.01	3.551	O					2.96
85.000	0.00	0.01	3.551	O					2.96
85.083	0.00	0.01	3.551	O					2.96
85.167	0.00	0.01	3.551	O					2.96
85.250	0.00	0.01	3.551	O					2.96
85.333	0.00	0.01	3.551	O					2.96
85.417	0.00	0.01	3.551	O					2.96
85.500	0.00	0.01	3.550	O					2.96

85.583	0.00	0.01	3.550	O				2.96
85.667	0.00	0.01	3.550	O				2.96
85.750	0.00	0.01	3.550	O				2.96
85.833	0.00	0.01	3.550	O				2.96
85.917	0.00	0.01	3.550	O				2.96
86.000	0.00	0.01	3.550	O				2.96
86.083	0.00	0.01	3.550	O				2.96
86.167	0.00	0.01	3.550	O				2.96
86.250	0.00	0.01	3.550	O				2.96
86.333	0.00	0.01	3.550	O				2.96
86.417	0.00	0.01	3.550	O				2.96
86.500	0.00	0.01	3.550	O				2.96
86.583	0.00	0.01	3.550	O				2.96
86.667	0.00	0.01	3.549	O				2.96
86.750	0.00	0.01	3.549	O				2.96
86.833	0.00	0.01	3.549	O				2.96
86.917	0.00	0.01	3.549	O				2.96
87.000	0.00	0.01	3.549	O				2.96
87.083	0.00	0.01	3.549	O				2.96
87.167	0.00	0.01	3.549	O				2.96
87.250	0.00	0.01	3.549	O				2.96
87.333	0.00	0.01	3.549	O				2.96
87.417	0.00	0.01	3.549	O				2.96
87.500	0.00	0.01	3.549	O				2.96
87.583	0.00	0.01	3.549	O				2.96
87.667	0.00	0.01	3.549	O				2.96
87.750	0.00	0.01	3.549	O				2.96
87.833	0.00	0.01	3.549	O				2.96
87.917	0.00	0.01	3.548	O				2.96
88.000	0.00	0.01	3.548	O				2.96
88.083	0.00	0.01	3.548	O				2.96
88.167	0.00	0.01	3.548	O				2.96
88.250	0.00	0.01	3.548	O				2.96
88.333	0.00	0.01	3.548	O				2.96
88.417	0.00	0.01	3.548	O				2.96
88.500	0.00	0.01	3.548	O				2.96
88.583	0.00	0.01	3.548	O				2.96
88.667	0.00	0.01	3.548	O				2.96
88.750	0.00	0.01	3.548	O				2.96
88.833	0.00	0.01	3.548	O				2.96
88.917	0.00	0.01	3.548	O				2.96
89.000	0.00	0.01	3.548	O				2.96
89.083	0.00	0.01	3.547	O				2.96
89.167	0.00	0.01	3.547	O				2.96
89.250	0.00	0.01	3.547	O				2.96
89.333	0.00	0.01	3.547	O				2.96
89.417	0.00	0.01	3.547	O				2.96
89.500	0.00	0.01	3.547	O				2.96
89.583	0.00	0.01	3.547	O				2.96
89.667	0.00	0.01	3.547	O				2.96

89.750	0.00	0.01	3.547	O				2.96
89.833	0.00	0.01	3.547	O				2.96
89.917	0.00	0.01	3.547	O				2.96
90.000	0.00	0.01	3.547	O				2.96
90.083	0.00	0.01	3.547	O				2.96
90.167	0.00	0.01	3.547	O				2.96
90.250	0.00	0.01	3.547	O				2.96
90.333	0.00	0.01	3.546	O				2.96
90.417	0.00	0.01	3.546	O				2.96
90.500	0.00	0.01	3.546	O				2.96
90.583	0.00	0.01	3.546	O				2.96
90.667	0.00	0.01	3.546	O				2.96
90.750	0.00	0.01	3.546	O				2.96
90.833	0.00	0.01	3.546	O				2.96
90.917	0.00	0.01	3.546	O				2.95
91.000	0.00	0.01	3.546	O				2.95
91.083	0.00	0.01	3.546	O				2.95
91.167	0.00	0.01	3.546	O				2.95
91.250	0.00	0.01	3.546	O				2.95
91.333	0.00	0.01	3.546	O				2.95
91.417	0.00	0.01	3.546	O				2.95
91.500	0.00	0.01	3.545	O				2.95
91.583	0.00	0.01	3.545	O				2.95
91.667	0.00	0.01	3.545	O				2.95
91.750	0.00	0.01	3.545	O				2.95
91.833	0.00	0.01	3.545	O				2.95
91.917	0.00	0.01	3.545	O				2.95
92.000	0.00	0.01	3.545	O				2.95
92.083	0.00	0.01	3.545	O				2.95
92.167	0.00	0.01	3.545	O				2.95
92.250	0.00	0.01	3.545	O				2.95
92.333	0.00	0.01	3.545	O				2.95
92.417	0.00	0.01	3.545	O				2.95
92.500	0.00	0.01	3.545	O				2.95
92.583	0.00	0.01	3.545	O				2.95
92.667	0.00	0.01	3.545	O				2.95
92.750	0.00	0.01	3.544	O				2.95
92.833	0.00	0.01	3.544	O				2.95
92.917	0.00	0.01	3.544	O				2.95
93.000	0.00	0.01	3.544	O				2.95
93.083	0.00	0.01	3.544	O				2.95
93.167	0.00	0.01	3.544	O				2.95
93.250	0.00	0.01	3.544	O				2.95
93.333	0.00	0.01	3.544	O				2.95
93.417	0.00	0.01	3.544	O				2.95
93.500	0.00	0.01	3.544	O				2.95
93.583	0.00	0.01	3.544	O				2.95
93.667	0.00	0.01	3.544	O				2.95
93.750	0.00	0.01	3.544	O				2.95
93.833	0.00	0.01	3.544	O				2.95

93.917	0.00	0.01	3.543	O				2.95
94.000	0.00	0.01	3.543	O				2.95
94.083	0.00	0.01	3.543	O				2.95
94.167	0.00	0.01	3.543	O				2.95
94.250	0.00	0.01	3.543	O				2.95
94.333	0.00	0.01	3.543	O				2.95
94.417	0.00	0.01	3.543	O				2.95
94.500	0.00	0.01	3.543	O				2.95
94.583	0.00	0.01	3.543	O				2.95
94.667	0.00	0.01	3.543	O				2.95
94.750	0.00	0.01	3.543	O				2.95
94.833	0.00	0.01	3.543	O				2.95
94.917	0.00	0.01	3.543	O				2.95
95.000	0.00	0.01	3.543	O				2.95
95.083	0.00	0.01	3.543	O				2.95
95.167	0.00	0.01	3.542	O				2.95
95.250	0.00	0.01	3.542	O				2.95
95.333	0.00	0.01	3.542	O				2.95
95.417	0.00	0.01	3.542	O				2.95
95.500	0.00	0.01	3.542	O				2.95
95.583	0.00	0.01	3.542	O				2.95
95.667	0.00	0.01	3.542	O				2.95
95.750	0.00	0.01	3.542	O				2.95
95.833	0.00	0.01	3.542	O				2.95
95.917	0.00	0.01	3.542	O				2.95
96.000	0.00	0.01	3.542	O				2.95
96.083	0.00	0.01	3.542	O				2.95
96.167	0.00	0.01	3.542	O				2.95
96.250	0.00	0.01	3.542	O				2.95
96.333	0.00	0.01	3.541	O				2.95
96.417	0.00	0.01	3.541	O				2.95
96.500	0.00	0.01	3.541	O				2.95
96.583	0.00	0.01	3.541	O				2.95
96.667	0.00	0.01	3.541	O				2.95
96.750	0.00	0.01	3.541	O				2.95
96.833	0.00	0.01	3.541	O				2.95
96.917	0.00	0.01	3.541	O				2.95
97.000	0.00	0.01	3.541	O				2.95
97.083	0.00	0.01	3.541	O				2.95
97.167	0.00	0.01	3.541	O				2.95
97.250	0.00	0.01	3.541	O				2.95
97.333	0.00	0.01	3.541	O				2.95
97.417	0.00	0.01	3.541	O				2.95
97.500	0.00	0.01	3.541	O				2.95
97.583	0.00	0.01	3.540	O				2.95
97.667	0.00	0.01	3.540	O				2.95
97.750	0.00	0.01	3.540	O				2.95
97.833	0.00	0.01	3.540	O				2.95
97.917	0.00	0.01	3.540	O				2.95
98.000	0.00	0.01	3.540	O				2.95

98.083	0.00	0.01	3.540	O				2.95
98.167	0.00	0.01	3.540	O				2.95
98.250	0.00	0.01	3.540	O				2.95
98.333	0.00	0.01	3.540	O				2.95
98.417	0.00	0.01	3.540	O				2.95
98.500	0.00	0.01	3.540	O				2.95
98.583	0.00	0.01	3.540	O				2.95
98.667	0.00	0.01	3.540	O				2.95
98.750	0.00	0.01	3.539	O				2.95
98.833	0.00	0.01	3.539	O				2.95
98.917	0.00	0.01	3.539	O				2.95
99.000	0.00	0.01	3.539	O				2.95
99.083	0.00	0.01	3.539	O				2.95
99.167	0.00	0.01	3.539	O				2.95
99.250	0.00	0.01	3.539	O				2.95
99.333	0.00	0.01	3.539	O				2.95
99.417	0.00	0.01	3.539	O				2.95
99.500	0.00	0.01	3.539	O				2.95
99.583	0.00	0.01	3.539	O				2.95
99.667	0.00	0.01	3.539	O				2.95
99.750	0.00	0.01	3.539	O				2.95
99.833	0.00	0.01	3.539	O				2.95
99.917	0.00	0.01	3.539	O				2.95
100.000	0.00	0.01	3.538	O				2.95
100.083	0.00	0.01	3.538	O				2.95
100.167	0.00	0.01	3.538	O				2.95
100.250	0.00	0.01	3.538	O				2.95
100.333	0.00	0.01	3.538	O				2.95
100.417	0.00	0.01	3.538	O				2.95
100.500	0.00	0.01	3.538	O				2.95
100.583	0.00	0.01	3.538	O				2.95
100.667	0.00	0.01	3.538	O				2.95
100.750	0.00	0.01	3.538	O				2.95
100.833	0.00	0.01	3.538	O				2.95
100.917	0.00	0.01	3.538	O				2.95
101.000	0.00	0.01	3.538	O				2.95
101.083	0.00	0.01	3.538	O				2.95
101.167	0.00	0.01	3.537	O				2.95
101.250	0.00	0.01	3.537	O				2.95
101.333	0.00	0.01	3.537	O				2.95
101.417	0.00	0.01	3.537	O				2.95
101.500	0.00	0.01	3.537	O				2.95
101.583	0.00	0.01	3.537	O				2.95
101.667	0.00	0.01	3.537	O				2.95
101.750	0.00	0.01	3.537	O				2.95
101.833	0.00	0.01	3.537	O				2.95
101.917	0.00	0.01	3.537	O				2.95
102.000	0.00	0.01	3.537	O				2.95
102.083	0.00	0.01	3.537	O				2.95
102.167	0.00	0.01	3.537	O				2.95

102.250	0.00	0.01	3.537	O				2.95
102.333	0.00	0.01	3.537	O				2.95
102.417	0.00	0.01	3.536	O				2.95
102.500	0.00	0.01	3.536	O				2.95
102.583	0.00	0.01	3.536	O				2.95
102.667	0.00	0.01	3.536	O				2.95
102.750	0.00	0.01	3.536	O				2.95
102.833	0.00	0.01	3.536	O				2.95
102.917	0.00	0.01	3.536	O				2.95
103.000	0.00	0.01	3.536	O				2.95
103.083	0.00	0.01	3.536	O				2.95
103.167	0.00	0.01	3.536	O				2.95
103.250	0.00	0.01	3.536	O				2.95
103.333	0.00	0.01	3.536	O				2.95
103.417	0.00	0.01	3.536	O				2.95
103.500	0.00	0.01	3.536	O				2.95
103.583	0.00	0.01	3.535	O				2.95
103.667	0.00	0.01	3.535	O				2.95
103.750	0.00	0.01	3.535	O				2.95
103.833	0.00	0.01	3.535	O				2.95
103.917	0.00	0.01	3.535	O				2.95
104.000	0.00	0.01	3.535	O				2.95
104.083	0.00	0.01	3.535	O				2.95
104.167	0.00	0.01	3.535	O				2.95
104.250	0.00	0.01	3.535	O				2.95
104.333	0.00	0.01	3.535	O				2.95
104.417	0.00	0.01	3.535	O				2.95
104.500	0.00	0.01	3.535	O				2.95
104.583	0.00	0.01	3.535	O				2.95
104.667	0.00	0.01	3.535	O				2.95
104.750	0.00	0.01	3.535	O				2.95
104.833	0.00	0.01	3.534	O				2.95
104.917	0.00	0.01	3.534	O				2.95
105.000	0.00	0.01	3.534	O				2.95
105.083	0.00	0.01	3.534	O				2.95
105.167	0.00	0.01	3.534	O				2.95
105.250	0.00	0.01	3.534	O				2.95
105.333	0.00	0.01	3.534	O				2.95
105.417	0.00	0.01	3.534	O				2.94
105.500	0.00	0.01	3.534	O				2.94
105.583	0.00	0.01	3.534	O				2.94
105.667	0.00	0.01	3.534	O				2.94
105.750	0.00	0.01	3.534	O				2.94
105.833	0.00	0.01	3.534	O				2.94
105.917	0.00	0.01	3.534	O				2.94
106.000	0.00	0.01	3.534	O				2.94
106.083	0.00	0.01	3.533	O				2.94
106.167	0.00	0.01	3.533	O				2.94
106.250	0.00	0.01	3.533	O				2.94
106.333	0.00	0.01	3.533	O				2.94

106.417	0.00	0.01	3.533	O				2.94
106.500	0.00	0.01	3.533	O				2.94
106.583	0.00	0.01	3.533	O				2.94
106.667	0.00	0.01	3.533	O				2.94
106.750	0.00	0.01	3.533	O				2.94
106.833	0.00	0.01	3.533	O				2.94
106.917	0.00	0.01	3.533	O				2.94
107.000	0.00	0.01	3.533	O				2.94
107.083	0.00	0.01	3.533	O				2.94
107.167	0.00	0.01	3.533	O				2.94
107.250	0.00	0.01	3.532	O				2.94
107.333	0.00	0.01	3.532	O				2.94
107.417	0.00	0.01	3.532	O				2.94
107.500	0.00	0.01	3.532	O				2.94
107.583	0.00	0.01	3.532	O				2.94
107.667	0.00	0.01	3.532	O				2.94
107.750	0.00	0.01	3.532	O				2.94
107.833	0.00	0.01	3.532	O				2.94
107.917	0.00	0.01	3.532	O				2.94
108.000	0.00	0.01	3.532	O				2.94
108.083	0.00	0.01	3.532	O				2.94
108.167	0.00	0.01	3.532	O				2.94
108.250	0.00	0.01	3.532	O				2.94
108.333	0.00	0.01	3.532	O				2.94
108.417	0.00	0.01	3.532	O				2.94
108.500	0.00	0.01	3.531	O				2.94
108.583	0.00	0.01	3.531	O				2.94
108.667	0.00	0.01	3.531	O				2.94
108.750	0.00	0.01	3.531	O				2.94
108.833	0.00	0.01	3.531	O				2.94
108.917	0.00	0.01	3.531	O				2.94
109.000	0.00	0.01	3.531	O				2.94
109.083	0.00	0.01	3.531	O				2.94
109.167	0.00	0.01	3.531	O				2.94
109.250	0.00	0.01	3.531	O				2.94
109.333	0.00	0.01	3.531	O				2.94
109.417	0.00	0.01	3.531	O				2.94
109.500	0.00	0.01	3.531	O				2.94
109.583	0.00	0.01	3.531	O				2.94
109.667	0.00	0.01	3.530	O				2.94
109.750	0.00	0.01	3.530	O				2.94
109.833	0.00	0.01	3.530	O				2.94
109.917	0.00	0.01	3.530	O				2.94
110.000	0.00	0.01	3.530	O				2.94
110.083	0.00	0.01	3.530	O				2.94
110.167	0.00	0.01	3.530	O				2.94
110.250	0.00	0.01	3.530	O				2.94
110.333	0.00	0.01	3.530	O				2.94
110.417	0.00	0.01	3.530	O				2.94
110.500	0.00	0.01	3.530	O				2.94

110.583	0.00	0.01	3.530	O	|	|	|	2.94
110.667	0.00	0.01	3.530	O	|	|	|	2.94
110.750	0.00	0.01	3.530	O	|	|	|	2.94
110.833	0.00	0.01	3.530	O	|	|	|	2.94
110.917	0.00	0.01	3.529	O	|	|	|	2.94
111.000	0.00	0.01	3.529	O	|	|	|	2.94
111.083	0.00	0.01	3.529	O	|	|	|	2.94
111.167	0.00	0.01	3.529	O	|	|	|	2.94
111.250	0.00	0.01	3.529	O	|	|	|	2.94
111.333	0.00	0.01	3.529	O	|	|	|	2.94
111.417	0.00	0.01	3.529	O	|	|	|	2.94
111.500	0.00	0.01	3.529	O	|	|	|	2.94
111.583	0.00	0.01	3.529	O	|	|	|	2.94
111.667	0.00	0.01	3.529	O	|	|	|	2.94
111.750	0.00	0.01	3.529	O	|	|	|	2.94
111.833	0.00	0.01	3.529	O	|	|	|	2.94
111.917	0.00	0.01	3.529	O	|	|	|	2.94
112.000	0.00	0.01	3.529	O	|	|	|	2.94
112.083	0.00	0.01	3.528	O	|	|	|	2.94
112.167	0.00	0.01	3.528	O	|	|	|	2.94
112.250	0.00	0.01	3.528	O	|	|	|	2.94
112.333	0.00	0.01	3.528	O	|	|	|	2.94
112.417	0.00	0.01	3.528	O	|	|	|	2.94
112.500	0.00	0.01	3.528	O	|	|	|	2.94
112.583	0.00	0.01	3.528	O	|	|	|	2.94
112.667	0.00	0.01	3.528	O	|	|	|	2.94
112.750	0.00	0.01	3.528	O	|	|	|	2.94
112.833	0.00	0.01	3.528	O	|	|	|	2.94
112.917	0.00	0.01	3.528	O	|	|	|	2.94
113.000	0.00	0.01	3.528	O	|	|	|	2.94
113.083	0.00	0.01	3.528	O	|	|	|	2.94
113.167	0.00	0.01	3.528	O	|	|	|	2.94
113.250	0.00	0.01	3.528	O	|	|	|	2.94
113.333	0.00	0.01	3.527	O	|	|	|	2.94
113.417	0.00	0.01	3.527	O	|	|	|	2.94
113.500	0.00	0.01	3.527	O	|	|	|	2.94
113.583	0.00	0.01	3.527	O	|	|	|	2.94
113.667	0.00	0.01	3.527	O	|	|	|	2.94
113.750	0.00	0.01	3.527	O	|	|	|	2.94
113.833	0.00	0.01	3.527	O	|	|	|	2.94
113.917	0.00	0.01	3.527	O	|	|	|	2.94
114.000	0.00	0.01	3.527	O	|	|	|	2.94
114.083	0.00	0.01	3.527	O	|	|	|	2.94
114.167	0.00	0.01	3.527	O	|	|	|	2.94
114.250	0.00	0.01	3.527	O	|	|	|	2.94
114.333	0.00	0.01	3.527	O	|	|	|	2.94
114.417	0.00	0.01	3.527	O	|	|	|	2.94
114.500	0.00	0.01	3.526	O	|	|	|	2.94
114.583	0.00	0.01	3.526	O	|	|	|	2.94
114.667	0.00	0.01	3.526	O	|	|	|	2.94

114.750	0.00	0.01	3.526	O				2.94
114.833	0.00	0.01	3.526	O				2.94
114.917	0.00	0.01	3.526	O				2.94
115.000	0.00	0.01	3.526	O				2.94
115.083	0.00	0.01	3.526	O				2.94
115.167	0.00	0.01	3.526	O				2.94
115.250	0.00	0.01	3.526	O				2.94
115.333	0.00	0.01	3.526	O				2.94
115.417	0.00	0.01	3.526	O				2.94
115.500	0.00	0.01	3.526	O				2.94
115.583	0.00	0.01	3.526	O				2.94
115.667	0.00	0.01	3.526	O				2.94
115.750	0.00	0.01	3.525	O				2.94
115.833	0.00	0.01	3.525	O				2.94
115.917	0.00	0.01	3.525	O				2.94
116.000	0.00	0.01	3.525	O				2.94
116.083	0.00	0.01	3.525	O				2.94
116.167	0.00	0.01	3.525	O				2.94
116.250	0.00	0.01	3.525	O				2.94
116.333	0.00	0.01	3.525	O				2.94
116.417	0.00	0.01	3.525	O				2.94
116.500	0.00	0.01	3.525	O				2.94
116.583	0.00	0.01	3.525	O				2.94
116.667	0.00	0.01	3.525	O				2.94
116.750	0.00	0.01	3.525	O				2.94
116.833	0.00	0.01	3.525	O				2.94
116.917	0.00	0.01	3.524	O				2.94
117.000	0.00	0.01	3.524	O				2.94
117.083	0.00	0.01	3.524	O				2.94
117.167	0.00	0.01	3.524	O				2.94
117.250	0.00	0.01	3.524	O				2.94
117.333	0.00	0.01	3.524	O				2.94
117.417	0.00	0.01	3.524	O				2.94
117.500	0.00	0.01	3.524	O				2.94
117.583	0.00	0.01	3.524	O				2.94
117.667	0.00	0.01	3.524	O				2.94
117.750	0.00	0.01	3.524	O				2.94
117.833	0.00	0.01	3.524	O				2.94
117.917	0.00	0.01	3.524	O				2.94
118.000	0.00	0.01	3.524	O				2.94
118.083	0.00	0.01	3.524	O				2.94
118.167	0.00	0.01	3.523	O				2.94
118.250	0.00	0.01	3.523	O				2.94
118.333	0.00	0.01	3.523	O				2.94
118.417	0.00	0.01	3.523	O				2.94
118.500	0.00	0.01	3.523	O				2.94
118.583	0.00	0.01	3.523	O				2.94
118.667	0.00	0.01	3.523	O				2.94
118.750	0.00	0.01	3.523	O				2.94
118.833	0.00	0.01	3.523	O				2.94

118.917	0.00	0.01	3.523	O					2.94
119.000	0.00	0.01	3.523	O					2.94
119.083	0.00	0.01	3.523	O					2.94
119.167	0.00	0.01	3.523	O					2.94
119.250	0.00	0.01	3.523	O					2.94
119.333	0.00	0.01	3.522	O					2.94
119.417	0.00	0.01	3.522	O					2.94
119.500	0.00	0.01	3.522	O					2.94
119.583	0.00	0.01	3.522	O					2.94
119.667	0.00	0.01	3.522	O					2.94
119.750	0.00	0.01	3.522	O					2.94
119.833	0.00	0.01	3.522	O					2.94
119.917	0.00	0.01	3.522	O					2.93
120.000	0.00	0.01	3.522	O					2.93
120.083	0.00	0.01	3.522	O					2.93
120.167	0.00	0.01	3.522	O					2.93
120.250	0.00	0.01	3.522	O					2.93
120.333	0.00	0.01	3.522	O					2.93
120.417	0.00	0.01	3.522	O					2.93
120.500	0.00	0.01	3.522	O					2.93
120.583	0.00	0.01	3.521	O					2.93
120.667	0.00	0.01	3.521	O					2.93
120.750	0.00	0.01	3.521	O					2.93
120.833	0.00	0.01	3.521	O					2.93
120.917	0.00	0.01	3.521	O					2.93
121.000	0.00	0.01	3.521	O					2.93
121.083	0.00	0.01	3.521	O					2.93
121.167	0.00	0.01	3.521	O					2.93
121.250	0.00	0.01	3.521	O					2.93
121.333	0.00	0.01	3.521	O					2.93
121.417	0.00	0.01	3.521	O					2.93
121.500	0.00	0.01	3.521	O					2.93
121.583	0.00	0.01	3.521	O					2.93
121.667	0.00	0.01	3.521	O					2.93
121.750	0.00	0.01	3.520	O					2.93
121.833	0.00	0.01	3.520	O					2.93
121.917	0.00	0.01	3.520	O					2.93
122.000	0.00	0.01	3.520	O					2.93
122.083	0.00	0.01	3.520	O					2.93
122.167	0.00	0.01	3.520	O					2.93
122.250	0.00	0.01	3.520	O					2.93
122.333	0.00	0.01	3.520	O					2.93
122.417	0.00	0.01	3.520	O					2.93
122.500	0.00	0.01	3.520	O					2.93
122.583	0.00	0.01	3.520	O					2.93
122.667	0.00	0.01	3.520	O					2.93
122.750	0.00	0.01	3.520	O					2.93
122.833	0.00	0.01	3.520	O					2.93
122.917	0.00	0.01	3.520	O					2.93
123.000	0.00	0.01	3.519	O					2.93

123.083	0.00	0.01	3.519	O				2.93
123.167	0.00	0.01	3.519	O				2.93
123.250	0.00	0.01	3.519	O				2.93
123.333	0.00	0.01	3.519	O				2.93
123.417	0.00	0.01	3.519	O				2.93
123.500	0.00	0.01	3.519	O				2.93
123.583	0.00	0.01	3.519	O				2.93
123.667	0.00	0.01	3.519	O				2.93
123.750	0.00	0.01	3.519	O				2.93
123.833	0.00	0.01	3.519	O				2.93
123.917	0.00	0.01	3.519	O				2.93
124.000	0.00	0.01	3.519	O				2.93
124.083	0.00	0.01	3.519	O				2.93
124.167	0.00	0.01	3.518	O				2.93
124.250	0.00	0.01	3.518	O				2.93
124.333	0.00	0.01	3.518	O				2.93
124.417	0.00	0.01	3.518	O				2.93
124.500	0.00	0.01	3.518	O				2.93
124.583	0.00	0.01	3.518	O				2.93
124.667	0.00	0.01	3.518	O				2.93
124.750	0.00	0.01	3.518	O				2.93
124.833	0.00	0.01	3.518	O				2.93
124.917	0.00	0.01	3.518	O				2.93
125.000	0.00	0.01	3.518	O				2.93
125.083	0.00	0.01	3.518	O				2.93
125.167	0.00	0.01	3.518	O				2.93
125.250	0.00	0.01	3.518	O				2.93
125.333	0.00	0.01	3.518	O				2.93
125.417	0.00	0.01	3.517	O				2.93
125.500	0.00	0.01	3.517	O				2.93
125.583	0.00	0.01	3.517	O				2.93
125.667	0.00	0.01	3.517	O				2.93
125.750	0.00	0.01	3.517	O				2.93
125.833	0.00	0.01	3.517	O				2.93
125.917	0.00	0.01	3.517	O				2.93
126.000	0.00	0.01	3.517	O				2.93
126.083	0.00	0.01	3.517	O				2.93
126.167	0.00	0.01	3.517	O				2.93
126.250	0.00	0.01	3.517	O				2.93
126.333	0.00	0.01	3.517	O				2.93
126.417	0.00	0.01	3.517	O				2.93
126.500	0.00	0.01	3.517	O				2.93
126.583	0.00	0.01	3.516	O				2.93
126.667	0.00	0.01	3.516	O				2.93
126.750	0.00	0.01	3.516	O				2.93
126.833	0.00	0.01	3.516	O				2.93
126.917	0.00	0.01	3.516	O				2.93
127.000	0.00	0.01	3.516	O				2.93
127.083	0.00	0.01	3.516	O				2.93
127.167	0.00	0.01	3.516	O				2.93

127.250	0.00	0.01	3.516	O				2.93
127.333	0.00	0.01	3.516	O				2.93
127.417	0.00	0.01	3.516	O				2.93
127.500	0.00	0.01	3.516	O				2.93
127.583	0.00	0.01	3.516	O				2.93
127.667	0.00	0.01	3.516	O				2.93
127.750	0.00	0.01	3.516	O				2.93
127.833	0.00	0.01	3.515	O				2.93
127.917	0.00	0.01	3.515	O				2.93
128.000	0.00	0.01	3.515	O				2.93
128.083	0.00	0.01	3.515	O				2.93
128.167	0.00	0.01	3.515	O				2.93
128.250	0.00	0.01	3.515	O				2.93
128.333	0.00	0.01	3.515	O				2.93
128.417	0.00	0.01	3.515	O				2.93
128.500	0.00	0.01	3.515	O				2.93
128.583	0.00	0.01	3.515	O				2.93
128.667	0.00	0.01	3.515	O				2.93
128.750	0.00	0.01	3.515	O				2.93
128.833	0.00	0.01	3.515	O				2.93
128.917	0.00	0.01	3.515	O				2.93
129.000	0.00	0.01	3.514	O				2.93
129.083	0.00	0.01	3.514	O				2.93
129.167	0.00	0.01	3.514	O				2.93
129.250	0.00	0.01	3.514	O				2.93
129.333	0.00	0.01	3.514	O				2.93
129.417	0.00	0.01	3.514	O				2.93
129.500	0.00	0.01	3.514	O				2.93
129.583	0.00	0.01	3.514	O				2.93
129.667	0.00	0.01	3.514	O				2.93
129.750	0.00	0.01	3.514	O				2.93
129.833	0.00	0.01	3.514	O				2.93
129.917	0.00	0.01	3.514	O				2.93
130.000	0.00	0.01	3.514	O				2.93
130.083	0.00	0.01	3.514	O				2.93
130.167	0.00	0.01	3.514	O				2.93
130.250	0.00	0.01	3.513	O				2.93
130.333	0.00	0.01	3.513	O				2.93
130.417	0.00	0.01	3.513	O				2.93
130.500	0.00	0.01	3.513	O				2.93
130.583	0.00	0.01	3.513	O				2.93
130.667	0.00	0.01	3.513	O				2.93
130.750	0.00	0.01	3.513	O				2.93
130.833	0.00	0.01	3.513	O				2.93
130.917	0.00	0.01	3.513	O				2.93
131.000	0.00	0.01	3.513	O				2.93
131.083	0.00	0.01	3.513	O				2.93
131.167	0.00	0.01	3.513	O				2.93
131.250	0.00	0.01	3.513	O				2.93
131.333	0.00	0.01	3.513	O				2.93

131.417	0.00	0.01	3.512	O				2.93
131.500	0.00	0.01	3.512	O				2.93
131.583	0.00	0.01	3.512	O				2.93
131.667	0.00	0.01	3.512	O				2.93
131.750	0.00	0.01	3.512	O				2.93
131.833	0.00	0.01	3.512	O				2.93
131.917	0.00	0.01	3.512	O				2.93
132.000	0.00	0.01	3.512	O				2.93
132.083	0.00	0.01	3.512	O				2.93
132.167	0.00	0.01	3.512	O				2.93
132.250	0.00	0.01	3.512	O				2.93
132.333	0.00	0.01	3.512	O				2.93
132.417	0.00	0.01	3.512	O				2.93
132.500	0.00	0.01	3.512	O				2.93
132.583	0.00	0.01	3.512	O				2.93
132.667	0.00	0.01	3.511	O				2.93
132.750	0.00	0.01	3.511	O				2.93
132.833	0.00	0.01	3.511	O				2.93
132.917	0.00	0.01	3.511	O				2.93
133.000	0.00	0.01	3.511	O				2.93
133.083	0.00	0.01	3.511	O				2.93
133.167	0.00	0.01	3.511	O				2.93
133.250	0.00	0.01	3.511	O				2.93
133.333	0.00	0.01	3.511	O				2.93
133.417	0.00	0.01	3.511	O				2.93
133.500	0.00	0.01	3.511	O				2.93
133.583	0.00	0.01	3.511	O				2.93
133.667	0.00	0.01	3.511	O				2.93
133.750	0.00	0.01	3.511	O				2.93
133.833	0.00	0.01	3.510	O				2.93
133.917	0.00	0.01	3.510	O				2.93
134.000	0.00	0.01	3.510	O				2.93
134.083	0.00	0.01	3.510	O				2.93
134.167	0.00	0.01	3.510	O				2.93
134.250	0.00	0.01	3.510	O				2.93
134.333	0.00	0.01	3.510	O				2.93
134.417	0.00	0.01	3.510	O				2.93
134.500	0.00	0.01	3.510	O				2.92
134.583	0.00	0.01	3.510	O				2.92
134.667	0.00	0.01	3.510	O				2.92
134.750	0.00	0.01	3.510	O				2.92
134.833	0.00	0.01	3.510	O				2.92
134.917	0.00	0.01	3.510	O				2.92
135.000	0.00	0.01	3.510	O				2.92
135.083	0.00	0.01	3.509	O				2.92
135.167	0.00	0.01	3.509	O				2.92
135.250	0.00	0.01	3.509	O				2.92
135.333	0.00	0.01	3.509	O				2.92
135.417	0.00	0.01	3.509	O				2.92
135.500	0.00	0.01	3.509	O				2.92

135.583	0.00	0.01	3.509	O	|	|	|	2.92
135.667	0.00	0.01	3.509	O	|	|	|	2.92
135.750	0.00	0.01	3.509	O	|	|	|	2.92
135.833	0.00	0.01	3.509	O	|	|	|	2.92
135.917	0.00	0.01	3.509	O	|	|	|	2.92
136.000	0.00	0.01	3.509	O	|	|	|	2.92
136.083	0.00	0.01	3.509	O	|	|	|	2.92
136.167	0.00	0.01	3.509	O	|	|	|	2.92
136.250	0.00	0.01	3.509	O	|	|	|	2.92
136.333	0.00	0.01	3.508	O	|	|	|	2.92
136.417	0.00	0.01	3.508	O	|	|	|	2.92
136.500	0.00	0.01	3.508	O	|	|	|	2.92
136.583	0.00	0.01	3.508	O	|	|	|	2.92
136.667	0.00	0.01	3.508	O	|	|	|	2.92
136.750	0.00	0.01	3.508	O	|	|	|	2.92
136.833	0.00	0.01	3.508	O	|	|	|	2.92
136.917	0.00	0.01	3.508	O	|	|	|	2.92
137.000	0.00	0.01	3.508	O	|	|	|	2.92
137.083	0.00	0.01	3.508	O	|	|	|	2.92
137.167	0.00	0.01	3.508	O	|	|	|	2.92
137.250	0.00	0.01	3.508	O	|	|	|	2.92
137.333	0.00	0.01	3.508	O	|	|	|	2.92
137.417	0.00	0.01	3.508	O	|	|	|	2.92
137.500	0.00	0.01	3.507	O	|	|	|	2.92
137.583	0.00	0.01	3.507	O	|	|	|	2.92
137.667	0.00	0.01	3.507	O	|	|	|	2.92
137.750	0.00	0.01	3.507	O	|	|	|	2.92
137.833	0.00	0.01	3.507	O	|	|	|	2.92
137.917	0.00	0.01	3.507	O	|	|	|	2.92
138.000	0.00	0.01	3.507	O	|	|	|	2.92
138.083	0.00	0.01	3.507	O	|	|	|	2.92
138.167	0.00	0.01	3.507	O	|	|	|	2.92
138.250	0.00	0.01	3.507	O	|	|	|	2.92
138.333	0.00	0.01	3.507	O	|	|	|	2.92
138.417	0.00	0.01	3.507	O	|	|	|	2.92
138.500	0.00	0.01	3.507	O	|	|	|	2.92
138.583	0.00	0.01	3.507	O	|	|	|	2.92
138.667	0.00	0.01	3.507	O	|	|	|	2.92
138.750	0.00	0.01	3.506	O	|	|	|	2.92
138.833	0.00	0.01	3.506	O	|	|	|	2.92
138.917	0.00	0.01	3.506	O	|	|	|	2.92
139.000	0.00	0.01	3.506	O	|	|	|	2.92
139.083	0.00	0.01	3.506	O	|	|	|	2.92
139.167	0.00	0.01	3.506	O	|	|	|	2.92
139.250	0.00	0.01	3.506	O	|	|	|	2.92
139.333	0.00	0.01	3.506	O	|	|	|	2.92
139.417	0.00	0.01	3.506	O	|	|	|	2.92
139.500	0.00	0.01	3.506	O	|	|	|	2.92
139.583	0.00	0.01	3.506	O	|	|	|	2.92
139.667	0.00	0.01	3.506	O	|	|	|	2.92

139.750	0.00	0.01	3.506	O	|	|	|	2.92
139.833	0.00	0.01	3.506	O	|	|	|	2.92
139.917	0.00	0.01	3.505	O	|	|	|	2.92
140.000	0.00	0.01	3.505	O	|	|	|	2.92
140.083	0.00	0.01	3.505	O	|	|	|	2.92
140.167	0.00	0.01	3.505	O	|	|	|	2.92
140.250	0.00	0.01	3.505	O	|	|	|	2.92
140.333	0.00	0.01	3.505	O	|	|	|	2.92
140.417	0.00	0.01	3.505	O	|	|	|	2.92
140.500	0.00	0.01	3.505	O	|	|	|	2.92
140.583	0.00	0.01	3.505	O	|	|	|	2.92
140.667	0.00	0.01	3.505	O	|	|	|	2.92
140.750	0.00	0.01	3.505	O	|	|	|	2.92
140.833	0.00	0.01	3.505	O	|	|	|	2.92
140.917	0.00	0.01	3.505	O	|	|	|	2.92
141.000	0.00	0.01	3.505	O	|	|	|	2.92
141.083	0.00	0.01	3.505	O	|	|	|	2.92
141.167	0.00	0.01	3.504	O	|	|	|	2.92
141.250	0.00	0.01	3.504	O	|	|	|	2.92
141.333	0.00	0.01	3.504	O	|	|	|	2.92
141.417	0.00	0.01	3.504	O	|	|	|	2.92
141.500	0.00	0.01	3.504	O	|	|	|	2.92
141.583	0.00	0.01	3.504	O	|	|	|	2.92
141.667	0.00	0.01	3.504	O	|	|	|	2.92
141.750	0.00	0.01	3.504	O	|	|	|	2.92
141.833	0.00	0.01	3.504	O	|	|	|	2.92
141.917	0.00	0.01	3.504	O	|	|	|	2.92
142.000	0.00	0.01	3.504	O	|	|	|	2.92
142.083	0.00	0.01	3.504	O	|	|	|	2.92
142.167	0.00	0.01	3.504	O	|	|	|	2.92
142.250	0.00	0.01	3.504	O	|	|	|	2.92
142.333	0.00	0.01	3.503	O	|	|	|	2.92
142.417	0.00	0.01	3.503	O	|	|	|	2.92
142.500	0.00	0.01	3.503	O	|	|	|	2.92
142.583	0.00	0.01	3.503	O	|	|	|	2.92
142.667	0.00	0.01	3.503	O	|	|	|	2.92
142.750	0.00	0.01	3.503	O	|	|	|	2.92
142.833	0.00	0.01	3.503	O	|	|	|	2.92
142.917	0.00	0.01	3.503	O	|	|	|	2.92
143.000	0.00	0.01	3.503	O	|	|	|	2.92
143.083	0.00	0.01	3.503	O	|	|	|	2.92
143.167	0.00	0.01	3.503	O	|	|	|	2.92
143.250	0.00	0.01	3.503	O	|	|	|	2.92
143.333	0.00	0.01	3.503	O	|	|	|	2.92
143.417	0.00	0.01	3.503	O	|	|	|	2.92
143.500	0.00	0.01	3.503	O	|	|	|	2.92
143.583	0.00	0.01	3.502	O	|	|	|	2.92
143.667	0.00	0.01	3.502	O	|	|	|	2.92
143.750	0.00	0.01	3.502	O	|	|	|	2.92
143.833	0.00	0.01	3.502	O	|	|	|	2.92

143.917	0.00	0.01	3.502	O					2.92
144.000	0.00	0.01	3.502	O					2.92
144.083	0.00	0.01	3.502	O					2.92
144.167	0.00	0.01	3.502	O					2.92
144.250	0.00	0.01	3.502	O					2.92
144.333	0.00	0.01	3.502	O					2.92
144.417	0.00	0.01	3.502	O					2.92
144.500	0.00	0.01	3.502	O					2.92
144.583	0.00	0.01	3.502	O					2.92
144.667	0.00	0.01	3.502	O					2.92
144.750	0.00	0.01	3.501	O					2.92
144.833	0.00	0.01	3.501	O					2.92
144.917	0.00	0.01	3.501	O					2.92
145.000	0.00	0.01	3.501	O					2.92
145.083	0.00	0.01	3.501	O					2.92
145.167	0.00	0.01	3.501	O					2.92
145.250	0.00	0.01	3.501	O					2.92
145.333	0.00	0.01	3.501	O					2.92
145.417	0.00	0.01	3.501	O					2.92
145.500	0.00	0.01	3.501	O					2.92
145.583	0.00	0.01	3.501	O					2.92
145.667	0.00	0.01	3.501	O					2.92
145.750	0.00	0.01	3.501	O					2.92
145.833	0.00	0.01	3.501	O					2.92
145.917	0.00	0.01	3.501	O					2.92
146.000	0.00	0.01	3.500	O					2.92
146.083	0.00	0.01	3.500	O					2.92
146.167	0.00	0.01	3.500	O					2.92
146.250	0.00	0.01	3.500	O					2.92
146.333	0.00	0.01	3.500	O					2.92
146.417	0.00	0.01	3.500	O					2.92
146.500	0.00	0.01	3.500	O					2.92
146.583	0.00	0.01	3.500	O					2.92
146.667	0.00	0.01	3.500	O					2.92
146.750	0.00	0.01	3.500	O					2.92
146.833	0.00	0.01	3.500	O					2.92
146.917	0.00	0.01	3.500	O					2.92
147.000	0.00	0.01	3.500	O					2.92
147.083	0.00	0.01	3.500	O					2.92
147.167	0.00	0.01	3.499	O					2.92
147.250	0.00	0.01	3.499	O					2.92
147.333	0.00	0.01	3.499	O					2.92
147.417	0.00	0.01	3.499	O					2.92
147.500	0.00	0.01	3.499	O					2.92
147.583	0.00	0.01	3.499	O					2.92
147.667	0.00	0.01	3.499	O					2.92
147.750	0.00	0.01	3.499	O					2.92
147.833	0.00	0.01	3.499	O					2.92
147.917	0.00	0.01	3.499	O					2.92
148.000	0.00	0.01	3.499	O					2.92

148.083	0.00	0.01	3.499	O				2.92
148.167	0.00	0.01	3.499	O				2.92
148.250	0.00	0.01	3.499	O				2.92
148.333	0.00	0.01	3.499	O				2.92
148.417	0.00	0.01	3.498	O				2.92
148.500	0.00	0.01	3.498	O				2.92
148.583	0.00	0.01	3.498	O				2.92
148.667	0.00	0.01	3.498	O				2.92
148.750	0.00	0.01	3.498	O				2.92
148.833	0.00	0.01	3.498	O				2.92
148.917	0.00	0.01	3.498	O				2.92
149.000	0.00	0.01	3.498	O				2.91
149.083	0.00	0.01	3.498	O				2.91
149.167	0.00	0.01	3.498	O				2.91
149.250	0.00	0.01	3.498	O				2.91
149.333	0.00	0.01	3.498	O				2.91
149.417	0.00	0.01	3.498	O				2.91
149.500	0.00	0.01	3.498	O				2.91
149.583	0.00	0.01	3.497	O				2.91
149.667	0.00	0.01	3.497	O				2.91
149.750	0.00	0.01	3.497	O				2.91
149.833	0.00	0.01	3.497	O				2.91
149.917	0.00	0.01	3.497	O				2.91
150.000	0.00	0.01	3.497	O				2.91
150.083	0.00	0.01	3.497	O				2.91
150.167	0.00	0.01	3.497	O				2.91
150.250	0.00	0.01	3.497	O				2.91
150.333	0.00	0.01	3.497	O				2.91
150.417	0.00	0.01	3.497	O				2.91
150.500	0.00	0.01	3.497	O				2.91
150.583	0.00	0.01	3.497	O				2.91
150.667	0.00	0.01	3.497	O				2.91
150.750	0.00	0.01	3.497	O				2.91
150.833	0.00	0.01	3.496	O				2.91
150.917	0.00	0.01	3.496	O				2.91
151.000	0.00	0.01	3.496	O				2.91
151.083	0.00	0.01	3.496	O				2.91
151.167	0.00	0.01	3.496	O				2.91
151.250	0.00	0.01	3.496	O				2.91
151.333	0.00	0.01	3.496	O				2.91
151.417	0.00	0.01	3.496	O				2.91
151.500	0.00	0.01	3.496	O				2.91
151.583	0.00	0.01	3.496	O				2.91
151.667	0.00	0.01	3.496	O				2.91
151.750	0.00	0.01	3.496	O				2.91
151.833	0.00	0.01	3.496	O				2.91
151.917	0.00	0.01	3.496	O				2.91
152.000	0.00	0.01	3.495	O				2.91
152.083	0.00	0.01	3.495	O				2.91
152.167	0.00	0.01	3.495	O				2.91

152.250	0.00	0.01	3.495	O				2.91
152.333	0.00	0.01	3.495	O				2.91
152.417	0.00	0.01	3.495	O				2.91
152.500	0.00	0.01	3.495	O				2.91
152.583	0.00	0.01	3.495	O				2.91
152.667	0.00	0.01	3.495	O				2.91
152.750	0.00	0.01	3.495	O				2.91
152.833	0.00	0.01	3.495	O				2.91
152.917	0.00	0.01	3.495	O				2.91
153.000	0.00	0.01	3.495	O				2.91
153.083	0.00	0.01	3.495	O				2.91
153.167	0.00	0.01	3.495	O				2.91
153.250	0.00	0.01	3.494	O				2.91
153.333	0.00	0.01	3.494	O				2.91
153.417	0.00	0.01	3.494	O				2.91
153.500	0.00	0.01	3.494	O				2.91
153.583	0.00	0.01	3.494	O				2.91
153.667	0.00	0.01	3.494	O				2.91
153.750	0.00	0.01	3.494	O				2.91
153.833	0.00	0.01	3.494	O				2.91
153.917	0.00	0.01	3.494	O				2.91
154.000	0.00	0.01	3.494	O				2.91
154.083	0.00	0.01	3.494	O				2.91
154.167	0.00	0.01	3.494	O				2.91
154.250	0.00	0.01	3.494	O				2.91
154.333	0.00	0.01	3.494	O				2.91
154.417	0.00	0.01	3.493	O				2.91
154.500	0.00	0.01	3.493	O				2.91
154.583	0.00	0.01	3.493	O				2.91
154.667	0.00	0.01	3.493	O				2.91
154.750	0.00	0.01	3.493	O				2.91
154.833	0.00	0.01	3.493	O				2.91
154.917	0.00	0.01	3.493	O				2.91
155.000	0.00	0.01	3.493	O				2.91
155.083	0.00	0.01	3.493	O				2.91
155.167	0.00	0.01	3.493	O				2.91
155.250	0.00	0.01	3.493	O				2.91
155.333	0.00	0.01	3.493	O				2.91
155.417	0.00	0.01	3.493	O				2.91
155.500	0.00	0.01	3.493	O				2.91
155.583	0.00	0.01	3.493	O				2.91
155.667	0.00	0.01	3.492	O				2.91
155.750	0.00	0.01	3.492	O				2.91
155.833	0.00	0.01	3.492	O				2.91
155.917	0.00	0.01	3.492	O				2.91
156.000	0.00	0.01	3.492	O				2.91
156.083	0.00	0.01	3.492	O				2.91
156.167	0.00	0.01	3.492	O				2.91
156.250	0.00	0.01	3.492	O				2.91
156.333	0.00	0.01	3.492	O				2.91

156.417	0.00	0.01	3.492	O				2.91
156.500	0.00	0.01	3.492	O				2.91
156.583	0.00	0.01	3.492	O				2.91
156.667	0.00	0.01	3.492	O				2.91
156.750	0.00	0.01	3.492	O				2.91
156.833	0.00	0.01	3.491	O				2.91
156.917	0.00	0.01	3.491	O				2.91
157.000	0.00	0.01	3.491	O				2.91
157.083	0.00	0.01	3.491	O				2.91
157.167	0.00	0.01	3.491	O				2.91
157.250	0.00	0.01	3.491	O				2.91
157.333	0.00	0.01	3.491	O				2.91
157.417	0.00	0.01	3.491	O				2.91
157.500	0.00	0.01	3.491	O				2.91
157.583	0.00	0.01	3.491	O				2.91
157.667	0.00	0.01	3.491	O				2.91
157.750	0.00	0.01	3.491	O				2.91
157.833	0.00	0.01	3.491	O				2.91
157.917	0.00	0.01	3.491	O				2.91
158.000	0.00	0.01	3.491	O				2.91
158.083	0.00	0.01	3.490	O				2.91
158.167	0.00	0.01	3.490	O				2.91
158.250	0.00	0.01	3.490	O				2.91
158.333	0.00	0.01	3.490	O				2.91
158.417	0.00	0.01	3.490	O				2.91
158.500	0.00	0.01	3.490	O				2.91
158.583	0.00	0.01	3.490	O				2.91
158.667	0.00	0.01	3.490	O				2.91
158.750	0.00	0.01	3.490	O				2.91
158.833	0.00	0.01	3.490	O				2.91
158.917	0.00	0.01	3.490	O				2.91
159.000	0.00	0.01	3.490	O				2.91
159.083	0.00	0.01	3.490	O				2.91
159.167	0.00	0.01	3.490	O				2.91
159.250	0.00	0.01	3.489	O				2.91
159.333	0.00	0.01	3.489	O				2.91
159.417	0.00	0.01	3.489	O				2.91
159.500	0.00	0.01	3.489	O				2.91
159.583	0.00	0.01	3.489	O				2.91
159.667	0.00	0.01	3.489	O				2.91
159.750	0.00	0.01	3.489	O				2.91
159.833	0.00	0.01	3.489	O				2.91
159.917	0.00	0.01	3.489	O				2.91
160.000	0.00	0.01	3.489	O				2.91
160.083	0.00	0.01	3.489	O				2.91
160.167	0.00	0.01	3.489	O				2.91
160.250	0.00	0.01	3.489	O				2.91
160.333	0.00	0.01	3.489	O				2.91
160.417	0.00	0.01	3.489	O				2.91
160.500	0.00	0.01	3.488	O				2.91

160.583	0.00	0.01	3.488	O				2.91
160.667	0.00	0.01	3.488	O				2.91
160.750	0.00	0.01	3.488	O				2.91
160.833	0.00	0.01	3.488	O				2.91
160.917	0.00	0.01	3.488	O				2.91
161.000	0.00	0.01	3.488	O				2.91
161.083	0.00	0.01	3.488	O				2.91
161.167	0.00	0.01	3.488	O				2.91
161.250	0.00	0.01	3.488	O				2.91
161.333	0.00	0.01	3.488	O				2.91
161.417	0.00	0.01	3.488	O				2.91
161.500	0.00	0.01	3.488	O				2.91
161.583	0.00	0.01	3.488	O				2.91
161.667	0.00	0.01	3.487	O				2.91
161.750	0.00	0.01	3.487	O				2.91
161.833	0.00	0.01	3.487	O				2.91
161.917	0.00	0.01	3.487	O				2.91
162.000	0.00	0.01	3.487	O				2.91
162.083	0.00	0.01	3.487	O				2.91
162.167	0.00	0.01	3.487	O				2.91
162.250	0.00	0.01	3.487	O				2.91
162.333	0.00	0.01	3.487	O				2.91
162.417	0.00	0.01	3.487	O				2.91
162.500	0.00	0.01	3.487	O				2.91
162.583	0.00	0.01	3.487	O				2.91
162.667	0.00	0.01	3.487	O				2.91
162.750	0.00	0.01	3.487	O				2.91
162.833	0.00	0.01	3.487	O				2.91
162.917	0.00	0.01	3.486	O				2.91
163.000	0.00	0.01	3.486	O				2.91
163.083	0.00	0.01	3.486	O				2.91
163.167	0.00	0.01	3.486	O				2.91
163.250	0.00	0.01	3.486	O				2.91
163.333	0.00	0.01	3.486	O				2.91
163.417	0.00	0.01	3.486	O				2.91
163.500	0.00	0.01	3.486	O				2.90
163.583	0.00	0.01	3.486	O				2.90
163.667	0.00	0.01	3.486	O				2.90
163.750	0.00	0.01	3.486	O				2.90
163.833	0.00	0.01	3.486	O				2.90
163.917	0.00	0.01	3.486	O				2.90
164.000	0.00	0.01	3.486	O				2.90
164.083	0.00	0.01	3.485	O				2.90
164.167	0.00	0.01	3.485	O				2.90
164.250	0.00	0.01	3.485	O				2.90
164.333	0.00	0.01	3.485	O				2.90
164.417	0.00	0.01	3.485	O				2.90
164.500	0.00	0.01	3.485	O				2.90
164.583	0.00	0.01	3.485	O				2.90
164.667	0.00	0.01	3.485	O				2.90

164.750	0.00	0.01	3.485	O	|	|	|	|	2.90
164.833	0.00	0.01	3.485	O	|	|	|	|	2.90
164.917	0.00	0.01	3.485	O	|	|	|	|	2.90
165.000	0.00	0.01	3.485	O	|	|	|	|	2.90
165.083	0.00	0.01	3.485	O	|	|	|	|	2.90
165.167	0.00	0.01	3.485	O	|	|	|	|	2.90
165.250	0.00	0.01	3.485	O	|	|	|	|	2.90
165.333	0.00	0.01	3.484	O	|	|	|	|	2.90
165.417	0.00	0.01	3.484	O	|	|	|	|	2.90
165.500	0.00	0.01	3.484	O	|	|	|	|	2.90
165.583	0.00	0.01	3.484	O	|	|	|	|	2.90
165.667	0.00	0.01	3.484	O	|	|	|	|	2.90
165.750	0.00	0.01	3.484	O	|	|	|	|	2.90
165.833	0.00	0.01	3.484	O	|	|	|	|	2.90
165.917	0.00	0.01	3.484	O	|	|	|	|	2.90
166.000	0.00	0.01	3.484	O	|	|	|	|	2.90
166.083	0.00	0.01	3.484	O	|	|	|	|	2.90
166.167	0.00	0.01	3.484	O	|	|	|	|	2.90
166.250	0.00	0.01	3.484	O	|	|	|	|	2.90
166.333	0.00	0.01	3.484	O	|	|	|	|	2.90
166.417	0.00	0.01	3.484	O	|	|	|	|	2.90
166.500	0.00	0.01	3.484	O	|	|	|	|	2.90
166.583	0.00	0.01	3.483	O	|	|	|	|	2.90
166.667	0.00	0.01	3.483	O	|	|	|	|	2.90
166.750	0.00	0.01	3.483	O	|	|	|	|	2.90
166.833	0.00	0.01	3.483	O	|	|	|	|	2.90
166.917	0.00	0.01	3.483	O	|	|	|	|	2.90
167.000	0.00	0.01	3.483	O	|	|	|	|	2.90
167.083	0.00	0.01	3.483	O	|	|	|	|	2.90
167.167	0.00	0.01	3.483	O	|	|	|	|	2.90
167.250	0.00	0.01	3.483	O	|	|	|	|	2.90
167.333	0.00	0.01	3.483	O	|	|	|	|	2.90
167.417	0.00	0.01	3.483	O	|	|	|	|	2.90
167.500	0.00	0.01	3.483	O	|	|	|	|	2.90
167.583	0.00	0.01	3.483	O	|	|	|	|	2.90
167.667	0.00	0.01	3.483	O	|	|	|	|	2.90
167.750	0.00	0.01	3.482	O	|	|	|	|	2.90
167.833	0.00	0.01	3.482	O	|	|	|	|	2.90
167.917	0.00	0.01	3.482	O	|	|	|	|	2.90
168.000	0.00	0.01	3.482	O	|	|	|	|	2.90
168.083	0.00	0.01	3.482	O	|	|	|	|	2.90
168.167	0.00	0.01	3.482	O	|	|	|	|	2.90
168.250	0.00	0.01	3.482	O	|	|	|	|	2.90
168.333	0.00	0.01	3.482	O	|	|	|	|	2.90
168.417	0.00	0.01	3.482	O	|	|	|	|	2.90
168.500	0.00	0.01	3.482	O	|	|	|	|	2.90
168.583	0.00	0.01	3.482	O	|	|	|	|	2.90
168.667	0.00	0.01	3.482	O	|	|	|	|	2.90
168.750	0.00	0.01	3.482	O	|	|	|	|	2.90
168.833	0.00	0.01	3.482	O	|	|	|	|	2.90

168.917	0.00	0.01	3.482	O				2.90
169.000	0.00	0.01	3.481	O				2.90
169.083	0.00	0.01	3.481	O				2.90
169.167	0.00	0.01	3.481	O				2.90
169.250	0.00	0.01	3.481	O				2.90
169.333	0.00	0.01	3.481	O				2.90
169.417	0.00	0.01	3.481	O				2.90
169.500	0.00	0.01	3.481	O				2.90
169.583	0.00	0.01	3.481	O				2.90
169.667	0.00	0.01	3.481	O				2.90
169.750	0.00	0.01	3.481	O				2.90
169.833	0.00	0.01	3.481	O				2.90
169.917	0.00	0.01	3.481	O				2.90
170.000	0.00	0.01	3.481	O				2.90
170.083	0.00	0.01	3.481	O				2.90
170.167	0.00	0.01	3.480	O				2.90
170.250	0.00	0.01	3.480	O				2.90
170.333	0.00	0.01	3.480	O				2.90
170.417	0.00	0.01	3.480	O				2.90
170.500	0.00	0.01	3.480	O				2.90
170.583	0.00	0.01	3.480	O				2.90
170.667	0.00	0.01	3.480	O				2.90
170.750	0.00	0.01	3.480	O				2.90
170.833	0.00	0.01	3.480	O				2.90
170.917	0.00	0.01	3.480	O				2.90
171.000	0.00	0.01	3.480	O				2.90
171.083	0.00	0.01	3.480	O				2.90
171.167	0.00	0.01	3.480	O				2.90
171.250	0.00	0.01	3.480	O				2.90
171.333	0.00	0.01	3.480	O				2.90
171.417	0.00	0.01	3.479	O				2.90
171.500	0.00	0.01	3.479	O				2.90
171.583	0.00	0.01	3.479	O				2.90
171.667	0.00	0.01	3.479	O				2.90
171.750	0.00	0.01	3.479	O				2.90
171.833	0.00	0.01	3.479	O				2.90
171.917	0.00	0.01	3.479	O				2.90
172.000	0.00	0.01	3.479	O				2.90
172.083	0.00	0.01	3.479	O				2.90
172.167	0.00	0.01	3.479	O				2.90
172.250	0.00	0.01	3.479	O				2.90
172.333	0.00	0.01	3.479	O				2.90
172.417	0.00	0.01	3.479	O				2.90
172.500	0.00	0.01	3.479	O				2.90
172.583	0.00	0.01	3.478	O				2.90
172.667	0.00	0.01	3.478	O				2.90
172.750	0.00	0.01	3.478	O				2.90
172.833	0.00	0.01	3.478	O				2.90
172.917	0.00	0.01	3.478	O				2.90
173.000	0.00	0.01	3.478	O				2.90

173.083	0.00	0.01	3.478	O				2.90
173.167	0.00	0.01	3.478	O				2.90
173.250	0.00	0.01	3.478	O				2.90
173.333	0.00	0.01	3.478	O				2.90
173.417	0.00	0.01	3.478	O				2.90
173.500	0.00	0.01	3.478	O				2.90
173.583	0.00	0.01	3.478	O				2.90
173.667	0.00	0.01	3.478	O				2.90
173.750	0.00	0.01	3.478	O				2.90
173.833	0.00	0.01	3.477	O				2.90
173.917	0.00	0.01	3.477	O				2.90
174.000	0.00	0.01	3.477	O				2.90
174.083	0.00	0.01	3.477	O				2.90
174.167	0.00	0.01	3.477	O				2.90
174.250	0.00	0.01	3.477	O				2.90
174.333	0.00	0.01	3.477	O				2.90
174.417	0.00	0.01	3.477	O				2.90
174.500	0.00	0.01	3.477	O				2.90
174.583	0.00	0.01	3.477	O				2.90
174.667	0.00	0.01	3.477	O				2.90
174.750	0.00	0.01	3.477	O				2.90
174.833	0.00	0.01	3.477	O				2.90
174.917	0.00	0.01	3.477	O				2.90
175.000	0.00	0.01	3.476	O				2.90
175.083	0.00	0.01	3.476	O				2.90
175.167	0.00	0.01	3.476	O				2.90
175.250	0.00	0.01	3.476	O				2.90
175.333	0.00	0.01	3.476	O				2.90
175.417	0.00	0.01	3.476	O				2.90
175.500	0.00	0.01	3.476	O				2.90
175.583	0.00	0.01	3.476	O				2.90
175.667	0.00	0.01	3.476	O				2.90
175.750	0.00	0.01	3.476	O				2.90
175.833	0.00	0.01	3.476	O				2.90
175.917	0.00	0.01	3.476	O				2.90
176.000	0.00	0.01	3.476	O				2.90
176.083	0.00	0.01	3.476	O				2.90
176.167	0.00	0.01	3.476	O				2.90
176.250	0.00	0.01	3.475	O				2.90
176.333	0.00	0.01	3.475	O				2.90
176.417	0.00	0.01	3.475	O				2.90
176.500	0.00	0.01	3.475	O				2.90
176.583	0.00	0.01	3.475	O				2.90
176.667	0.00	0.01	3.475	O				2.90
176.750	0.00	0.01	3.475	O				2.90
176.833	0.00	0.01	3.475	O				2.90
176.917	0.00	0.01	3.475	O				2.90
177.000	0.00	0.01	3.475	O				2.90
177.083	0.00	0.01	3.475	O				2.90
177.167	0.00	0.01	3.475	O				2.90

177.250	0.00	0.01	3.475	O				2.90
177.333	0.00	0.01	3.475	O				2.90
177.417	0.00	0.01	3.474	O				2.90
177.500	0.00	0.01	3.474	O				2.90
177.583	0.00	0.01	3.474	O				2.90
177.667	0.00	0.01	3.474	O				2.90
177.750	0.00	0.01	3.474	O				2.90
177.833	0.00	0.01	3.474	O				2.90
177.917	0.00	0.01	3.474	O				2.90
178.000	0.00	0.01	3.474	O				2.89
178.083	0.00	0.01	3.474	O				2.89
178.167	0.00	0.01	3.474	O				2.89
178.250	0.00	0.01	3.474	O				2.89
178.333	0.00	0.01	3.474	O				2.89
178.417	0.00	0.01	3.474	O				2.89
178.500	0.00	0.01	3.474	O				2.89
178.583	0.00	0.01	3.474	O				2.89
178.667	0.00	0.01	3.473	O				2.89
178.750	0.00	0.01	3.473	O				2.89
178.833	0.00	0.01	3.473	O				2.89
178.917	0.00	0.01	3.473	O				2.89
179.000	0.00	0.01	3.473	O				2.89
179.083	0.00	0.01	3.473	O				2.89
179.167	0.00	0.01	3.473	O				2.89
179.250	0.00	0.01	3.473	O				2.89
179.333	0.00	0.01	3.473	O				2.89
179.417	0.00	0.01	3.473	O				2.89
179.500	0.00	0.01	3.473	O				2.89
179.583	0.00	0.01	3.473	O				2.89
179.667	0.00	0.01	3.473	O				2.89
179.750	0.00	0.01	3.473	O				2.89
179.833	0.00	0.01	3.472	O				2.89
179.917	0.00	0.01	3.472	O				2.89
180.000	0.00	0.01	3.472	O				2.89
180.083	0.00	0.01	3.472	O				2.89
180.167	0.00	0.01	3.472	O				2.89
180.250	0.00	0.01	3.472	O				2.89
180.333	0.00	0.01	3.472	O				2.89
180.417	0.00	0.01	3.472	O				2.89
180.500	0.00	0.01	3.472	O				2.89
180.583	0.00	0.01	3.472	O				2.89
180.667	0.00	0.01	3.472	O				2.89
180.750	0.00	0.01	3.472	O				2.89
180.833	0.00	0.01	3.472	O				2.89
180.917	0.00	0.01	3.472	O				2.89
181.000	0.00	0.01	3.472	O				2.89
181.083	0.00	0.01	3.471	O				2.89
181.167	0.00	0.01	3.471	O				2.89
181.250	0.00	0.01	3.471	O				2.89
181.333	0.00	0.01	3.471	O				2.89

181.417	0.00	0.01	3.471	O	|	|	|	2.89
181.500	0.00	0.01	3.471	O	|	|	|	2.89
181.583	0.00	0.01	3.471	O	|	|	|	2.89
181.667	0.00	0.01	3.471	O	|	|	|	2.89
181.750	0.00	0.01	3.471	O	|	|	|	2.89
181.833	0.00	0.01	3.471	O	|	|	|	2.89
181.917	0.00	0.01	3.471	O	|	|	|	2.89
182.000	0.00	0.01	3.471	O	|	|	|	2.89
182.083	0.00	0.01	3.471	O	|	|	|	2.89
182.167	0.00	0.01	3.471	O	|	|	|	2.89
182.250	0.00	0.01	3.470	O	|	|	|	2.89
182.333	0.00	0.01	3.470	O	|	|	|	2.89
182.417	0.00	0.01	3.470	O	|	|	|	2.89
182.500	0.00	0.01	3.470	O	|	|	|	2.89
182.583	0.00	0.01	3.470	O	|	|	|	2.89
182.667	0.00	0.01	3.470	O	|	|	|	2.89
182.750	0.00	0.01	3.470	O	|	|	|	2.89
182.833	0.00	0.01	3.470	O	|	|	|	2.89
182.917	0.00	0.01	3.470	O	|	|	|	2.89
183.000	0.00	0.01	3.470	O	|	|	|	2.89
183.083	0.00	0.01	3.470	O	|	|	|	2.89
183.167	0.00	0.01	3.470	O	|	|	|	2.89
183.250	0.00	0.01	3.470	O	|	|	|	2.89
183.333	0.00	0.01	3.470	O	|	|	|	2.89
183.417	0.00	0.01	3.470	O	|	|	|	2.89
183.500	0.00	0.01	3.469	O	|	|	|	2.89
183.583	0.00	0.01	3.469	O	|	|	|	2.89
183.667	0.00	0.01	3.469	O	|	|	|	2.89
183.750	0.00	0.01	3.469	O	|	|	|	2.89
183.833	0.00	0.01	3.469	O	|	|	|	2.89
183.917	0.00	0.01	3.469	O	|	|	|	2.89
184.000	0.00	0.01	3.469	O	|	|	|	2.89
184.083	0.00	0.01	3.469	O	|	|	|	2.89
184.167	0.00	0.01	3.469	O	|	|	|	2.89
184.250	0.00	0.01	3.469	O	|	|	|	2.89
184.333	0.00	0.01	3.469	O	|	|	|	2.89
184.417	0.00	0.01	3.469	O	|	|	|	2.89
184.500	0.00	0.01	3.469	O	|	|	|	2.89
184.583	0.00	0.01	3.469	O	|	|	|	2.89
184.667	0.00	0.01	3.468	O	|	|	|	2.89
184.750	0.00	0.01	3.468	O	|	|	|	2.89
184.833	0.00	0.01	3.468	O	|	|	|	2.89
184.917	0.00	0.01	3.468	O	|	|	|	2.89
185.000	0.00	0.01	3.468	O	|	|	|	2.89
185.083	0.00	0.01	3.468	O	|	|	|	2.89
185.167	0.00	0.01	3.468	O	|	|	|	2.89
185.250	0.00	0.01	3.468	O	|	|	|	2.89
185.333	0.00	0.01	3.468	O	|	|	|	2.89
185.417	0.00	0.01	3.468	O	|	|	|	2.89
185.500	0.00	0.01	3.468	O	|	|	|	2.89

185.583	0.00	0.01	3.468	O	|	|	|	2.89
185.667	0.00	0.01	3.468	O	|	|	|	2.89
185.750	0.00	0.01	3.468	O	|	|	|	2.89
185.833	0.00	0.01	3.468	O	|	|	|	2.89
185.917	0.00	0.01	3.467	O	|	|	|	2.89
186.000	0.00	0.01	3.467	O	|	|	|	2.89
186.083	0.00	0.01	3.467	O	|	|	|	2.89
186.167	0.00	0.01	3.467	O	|	|	|	2.89
186.250	0.00	0.01	3.467	O	|	|	|	2.89
186.333	0.00	0.01	3.467	O	|	|	|	2.89
186.417	0.00	0.01	3.467	O	|	|	|	2.89
186.500	0.00	0.01	3.467	O	|	|	|	2.89
186.583	0.00	0.01	3.467	O	|	|	|	2.89
186.667	0.00	0.01	3.467	O	|	|	|	2.89
186.750	0.00	0.01	3.467	O	|	|	|	2.89
186.833	0.00	0.01	3.467	O	|	|	|	2.89
186.917	0.00	0.01	3.467	O	|	|	|	2.89
187.000	0.00	0.01	3.467	O	|	|	|	2.89
187.083	0.00	0.01	3.466	O	|	|	|	2.89
187.167	0.00	0.01	3.466	O	|	|	|	2.89
187.250	0.00	0.01	3.466	O	|	|	|	2.89
187.333	0.00	0.01	3.466	O	|	|	|	2.89
187.417	0.00	0.01	3.466	O	|	|	|	2.89
187.500	0.00	0.01	3.466	O	|	|	|	2.89
187.583	0.00	0.01	3.466	O	|	|	|	2.89
187.667	0.00	0.01	3.466	O	|	|	|	2.89
187.750	0.00	0.01	3.466	O	|	|	|	2.89
187.833	0.00	0.01	3.466	O	|	|	|	2.89
187.917	0.00	0.01	3.466	O	|	|	|	2.89
188.000	0.00	0.01	3.466	O	|	|	|	2.89
188.083	0.00	0.01	3.466	O	|	|	|	2.89
188.167	0.00	0.01	3.466	O	|	|	|	2.89
188.250	0.00	0.01	3.466	O	|	|	|	2.89
188.333	0.00	0.01	3.465	O	|	|	|	2.89
188.417	0.00	0.01	3.465	O	|	|	|	2.89
188.500	0.00	0.01	3.465	O	|	|	|	2.89
188.583	0.00	0.01	3.465	O	|	|	|	2.89
188.667	0.00	0.01	3.465	O	|	|	|	2.89
188.750	0.00	0.01	3.465	O	|	|	|	2.89
188.833	0.00	0.01	3.465	O	|	|	|	2.89
188.917	0.00	0.01	3.465	O	|	|	|	2.89
189.000	0.00	0.01	3.465	O	|	|	|	2.89
189.083	0.00	0.01	3.465	O	|	|	|	2.89
189.167	0.00	0.01	3.465	O	|	|	|	2.89
189.250	0.00	0.01	3.465	O	|	|	|	2.89
189.333	0.00	0.01	3.465	O	|	|	|	2.89
189.417	0.00	0.01	3.465	O	|	|	|	2.89
189.500	0.00	0.01	3.464	O	|	|	|	2.89
189.583	0.00	0.01	3.464	O	|	|	|	2.89
189.667	0.00	0.01	3.464	O	|	|	|	2.89

189.750	0.00	0.01	3.464	O	|	|	|	2.89
189.833	0.00	0.01	3.464	O	|	|	|	2.89
189.917	0.00	0.01	3.464	O	|	|	|	2.89
190.000	0.00	0.01	3.464	O	|	|	|	2.89
190.083	0.00	0.01	3.464	O	|	|	|	2.89
190.167	0.00	0.01	3.464	O	|	|	|	2.89
190.250	0.00	0.01	3.464	O	|	|	|	2.89
190.333	0.00	0.01	3.464	O	|	|	|	2.89
190.417	0.00	0.01	3.464	O	|	|	|	2.89
190.500	0.00	0.01	3.464	O	|	|	|	2.89
190.583	0.00	0.01	3.464	O	|	|	|	2.89
190.667	0.00	0.01	3.464	O	|	|	|	2.89
190.750	0.00	0.01	3.463	O	|	|	|	2.89
190.833	0.00	0.01	3.463	O	|	|	|	2.89
190.917	0.00	0.01	3.463	O	|	|	|	2.89
191.000	0.00	0.01	3.463	O	|	|	|	2.89
191.083	0.00	0.01	3.463	O	|	|	|	2.89
191.167	0.00	0.01	3.463	O	|	|	|	2.89
191.250	0.00	0.01	3.463	O	|	|	|	2.89
191.333	0.00	0.01	3.463	O	|	|	|	2.89
191.417	0.00	0.01	3.463	O	|	|	|	2.89
191.500	0.00	0.01	3.463	O	|	|	|	2.89
191.583	0.00	0.01	3.463	O	|	|	|	2.89
191.667	0.00	0.01	3.463	O	|	|	|	2.89
191.750	0.00	0.01	3.463	O	|	|	|	2.89
191.833	0.00	0.01	3.463	O	|	|	|	2.89
191.917	0.00	0.01	3.462	O	|	|	|	2.89
192.000	0.00	0.01	3.462	O	|	|	|	2.89
192.083	0.00	0.01	3.462	O	|	|	|	2.89
192.167	0.00	0.01	3.462	O	|	|	|	2.89
192.250	0.00	0.01	3.462	O	|	|	|	2.89
192.333	0.00	0.01	3.462	O	|	|	|	2.89
192.417	0.00	0.01	3.462	O	|	|	|	2.89
192.500	0.00	0.01	3.462	O	|	|	|	2.89
192.583	0.00	0.01	3.462	O	|	|	|	2.88
192.667	0.00	0.01	3.462	O	|	|	|	2.88
192.750	0.00	0.01	3.462	O	|	|	|	2.88
192.833	0.00	0.01	3.462	O	|	|	|	2.88
192.917	0.00	0.01	3.462	O	|	|	|	2.88
193.000	0.00	0.01	3.462	O	|	|	|	2.88
193.083	0.00	0.01	3.462	O	|	|	|	2.88
193.167	0.00	0.01	3.461	O	|	|	|	2.88
193.250	0.00	0.01	3.461	O	|	|	|	2.88
193.333	0.00	0.01	3.461	O	|	|	|	2.88
193.417	0.00	0.01	3.461	O	|	|	|	2.88
193.500	0.00	0.01	3.461	O	|	|	|	2.88
193.583	0.00	0.01	3.461	O	|	|	|	2.88
193.667	0.00	0.01	3.461	O	|	|	|	2.88
193.750	0.00	0.01	3.461	O	|	|	|	2.88
193.833	0.00	0.01	3.461	O	|	|	|	2.88

193.917	0.00	0.01	3.461	O	|	|	|	2.88
194.000	0.00	0.01	3.461	O	|	|	|	2.88
194.083	0.00	0.01	3.461	O	|	|	|	2.88
194.167	0.00	0.01	3.461	O	|	|	|	2.88
194.250	0.00	0.01	3.461	O	|	|	|	2.88
194.333	0.00	0.01	3.460	O	|	|	|	2.88
194.417	0.00	0.01	3.460	O	|	|	|	2.88
194.500	0.00	0.01	3.460	O	|	|	|	2.88
194.583	0.00	0.01	3.460	O	|	|	|	2.88
194.667	0.00	0.01	3.460	O	|	|	|	2.88
194.750	0.00	0.01	3.460	O	|	|	|	2.88
194.833	0.00	0.01	3.460	O	|	|	|	2.88
194.917	0.00	0.01	3.460	O	|	|	|	2.88
195.000	0.00	0.01	3.460	O	|	|	|	2.88
195.083	0.00	0.01	3.460	O	|	|	|	2.88
195.167	0.00	0.01	3.460	O	|	|	|	2.88
195.250	0.00	0.01	3.460	O	|	|	|	2.88
195.333	0.00	0.01	3.460	O	|	|	|	2.88
195.417	0.00	0.01	3.460	O	|	|	|	2.88
195.500	0.00	0.01	3.460	O	|	|	|	2.88
195.583	0.00	0.01	3.459	O	|	|	|	2.88
195.667	0.00	0.01	3.459	O	|	|	|	2.88
195.750	0.00	0.01	3.459	O	|	|	|	2.88
195.833	0.00	0.01	3.459	O	|	|	|	2.88
195.917	0.00	0.01	3.459	O	|	|	|	2.88
196.000	0.00	0.01	3.459	O	|	|	|	2.88
196.083	0.00	0.01	3.459	O	|	|	|	2.88
196.167	0.00	0.01	3.459	O	|	|	|	2.88
196.250	0.00	0.01	3.459	O	|	|	|	2.88
196.333	0.00	0.01	3.459	O	|	|	|	2.88
196.417	0.00	0.01	3.459	O	|	|	|	2.88
196.500	0.00	0.01	3.459	O	|	|	|	2.88
196.583	0.00	0.01	3.459	O	|	|	|	2.88
196.667	0.00	0.01	3.459	O	|	|	|	2.88
196.750	0.00	0.01	3.459	O	|	|	|	2.88
196.833	0.00	0.01	3.458	O	|	|	|	2.88
196.917	0.00	0.01	3.458	O	|	|	|	2.88
197.000	0.00	0.01	3.458	O	|	|	|	2.88
197.083	0.00	0.01	3.458	O	|	|	|	2.88
197.167	0.00	0.01	3.458	O	|	|	|	2.88
197.250	0.00	0.01	3.458	O	|	|	|	2.88
197.333	0.00	0.01	3.458	O	|	|	|	2.88
197.417	0.00	0.01	3.458	O	|	|	|	2.88
197.500	0.00	0.01	3.458	O	|	|	|	2.88
197.583	0.00	0.01	3.458	O	|	|	|	2.88
197.667	0.00	0.01	3.458	O	|	|	|	2.88
197.750	0.00	0.01	3.458	O	|	|	|	2.88
197.833	0.00	0.01	3.458	O	|	|	|	2.88
197.917	0.00	0.01	3.458	O	|	|	|	2.88
198.000	0.00	0.01	3.457	O	|	|	|	2.88

198.083	0.00	0.01	3.457	O				2.88
198.167	0.00	0.01	3.457	O				2.88
198.250	0.00	0.01	3.457	O				2.88
198.333	0.00	0.01	3.457	O				2.88
198.417	0.00	0.01	3.457	O				2.88
198.500	0.00	0.01	3.457	O				2.88
198.583	0.00	0.01	3.457	O				2.88
198.667	0.00	0.01	3.457	O				2.88
198.750	0.00	0.01	3.457	O				2.88
198.833	0.00	0.01	3.457	O				2.88
198.917	0.00	0.01	3.457	O				2.88
199.000	0.00	0.01	3.457	O				2.88
199.083	0.00	0.01	3.457	O				2.88
199.167	0.00	0.01	3.457	O				2.88
199.250	0.00	0.01	3.456	O				2.88
199.333	0.00	0.01	3.456	O				2.88
199.417	0.00	0.01	3.456	O				2.88
199.500	0.00	0.01	3.456	O				2.88
199.583	0.00	0.01	3.456	O				2.88
199.667	0.00	0.01	3.456	O				2.88
199.750	0.00	0.01	3.456	O				2.88
199.833	0.00	0.01	3.456	O				2.88
199.917	0.00	0.01	3.456	O				2.88
200.000	0.00	0.01	3.456	O				2.88
200.083	0.00	0.01	3.456	O				2.88
200.167	0.00	0.01	3.456	O				2.88
200.250	0.00	0.01	3.456	O				2.88
200.333	0.00	0.01	3.456	O				2.88
200.417	0.00	0.01	3.455	O				2.88
200.500	0.00	0.01	3.455	O				2.88
200.583	0.00	0.01	3.455	O				2.88
200.667	0.00	0.01	3.455	O				2.88
200.750	0.00	0.01	3.455	O				2.88
200.833	0.00	0.01	3.455	O				2.88
200.917	0.00	0.01	3.455	O				2.88
201.000	0.00	0.01	3.455	O				2.88
201.083	0.00	0.01	3.455	O				2.88
201.167	0.00	0.01	3.455	O				2.88
201.250	0.00	0.01	3.455	O				2.88
201.333	0.00	0.01	3.455	O				2.88
201.417	0.00	0.01	3.455	O				2.88
201.500	0.00	0.01	3.455	O				2.88
201.583	0.00	0.01	3.455	O				2.88
201.667	0.00	0.01	3.454	O				2.88
201.750	0.00	0.01	3.454	O				2.88
201.833	0.00	0.01	3.454	O				2.88
201.917	0.00	0.01	3.454	O				2.88
202.000	0.00	0.01	3.454	O				2.88
202.083	0.00	0.01	3.454	O				2.88
202.167	0.00	0.01	3.454	O				2.88

202.250	0.00	0.01	3.454	O				2.88
202.333	0.00	0.01	3.454	O				2.88
202.417	0.00	0.01	3.454	O				2.88
202.500	0.00	0.01	3.454	O				2.88
202.583	0.00	0.01	3.454	O				2.88
202.667	0.00	0.01	3.454	O				2.88
202.750	0.00	0.01	3.454	O				2.88
202.833	0.00	0.01	3.453	O				2.88
202.917	0.00	0.01	3.453	O				2.88
203.000	0.00	0.01	3.453	O				2.88
203.083	0.00	0.01	3.453	O				2.88
203.167	0.00	0.01	3.453	O				2.88
203.250	0.00	0.01	3.453	O				2.88
203.333	0.00	0.01	3.453	O				2.88
203.417	0.00	0.01	3.453	O				2.88
203.500	0.00	0.01	3.453	O				2.88
203.583	0.00	0.01	3.453	O				2.88
203.667	0.00	0.01	3.453	O				2.88
203.750	0.00	0.01	3.453	O				2.88
203.833	0.00	0.01	3.453	O				2.88
203.917	0.00	0.01	3.453	O				2.88
204.000	0.00	0.01	3.453	O				2.88
204.083	0.00	0.01	3.452	O				2.88
204.167	0.00	0.01	3.452	O				2.88
204.250	0.00	0.01	3.452	O				2.88
204.333	0.00	0.01	3.452	O				2.88
204.417	0.00	0.01	3.452	O				2.88
204.500	0.00	0.01	3.452	O				2.88
204.583	0.00	0.01	3.452	O				2.88
204.667	0.00	0.01	3.452	O				2.88
204.750	0.00	0.01	3.452	O				2.88
204.833	0.00	0.01	3.452	O				2.88
204.917	0.00	0.01	3.452	O				2.88
205.000	0.00	0.01	3.452	O				2.88
205.083	0.00	0.01	3.452	O				2.88
205.167	0.00	0.01	3.452	O				2.88
205.250	0.00	0.01	3.451	O				2.88
205.333	0.00	0.01	3.451	O				2.88
205.417	0.00	0.01	3.451	O				2.88
205.500	0.00	0.01	3.451	O				2.88
205.583	0.00	0.01	3.451	O				2.88
205.667	0.00	0.01	3.451	O				2.88
205.750	0.00	0.01	3.451	O				2.88
205.833	0.00	0.01	3.451	O				2.88
205.917	0.00	0.01	3.451	O				2.88
206.000	0.00	0.01	3.451	O				2.88
206.083	0.00	0.01	3.451	O				2.88
206.167	0.00	0.01	3.451	O				2.88
206.250	0.00	0.01	3.451	O				2.88
206.333	0.00	0.01	3.451	O				2.88

206.417	0.00	0.01	3.451	O	|	|	|	2.88
206.500	0.00	0.01	3.450	O	|	|	|	2.88
206.583	0.00	0.01	3.450	O	|	|	|	2.88
206.667	0.00	0.01	3.450	O	|	|	|	2.88
206.750	0.00	0.01	3.450	O	|	|	|	2.88
206.833	0.00	0.01	3.450	O	|	|	|	2.88
206.917	0.00	0.01	3.450	O	|	|	|	2.88
207.000	0.00	0.01	3.450	O	|	|	|	2.88
207.083	0.00	0.01	3.450	O	|	|	|	2.87
207.167	0.00	0.01	3.450	O	|	|	|	2.87
207.250	0.00	0.01	3.450	O	|	|	|	2.87
207.333	0.00	0.01	3.450	O	|	|	|	2.87
207.417	0.00	0.01	3.450	O	|	|	|	2.87
207.500	0.00	0.01	3.450	O	|	|	|	2.87
207.583	0.00	0.01	3.450	O	|	|	|	2.87
207.667	0.00	0.01	3.449	O	|	|	|	2.87
207.750	0.00	0.01	3.449	O	|	|	|	2.87
207.833	0.00	0.01	3.449	O	|	|	|	2.87
207.917	0.00	0.01	3.449	O	|	|	|	2.87
208.000	0.00	0.01	3.449	O	|	|	|	2.87
208.083	0.00	0.01	3.449	O	|	|	|	2.87
208.167	0.00	0.01	3.449	O	|	|	|	2.87
208.250	0.00	0.01	3.449	O	|	|	|	2.87
208.333	0.00	0.01	3.449	O	|	|	|	2.87
208.417	0.00	0.01	3.449	O	|	|	|	2.87
208.500	0.00	0.01	3.449	O	|	|	|	2.87
208.583	0.00	0.01	3.449	O	|	|	|	2.87
208.667	0.00	0.01	3.449	O	|	|	|	2.87
208.750	0.00	0.01	3.449	O	|	|	|	2.87
208.833	0.00	0.01	3.449	O	|	|	|	2.87
208.917	0.00	0.01	3.448	O	|	|	|	2.87
209.000	0.00	0.01	3.448	O	|	|	|	2.87
209.083	0.00	0.01	3.448	O	|	|	|	2.87
209.167	0.00	0.01	3.448	O	|	|	|	2.87
209.250	0.00	0.01	3.448	O	|	|	|	2.87
209.333	0.00	0.01	3.448	O	|	|	|	2.87
209.417	0.00	0.01	3.448	O	|	|	|	2.87
209.500	0.00	0.01	3.448	O	|	|	|	2.87
209.583	0.00	0.01	3.448	O	|	|	|	2.87
209.667	0.00	0.01	3.448	O	|	|	|	2.87
209.750	0.00	0.01	3.448	O	|	|	|	2.87
209.833	0.00	0.01	3.448	O	|	|	|	2.87
209.917	0.00	0.01	3.448	O	|	|	|	2.87
210.000	0.00	0.01	3.448	O	|	|	|	2.87
210.083	0.00	0.01	3.447	O	|	|	|	2.87
210.167	0.00	0.01	3.447	O	|	|	|	2.87
210.250	0.00	0.01	3.447	O	|	|	|	2.87
210.333	0.00	0.01	3.447	O	|	|	|	2.87
210.417	0.00	0.01	3.447	O	|	|	|	2.87
210.500	0.00	0.01	3.447	O	|	|	|	2.87

210.583	0.00	0.01	3.447	O	|	|	|	2.87
210.667	0.00	0.01	3.447	O	|	|	|	2.87
210.750	0.00	0.01	3.447	O	|	|	|	2.87
210.833	0.00	0.01	3.447	O	|	|	|	2.87
210.917	0.00	0.01	3.447	O	|	|	|	2.87
211.000	0.00	0.01	3.447	O	|	|	|	2.87
211.083	0.00	0.01	3.447	O	|	|	|	2.87
211.167	0.00	0.01	3.447	O	|	|	|	2.87
211.250	0.00	0.01	3.447	O	|	|	|	2.87
211.333	0.00	0.01	3.446	O	|	|	|	2.87
211.417	0.00	0.01	3.446	O	|	|	|	2.87
211.500	0.00	0.01	3.446	O	|	|	|	2.87
211.583	0.00	0.01	3.446	O	|	|	|	2.87
211.667	0.00	0.01	3.446	O	|	|	|	2.87
211.750	0.00	0.01	3.446	O	|	|	|	2.87
211.833	0.00	0.01	3.446	O	|	|	|	2.87
211.917	0.00	0.01	3.446	O	|	|	|	2.87
212.000	0.00	0.01	3.446	O	|	|	|	2.87
212.083	0.00	0.01	3.446	O	|	|	|	2.87
212.167	0.00	0.01	3.446	O	|	|	|	2.87
212.250	0.00	0.01	3.446	O	|	|	|	2.87
212.333	0.00	0.01	3.446	O	|	|	|	2.87
212.417	0.00	0.01	3.446	O	|	|	|	2.87
212.500	0.00	0.01	3.445	O	|	|	|	2.87
212.583	0.00	0.01	3.445	O	|	|	|	2.87
212.667	0.00	0.01	3.445	O	|	|	|	2.87
212.750	0.00	0.01	3.445	O	|	|	|	2.87
212.833	0.00	0.01	3.445	O	|	|	|	2.87
212.917	0.00	0.01	3.445	O	|	|	|	2.87
213.000	0.00	0.01	3.445	O	|	|	|	2.87
213.083	0.00	0.01	3.445	O	|	|	|	2.87
213.167	0.00	0.01	3.445	O	|	|	|	2.87
213.250	0.00	0.01	3.445	O	|	|	|	2.87
213.333	0.00	0.01	3.445	O	|	|	|	2.87
213.417	0.00	0.01	3.445	O	|	|	|	2.87
213.500	0.00	0.01	3.445	O	|	|	|	2.87
213.583	0.00	0.01	3.445	O	|	|	|	2.87
213.667	0.00	0.01	3.445	O	|	|	|	2.87
213.750	0.00	0.01	3.444	O	|	|	|	2.87
213.833	0.00	0.01	3.444	O	|	|	|	2.87
213.917	0.00	0.01	3.444	O	|	|	|	2.87
214.000	0.00	0.01	3.444	O	|	|	|	2.87
214.083	0.00	0.01	3.444	O	|	|	|	2.87
214.167	0.00	0.01	3.444	O	|	|	|	2.87
214.250	0.00	0.01	3.444	O	|	|	|	2.87
214.333	0.00	0.01	3.444	O	|	|	|	2.87
214.417	0.00	0.01	3.444	O	|	|	|	2.87
214.500	0.00	0.01	3.444	O	|	|	|	2.87
214.583	0.00	0.01	3.444	O	|	|	|	2.87
214.667	0.00	0.01	3.444	O	|	|	|	2.87

214.750	0.00	0.01	3.444	O	|	|	|	2.87
214.833	0.00	0.01	3.444	O	|	|	|	2.87
214.917	0.00	0.01	3.443	O	|	|	|	2.87
215.000	0.00	0.01	3.443	O	|	|	|	2.87
215.083	0.00	0.01	3.443	O	|	|	|	2.87
215.167	0.00	0.01	3.443	O	|	|	|	2.87
215.250	0.00	0.01	3.443	O	|	|	|	2.87
215.333	0.00	0.01	3.443	O	|	|	|	2.87
215.417	0.00	0.01	3.443	O	|	|	|	2.87
215.500	0.00	0.01	3.443	O	|	|	|	2.87
215.583	0.00	0.01	3.443	O	|	|	|	2.87
215.667	0.00	0.01	3.443	O	|	|	|	2.87
215.750	0.00	0.01	3.443	O	|	|	|	2.87
215.833	0.00	0.01	3.443	O	|	|	|	2.87
215.917	0.00	0.01	3.443	O	|	|	|	2.87
216.000	0.00	0.01	3.443	O	|	|	|	2.87
216.083	0.00	0.01	3.443	O	|	|	|	2.87
216.167	0.00	0.01	3.442	O	|	|	|	2.87
216.250	0.00	0.01	3.442	O	|	|	|	2.87
216.333	0.00	0.01	3.442	O	|	|	|	2.87
216.417	0.00	0.01	3.442	O	|	|	|	2.87
216.500	0.00	0.01	3.442	O	|	|	|	2.87
216.583	0.00	0.01	3.442	O	|	|	|	2.87
216.667	0.00	0.01	3.442	O	|	|	|	2.87
216.750	0.00	0.01	3.442	O	|	|	|	2.87
216.833	0.00	0.01	3.442	O	|	|	|	2.87
216.917	0.00	0.01	3.442	O	|	|	|	2.87
217.000	0.00	0.01	3.442	O	|	|	|	2.87
217.083	0.00	0.01	3.442	O	|	|	|	2.87
217.167	0.00	0.01	3.442	O	|	|	|	2.87
217.250	0.00	0.01	3.442	O	|	|	|	2.87
217.333	0.00	0.01	3.441	O	|	|	|	2.87
217.417	0.00	0.01	3.441	O	|	|	|	2.87
217.500	0.00	0.01	3.441	O	|	|	|	2.87
217.583	0.00	0.01	3.441	O	|	|	|	2.87
217.667	0.00	0.01	3.441	O	|	|	|	2.87
217.750	0.00	0.01	3.441	O	|	|	|	2.87
217.833	0.00	0.01	3.441	O	|	|	|	2.87
217.917	0.00	0.01	3.441	O	|	|	|	2.87
218.000	0.00	0.01	3.441	O	|	|	|	2.87
218.083	0.00	0.01	3.441	O	|	|	|	2.87
218.167	0.00	0.01	3.441	O	|	|	|	2.87
218.250	0.00	0.01	3.441	O	|	|	|	2.87
218.333	0.00	0.01	3.441	O	|	|	|	2.87
218.417	0.00	0.01	3.441	O	|	|	|	2.87
218.500	0.00	0.01	3.441	O	|	|	|	2.87
218.583	0.00	0.01	3.440	O	|	|	|	2.87
218.667	0.00	0.01	3.440	O	|	|	|	2.87
218.750	0.00	0.01	3.440	O	|	|	|	2.87
218.833	0.00	0.01	3.440	O	|	|	|	2.87

218.917	0.00	0.01	3.440	O	|	|	|	2.87
219.000	0.00	0.01	3.440	O	|	|	|	2.87
219.083	0.00	0.01	3.440	O	|	|	|	2.87
219.167	0.00	0.01	3.440	O	|	|	|	2.87
219.250	0.00	0.01	3.440	O	|	|	|	2.87
219.333	0.00	0.01	3.440	O	|	|	|	2.87
219.417	0.00	0.01	3.440	O	|	|	|	2.87
219.500	0.00	0.01	3.440	O	|	|	|	2.87
219.583	0.00	0.01	3.440	O	|	|	|	2.87
219.667	0.00	0.01	3.440	O	|	|	|	2.87
219.750	0.00	0.01	3.439	O	|	|	|	2.87
219.833	0.00	0.01	3.439	O	|	|	|	2.87
219.917	0.00	0.01	3.439	O	|	|	|	2.87
220.000	0.00	0.01	3.439	O	|	|	|	2.87
220.083	0.00	0.01	3.439	O	|	|	|	2.87
220.167	0.00	0.01	3.439	O	|	|	|	2.87
220.250	0.00	0.01	3.439	O	|	|	|	2.87
220.333	0.00	0.01	3.439	O	|	|	|	2.87
220.417	0.00	0.01	3.439	O	|	|	|	2.87
220.500	0.00	0.01	3.439	O	|	|	|	2.87
220.583	0.00	0.01	3.439	O	|	|	|	2.87
220.667	0.00	0.01	3.439	O	|	|	|	2.87
220.750	0.00	0.01	3.439	O	|	|	|	2.87
220.833	0.00	0.01	3.439	O	|	|	|	2.87
220.917	0.00	0.01	3.439	O	|	|	|	2.87
221.000	0.00	0.01	3.438	O	|	|	|	2.87
221.083	0.00	0.01	3.438	O	|	|	|	2.87
221.167	0.00	0.01	3.438	O	|	|	|	2.87
221.250	0.00	0.01	3.438	O	|	|	|	2.87
221.333	0.00	0.01	3.438	O	|	|	|	2.87
221.417	0.00	0.01	3.438	O	|	|	|	2.87
221.500	0.00	0.01	3.438	O	|	|	|	2.87
221.583	0.00	0.01	3.438	O	|	|	|	2.86
221.667	0.00	0.01	3.438	O	|	|	|	2.86
221.750	0.00	0.01	3.438	O	|	|	|	2.86
221.833	0.00	0.01	3.438	O	|	|	|	2.86
221.917	0.00	0.01	3.438	O	|	|	|	2.86
222.000	0.00	0.01	3.438	O	|	|	|	2.86
222.083	0.00	0.01	3.438	O	|	|	|	2.86
222.167	0.00	0.01	3.437	O	|	|	|	2.86
222.250	0.00	0.01	3.437	O	|	|	|	2.86
222.333	0.00	0.01	3.437	O	|	|	|	2.86
222.417	0.00	0.01	3.437	O	|	|	|	2.86
222.500	0.00	0.01	3.437	O	|	|	|	2.86
222.583	0.00	0.01	3.437	O	|	|	|	2.86
222.667	0.00	0.01	3.437	O	|	|	|	2.86
222.750	0.00	0.01	3.437	O	|	|	|	2.86
222.833	0.00	0.01	3.437	O	|	|	|	2.86
222.917	0.00	0.01	3.437	O	|	|	|	2.86
223.000	0.00	0.01	3.437	O	|	|	|	2.86

223.083	0.00	0.01	3.437	O				2.86
223.167	0.00	0.01	3.437	O				2.86
223.250	0.00	0.01	3.437	O				2.86
223.333	0.00	0.01	3.437	O				2.86
223.417	0.00	0.01	3.436	O				2.86
223.500	0.00	0.01	3.436	O				2.86
223.583	0.00	0.01	3.436	O				2.86
223.667	0.00	0.01	3.436	O				2.86
223.750	0.00	0.01	3.436	O				2.86
223.833	0.00	0.01	3.436	O				2.86
223.917	0.00	0.01	3.436	O				2.86
224.000	0.00	0.01	3.436	O				2.86
224.083	0.00	0.01	3.436	O				2.86
224.167	0.00	0.01	3.436	O				2.86
224.250	0.00	0.01	3.436	O				2.86
224.333	0.00	0.01	3.436	O				2.86
224.417	0.00	0.01	3.436	O				2.86
224.500	0.00	0.01	3.436	O				2.86
224.583	0.00	0.01	3.435	O				2.86
224.667	0.00	0.01	3.435	O				2.86
224.750	0.00	0.01	3.435	O				2.86
224.833	0.00	0.01	3.435	O				2.86
224.917	0.00	0.01	3.435	O				2.86
225.000	0.00	0.01	3.435	O				2.86
225.083	0.00	0.01	3.435	O				2.86
225.167	0.00	0.01	3.435	O				2.86
225.250	0.00	0.01	3.435	O				2.86
225.333	0.00	0.01	3.435	O				2.86
225.417	0.00	0.01	3.435	O				2.86
225.500	0.00	0.01	3.435	O				2.86
225.583	0.00	0.01	3.435	O				2.86
225.667	0.00	0.01	3.435	O				2.86
225.750	0.00	0.01	3.435	O				2.86
225.833	0.00	0.01	3.434	O				2.86
225.917	0.00	0.01	3.434	O				2.86
226.000	0.00	0.01	3.434	O				2.86
226.083	0.00	0.01	3.434	O				2.86
226.167	0.00	0.01	3.434	O				2.86
226.250	0.00	0.01	3.434	O				2.86
226.333	0.00	0.01	3.434	O				2.86
226.417	0.00	0.01	3.434	O				2.86
226.500	0.00	0.01	3.434	O				2.86
226.583	0.00	0.01	3.434	O				2.86
226.667	0.00	0.01	3.434	O				2.86
226.750	0.00	0.01	3.434	O				2.86
226.833	0.00	0.01	3.434	O				2.86
226.917	0.00	0.01	3.434	O				2.86
227.000	0.00	0.01	3.434	O				2.86
227.083	0.00	0.01	3.433	O				2.86
227.167	0.00	0.01	3.433	O				2.86

227.250	0.00	0.01	3.433	O				2.86
227.333	0.00	0.01	3.433	O				2.86
227.417	0.00	0.01	3.433	O				2.86
227.500	0.00	0.01	3.433	O				2.86
227.583	0.00	0.01	3.433	O				2.86
227.667	0.00	0.01	3.433	O				2.86
227.750	0.00	0.01	3.433	O				2.86
227.833	0.00	0.01	3.433	O				2.86
227.917	0.00	0.01	3.433	O				2.86
228.000	0.00	0.01	3.433	O				2.86
228.083	0.00	0.01	3.433	O				2.86
228.167	0.00	0.01	3.433	O				2.86
228.250	0.00	0.01	3.432	O				2.86
228.333	0.00	0.01	3.432	O				2.86
228.417	0.00	0.01	3.432	O				2.86
228.500	0.00	0.01	3.432	O				2.86
228.583	0.00	0.01	3.432	O				2.86
228.667	0.00	0.01	3.432	O				2.86
228.750	0.00	0.01	3.432	O				2.86
228.833	0.00	0.01	3.432	O				2.86
228.917	0.00	0.01	3.432	O				2.86
229.000	0.00	0.01	3.432	O				2.86
229.083	0.00	0.01	3.432	O				2.86
229.167	0.00	0.01	3.432	O				2.86
229.250	0.00	0.01	3.432	O				2.86
229.333	0.00	0.01	3.432	O				2.86
229.417	0.00	0.01	3.432	O				2.86
229.500	0.00	0.01	3.431	O				2.86
229.583	0.00	0.01	3.431	O				2.86
229.667	0.00	0.01	3.431	O				2.86
229.750	0.00	0.01	3.431	O				2.86
229.833	0.00	0.01	3.431	O				2.86
229.917	0.00	0.01	3.431	O				2.86
230.000	0.00	0.01	3.431	O				2.86
230.083	0.00	0.01	3.431	O				2.86
230.167	0.00	0.01	3.431	O				2.86
230.250	0.00	0.01	3.431	O				2.86
230.333	0.00	0.01	3.431	O				2.86
230.417	0.00	0.01	3.431	O				2.86
230.500	0.00	0.01	3.431	O				2.86
230.583	0.00	0.01	3.431	O				2.86
230.667	0.00	0.01	3.430	O				2.86
230.750	0.00	0.01	3.430	O				2.86
230.833	0.00	0.01	3.430	O				2.86
230.917	0.00	0.01	3.430	O				2.86
231.000	0.00	0.01	3.430	O				2.86
231.083	0.00	0.01	3.430	O				2.86
231.167	0.00	0.01	3.430	O				2.86
231.250	0.00	0.01	3.430	O				2.86
231.333	0.00	0.01	3.430	O				2.86

231.417	0.00	0.01	3.430	O	|	|	|	2.86
231.500	0.00	0.01	3.430	O	|	|	|	2.86
231.583	0.00	0.01	3.430	O	|	|	|	2.86
231.667	0.00	0.01	3.430	O	|	|	|	2.86
231.750	0.00	0.01	3.430	O	|	|	|	2.86
231.833	0.00	0.01	3.430	O	|	|	|	2.86
231.917	0.00	0.01	3.429	O	|	|	|	2.86
232.000	0.00	0.01	3.429	O	|	|	|	2.86
232.083	0.00	0.01	3.429	O	|	|	|	2.86
232.167	0.00	0.01	3.429	O	|	|	|	2.86
232.250	0.00	0.01	3.429	O	|	|	|	2.86
232.333	0.00	0.01	3.429	O	|	|	|	2.86
232.417	0.00	0.01	3.429	O	|	|	|	2.86
232.500	0.00	0.01	3.429	O	|	|	|	2.86
232.583	0.00	0.01	3.429	O	|	|	|	2.86
232.667	0.00	0.01	3.429	O	|	|	|	2.86
232.750	0.00	0.01	3.429	O	|	|	|	2.86
232.833	0.00	0.01	3.429	O	|	|	|	2.86
232.917	0.00	0.01	3.429	O	|	|	|	2.86
233.000	0.00	0.01	3.429	O	|	|	|	2.86
233.083	0.00	0.01	3.428	O	|	|	|	2.86
233.167	0.00	0.01	3.428	O	|	|	|	2.86
233.250	0.00	0.01	3.428	O	|	|	|	2.86
233.333	0.00	0.01	3.428	O	|	|	|	2.86
233.417	0.00	0.01	3.428	O	|	|	|	2.86
233.500	0.00	0.01	3.428	O	|	|	|	2.86
233.583	0.00	0.01	3.428	O	|	|	|	2.86
233.667	0.00	0.01	3.428	O	|	|	|	2.86
233.750	0.00	0.01	3.428	O	|	|	|	2.86
233.833	0.00	0.01	3.428	O	|	|	|	2.86
233.917	0.00	0.01	3.428	O	|	|	|	2.86
234.000	0.00	0.01	3.428	O	|	|	|	2.86
234.083	0.00	0.01	3.428	O	|	|	|	2.86
234.167	0.00	0.01	3.428	O	|	|	|	2.86
234.250	0.00	0.01	3.428	O	|	|	|	2.86
234.333	0.00	0.01	3.427	O	|	|	|	2.86
234.417	0.00	0.01	3.427	O	|	|	|	2.86
234.500	0.00	0.01	3.427	O	|	|	|	2.86
234.583	0.00	0.01	3.427	O	|	|	|	2.86
234.667	0.00	0.01	3.427	O	|	|	|	2.86
234.750	0.00	0.01	3.427	O	|	|	|	2.86
234.833	0.00	0.01	3.427	O	|	|	|	2.86
234.917	0.00	0.01	3.427	O	|	|	|	2.86
235.000	0.00	0.01	3.427	O	|	|	|	2.86
235.083	0.00	0.01	3.427	O	|	|	|	2.86
235.167	0.00	0.01	3.427	O	|	|	|	2.86
235.250	0.00	0.01	3.427	O	|	|	|	2.86
235.333	0.00	0.01	3.427	O	|	|	|	2.86
235.417	0.00	0.01	3.427	O	|	|	|	2.86
235.500	0.00	0.01	3.426	O	|	|	|	2.86

235.583	0.00	0.01	3.426	O				2.86
235.667	0.00	0.01	3.426	O				2.86
235.750	0.00	0.01	3.426	O				2.86
235.833	0.00	0.01	3.426	O				2.86
235.917	0.00	0.01	3.426	O				2.86
236.000	0.00	0.01	3.426	O				2.86
236.083	0.00	0.01	3.426	O				2.85
236.167	0.00	0.01	3.426	O				2.85
236.250	0.00	0.01	3.426	O				2.85
236.333	0.00	0.01	3.426	O				2.85
236.417	0.00	0.01	3.426	O				2.85
236.500	0.00	0.01	3.426	O				2.85
236.583	0.00	0.01	3.426	O				2.85
236.667	0.00	0.01	3.426	O				2.85
236.750	0.00	0.01	3.425	O				2.85
236.833	0.00	0.01	3.425	O				2.85
236.917	0.00	0.01	3.425	O				2.85
237.000	0.00	0.01	3.425	O				2.85
237.083	0.00	0.01	3.425	O				2.85
237.167	0.00	0.01	3.425	O				2.85
237.250	0.00	0.01	3.425	O				2.85
237.333	0.00	0.01	3.425	O				2.85
237.417	0.00	0.01	3.425	O				2.85
237.500	0.00	0.01	3.425	O				2.85
237.583	0.00	0.01	3.425	O				2.85
237.667	0.00	0.01	3.425	O				2.85
237.750	0.00	0.01	3.425	O				2.85
237.833	0.00	0.01	3.425	O				2.85
237.917	0.00	0.01	3.424	O				2.85
238.000	0.00	0.01	3.424	O				2.85
238.083	0.00	0.01	3.424	O				2.85
238.167	0.00	0.01	3.424	O				2.85
238.250	0.00	0.01	3.424	O				2.85
238.333	0.00	0.01	3.424	O				2.85
238.417	0.00	0.01	3.424	O				2.85
238.500	0.00	0.01	3.424	O				2.85
238.583	0.00	0.01	3.424	O				2.85
238.667	0.00	0.01	3.424	O				2.85
238.750	0.00	0.01	3.424	O				2.85
238.833	0.00	0.01	3.424	O				2.85
238.917	0.00	0.01	3.424	O				2.85
239.000	0.00	0.01	3.424	O				2.85
239.083	0.00	0.01	3.424	O				2.85
239.167	0.00	0.01	3.423	O				2.85
239.250	0.00	0.01	3.423	O				2.85
239.333	0.00	0.01	3.423	O				2.85
239.417	0.00	0.01	3.423	O				2.85
239.500	0.00	0.01	3.423	O				2.85
239.583	0.00	0.01	3.423	O				2.85
239.667	0.00	0.01	3.423	O				2.85

239.750	0.00	0.01	3.423	O				2.85
239.833	0.00	0.01	3.423	O				2.85
239.917	0.00	0.01	3.423	O				2.85
240.000	0.00	0.01	3.423	O				2.85
240.083	0.00	0.01	3.423	O				2.85
240.167	0.00	0.01	3.423	O				2.85
240.250	0.00	0.01	3.423	O				2.85
240.333	0.00	0.01	3.422	O				2.85
240.417	0.00	0.01	3.422	O				2.85
240.500	0.00	0.01	3.422	O				2.85
240.583	0.00	0.01	3.422	O				2.85
240.667	0.00	0.01	3.422	O				2.85
240.750	0.00	0.01	3.422	O				2.85
240.833	0.00	0.01	3.422	O				2.85
240.917	0.00	0.01	3.422	O				2.85
241.000	0.00	0.01	3.422	O				2.85
241.083	0.00	0.01	3.422	O				2.85
241.167	0.00	0.01	3.422	O				2.85
241.250	0.00	0.01	3.422	O				2.85
241.333	0.00	0.01	3.422	O				2.85
241.417	0.00	0.01	3.422	O				2.85
241.500	0.00	0.01	3.422	O				2.85
241.583	0.00	0.01	3.421	O				2.85
241.667	0.00	0.01	3.421	O				2.85
241.750	0.00	0.01	3.421	O				2.85
241.833	0.00	0.01	3.421	O				2.85
241.917	0.00	0.01	3.421	O				2.85
242.000	0.00	0.01	3.421	O				2.85
242.083	0.00	0.01	3.421	O				2.85
242.167	0.00	0.01	3.421	O				2.85
242.250	0.00	0.01	3.421	O				2.85
242.333	0.00	0.01	3.421	O				2.85
242.417	0.00	0.01	3.421	O				2.85
242.500	0.00	0.01	3.421	O				2.85
242.583	0.00	0.01	3.421	O				2.85
242.667	0.00	0.01	3.421	O				2.85
242.750	0.00	0.01	3.420	O				2.85
242.833	0.00	0.01	3.420	O				2.85
242.917	0.00	0.01	3.420	O				2.85
243.000	0.00	0.01	3.420	O				2.85
243.083	0.00	0.01	3.420	O				2.85
243.167	0.00	0.01	3.420	O				2.85
243.250	0.00	0.01	3.420	O				2.85
243.333	0.00	0.01	3.420	O				2.85
243.417	0.00	0.01	3.420	O				2.85
243.500	0.00	0.01	3.420	O				2.85
243.583	0.00	0.01	3.420	O				2.85
243.667	0.00	0.01	3.420	O				2.85
243.750	0.00	0.01	3.420	O				2.85
243.833	0.00	0.01	3.420	O				2.85

243.917	0.00	0.01	3.420	O					2.85
244.000	0.00	0.01	3.419	O					2.85
244.083	0.00	0.01	3.419	O					2.85
244.167	0.00	0.01	3.419	O					2.85
244.250	0.00	0.01	3.419	O					2.85
244.333	0.00	0.01	3.419	O					2.85
244.417	0.00	0.01	3.419	O					2.85
244.500	0.00	0.01	3.419	O					2.85
244.583	0.00	0.01	3.419	O					2.85
244.667	0.00	0.01	3.419	O					2.85
244.750	0.00	0.01	3.419	O					2.85
244.833	0.00	0.01	3.419	O					2.85
244.917	0.00	0.01	3.419	O					2.85
245.000	0.00	0.01	3.419	O					2.85
245.083	0.00	0.01	3.419	O					2.85
245.167	0.00	0.01	3.418	O					2.85
245.250	0.00	0.01	3.418	O					2.85
245.333	0.00	0.01	3.418	O					2.85
245.417	0.00	0.01	3.418	O					2.85
245.500	0.00	0.01	3.418	O					2.85
245.583	0.00	0.01	3.418	O					2.85
245.667	0.00	0.01	3.418	O					2.85
245.750	0.00	0.01	3.418	O					2.85
245.833	0.00	0.01	3.418	O					2.85
245.917	0.00	0.01	3.418	O					2.85
246.000	0.00	0.01	3.418	O					2.85
246.083	0.00	0.01	3.418	O					2.85
246.167	0.00	0.01	3.418	O					2.85
246.250	0.00	0.01	3.418	O					2.85
246.333	0.00	0.01	3.418	O					2.85
246.417	0.00	0.01	3.417	O					2.85
246.500	0.00	0.01	3.417	O					2.85
246.583	0.00	0.01	3.417	O					2.85
246.667	0.00	0.01	3.417	O					2.85
246.750	0.00	0.01	3.417	O					2.85
246.833	0.00	0.01	3.417	O					2.85
246.917	0.00	0.01	3.417	O					2.85
247.000	0.00	0.01	3.417	O					2.85
247.083	0.00	0.01	3.417	O					2.85
247.167	0.00	0.01	3.417	O					2.85
247.250	0.00	0.01	3.417	O					2.85
247.333	0.00	0.01	3.417	O					2.85
247.417	0.00	0.01	3.417	O					2.85
247.500	0.00	0.01	3.417	O					2.85
247.583	0.00	0.01	3.416	O					2.85
247.667	0.00	0.01	3.416	O					2.85
247.750	0.00	0.01	3.416	O					2.85
247.833	0.00	0.01	3.416	O					2.85
247.917	0.00	0.01	3.416	O					2.85
248.000	0.00	0.01	3.416	O					2.85

248.083	0.00	0.01	3.416	O				2.85
248.167	0.00	0.01	3.416	O				2.85
248.250	0.00	0.01	3.416	O				2.85
248.333	0.00	0.01	3.416	O				2.85
248.417	0.00	0.01	3.416	O				2.85
248.500	0.00	0.01	3.416	O				2.85
248.583	0.00	0.01	3.416	O				2.85
248.667	0.00	0.01	3.416	O				2.85
248.750	0.00	0.01	3.416	O				2.85
248.833	0.00	0.01	3.415	O				2.85
248.917	0.00	0.01	3.415	O				2.85
249.000	0.00	0.01	3.415	O				2.85
249.083	0.00	0.01	3.415	O				2.85
249.167	0.00	0.01	3.415	O				2.85
249.250	0.00	0.01	3.415	O				2.85
249.333	0.00	0.01	3.415	O				2.85
249.417	0.00	0.01	3.415	O				2.85
249.500	0.00	0.01	3.415	O				2.85
249.583	0.00	0.01	3.415	O				2.85
249.667	0.00	0.01	3.415	O				2.85
249.750	0.00	0.01	3.415	O				2.85
249.833	0.00	0.01	3.415	O				2.85
249.917	0.00	0.01	3.415	O				2.85
250.000	0.00	0.01	3.414	O				2.85
250.083	0.00	0.01	3.414	O				2.85
250.167	0.00	0.01	3.414	O				2.85
250.250	0.00	0.01	3.414	O				2.85
250.333	0.00	0.01	3.414	O				2.85
250.417	0.00	0.01	3.414	O				2.85
250.500	0.00	0.01	3.414	O				2.85
250.583	0.00	0.01	3.414	O				2.85
250.667	0.00	0.01	3.414	O				2.84
250.750	0.00	0.01	3.414	O				2.84
250.833	0.00	0.01	3.414	O				2.84
250.917	0.00	0.01	3.414	O				2.84
251.000	0.00	0.01	3.414	O				2.84
251.083	0.00	0.01	3.414	O				2.84
251.167	0.00	0.01	3.414	O				2.84
251.250	0.00	0.01	3.413	O				2.84
251.333	0.00	0.01	3.413	O				2.84
251.417	0.00	0.01	3.413	O				2.84
251.500	0.00	0.01	3.413	O				2.84
251.583	0.00	0.01	3.413	O				2.84
251.667	0.00	0.01	3.413	O				2.84
251.750	0.00	0.01	3.413	O				2.84
251.833	0.00	0.01	3.413	O				2.84
251.917	0.00	0.01	3.413	O				2.84
252.000	0.00	0.01	3.413	O				2.84
252.083	0.00	0.01	3.413	O				2.84
252.167	0.00	0.01	3.413	O				2.84

252.250	0.00	0.01	3.413	O				2.84
252.333	0.00	0.01	3.413	O				2.84
252.417	0.00	0.01	3.412	O				2.84
252.500	0.00	0.01	3.412	O				2.84
252.583	0.00	0.01	3.412	O				2.84
252.667	0.00	0.01	3.412	O				2.84
252.750	0.00	0.01	3.412	O				2.84
252.833	0.00	0.01	3.412	O				2.84
252.917	0.00	0.01	3.412	O				2.84
253.000	0.00	0.01	3.412	O				2.84
253.083	0.00	0.01	3.412	O				2.84
253.167	0.00	0.01	3.412	O				2.84
253.250	0.00	0.01	3.412	O				2.84
253.333	0.00	0.01	3.412	O				2.84
253.417	0.00	0.01	3.412	O				2.84
253.500	0.00	0.01	3.412	O				2.84
253.583	0.00	0.01	3.412	O				2.84
253.667	0.00	0.01	3.411	O				2.84
253.750	0.00	0.01	3.411	O				2.84
253.833	0.00	0.01	3.411	O				2.84
253.917	0.00	0.01	3.411	O				2.84
254.000	0.00	0.01	3.411	O				2.84
254.083	0.00	0.01	3.411	O				2.84
254.167	0.00	0.01	3.411	O				2.84
254.250	0.00	0.01	3.411	O				2.84
254.333	0.00	0.01	3.411	O				2.84
254.417	0.00	0.01	3.411	O				2.84
254.500	0.00	0.01	3.411	O				2.84
254.583	0.00	0.01	3.411	O				2.84
254.667	0.00	0.01	3.411	O				2.84
254.750	0.00	0.01	3.411	O				2.84
254.833	0.00	0.01	3.410	O				2.84
254.917	0.00	0.01	3.410	O				2.84
255.000	0.00	0.01	3.410	O				2.84
255.083	0.00	0.01	3.410	O				2.84
255.167	0.00	0.01	3.410	O				2.84
255.250	0.00	0.01	3.410	O				2.84
255.333	0.00	0.01	3.410	O				2.84
255.417	0.00	0.01	3.410	O				2.84
255.500	0.00	0.01	3.410	O				2.84
255.583	0.00	0.01	3.410	O				2.84
255.667	0.00	0.01	3.410	O				2.84
255.750	0.00	0.01	3.410	O				2.84
255.833	0.00	0.01	3.410	O				2.84
255.917	0.00	0.01	3.410	O				2.84
256.000	0.00	0.01	3.410	O				2.84
256.083	0.00	0.01	3.409	O				2.84
256.167	0.00	0.01	3.409	O				2.84
256.250	0.00	0.01	3.409	O				2.84
256.333	0.00	0.01	3.409	O				2.84

256.417	0.00	0.01	3.409	O	|	|	|	2.84
256.500	0.00	0.01	3.409	O	|	|	|	2.84
256.583	0.00	0.01	3.409	O	|	|	|	2.84
256.667	0.00	0.01	3.409	O	|	|	|	2.84
256.750	0.00	0.01	3.409	O	|	|	|	2.84
256.833	0.00	0.01	3.409	O	|	|	|	2.84
256.917	0.00	0.01	3.409	O	|	|	|	2.84
257.000	0.00	0.01	3.409	O	|	|	|	2.84
257.083	0.00	0.01	3.409	O	|	|	|	2.84
257.167	0.00	0.01	3.409	O	|	|	|	2.84
257.250	0.00	0.01	3.409	O	|	|	|	2.84
257.333	0.00	0.01	3.408	O	|	|	|	2.84
257.417	0.00	0.01	3.408	O	|	|	|	2.84
257.500	0.00	0.01	3.408	O	|	|	|	2.84
257.583	0.00	0.01	3.408	O	|	|	|	2.84
257.667	0.00	0.01	3.408	O	|	|	|	2.84
257.750	0.00	0.01	3.408	O	|	|	|	2.84
257.833	0.00	0.01	3.408	O	|	|	|	2.84
257.917	0.00	0.01	3.408	O	|	|	|	2.84
258.000	0.00	0.01	3.408	O	|	|	|	2.84
258.083	0.00	0.01	3.408	O	|	|	|	2.84
258.167	0.00	0.01	3.408	O	|	|	|	2.84
258.250	0.00	0.01	3.408	O	|	|	|	2.84
258.333	0.00	0.01	3.408	O	|	|	|	2.84
258.417	0.00	0.01	3.408	O	|	|	|	2.84
258.500	0.00	0.01	3.407	O	|	|	|	2.84
258.583	0.00	0.01	3.407	O	|	|	|	2.84
258.667	0.00	0.01	3.407	O	|	|	|	2.84
258.750	0.00	0.01	3.407	O	|	|	|	2.84
258.833	0.00	0.01	3.407	O	|	|	|	2.84
258.917	0.00	0.01	3.407	O	|	|	|	2.84
259.000	0.00	0.01	3.407	O	|	|	|	2.84
259.083	0.00	0.01	3.407	O	|	|	|	2.84
259.167	0.00	0.01	3.407	O	|	|	|	2.84
259.250	0.00	0.01	3.407	O	|	|	|	2.84
259.333	0.00	0.01	3.407	O	|	|	|	2.84
259.417	0.00	0.01	3.407	O	|	|	|	2.84
259.500	0.00	0.01	3.407	O	|	|	|	2.84
259.583	0.00	0.01	3.407	O	|	|	|	2.84
259.667	0.00	0.01	3.407	O	|	|	|	2.84
259.750	0.00	0.01	3.406	O	|	|	|	2.84
259.833	0.00	0.01	3.406	O	|	|	|	2.84
259.917	0.00	0.01	3.406	O	|	|	|	2.84
260.000	0.00	0.01	3.406	O	|	|	|	2.84
260.083	0.00	0.01	3.406	O	|	|	|	2.84
260.167	0.00	0.01	3.406	O	|	|	|	2.84
260.250	0.00	0.01	3.406	O	|	|	|	2.84
260.333	0.00	0.01	3.406	O	|	|	|	2.84
260.417	0.00	0.01	3.406	O	|	|	|	2.84
260.500	0.00	0.01	3.406	O	|	|	|	2.84

260.583	0.00	0.01	3.406	O	|	|	|	2.84
260.667	0.00	0.01	3.406	O	|	|	|	2.84
260.750	0.00	0.01	3.406	O	|	|	|	2.84
260.833	0.00	0.01	3.406	O	|	|	|	2.84
260.917	0.00	0.01	3.405	O	|	|	|	2.84
261.000	0.00	0.01	3.405	O	|	|	|	2.84
261.083	0.00	0.01	3.405	O	|	|	|	2.84
261.167	0.00	0.01	3.405	O	|	|	|	2.84
261.250	0.00	0.01	3.405	O	|	|	|	2.84
261.333	0.00	0.01	3.405	O	|	|	|	2.84
261.417	0.00	0.01	3.405	O	|	|	|	2.84
261.500	0.00	0.01	3.405	O	|	|	|	2.84
261.583	0.00	0.01	3.405	O	|	|	|	2.84
261.667	0.00	0.01	3.405	O	|	|	|	2.84
261.750	0.00	0.01	3.405	O	|	|	|	2.84
261.833	0.00	0.01	3.405	O	|	|	|	2.84
261.917	0.00	0.01	3.405	O	|	|	|	2.84
262.000	0.00	0.01	3.405	O	|	|	|	2.84
262.083	0.00	0.01	3.405	O	|	|	|	2.84
262.167	0.00	0.01	3.404	O	|	|	|	2.84
262.250	0.00	0.01	3.404	O	|	|	|	2.84
262.333	0.00	0.01	3.404	O	|	|	|	2.84
262.417	0.00	0.01	3.404	O	|	|	|	2.84
262.500	0.00	0.01	3.404	O	|	|	|	2.84
262.583	0.00	0.01	3.404	O	|	|	|	2.84
262.667	0.00	0.01	3.404	O	|	|	|	2.84
262.750	0.00	0.01	3.404	O	|	|	|	2.84
262.833	0.00	0.01	3.404	O	|	|	|	2.84
262.917	0.00	0.01	3.404	O	|	|	|	2.84
263.000	0.00	0.01	3.404	O	|	|	|	2.84
263.083	0.00	0.01	3.404	O	|	|	|	2.84
263.167	0.00	0.01	3.404	O	|	|	|	2.84
263.250	0.00	0.01	3.404	O	|	|	|	2.84
263.333	0.00	0.01	3.403	O	|	|	|	2.84
263.417	0.00	0.01	3.403	O	|	|	|	2.84
263.500	0.00	0.01	3.403	O	|	|	|	2.84
263.583	0.00	0.01	3.403	O	|	|	|	2.84
263.667	0.00	0.01	3.403	O	|	|	|	2.84
263.750	0.00	0.01	3.403	O	|	|	|	2.84
263.833	0.00	0.01	3.403	O	|	|	|	2.84
263.917	0.00	0.01	3.403	O	|	|	|	2.84
264.000	0.00	0.01	3.403	O	|	|	|	2.84
264.083	0.00	0.01	3.403	O	|	|	|	2.84
264.167	0.00	0.01	3.403	O	|	|	|	2.84
264.250	0.00	0.01	3.403	O	|	|	|	2.84
264.333	0.00	0.01	3.403	O	|	|	|	2.84
264.417	0.00	0.01	3.403	O	|	|	|	2.84
264.500	0.00	0.01	3.403	O	|	|	|	2.84
264.583	0.00	0.01	3.402	O	|	|	|	2.84
264.667	0.00	0.01	3.402	O	|	|	|	2.84

264.750	0.00	0.01	3.402	O	|	|	|	2.84
264.833	0.00	0.01	3.402	O	|	|	|	2.84
264.917	0.00	0.01	3.402	O	|	|	|	2.84
265.000	0.00	0.01	3.402	O	|	|	|	2.84
265.083	0.00	0.01	3.402	O	|	|	|	2.84
265.167	0.00	0.01	3.402	O	|	|	|	2.83
265.250	0.00	0.01	3.402	O	|	|	|	2.83
265.333	0.00	0.01	3.402	O	|	|	|	2.83
265.417	0.00	0.01	3.402	O	|	|	|	2.83
265.500	0.00	0.01	3.402	O	|	|	|	2.83
265.583	0.00	0.01	3.402	O	|	|	|	2.83
265.667	0.00	0.01	3.402	O	|	|	|	2.83
265.750	0.00	0.01	3.401	O	|	|	|	2.83
265.833	0.00	0.01	3.401	O	|	|	|	2.83
265.917	0.00	0.01	3.401	O	|	|	|	2.83
266.000	0.00	0.01	3.401	O	|	|	|	2.83
266.083	0.00	0.01	3.401	O	|	|	|	2.83
266.167	0.00	0.01	3.401	O	|	|	|	2.83
266.250	0.00	0.01	3.401	O	|	|	|	2.83
266.333	0.00	0.01	3.401	O	|	|	|	2.83
266.417	0.00	0.01	3.401	O	|	|	|	2.83
266.500	0.00	0.01	3.401	O	|	|	|	2.83
266.583	0.00	0.01	3.401	O	|	|	|	2.83
266.667	0.00	0.01	3.401	O	|	|	|	2.83
266.750	0.00	0.01	3.401	O	|	|	|	2.83
266.833	0.00	0.01	3.401	O	|	|	|	2.83
266.917	0.00	0.01	3.401	O	|	|	|	2.83
267.000	0.00	0.01	3.400	O	|	|	|	2.83
267.083	0.00	0.01	3.400	O	|	|	|	2.83
267.167	0.00	0.01	3.400	O	|	|	|	2.83
267.250	0.00	0.01	3.400	O	|	|	|	2.83
267.333	0.00	0.01	3.400	O	|	|	|	2.83
267.417	0.00	0.01	3.400	O	|	|	|	2.83
267.500	0.00	0.01	3.400	O	|	|	|	2.83
267.583	0.00	0.01	3.400	O	|	|	|	2.83
267.667	0.00	0.01	3.400	O	|	|	|	2.83
267.750	0.00	0.01	3.400	O	|	|	|	2.83
267.833	0.00	0.01	3.400	O	|	|	|	2.83
267.917	0.00	0.01	3.400	O	|	|	|	2.83
268.000	0.00	0.01	3.400	O	|	|	|	2.83
268.083	0.00	0.01	3.400	O	|	|	|	2.83
268.167	0.00	0.01	3.399	O	|	|	|	2.83
268.250	0.00	0.01	3.399	O	|	|	|	2.83
268.333	0.00	0.01	3.399	O	|	|	|	2.83
268.417	0.00	0.01	3.399	O	|	|	|	2.83
268.500	0.00	0.01	3.399	O	|	|	|	2.83
268.583	0.00	0.01	3.399	O	|	|	|	2.83
268.667	0.00	0.01	3.399	O	|	|	|	2.83
268.750	0.00	0.01	3.399	O	|	|	|	2.83
268.833	0.00	0.01	3.399	O	|	|	|	2.83

268.917	0.00	0.01	3.399	O				2.83
269.000	0.00	0.01	3.399	O				2.83
269.083	0.00	0.01	3.399	O				2.83
269.167	0.00	0.01	3.399	O				2.83
269.250	0.00	0.01	3.399	O				2.83
269.333	0.00	0.01	3.399	O				2.83
269.417	0.00	0.01	3.398	O				2.83
269.500	0.00	0.01	3.398	O				2.83
269.583	0.00	0.01	3.398	O				2.83
269.667	0.00	0.01	3.398	O				2.83
269.750	0.00	0.01	3.398	O				2.83
269.833	0.00	0.01	3.398	O				2.83
269.917	0.00	0.01	3.398	O				2.83
270.000	0.00	0.01	3.398	O				2.83
270.083	0.00	0.01	3.398	O				2.83
270.167	0.00	0.01	3.398	O				2.83
270.250	0.00	0.01	3.398	O				2.83
270.333	0.00	0.01	3.398	O				2.83
270.417	0.00	0.01	3.398	O				2.83
270.500	0.00	0.01	3.398	O				2.83
270.583	0.00	0.01	3.397	O				2.83
270.667	0.00	0.01	3.397	O				2.83
270.750	0.00	0.01	3.397	O				2.83
270.833	0.00	0.01	3.397	O				2.83
270.917	0.00	0.01	3.397	O				2.83
271.000	0.00	0.01	3.397	O				2.83
271.083	0.00	0.01	3.397	O				2.83
271.167	0.00	0.01	3.397	O				2.83
271.250	0.00	0.01	3.397	O				2.83
271.333	0.00	0.01	3.397	O				2.83
271.417	0.00	0.01	3.397	O				2.83
271.500	0.00	0.01	3.397	O				2.83
271.583	0.00	0.01	3.397	O				2.83
271.667	0.00	0.01	3.397	O				2.83
271.750	0.00	0.01	3.397	O				2.83
271.833	0.00	0.01	3.396	O				2.83
271.917	0.00	0.01	3.396	O				2.83
272.000	0.00	0.01	3.396	O				2.83
272.083	0.00	0.01	3.396	O				2.83
272.167	0.00	0.01	3.396	O				2.83
272.250	0.00	0.01	3.396	O				2.83
272.333	0.00	0.01	3.396	O				2.83
272.417	0.00	0.01	3.396	O				2.83
272.500	0.00	0.01	3.396	O				2.83
272.583	0.00	0.01	3.396	O				2.83
272.667	0.00	0.01	3.396	O				2.83
272.750	0.00	0.01	3.396	O				2.83
272.833	0.00	0.01	3.396	O				2.83
272.917	0.00	0.01	3.396	O				2.83
273.000	0.00	0.01	3.395	O				2.83

273.083	0.00	0.01	3.395	O	|	|	|	2.83
273.167	0.00	0.01	3.395	O	|	|	|	2.83
273.250	0.00	0.01	3.395	O	|	|	|	2.83
273.333	0.00	0.01	3.395	O	|	|	|	2.83
273.417	0.00	0.01	3.395	O	|	|	|	2.83
273.500	0.00	0.01	3.395	O	|	|	|	2.83
273.583	0.00	0.01	3.395	O	|	|	|	2.83
273.667	0.00	0.01	3.395	O	|	|	|	2.83
273.750	0.00	0.01	3.395	O	|	|	|	2.83
273.833	0.00	0.01	3.395	O	|	|	|	2.83
273.917	0.00	0.01	3.395	O	|	|	|	2.83
274.000	0.00	0.01	3.395	O	|	|	|	2.83
274.083	0.00	0.01	3.395	O	|	|	|	2.83
274.167	0.00	0.01	3.395	O	|	|	|	2.83
274.250	0.00	0.01	3.394	O	|	|	|	2.83
274.333	0.00	0.01	3.394	O	|	|	|	2.83
274.417	0.00	0.01	3.394	O	|	|	|	2.83
274.500	0.00	0.01	3.394	O	|	|	|	2.83
274.583	0.00	0.01	3.394	O	|	|	|	2.83
274.667	0.00	0.01	3.394	O	|	|	|	2.83
274.750	0.00	0.01	3.394	O	|	|	|	2.83
274.833	0.00	0.01	3.394	O	|	|	|	2.83
274.917	0.00	0.01	3.394	O	|	|	|	2.83
275.000	0.00	0.01	3.394	O	|	|	|	2.83
275.083	0.00	0.01	3.394	O	|	|	|	2.83
275.167	0.00	0.01	3.394	O	|	|	|	2.83
275.250	0.00	0.01	3.394	O	|	|	|	2.83
275.333	0.00	0.01	3.394	O	|	|	|	2.83
275.417	0.00	0.01	3.393	O	|	|	|	2.83
275.500	0.00	0.01	3.393	O	|	|	|	2.83
275.583	0.00	0.01	3.393	O	|	|	|	2.83
275.667	0.00	0.01	3.393	O	|	|	|	2.83
275.750	0.00	0.01	3.393	O	|	|	|	2.83
275.833	0.00	0.01	3.393	O	|	|	|	2.83
275.917	0.00	0.01	3.393	O	|	|	|	2.83
276.000	0.00	0.01	3.393	O	|	|	|	2.83
276.083	0.00	0.01	3.393	O	|	|	|	2.83
276.167	0.00	0.01	3.393	O	|	|	|	2.83
276.250	0.00	0.01	3.393	O	|	|	|	2.83
276.333	0.00	0.01	3.393	O	|	|	|	2.83
276.417	0.00	0.01	3.393	O	|	|	|	2.83
276.500	0.00	0.01	3.393	O	|	|	|	2.83
276.583	0.00	0.01	3.393	O	|	|	|	2.83
276.667	0.00	0.01	3.392	O	|	|	|	2.83
276.750	0.00	0.01	3.392	O	|	|	|	2.83
276.833	0.00	0.01	3.392	O	|	|	|	2.83
276.917	0.00	0.01	3.392	O	|	|	|	2.83
277.000	0.00	0.01	3.392	O	|	|	|	2.83
277.083	0.00	0.01	3.392	O	|	|	|	2.83
277.167	0.00	0.01	3.392	O	|	|	|	2.83

277.250	0.00	0.01	3.392	O				2.83
277.333	0.00	0.01	3.392	O				2.83
277.417	0.00	0.01	3.392	O				2.83
277.500	0.00	0.01	3.392	O				2.83
277.583	0.00	0.01	3.392	O				2.83
277.667	0.00	0.01	3.392	O				2.83
277.750	0.00	0.01	3.392	O				2.83
277.833	0.00	0.01	3.391	O				2.83
277.917	0.00	0.01	3.391	O				2.83
278.000	0.00	0.01	3.391	O				2.83
278.083	0.00	0.01	3.391	O				2.83
278.167	0.00	0.01	3.391	O				2.83
278.250	0.00	0.01	3.391	O				2.83
278.333	0.00	0.01	3.391	O				2.83
278.417	0.00	0.01	3.391	O				2.83
278.500	0.00	0.01	3.391	O				2.83
278.583	0.00	0.01	3.391	O				2.83
278.667	0.00	0.01	3.391	O				2.83
278.750	0.00	0.01	3.391	O				2.83
278.833	0.00	0.01	3.391	O				2.83
278.917	0.00	0.01	3.391	O				2.83
279.000	0.00	0.01	3.391	O				2.83
279.083	0.00	0.01	3.390	O				2.83
279.167	0.00	0.01	3.390	O				2.83
279.250	0.00	0.01	3.390	O				2.83
279.333	0.00	0.01	3.390	O				2.83
279.417	0.00	0.01	3.390	O				2.83
279.500	0.00	0.01	3.390	O				2.83
279.583	0.00	0.01	3.390	O				2.83
279.667	0.00	0.01	3.390	O				2.82
279.750	0.00	0.01	3.390	O				2.82
279.833	0.00	0.01	3.390	O				2.82
279.917	0.00	0.01	3.390	O				2.82
280.000	0.00	0.01	3.390	O				2.82
280.083	0.00	0.01	3.390	O				2.82
280.167	0.00	0.01	3.390	O				2.82
280.250	0.00	0.01	3.389	O				2.82
280.333	0.00	0.01	3.389	O				2.82
280.417	0.00	0.01	3.389	O				2.82
280.500	0.00	0.01	3.389	O				2.82
280.583	0.00	0.01	3.389	O				2.82
280.667	0.00	0.01	3.389	O				2.82
280.750	0.00	0.01	3.389	O				2.82
280.833	0.00	0.01	3.389	O				2.82
280.917	0.00	0.01	3.389	O				2.82
281.000	0.00	0.01	3.389	O				2.82
281.083	0.00	0.01	3.389	O				2.82
281.167	0.00	0.01	3.389	O				2.82
281.250	0.00	0.01	3.389	O				2.82
281.333	0.00	0.01	3.389	O				2.82

281.417	0.00	0.01	3.389	O	|	|	|	2.82
281.500	0.00	0.01	3.388	O	|	|	|	2.82
281.583	0.00	0.01	3.388	O	|	|	|	2.82
281.667	0.00	0.01	3.388	O	|	|	|	2.82
281.750	0.00	0.01	3.388	O	|	|	|	2.82
281.833	0.00	0.01	3.388	O	|	|	|	2.82
281.917	0.00	0.01	3.388	O	|	|	|	2.82
282.000	0.00	0.01	3.388	O	|	|	|	2.82
282.083	0.00	0.01	3.388	O	|	|	|	2.82
282.167	0.00	0.01	3.388	O	|	|	|	2.82
282.250	0.00	0.01	3.388	O	|	|	|	2.82
282.333	0.00	0.01	3.388	O	|	|	|	2.82
282.417	0.00	0.01	3.388	O	|	|	|	2.82
282.500	0.00	0.01	3.388	O	|	|	|	2.82
282.583	0.00	0.01	3.388	O	|	|	|	2.82
282.667	0.00	0.01	3.387	O	|	|	|	2.82
282.750	0.00	0.01	3.387	O	|	|	|	2.82
282.833	0.00	0.01	3.387	O	|	|	|	2.82
282.917	0.00	0.01	3.387	O	|	|	|	2.82
283.000	0.00	0.01	3.387	O	|	|	|	2.82
283.083	0.00	0.01	3.387	O	|	|	|	2.82
283.167	0.00	0.01	3.387	O	|	|	|	2.82
283.250	0.00	0.01	3.387	O	|	|	|	2.82
283.333	0.00	0.01	3.387	O	|	|	|	2.82
283.417	0.00	0.01	3.387	O	|	|	|	2.82
283.500	0.00	0.01	3.387	O	|	|	|	2.82
283.583	0.00	0.01	3.387	O	|	|	|	2.82
283.667	0.00	0.01	3.387	O	|	|	|	2.82
283.750	0.00	0.01	3.387	O	|	|	|	2.82
283.833	0.00	0.01	3.387	O	|	|	|	2.82
283.917	0.00	0.01	3.386	O	|	|	|	2.82
284.000	0.00	0.01	3.386	O	|	|	|	2.82
284.083	0.00	0.01	3.386	O	|	|	|	2.82
284.167	0.00	0.01	3.386	O	|	|	|	2.82
284.250	0.00	0.01	3.386	O	|	|	|	2.82
284.333	0.00	0.01	3.386	O	|	|	|	2.82
284.417	0.00	0.01	3.386	O	|	|	|	2.82
284.500	0.00	0.01	3.386	O	|	|	|	2.82
284.583	0.00	0.01	3.386	O	|	|	|	2.82
284.667	0.00	0.01	3.386	O	|	|	|	2.82
284.750	0.00	0.01	3.386	O	|	|	|	2.82
284.833	0.00	0.01	3.386	O	|	|	|	2.82
284.917	0.00	0.01	3.386	O	|	|	|	2.82
285.000	0.00	0.01	3.386	O	|	|	|	2.82
285.083	0.00	0.01	3.385	O	|	|	|	2.82
285.167	0.00	0.01	3.385	O	|	|	|	2.82
285.250	0.00	0.01	3.385	O	|	|	|	2.82
285.333	0.00	0.01	3.385	O	|	|	|	2.82
285.417	0.00	0.01	3.385	O	|	|	|	2.82
285.500	0.00	0.01	3.385	O	|	|	|	2.82

285.583	0.00	0.01	3.385	O	|	|	|	2.82
285.667	0.00	0.01	3.385	O	|	|	|	2.82
285.750	0.00	0.01	3.385	O	|	|	|	2.82
285.833	0.00	0.01	3.385	O	|	|	|	2.82
285.917	0.00	0.01	3.385	O	|	|	|	2.82
286.000	0.00	0.01	3.385	O	|	|	|	2.82
286.083	0.00	0.01	3.385	O	|	|	|	2.82
286.167	0.00	0.01	3.385	O	|	|	|	2.82
286.250	0.00	0.01	3.385	O	|	|	|	2.82
286.333	0.00	0.01	3.384	O	|	|	|	2.82
286.417	0.00	0.01	3.384	O	|	|	|	2.82
286.500	0.00	0.01	3.384	O	|	|	|	2.82
286.583	0.00	0.01	3.384	O	|	|	|	2.82
286.667	0.00	0.01	3.384	O	|	|	|	2.82
286.750	0.00	0.01	3.384	O	|	|	|	2.82
286.833	0.00	0.01	3.384	O	|	|	|	2.82
286.917	0.00	0.01	3.384	O	|	|	|	2.82
287.000	0.00	0.01	3.384	O	|	|	|	2.82
287.083	0.00	0.01	3.384	O	|	|	|	2.82
287.167	0.00	0.01	3.384	O	|	|	|	2.82
287.250	0.00	0.01	3.384	O	|	|	|	2.82
287.333	0.00	0.01	3.384	O	|	|	|	2.82
287.417	0.00	0.01	3.384	O	|	|	|	2.82
287.500	0.00	0.01	3.384	O	|	|	|	2.82
287.583	0.00	0.01	3.383	O	|	|	|	2.82
287.667	0.00	0.01	3.383	O	|	|	|	2.82
287.750	0.00	0.01	3.383	O	|	|	|	2.82
287.833	0.00	0.01	3.383	O	|	|	|	2.82
287.917	0.00	0.01	3.383	O	|	|	|	2.82
288.000	0.00	0.01	3.383	O	|	|	|	2.82
288.083	0.00	0.01	3.383	O	|	|	|	2.82
288.167	0.00	0.01	3.383	O	|	|	|	2.82
288.250	0.00	0.01	3.383	O	|	|	|	2.82
288.333	0.00	0.01	3.383	O	|	|	|	2.82
288.417	0.00	0.01	3.383	O	|	|	|	2.82
288.500	0.00	0.01	3.383	O	|	|	|	2.82
288.583	0.00	0.01	3.383	O	|	|	|	2.82
288.667	0.00	0.01	3.383	O	|	|	|	2.82
288.750	0.00	0.01	3.382	O	|	|	|	2.82
288.833	0.00	0.01	3.382	O	|	|	|	2.82
288.917	0.00	0.01	3.382	O	|	|	|	2.82
289.000	0.00	0.01	3.382	O	|	|	|	2.82
289.083	0.00	0.01	3.382	O	|	|	|	2.82
289.167	0.00	0.01	3.382	O	|	|	|	2.82
289.250	0.00	0.01	3.382	O	|	|	|	2.82
289.333	0.00	0.01	3.382	O	|	|	|	2.82
289.417	0.00	0.01	3.382	O	|	|	|	2.82
289.500	0.00	0.01	3.382	O	|	|	|	2.82
289.583	0.00	0.01	3.382	O	|	|	|	2.82
289.667	0.00	0.01	3.382	O	|	|	|	2.82

289.750	0.00	0.01	3.382	O	|	|	|	2.82
289.833	0.00	0.01	3.382	O	|	|	|	2.82
289.917	0.00	0.01	3.382	O	|	|	|	2.82
290.000	0.00	0.01	3.381	O	|	|	|	2.82
290.083	0.00	0.01	3.381	O	|	|	|	2.82
290.167	0.00	0.01	3.381	O	|	|	|	2.82
290.250	0.00	0.01	3.381	O	|	|	|	2.82
290.333	0.00	0.01	3.381	O	|	|	|	2.82
290.417	0.00	0.01	3.381	O	|	|	|	2.82
290.500	0.00	0.01	3.381	O	|	|	|	2.82
290.583	0.00	0.01	3.381	O	|	|	|	2.82
290.667	0.00	0.01	3.381	O	|	|	|	2.82
290.750	0.00	0.01	3.381	O	|	|	|	2.82
290.833	0.00	0.01	3.381	O	|	|	|	2.82
290.917	0.00	0.01	3.381	O	|	|	|	2.82
291.000	0.00	0.01	3.381	O	|	|	|	2.82
291.083	0.00	0.01	3.381	O	|	|	|	2.82
291.167	0.00	0.01	3.380	O	|	|	|	2.82
291.250	0.00	0.01	3.380	O	|	|	|	2.82
291.333	0.00	0.01	3.380	O	|	|	|	2.82
291.417	0.00	0.01	3.380	O	|	|	|	2.82
291.500	0.00	0.01	3.380	O	|	|	|	2.82
291.583	0.00	0.01	3.380	O	|	|	|	2.82
291.667	0.00	0.01	3.380	O	|	|	|	2.82
291.750	0.00	0.01	3.380	O	|	|	|	2.82
291.833	0.00	0.01	3.380	O	|	|	|	2.82
291.917	0.00	0.01	3.380	O	|	|	|	2.82
292.000	0.00	0.01	3.380	O	|	|	|	2.82
292.083	0.00	0.01	3.380	O	|	|	|	2.82
292.167	0.00	0.01	3.380	O	|	|	|	2.82
292.250	0.00	0.01	3.380	O	|	|	|	2.82
292.333	0.00	0.01	3.380	O	|	|	|	2.82
292.417	0.00	0.01	3.379	O	|	|	|	2.82
292.500	0.00	0.01	3.379	O	|	|	|	2.82
292.583	0.00	0.01	3.379	O	|	|	|	2.82
292.667	0.00	0.01	3.379	O	|	|	|	2.82
292.750	0.00	0.01	3.379	O	|	|	|	2.82
292.833	0.00	0.01	3.379	O	|	|	|	2.82
292.917	0.00	0.01	3.379	O	|	|	|	2.82
293.000	0.00	0.01	3.379	O	|	|	|	2.82
293.083	0.00	0.01	3.379	O	|	|	|	2.82
293.167	0.00	0.01	3.379	O	|	|	|	2.82
293.250	0.00	0.01	3.379	O	|	|	|	2.82
293.333	0.00	0.01	3.379	O	|	|	|	2.82
293.417	0.00	0.01	3.379	O	|	|	|	2.82
293.500	0.00	0.01	3.379	O	|	|	|	2.82
293.583	0.00	0.01	3.378	O	|	|	|	2.82
293.667	0.00	0.01	3.378	O	|	|	|	2.82
293.750	0.00	0.01	3.378	O	|	|	|	2.82
293.833	0.00	0.01	3.378	O	|	|	|	2.82

293.917	0.00	0.01	3.378	O				2.82
294.000	0.00	0.01	3.378	O				2.82
294.083	0.00	0.01	3.378	O				2.82
294.167	0.00	0.01	3.378	O				2.81
294.250	0.00	0.01	3.378	O				2.81
294.333	0.00	0.01	3.378	O				2.81
294.417	0.00	0.01	3.378	O				2.81
294.500	0.00	0.01	3.378	O				2.81
294.583	0.00	0.01	3.378	O				2.81
294.667	0.00	0.01	3.378	O				2.81
294.750	0.00	0.01	3.378	O				2.81
294.833	0.00	0.01	3.377	O				2.81
294.917	0.00	0.01	3.377	O				2.81
295.000	0.00	0.01	3.377	O				2.81
295.083	0.00	0.01	3.377	O				2.81
295.167	0.00	0.01	3.377	O				2.81
295.250	0.00	0.01	3.377	O				2.81
295.333	0.00	0.01	3.377	O				2.81
295.417	0.00	0.01	3.377	O				2.81
295.500	0.00	0.01	3.377	O				2.81
295.583	0.00	0.01	3.377	O				2.81
295.667	0.00	0.01	3.377	O				2.81
295.750	0.00	0.01	3.377	O				2.81
295.833	0.00	0.01	3.377	O				2.81
295.917	0.00	0.01	3.377	O				2.81
296.000	0.00	0.01	3.376	O				2.81
296.083	0.00	0.01	3.376	O				2.81
296.167	0.00	0.01	3.376	O				2.81
296.250	0.00	0.01	3.376	O				2.81
296.333	0.00	0.01	3.376	O				2.81
296.417	0.00	0.01	3.376	O				2.81
296.500	0.00	0.01	3.376	O				2.81
296.583	0.00	0.01	3.376	O				2.81
296.667	0.00	0.01	3.376	O				2.81
296.750	0.00	0.01	3.376	O				2.81
296.833	0.00	0.01	3.376	O				2.81
296.917	0.00	0.01	3.376	O				2.81
297.000	0.00	0.01	3.376	O				2.81
297.083	0.00	0.01	3.376	O				2.81
297.167	0.00	0.01	3.376	O				2.81
297.250	0.00	0.01	3.375	O				2.81
297.333	0.00	0.01	3.375	O				2.81
297.417	0.00	0.01	3.375	O				2.81
297.500	0.00	0.01	3.375	O				2.81
297.583	0.00	0.01	3.375	O				2.81
297.667	0.00	0.01	3.375	O				2.81
297.750	0.00	0.01	3.375	O				2.81
297.833	0.00	0.01	3.375	O				2.81
297.917	0.00	0.01	3.375	O				2.81
298.000	0.00	0.01	3.375	O				2.81

298.083	0.00	0.01	3.375	O				2.81
298.167	0.00	0.01	3.375	O				2.81
298.250	0.00	0.01	3.375	O				2.81
298.333	0.00	0.01	3.375	O				2.81
298.417	0.00	0.01	3.374	O				2.81
298.500	0.00	0.01	3.374	O				2.81
298.583	0.00	0.01	3.374	O				2.81
298.667	0.00	0.01	3.374	O				2.81
298.750	0.00	0.01	3.374	O				2.81
298.833	0.00	0.01	3.374	O				2.81
298.917	0.00	0.01	3.374	O				2.81
299.000	0.00	0.01	3.374	O				2.81
299.083	0.00	0.01	3.374	O				2.81
299.167	0.00	0.01	3.374	O				2.81
299.250	0.00	0.01	3.374	O				2.81
299.333	0.00	0.01	3.374	O				2.81
299.417	0.00	0.01	3.374	O				2.81
299.500	0.00	0.01	3.374	O				2.81
299.583	0.00	0.01	3.374	O				2.81
299.667	0.00	0.01	3.373	O				2.81
299.750	0.00	0.01	3.373	O				2.81
299.833	0.00	0.01	3.373	O				2.81
299.917	0.00	0.01	3.373	O				2.81
300.000	0.00	0.01	3.373	O				2.81
300.083	0.00	0.01	3.373	O				2.81
300.167	0.00	0.01	3.373	O				2.81
300.250	0.00	0.01	3.373	O				2.81
300.333	0.00	0.01	3.373	O				2.81
300.417	0.00	0.01	3.373	O				2.81
300.500	0.00	0.01	3.373	O				2.81
300.583	0.00	0.01	3.373	O				2.81
300.667	0.00	0.01	3.373	O				2.81
300.750	0.00	0.01	3.373	O				2.81
300.833	0.00	0.01	3.372	O				2.81
300.917	0.00	0.01	3.372	O				2.81
301.000	0.00	0.01	3.372	O				2.81
301.083	0.00	0.01	3.372	O				2.81
301.167	0.00	0.01	3.372	O				2.81
301.250	0.00	0.01	3.372	O				2.81
301.333	0.00	0.01	3.372	O				2.81
301.417	0.00	0.01	3.372	O				2.81
301.500	0.00	0.01	3.372	O				2.81
301.583	0.00	0.01	3.372	O				2.81
301.667	0.00	0.01	3.372	O				2.81
301.750	0.00	0.01	3.372	O				2.81
301.833	0.00	0.01	3.372	O				2.81
301.917	0.00	0.01	3.372	O				2.81
302.000	0.00	0.01	3.372	O				2.81
302.083	0.00	0.01	3.371	O				2.81
302.167	0.00	0.01	3.371	O				2.81

302.250	0.00	0.01	3.371	O				2.81
302.333	0.00	0.01	3.371	O				2.81
302.417	0.00	0.01	3.371	O				2.81
302.500	0.00	0.01	3.371	O				2.81
302.583	0.00	0.01	3.371	O				2.81
302.667	0.00	0.01	3.371	O				2.81
302.750	0.00	0.01	3.371	O				2.81
302.833	0.00	0.01	3.371	O				2.81
302.917	0.00	0.01	3.371	O				2.81
303.000	0.00	0.01	3.371	O				2.81
303.083	0.00	0.01	3.371	O				2.81
303.167	0.00	0.01	3.371	O				2.81
303.250	0.00	0.01	3.370	O				2.81
303.333	0.00	0.01	3.370	O				2.81
303.417	0.00	0.01	3.370	O				2.81
303.500	0.00	0.01	3.370	O				2.81
303.583	0.00	0.01	3.370	O				2.81
303.667	0.00	0.01	3.370	O				2.81
303.750	0.00	0.01	3.370	O				2.81
303.833	0.00	0.01	3.370	O				2.81
303.917	0.00	0.01	3.370	O				2.81
304.000	0.00	0.01	3.370	O				2.81
304.083	0.00	0.01	3.370	O				2.81
304.167	0.00	0.01	3.370	O				2.81
304.250	0.00	0.01	3.370	O				2.81
304.333	0.00	0.01	3.370	O				2.81
304.417	0.00	0.01	3.370	O				2.81
304.500	0.00	0.01	3.369	O				2.81
304.583	0.00	0.01	3.369	O				2.81
304.667	0.00	0.01	3.369	O				2.81
304.750	0.00	0.01	3.369	O				2.81
304.833	0.00	0.01	3.369	O				2.81
304.917	0.00	0.01	3.369	O				2.81
305.000	0.00	0.01	3.369	O				2.81
305.083	0.00	0.01	3.369	O				2.81
305.167	0.00	0.01	3.369	O				2.81
305.250	0.00	0.01	3.369	O				2.81
305.333	0.00	0.01	3.369	O				2.81
305.417	0.00	0.01	3.369	O				2.81
305.500	0.00	0.01	3.369	O				2.81
305.583	0.00	0.01	3.369	O				2.81
305.667	0.00	0.01	3.368	O				2.81
305.750	0.00	0.01	3.368	O				2.81
305.833	0.00	0.01	3.368	O				2.81
305.917	0.00	0.01	3.368	O				2.81
306.000	0.00	0.01	3.368	O				2.81
306.083	0.00	0.01	3.368	O				2.81
306.167	0.00	0.01	3.368	O				2.81
306.250	0.00	0.01	3.368	O				2.81
306.333	0.00	0.01	3.368	O				2.81

306.417	0.00	0.01	3.368	O	|	|	|	2.81
306.500	0.00	0.01	3.368	O	|	|	|	2.81
306.583	0.00	0.01	3.368	O	|	|	|	2.81
306.667	0.00	0.01	3.368	O	|	|	|	2.81
306.750	0.00	0.01	3.368	O	|	|	|	2.81
306.833	0.00	0.01	3.368	O	|	|	|	2.81
306.917	0.00	0.01	3.367	O	|	|	|	2.81
307.000	0.00	0.01	3.367	O	|	|	|	2.81
307.083	0.00	0.01	3.367	O	|	|	|	2.81
307.167	0.00	0.01	3.367	O	|	|	|	2.81
307.250	0.00	0.01	3.367	O	|	|	|	2.81
307.333	0.00	0.01	3.367	O	|	|	|	2.81
307.417	0.00	0.01	3.367	O	|	|	|	2.81
307.500	0.00	0.01	3.367	O	|	|	|	2.81
307.583	0.00	0.01	3.367	O	|	|	|	2.81
307.667	0.00	0.01	3.367	O	|	|	|	2.81
307.750	0.00	0.01	3.367	O	|	|	|	2.81
307.833	0.00	0.01	3.367	O	|	|	|	2.81
307.917	0.00	0.01	3.367	O	|	|	|	2.81
308.000	0.00	0.01	3.367	O	|	|	|	2.81
308.083	0.00	0.01	3.366	O	|	|	|	2.81
308.167	0.00	0.01	3.366	O	|	|	|	2.81
308.250	0.00	0.01	3.366	O	|	|	|	2.81
308.333	0.00	0.01	3.366	O	|	|	|	2.81
308.417	0.00	0.01	3.366	O	|	|	|	2.81
308.500	0.00	0.01	3.366	O	|	|	|	2.81
308.583	0.00	0.01	3.366	O	|	|	|	2.81
308.667	0.00	0.01	3.366	O	|	|	|	2.81
308.750	0.00	0.01	3.366	O	|	|	|	2.80
308.833	0.00	0.01	3.366	O	|	|	|	2.80
308.917	0.00	0.01	3.366	O	|	|	|	2.80
309.000	0.00	0.01	3.366	O	|	|	|	2.80
309.083	0.00	0.01	3.366	O	|	|	|	2.80
309.167	0.00	0.01	3.366	O	|	|	|	2.80
309.250	0.00	0.01	3.366	O	|	|	|	2.80
309.333	0.00	0.01	3.365	O	|	|	|	2.80
309.417	0.00	0.01	3.365	O	|	|	|	2.80
309.500	0.00	0.01	3.365	O	|	|	|	2.80
309.583	0.00	0.01	3.365	O	|	|	|	2.80
309.667	0.00	0.01	3.365	O	|	|	|	2.80
309.750	0.00	0.01	3.365	O	|	|	|	2.80
309.833	0.00	0.01	3.365	O	|	|	|	2.80
309.917	0.00	0.01	3.365	O	|	|	|	2.80
310.000	0.00	0.01	3.365	O	|	|	|	2.80
310.083	0.00	0.01	3.365	O	|	|	|	2.80
310.167	0.00	0.01	3.365	O	|	|	|	2.80
310.250	0.00	0.01	3.365	O	|	|	|	2.80
310.333	0.00	0.01	3.365	O	|	|	|	2.80
310.417	0.00	0.01	3.365	O	|	|	|	2.80
310.500	0.00	0.01	3.364	O	|	|	|	2.80

310.583	0.00	0.01	3.364	O				2.80
310.667	0.00	0.01	3.364	O				2.80
310.750	0.00	0.01	3.364	O				2.80
310.833	0.00	0.01	3.364	O				2.80
310.917	0.00	0.01	3.364	O				2.80
311.000	0.00	0.01	3.364	O				2.80
311.083	0.00	0.01	3.364	O				2.80
311.167	0.00	0.01	3.364	O				2.80
311.250	0.00	0.01	3.364	O				2.80
311.333	0.00	0.01	3.364	O				2.80
311.417	0.00	0.01	3.364	O				2.80
311.500	0.00	0.01	3.364	O				2.80
311.583	0.00	0.01	3.364	O				2.80
311.667	0.00	0.01	3.364	O				2.80
311.750	0.00	0.01	3.363	O				2.80
311.833	0.00	0.01	3.363	O				2.80
311.917	0.00	0.01	3.363	O				2.80
312.000	0.00	0.01	3.363	O				2.80
312.083	0.00	0.01	3.363	O				2.80
312.167	0.00	0.01	3.363	O				2.80
312.250	0.00	0.01	3.363	O				2.80
312.333	0.00	0.01	3.363	O				2.80
312.417	0.00	0.01	3.363	O				2.80
312.500	0.00	0.01	3.363	O				2.80
312.583	0.00	0.01	3.363	O				2.80
312.667	0.00	0.01	3.363	O				2.80
312.750	0.00	0.01	3.363	O				2.80
312.833	0.00	0.01	3.363	O				2.80
312.917	0.00	0.01	3.362	O				2.80
313.000	0.00	0.01	3.362	O				2.80
313.083	0.00	0.01	3.362	O				2.80
313.167	0.00	0.01	3.362	O				2.80
313.250	0.00	0.01	3.362	O				2.80
313.333	0.00	0.01	3.362	O				2.80
313.417	0.00	0.01	3.362	O				2.80
313.500	0.00	0.01	3.362	O				2.80
313.583	0.00	0.01	3.362	O				2.80
313.667	0.00	0.01	3.362	O				2.80
313.750	0.00	0.01	3.362	O				2.80
313.833	0.00	0.01	3.362	O				2.80
313.917	0.00	0.01	3.362	O				2.80
314.000	0.00	0.01	3.362	O				2.80
314.083	0.00	0.01	3.362	O				2.80
314.167	0.00	0.01	3.361	O				2.80
314.250	0.00	0.01	3.361	O				2.80
314.333	0.00	0.01	3.361	O				2.80
314.417	0.00	0.01	3.361	O				2.80
314.500	0.00	0.01	3.361	O				2.80
314.583	0.00	0.01	3.361	O				2.80
314.667	0.00	0.01	3.361	O				2.80

314.750	0.00	0.01	3.361	O	|	|	|	2.80
314.833	0.00	0.01	3.361	O	|	|	|	2.80
314.917	0.00	0.01	3.361	O	|	|	|	2.80
315.000	0.00	0.01	3.361	O	|	|	|	2.80
315.083	0.00	0.01	3.361	O	|	|	|	2.80
315.167	0.00	0.01	3.361	O	|	|	|	2.80
315.250	0.00	0.01	3.361	O	|	|	|	2.80
315.333	0.00	0.01	3.360	O	|	|	|	2.80
315.417	0.00	0.01	3.360	O	|	|	|	2.80
315.500	0.00	0.01	3.360	O	|	|	|	2.80
315.583	0.00	0.01	3.360	O	|	|	|	2.80
315.667	0.00	0.01	3.360	O	|	|	|	2.80
315.750	0.00	0.01	3.360	O	|	|	|	2.80
315.833	0.00	0.01	3.360	O	|	|	|	2.80
315.917	0.00	0.01	3.360	O	|	|	|	2.80
316.000	0.00	0.01	3.360	O	|	|	|	2.80
316.083	0.00	0.01	3.360	O	|	|	|	2.80
316.167	0.00	0.01	3.360	O	|	|	|	2.80
316.250	0.00	0.01	3.360	O	|	|	|	2.80
316.333	0.00	0.01	3.360	O	|	|	|	2.80
316.417	0.00	0.01	3.360	O	|	|	|	2.80
316.500	0.00	0.01	3.360	O	|	|	|	2.80
316.583	0.00	0.01	3.359	O	|	|	|	2.80
316.667	0.00	0.01	3.359	O	|	|	|	2.80
316.750	0.00	0.01	3.359	O	|	|	|	2.80
316.833	0.00	0.01	3.359	O	|	|	|	2.80
316.917	0.00	0.01	3.359	O	|	|	|	2.80
317.000	0.00	0.01	3.359	O	|	|	|	2.80
317.083	0.00	0.01	3.359	O	|	|	|	2.80
317.167	0.00	0.01	3.359	O	|	|	|	2.80
317.250	0.00	0.01	3.359	O	|	|	|	2.80
317.333	0.00	0.01	3.359	O	|	|	|	2.80
317.417	0.00	0.01	3.359	O	|	|	|	2.80
317.500	0.00	0.01	3.359	O	|	|	|	2.80
317.583	0.00	0.01	3.359	O	|	|	|	2.80
317.667	0.00	0.01	3.359	O	|	|	|	2.80
317.750	0.00	0.01	3.359	O	|	|	|	2.80
317.833	0.00	0.01	3.358	O	|	|	|	2.80
317.917	0.00	0.01	3.358	O	|	|	|	2.80
318.000	0.00	0.01	3.358	O	|	|	|	2.80
318.083	0.00	0.01	3.358	O	|	|	|	2.80
318.167	0.00	0.01	3.358	O	|	|	|	2.80
318.250	0.00	0.01	3.358	O	|	|	|	2.80
318.333	0.00	0.01	3.358	O	|	|	|	2.80
318.417	0.00	0.01	3.358	O	|	|	|	2.80
318.500	0.00	0.01	3.358	O	|	|	|	2.80
318.583	0.00	0.01	3.358	O	|	|	|	2.80
318.667	0.00	0.01	3.358	O	|	|	|	2.80
318.750	0.00	0.01	3.358	O	|	|	|	2.80
318.833	0.00	0.01	3.358	O	|	|	|	2.80

318.917	0.00	0.01	3.358	O				2.80
319.000	0.00	0.01	3.357	O				2.80
319.083	0.00	0.01	3.357	O				2.80
319.167	0.00	0.01	3.357	O				2.80
319.250	0.00	0.01	3.357	O				2.80
319.333	0.00	0.01	3.357	O				2.80
319.417	0.00	0.01	3.357	O				2.80
319.500	0.00	0.01	3.357	O				2.80
319.583	0.00	0.01	3.357	O				2.80
319.667	0.00	0.01	3.357	O				2.80
319.750	0.00	0.01	3.357	O				2.80
319.833	0.00	0.01	3.357	O				2.80
319.917	0.00	0.01	3.357	O				2.80
320.000	0.00	0.01	3.357	O				2.80
320.083	0.00	0.01	3.357	O				2.80
320.167	0.00	0.01	3.357	O				2.80
320.250	0.00	0.01	3.356	O				2.80
320.333	0.00	0.01	3.356	O				2.80
320.417	0.00	0.01	3.356	O				2.80
320.500	0.00	0.01	3.356	O				2.80
320.583	0.00	0.01	3.356	O				2.80
320.667	0.00	0.01	3.356	O				2.80
320.750	0.00	0.01	3.356	O				2.80
320.833	0.00	0.01	3.356	O				2.80
320.917	0.00	0.01	3.356	O				2.80
321.000	0.00	0.01	3.356	O				2.80
321.083	0.00	0.01	3.356	O				2.80
321.167	0.00	0.01	3.356	O				2.80
321.250	0.00	0.01	3.356	O				2.80
321.333	0.00	0.01	3.356	O				2.80
321.417	0.00	0.01	3.355	O				2.80
321.500	0.00	0.01	3.355	O				2.80
321.583	0.00	0.01	3.355	O				2.80
321.667	0.00	0.01	3.355	O				2.80
321.750	0.00	0.01	3.355	O				2.80
321.833	0.00	0.01	3.355	O				2.80
321.917	0.00	0.01	3.355	O				2.80
322.000	0.00	0.01	3.355	O				2.80
322.083	0.00	0.01	3.355	O				2.80
322.167	0.00	0.01	3.355	O				2.80
322.250	0.00	0.01	3.355	O				2.80
322.333	0.00	0.01	3.355	O				2.80
322.417	0.00	0.01	3.355	O				2.80
322.500	0.00	0.01	3.355	O				2.80
322.583	0.00	0.01	3.355	O				2.80
322.667	0.00	0.01	3.354	O				2.80
322.750	0.00	0.01	3.354	O				2.80
322.833	0.00	0.01	3.354	O				2.80
322.917	0.00	0.01	3.354	O				2.80
323.000	0.00	0.01	3.354	O				2.80

323.083	0.00	0.01	3.354	O				2.80
323.167	0.00	0.01	3.354	O				2.80
323.250	0.00	0.01	3.354	O				2.79
323.333	0.00	0.01	3.354	O				2.79
323.417	0.00	0.01	3.354	O				2.79
323.500	0.00	0.01	3.354	O				2.79
323.583	0.00	0.01	3.354	O				2.79
323.667	0.00	0.01	3.354	O				2.79
323.750	0.00	0.01	3.354	O				2.79
323.833	0.00	0.01	3.353	O				2.79
323.917	0.00	0.01	3.353	O				2.79
324.000	0.00	0.01	3.353	O				2.79
324.083	0.00	0.01	3.353	O				2.79
324.167	0.00	0.01	3.353	O				2.79
324.250	0.00	0.01	3.353	O				2.79
324.333	0.00	0.01	3.353	O				2.79
324.417	0.00	0.01	3.353	O				2.79
324.500	0.00	0.01	3.353	O				2.79
324.583	0.00	0.01	3.353	O				2.79
324.667	0.00	0.01	3.353	O				2.79
324.750	0.00	0.01	3.353	O				2.79
324.833	0.00	0.01	3.353	O				2.79
324.917	0.00	0.01	3.353	O				2.79
325.000	0.00	0.01	3.353	O				2.79
325.083	0.00	0.01	3.352	O				2.79
325.167	0.00	0.01	3.352	O				2.79
325.250	0.00	0.01	3.352	O				2.79
325.333	0.00	0.01	3.352	O				2.79
325.417	0.00	0.01	3.352	O				2.79
325.500	0.00	0.01	3.352	O				2.79
325.583	0.00	0.01	3.352	O				2.79
325.667	0.00	0.01	3.352	O				2.79
325.750	0.00	0.01	3.352	O				2.79
325.833	0.00	0.01	3.352	O				2.79
325.917	0.00	0.01	3.352	O				2.79
326.000	0.00	0.01	3.352	O				2.79
326.083	0.00	0.01	3.352	O				2.79
326.167	0.00	0.01	3.352	O				2.79
326.250	0.00	0.01	3.351	O				2.79
326.333	0.00	0.01	3.351	O				2.79
326.417	0.00	0.01	3.351	O				2.79
326.500	0.00	0.01	3.351	O				2.79
326.583	0.00	0.01	3.351	O				2.79
326.667	0.00	0.01	3.351	O				2.79
326.750	0.00	0.01	3.351	O				2.79
326.833	0.00	0.01	3.351	O				2.79
326.917	0.00	0.01	3.351	O				2.79
327.000	0.00	0.01	3.351	O				2.79
327.083	0.00	0.01	3.351	O				2.79
327.167	0.00	0.01	3.351	O				2.79

327.250	0.00	0.01	3.351	O				2.79
327.333	0.00	0.01	3.351	O				2.79
327.417	0.00	0.01	3.351	O				2.79
327.500	0.00	0.01	3.350	O				2.79
327.583	0.00	0.01	3.350	O				2.79
327.667	0.00	0.01	3.350	O				2.79
327.750	0.00	0.01	3.350	O				2.79
327.833	0.00	0.01	3.350	O				2.79
327.917	0.00	0.01	3.350	O				2.79
328.000	0.00	0.01	3.350	O				2.79
328.083	0.00	0.01	3.350	O				2.79
328.167	0.00	0.01	3.350	O				2.79
328.250	0.00	0.01	3.350	O				2.79
328.333	0.00	0.01	3.350	O				2.79
328.417	0.00	0.01	3.350	O				2.79
328.500	0.00	0.01	3.350	O				2.79
328.583	0.00	0.01	3.350	O				2.79
328.667	0.00	0.01	3.349	O				2.79
328.750	0.00	0.01	3.349	O				2.79
328.833	0.00	0.01	3.349	O				2.79
328.917	0.00	0.01	3.349	O				2.79
329.000	0.00	0.01	3.349	O				2.79
329.083	0.00	0.01	3.349	O				2.79
329.167	0.00	0.01	3.349	O				2.79
329.250	0.00	0.01	3.349	O				2.79
329.333	0.00	0.01	3.349	O				2.79
329.417	0.00	0.01	3.349	O				2.79
329.500	0.00	0.01	3.349	O				2.79
329.583	0.00	0.01	3.349	O				2.79
329.667	0.00	0.01	3.349	O				2.79
329.750	0.00	0.01	3.349	O				2.79
329.833	0.00	0.01	3.349	O				2.79
329.917	0.00	0.01	3.348	O				2.79
330.000	0.00	0.01	3.348	O				2.79
330.083	0.00	0.01	3.348	O				2.79
330.167	0.00	0.01	3.348	O				2.79
330.250	0.00	0.01	3.348	O				2.79
330.333	0.00	0.01	3.348	O				2.79
330.417	0.00	0.01	3.348	O				2.79
330.500	0.00	0.01	3.348	O				2.79
330.583	0.00	0.01	3.348	O				2.79
330.667	0.00	0.01	3.348	O				2.79
330.750	0.00	0.01	3.348	O				2.79
330.833	0.00	0.01	3.348	O				2.79
330.917	0.00	0.01	3.348	O				2.79
331.000	0.00	0.01	3.348	O				2.79
331.083	0.00	0.01	3.347	O				2.79
331.167	0.00	0.01	3.347	O				2.79
331.250	0.00	0.01	3.347	O				2.79
331.333	0.00	0.01	3.347	O				2.79

331.417	0.00	0.01	3.347	O				2.79
331.500	0.00	0.01	3.347	O				2.79
331.583	0.00	0.01	3.347	O				2.79
331.667	0.00	0.01	3.347	O				2.79
331.750	0.00	0.01	3.347	O				2.79
331.833	0.00	0.01	3.347	O				2.79
331.917	0.00	0.01	3.347	O				2.79
332.000	0.00	0.01	3.347	O				2.79
332.083	0.00	0.01	3.347	O				2.79
332.167	0.00	0.01	3.347	O				2.79
332.250	0.00	0.01	3.347	O				2.79
332.333	0.00	0.01	3.346	O				2.79
332.417	0.00	0.01	3.346	O				2.79
332.500	0.00	0.01	3.346	O				2.79
332.583	0.00	0.01	3.346	O				2.79
332.667	0.00	0.01	3.346	O				2.79
332.750	0.00	0.01	3.346	O				2.79
332.833	0.00	0.01	3.346	O				2.79
332.917	0.00	0.01	3.346	O				2.79
333.000	0.00	0.01	3.346	O				2.79
333.083	0.00	0.01	3.346	O				2.79
333.167	0.00	0.01	3.346	O				2.79
333.250	0.00	0.01	3.346	O				2.79
333.333	0.00	0.01	3.346	O				2.79
333.417	0.00	0.01	3.346	O				2.79
333.500	0.00	0.01	3.345	O				2.79
333.583	0.00	0.01	3.345	O				2.79
333.667	0.00	0.01	3.345	O				2.79
333.750	0.00	0.01	3.345	O				2.79
333.833	0.00	0.01	3.345	O				2.79
333.917	0.00	0.01	3.345	O				2.79
334.000	0.00	0.01	3.345	O				2.79
334.083	0.00	0.01	3.345	O				2.79
334.167	0.00	0.01	3.345	O				2.79
334.250	0.00	0.01	3.345	O				2.79
334.333	0.00	0.01	3.345	O				2.79
334.417	0.00	0.01	3.345	O				2.79
334.500	0.00	0.01	3.345	O				2.79
334.583	0.00	0.01	3.345	O				2.79
334.667	0.00	0.01	3.345	O				2.79
334.750	0.00	0.01	3.344	O				2.79
334.833	0.00	0.01	3.344	O				2.79
334.917	0.00	0.01	3.344	O				2.79
335.000	0.00	0.01	3.344	O				2.79
335.083	0.00	0.01	3.344	O				2.79
335.167	0.00	0.01	3.344	O				2.79
335.250	0.00	0.01	3.344	O				2.79
335.333	0.00	0.01	3.344	O				2.79
335.417	0.00	0.01	3.344	O				2.79
335.500	0.00	0.01	3.344	O				2.79

335.583	0.00	0.01	3.344	O				2.79
335.667	0.00	0.01	3.344	O				2.79
335.750	0.00	0.01	3.344	O				2.79
335.833	0.00	0.01	3.344	O				2.79
335.917	0.00	0.01	3.343	O				2.79
336.000	0.00	0.01	3.343	O				2.79
336.083	0.00	0.01	3.343	O				2.79
336.167	0.00	0.01	3.343	O				2.79
336.250	0.00	0.01	3.343	O				2.79
336.333	0.00	0.01	3.343	O				2.79
336.417	0.00	0.01	3.343	O				2.79
336.500	0.00	0.01	3.343	O				2.79
336.583	0.00	0.01	3.343	O				2.79
336.667	0.00	0.01	3.343	O				2.79
336.750	0.00	0.01	3.343	O				2.79
336.833	0.00	0.01	3.343	O				2.79
336.917	0.00	0.01	3.343	O				2.79
337.000	0.00	0.01	3.343	O				2.79
337.083	0.00	0.01	3.343	O				2.79
337.167	0.00	0.01	3.342	O				2.79
337.250	0.00	0.01	3.342	O				2.79
337.333	0.00	0.01	3.342	O				2.79
337.417	0.00	0.01	3.342	O				2.79
337.500	0.00	0.01	3.342	O				2.79
337.583	0.00	0.01	3.342	O				2.79
337.667	0.00	0.01	3.342	O				2.79
337.750	0.00	0.01	3.342	O				2.78
337.833	0.00	0.01	3.342	O				2.78
337.917	0.00	0.01	3.342	O				2.78
338.000	0.00	0.01	3.342	O				2.78
338.083	0.00	0.01	3.342	O				2.78
338.167	0.00	0.01	3.342	O				2.78
338.250	0.00	0.01	3.342	O				2.78
338.333	0.00	0.01	3.341	O				2.78
338.417	0.00	0.01	3.341	O				2.78
338.500	0.00	0.01	3.341	O				2.78
338.583	0.00	0.01	3.341	O				2.78
338.667	0.00	0.01	3.341	O				2.78
338.750	0.00	0.01	3.341	O				2.78
338.833	0.00	0.01	3.341	O				2.78
338.917	0.00	0.01	3.341	O				2.78
339.000	0.00	0.01	3.341	O				2.78
339.083	0.00	0.01	3.341	O				2.78
339.167	0.00	0.01	3.341	O				2.78
339.250	0.00	0.01	3.341	O				2.78
339.333	0.00	0.01	3.341	O				2.78
339.417	0.00	0.01	3.341	O				2.78
339.500	0.00	0.01	3.341	O				2.78
339.583	0.00	0.01	3.340	O				2.78
339.667	0.00	0.01	3.340	O				2.78

339.750	0.00	0.01	3.340	O	|	|	|	2.78
339.833	0.00	0.01	3.340	O	|	|	|	2.78
339.917	0.00	0.01	3.340	O	|	|	|	2.78
340.000	0.00	0.01	3.340	O	|	|	|	2.78
340.083	0.00	0.01	3.340	O	|	|	|	2.78
340.167	0.00	0.01	3.340	O	|	|	|	2.78
340.250	0.00	0.01	3.340	O	|	|	|	2.78
340.333	0.00	0.01	3.340	O	|	|	|	2.78
340.417	0.00	0.01	3.340	O	|	|	|	2.78
340.500	0.00	0.01	3.340	O	|	|	|	2.78
340.583	0.00	0.01	3.340	O	|	|	|	2.78
340.667	0.00	0.01	3.340	O	|	|	|	2.78
340.750	0.00	0.01	3.339	O	|	|	|	2.78
340.833	0.00	0.01	3.339	O	|	|	|	2.78
340.917	0.00	0.01	3.339	O	|	|	|	2.78
341.000	0.00	0.01	3.339	O	|	|	|	2.78
341.083	0.00	0.01	3.339	O	|	|	|	2.78
341.167	0.00	0.01	3.339	O	|	|	|	2.78
341.250	0.00	0.01	3.339	O	|	|	|	2.78
341.333	0.00	0.01	3.339	O	|	|	|	2.78
341.417	0.00	0.01	3.339	O	|	|	|	2.78
341.500	0.00	0.01	3.339	O	|	|	|	2.78
341.583	0.00	0.01	3.339	O	|	|	|	2.78
341.667	0.00	0.01	3.339	O	|	|	|	2.78
341.750	0.00	0.01	3.339	O	|	|	|	2.78
341.833	0.00	0.01	3.339	O	|	|	|	2.78
341.917	0.00	0.01	3.339	O	|	|	|	2.78
342.000	0.00	0.01	3.338	O	|	|	|	2.78
342.083	0.00	0.01	3.338	O	|	|	|	2.78
342.167	0.00	0.01	3.338	O	|	|	|	2.78
342.250	0.00	0.01	3.338	O	|	|	|	2.78
342.333	0.00	0.01	3.338	O	|	|	|	2.78
342.417	0.00	0.01	3.338	O	|	|	|	2.78
342.500	0.00	0.01	3.338	O	|	|	|	2.78
342.583	0.00	0.01	3.338	O	|	|	|	2.78
342.667	0.00	0.01	3.338	O	|	|	|	2.78
342.750	0.00	0.01	3.338	O	|	|	|	2.78
342.833	0.00	0.01	3.338	O	|	|	|	2.78
342.917	0.00	0.01	3.338	O	|	|	|	2.78
343.000	0.00	0.01	3.338	O	|	|	|	2.78
343.083	0.00	0.01	3.338	O	|	|	|	2.78
343.167	0.00	0.01	3.337	O	|	|	|	2.78
343.250	0.00	0.01	3.337	O	|	|	|	2.78
343.333	0.00	0.01	3.337	O	|	|	|	2.78
343.417	0.00	0.01	3.337	O	|	|	|	2.78
343.500	0.00	0.01	3.337	O	|	|	|	2.78
343.583	0.00	0.01	3.337	O	|	|	|	2.78
343.667	0.00	0.01	3.337	O	|	|	|	2.78
343.750	0.00	0.01	3.337	O	|	|	|	2.78
343.833	0.00	0.01	3.337	O	|	|	|	2.78

343.917	0.00	0.01	3.337	O					2.78
344.000	0.00	0.01	3.337	O					2.78
344.083	0.00	0.01	3.337	O					2.78
344.167	0.00	0.01	3.337	O					2.78
344.250	0.00	0.01	3.337	O					2.78
344.333	0.00	0.01	3.337	O					2.78
344.417	0.00	0.01	3.336	O					2.78
344.500	0.00	0.01	3.336	O					2.78
344.583	0.00	0.01	3.336	O					2.78
344.667	0.00	0.01	3.336	O					2.78
344.750	0.00	0.01	3.336	O					2.78
344.833	0.00	0.01	3.336	O					2.78
344.917	0.00	0.01	3.336	O					2.78
345.000	0.00	0.01	3.336	O					2.78
345.083	0.00	0.01	3.336	O					2.78
345.167	0.00	0.01	3.336	O					2.78
345.250	0.00	0.01	3.336	O					2.78
345.333	0.00	0.01	3.336	O					2.78
345.417	0.00	0.01	3.336	O					2.78
345.500	0.00	0.01	3.336	O					2.78
345.583	0.00	0.01	3.335	O					2.78
345.667	0.00	0.01	3.335	O					2.78
345.750	0.00	0.01	3.335	O					2.78
345.833	0.00	0.01	3.335	O					2.78
345.917	0.00	0.01	3.335	O					2.78
346.000	0.00	0.01	3.335	O					2.78
346.083	0.00	0.01	3.335	O					2.78
346.167	0.00	0.01	3.335	O					2.78
346.250	0.00	0.01	3.335	O					2.78
346.333	0.00	0.01	3.335	O					2.78
346.417	0.00	0.01	3.335	O					2.78
346.500	0.00	0.01	3.335	O					2.78
346.583	0.00	0.01	3.335	O					2.78
346.667	0.00	0.01	3.335	O					2.78
346.750	0.00	0.01	3.335	O					2.78
346.833	0.00	0.01	3.334	O					2.78
346.917	0.00	0.01	3.334	O					2.78
347.000	0.00	0.01	3.334	O					2.78
347.083	0.00	0.01	3.334	O					2.78
347.167	0.00	0.01	3.334	O					2.78
347.250	0.00	0.01	3.334	O					2.78
347.333	0.00	0.01	3.334	O					2.78
347.417	0.00	0.01	3.334	O					2.78
347.500	0.00	0.01	3.334	O					2.78
347.583	0.00	0.01	3.334	O					2.78
347.667	0.00	0.01	3.334	O					2.78
347.750	0.00	0.01	3.334	O					2.78
347.833	0.00	0.01	3.334	O					2.78
347.917	0.00	0.01	3.334	O					2.78
348.000	0.00	0.01	3.334	O					2.78

348.083	0.00	0.01	3.333	O				2.78
348.167	0.00	0.01	3.333	O				2.78
348.250	0.00	0.01	3.333	O				2.78
348.333	0.00	0.01	3.333	O				2.78
348.417	0.00	0.01	3.333	O				2.78
348.500	0.00	0.01	3.333	O				2.78
348.583	0.00	0.01	3.333	O				2.78
348.667	0.00	0.01	3.333	O				2.78
348.750	0.00	0.01	3.333	O				2.78
348.833	0.00	0.01	3.333	O				2.78
348.917	0.00	0.01	3.333	O				2.78
349.000	0.00	0.01	3.333	O				2.78
349.083	0.00	0.01	3.333	O				2.78
349.167	0.00	0.01	3.333	O				2.78
349.250	0.00	0.01	3.332	O				2.78
349.333	0.00	0.01	3.332	O				2.78
349.417	0.00	0.01	3.332	O				2.78
349.500	0.00	0.01	3.332	O				2.78
349.583	0.00	0.01	3.332	O				2.78
349.667	0.00	0.01	3.332	O				2.78
349.750	0.00	0.01	3.332	O				2.78
349.833	0.00	0.01	3.332	O				2.78
349.917	0.00	0.01	3.332	O				2.78
350.000	0.00	0.01	3.332	O				2.78
350.083	0.00	0.01	3.332	O				2.78
350.167	0.00	0.01	3.332	O				2.78
350.250	0.00	0.01	3.332	O				2.78
350.333	0.00	0.01	3.332	O				2.78
350.417	0.00	0.01	3.332	O				2.78
350.500	0.00	0.01	3.331	O				2.78
350.583	0.00	0.01	3.331	O				2.78
350.667	0.00	0.01	3.331	O				2.78
350.750	0.00	0.01	3.331	O				2.78
350.833	0.00	0.01	3.331	O				2.78
350.917	0.00	0.01	3.331	O				2.78
351.000	0.00	0.01	3.331	O				2.78
351.083	0.00	0.01	3.331	O				2.78
351.167	0.00	0.01	3.331	O				2.78
351.250	0.00	0.01	3.331	O				2.78
351.333	0.00	0.01	3.331	O				2.78
351.417	0.00	0.01	3.331	O				2.78
351.500	0.00	0.01	3.331	O				2.78
351.583	0.00	0.01	3.331	O				2.78
351.667	0.00	0.01	3.330	O				2.78
351.750	0.00	0.01	3.330	O				2.78
351.833	0.00	0.01	3.330	O				2.78
351.917	0.00	0.01	3.330	O				2.78
352.000	0.00	0.01	3.330	O				2.78
352.083	0.00	0.01	3.330	O				2.78
352.167	0.00	0.01	3.330	O				2.78

352.250	0.00	0.01	3.330	O				2.77
352.333	0.00	0.01	3.330	O				2.77
352.417	0.00	0.01	3.330	O				2.77
352.500	0.00	0.01	3.330	O				2.77
352.583	0.00	0.01	3.330	O				2.77
352.667	0.00	0.01	3.330	O				2.77
352.750	0.00	0.01	3.330	O				2.77
352.833	0.00	0.01	3.330	O				2.77
352.917	0.00	0.01	3.329	O				2.77
353.000	0.00	0.01	3.329	O				2.77
353.083	0.00	0.01	3.329	O				2.77
353.167	0.00	0.01	3.329	O				2.77
353.250	0.00	0.01	3.329	O				2.77
353.333	0.00	0.01	3.329	O				2.77
353.417	0.00	0.01	3.329	O				2.77
353.500	0.00	0.01	3.329	O				2.77
353.583	0.00	0.01	3.329	O				2.77
353.667	0.00	0.01	3.329	O				2.77
353.750	0.00	0.01	3.329	O				2.77
353.833	0.00	0.01	3.329	O				2.77
353.917	0.00	0.01	3.329	O				2.77
354.000	0.00	0.01	3.329	O				2.77
354.083	0.00	0.01	3.328	O				2.77
354.167	0.00	0.01	3.328	O				2.77
354.250	0.00	0.01	3.328	O				2.77
354.333	0.00	0.01	3.328	O				2.77
354.417	0.00	0.01	3.328	O				2.77
354.500	0.00	0.01	3.328	O				2.77
354.583	0.00	0.01	3.328	O				2.77
354.667	0.00	0.01	3.328	O				2.77
354.750	0.00	0.01	3.328	O				2.77
354.833	0.00	0.01	3.328	O				2.77
354.917	0.00	0.01	3.328	O				2.77
355.000	0.00	0.01	3.328	O				2.77
355.083	0.00	0.01	3.328	O				2.77
355.167	0.00	0.01	3.328	O				2.77
355.250	0.00	0.01	3.328	O				2.77
355.333	0.00	0.01	3.327	O				2.77
355.417	0.00	0.01	3.327	O				2.77
355.500	0.00	0.01	3.327	O				2.77
355.583	0.00	0.01	3.327	O				2.77
355.667	0.00	0.01	3.327	O				2.77
355.750	0.00	0.01	3.327	O				2.77
355.833	0.00	0.01	3.327	O				2.77
355.917	0.00	0.01	3.327	O				2.77
356.000	0.00	0.01	3.327	O				2.77
356.083	0.00	0.01	3.327	O				2.77
356.167	0.00	0.01	3.327	O				2.77
356.250	0.00	0.01	3.327	O				2.77
356.333	0.00	0.01	3.327	O				2.77

356.417	0.00	0.01	3.327	O	|	|	|	2.77
356.500	0.00	0.01	3.326	O	|	|	|	2.77
356.583	0.00	0.01	3.326	O	|	|	|	2.77
356.667	0.00	0.01	3.326	O	|	|	|	2.77
356.750	0.00	0.01	3.326	O	|	|	|	2.77
356.833	0.00	0.01	3.326	O	|	|	|	2.77
356.917	0.00	0.01	3.326	O	|	|	|	2.77
357.000	0.00	0.01	3.326	O	|	|	|	2.77
357.083	0.00	0.01	3.326	O	|	|	|	2.77
357.167	0.00	0.01	3.326	O	|	|	|	2.77
357.250	0.00	0.01	3.326	O	|	|	|	2.77
357.333	0.00	0.01	3.326	O	|	|	|	2.77
357.417	0.00	0.01	3.326	O	|	|	|	2.77
357.500	0.00	0.01	3.326	O	|	|	|	2.77
357.583	0.00	0.01	3.326	O	|	|	|	2.77
357.667	0.00	0.01	3.326	O	|	|	|	2.77
357.750	0.00	0.01	3.325	O	|	|	|	2.77
357.833	0.00	0.01	3.325	O	|	|	|	2.77
357.917	0.00	0.01	3.325	O	|	|	|	2.77
358.000	0.00	0.01	3.325	O	|	|	|	2.77
358.083	0.00	0.01	3.325	O	|	|	|	2.77
358.167	0.00	0.01	3.325	O	|	|	|	2.77
358.250	0.00	0.01	3.325	O	|	|	|	2.77
358.333	0.00	0.01	3.325	O	|	|	|	2.77
358.417	0.00	0.01	3.325	O	|	|	|	2.77
358.500	0.00	0.01	3.325	O	|	|	|	2.77
358.583	0.00	0.01	3.325	O	|	|	|	2.77
358.667	0.00	0.01	3.325	O	|	|	|	2.77
358.750	0.00	0.01	3.325	O	|	|	|	2.77
358.833	0.00	0.01	3.325	O	|	|	|	2.77
358.917	0.00	0.01	3.324	O	|	|	|	2.77
359.000	0.00	0.01	3.324	O	|	|	|	2.77
359.083	0.00	0.01	3.324	O	|	|	|	2.77
359.167	0.00	0.01	3.324	O	|	|	|	2.77
359.250	0.00	0.01	3.324	O	|	|	|	2.77
359.333	0.00	0.01	3.324	O	|	|	|	2.77
359.417	0.00	0.01	3.324	O	|	|	|	2.77
359.500	0.00	0.01	3.324	O	|	|	|	2.77
359.583	0.00	0.01	3.324	O	|	|	|	2.77
359.667	0.00	0.01	3.324	O	|	|	|	2.77
359.750	0.00	0.01	3.324	O	|	|	|	2.77
359.833	0.00	0.01	3.324	O	|	|	|	2.77
359.917	0.00	0.01	3.324	O	|	|	|	2.77
360.000	0.00	0.01	3.324	O	|	|	|	2.77
360.083	0.00	0.01	3.324	O	|	|	|	2.77
360.167	0.00	0.01	3.323	O	|	|	|	2.77
360.250	0.00	0.01	3.323	O	|	|	|	2.77
360.333	0.00	0.01	3.323	O	|	|	|	2.77
360.417	0.00	0.01	3.323	O	|	|	|	2.77
360.500	0.00	0.01	3.323	O	|	|	|	2.77

360.583	0.00	0.01	3.323	O				2.77
360.667	0.00	0.01	3.323	O				2.77
360.750	0.00	0.01	3.323	O				2.77
360.833	0.00	0.01	3.323	O				2.77
360.917	0.00	0.01	3.323	O				2.77
361.000	0.00	0.01	3.323	O				2.77
361.083	0.00	0.01	3.323	O				2.77
361.167	0.00	0.01	3.323	O				2.77
361.250	0.00	0.01	3.323	O				2.77
361.333	0.00	0.01	3.322	O				2.77
361.417	0.00	0.01	3.322	O				2.77
361.500	0.00	0.01	3.322	O				2.77
361.583	0.00	0.01	3.322	O				2.77
361.667	0.00	0.01	3.322	O				2.77
361.750	0.00	0.01	3.322	O				2.77
361.833	0.00	0.01	3.322	O				2.77
361.917	0.00	0.01	3.322	O				2.77
362.000	0.00	0.01	3.322	O				2.77
362.083	0.00	0.01	3.322	O				2.77
362.167	0.00	0.01	3.322	O				2.77
362.250	0.00	0.01	3.322	O				2.77
362.333	0.00	0.01	3.322	O				2.77
362.417	0.00	0.01	3.322	O				2.77
362.500	0.00	0.01	3.322	O				2.77
362.583	0.00	0.01	3.321	O				2.77
362.667	0.00	0.01	3.321	O				2.77
362.750	0.00	0.01	3.321	O				2.77
362.833	0.00	0.01	3.321	O				2.77
362.917	0.00	0.01	3.321	O				2.77
363.000	0.00	0.01	3.321	O				2.77
363.083	0.00	0.01	3.321	O				2.77
363.167	0.00	0.01	3.321	O				2.77
363.250	0.00	0.01	3.321	O				2.77
363.333	0.00	0.01	3.321	O				2.77
363.417	0.00	0.01	3.321	O				2.77
363.500	0.00	0.01	3.321	O				2.77
363.583	0.00	0.01	3.321	O				2.77
363.667	0.00	0.01	3.321	O				2.77
363.750	0.00	0.01	3.320	O				2.77
363.833	0.00	0.01	3.320	O				2.77
363.917	0.00	0.01	3.320	O				2.77
364.000	0.00	0.01	3.320	O				2.77
364.083	0.00	0.01	3.320	O				2.77
364.167	0.00	0.01	3.320	O				2.77
364.250	0.00	0.01	3.320	O				2.77
364.333	0.00	0.01	3.320	O				2.77
364.417	0.00	0.01	3.320	O				2.77
364.500	0.00	0.01	3.320	O				2.77
364.583	0.00	0.01	3.320	O				2.77
364.667	0.00	0.01	3.320	O				2.77

364.750	0.00	0.01	3.320	O				2.77
364.833	0.00	0.01	3.320	O				2.77
364.917	0.00	0.01	3.320	O				2.77
365.000	0.00	0.01	3.319	O				2.77
365.083	0.00	0.01	3.319	O				2.77
365.167	0.00	0.01	3.319	O				2.77
365.250	0.00	0.01	3.319	O				2.77
365.333	0.00	0.01	3.319	O				2.77
365.417	0.00	0.01	3.319	O				2.77
365.500	0.00	0.01	3.319	O				2.77
365.583	0.00	0.01	3.319	O				2.77
365.667	0.00	0.01	3.319	O				2.77
365.750	0.00	0.01	3.319	O				2.77
365.833	0.00	0.01	3.319	O				2.77
365.917	0.00	0.01	3.319	O				2.77
366.000	0.00	0.01	3.319	O				2.77
366.083	0.00	0.01	3.319	O				2.77
366.167	0.00	0.01	3.318	O				2.77
366.250	0.00	0.01	3.318	O				2.77
366.333	0.00	0.01	3.318	O				2.77
366.417	0.00	0.01	3.318	O				2.77
366.500	0.00	0.01	3.318	O				2.77
366.583	0.00	0.01	3.318	O				2.77
366.667	0.00	0.01	3.318	O				2.77
366.750	0.00	0.01	3.318	O				2.77
366.833	0.00	0.01	3.318	O				2.76
366.917	0.00	0.01	3.318	O				2.76
367.000	0.00	0.01	3.318	O				2.76
367.083	0.00	0.01	3.318	O				2.76
367.167	0.00	0.01	3.318	O				2.76
367.250	0.00	0.01	3.318	O				2.76
367.333	0.00	0.01	3.318	O				2.76
367.417	0.00	0.01	3.317	O				2.76
367.500	0.00	0.01	3.317	O				2.76
367.583	0.00	0.01	3.317	O				2.76
367.667	0.00	0.01	3.317	O				2.76
367.750	0.00	0.01	3.317	O				2.76
367.833	0.00	0.01	3.317	O				2.76
367.917	0.00	0.01	3.317	O				2.76
368.000	0.00	0.01	3.317	O				2.76
368.083	0.00	0.01	3.317	O				2.76
368.167	0.00	0.01	3.317	O				2.76
368.250	0.00	0.01	3.317	O				2.76
368.333	0.00	0.01	3.317	O				2.76
368.417	0.00	0.01	3.317	O				2.76
368.500	0.00	0.01	3.317	O				2.76
368.583	0.00	0.01	3.316	O				2.76
368.667	0.00	0.01	3.316	O				2.76
368.750	0.00	0.01	3.316	O				2.76
368.833	0.00	0.01	3.316	O				2.76

368.917	0.00	0.01	3.316	O				2.76
369.000	0.00	0.01	3.316	O				2.76
369.083	0.00	0.01	3.316	O				2.76
369.167	0.00	0.01	3.316	O				2.76
369.250	0.00	0.01	3.316	O				2.76
369.333	0.00	0.01	3.316	O				2.76
369.417	0.00	0.01	3.316	O				2.76
369.500	0.00	0.01	3.316	O				2.76
369.583	0.00	0.01	3.316	O				2.76
369.667	0.00	0.01	3.316	O				2.76
369.750	0.00	0.01	3.316	O				2.76
369.833	0.00	0.01	3.315	O				2.76
369.917	0.00	0.01	3.315	O				2.76
370.000	0.00	0.01	3.315	O				2.76
370.083	0.00	0.01	3.315	O				2.76
370.167	0.00	0.01	3.315	O				2.76
370.250	0.00	0.01	3.315	O				2.76
370.333	0.00	0.01	3.315	O				2.76
370.417	0.00	0.01	3.315	O				2.76
370.500	0.00	0.01	3.315	O				2.76
370.583	0.00	0.01	3.315	O				2.76
370.667	0.00	0.01	3.315	O				2.76
370.750	0.00	0.01	3.315	O				2.76
370.833	0.00	0.01	3.315	O				2.76
370.917	0.00	0.01	3.315	O				2.76
371.000	0.00	0.01	3.314	O				2.76
371.083	0.00	0.01	3.314	O				2.76
371.167	0.00	0.01	3.314	O				2.76
371.250	0.00	0.01	3.314	O				2.76
371.333	0.00	0.01	3.314	O				2.76
371.417	0.00	0.01	3.314	O				2.76
371.500	0.00	0.01	3.314	O				2.76
371.583	0.00	0.01	3.314	O				2.76
371.667	0.00	0.01	3.314	O				2.76
371.750	0.00	0.01	3.314	O				2.76
371.833	0.00	0.01	3.314	O				2.76
371.917	0.00	0.01	3.314	O				2.76
372.000	0.00	0.01	3.314	O				2.76
372.083	0.00	0.01	3.314	O				2.76
372.167	0.00	0.01	3.314	O				2.76
372.250	0.00	0.01	3.313	O				2.76
372.333	0.00	0.01	3.313	O				2.76
372.417	0.00	0.01	3.313	O				2.76
372.500	0.00	0.01	3.313	O				2.76
372.583	0.00	0.01	3.313	O				2.76
372.667	0.00	0.01	3.313	O				2.76
372.750	0.00	0.01	3.313	O				2.76
372.833	0.00	0.01	3.313	O				2.76
372.917	0.00	0.01	3.313	O				2.76
373.000	0.00	0.01	3.313	O				2.76

373.083	0.00	0.01	3.313	O	|	|	|	2.76
373.167	0.00	0.01	3.313	O	|	|	|	2.76
373.250	0.00	0.01	3.313	O	|	|	|	2.76
373.333	0.00	0.01	3.313	O	|	|	|	2.76
373.417	0.00	0.01	3.312	O	|	|	|	2.76
373.500	0.00	0.01	3.312	O	|	|	|	2.76
373.583	0.00	0.01	3.312	O	|	|	|	2.76
373.667	0.00	0.01	3.312	O	|	|	|	2.76
373.750	0.00	0.01	3.312	O	|	|	|	2.76
373.833	0.00	0.01	3.312	O	|	|	|	2.76
373.917	0.00	0.01	3.312	O	|	|	|	2.76
374.000	0.00	0.01	3.312	O	|	|	|	2.76
374.083	0.00	0.01	3.312	O	|	|	|	2.76
374.167	0.00	0.01	3.312	O	|	|	|	2.76
374.250	0.00	0.01	3.312	O	|	|	|	2.76
374.333	0.00	0.01	3.312	O	|	|	|	2.76
374.417	0.00	0.01	3.312	O	|	|	|	2.76
374.500	0.00	0.01	3.312	O	|	|	|	2.76
374.583	0.00	0.01	3.312	O	|	|	|	2.76
374.667	0.00	0.01	3.311	O	|	|	|	2.76
374.750	0.00	0.01	3.311	O	|	|	|	2.76
374.833	0.00	0.01	3.311	O	|	|	|	2.76
374.917	0.00	0.01	3.311	O	|	|	|	2.76
375.000	0.00	0.01	3.311	O	|	|	|	2.76
375.083	0.00	0.01	3.311	O	|	|	|	2.76
375.167	0.00	0.01	3.311	O	|	|	|	2.76
375.250	0.00	0.01	3.311	O	|	|	|	2.76
375.333	0.00	0.01	3.311	O	|	|	|	2.76
375.417	0.00	0.01	3.311	O	|	|	|	2.76
375.500	0.00	0.01	3.311	O	|	|	|	2.76
375.583	0.00	0.01	3.311	O	|	|	|	2.76
375.667	0.00	0.01	3.311	O	|	|	|	2.76
375.750	0.00	0.01	3.311	O	|	|	|	2.76
375.833	0.00	0.01	3.310	O	|	|	|	2.76
375.917	0.00	0.01	3.310	O	|	|	|	2.76
376.000	0.00	0.01	3.310	O	|	|	|	2.76
376.083	0.00	0.01	3.310	O	|	|	|	2.76
376.167	0.00	0.01	3.310	O	|	|	|	2.76
376.250	0.00	0.01	3.310	O	|	|	|	2.76
376.333	0.00	0.01	3.310	O	|	|	|	2.76
376.417	0.00	0.01	3.310	O	|	|	|	2.76
376.500	0.00	0.01	3.310	O	|	|	|	2.76
376.583	0.00	0.01	3.310	O	|	|	|	2.76
376.667	0.00	0.01	3.310	O	|	|	|	2.76
376.750	0.00	0.01	3.310	O	|	|	|	2.76
376.833	0.00	0.01	3.310	O	|	|	|	2.76
376.917	0.00	0.01	3.310	O	|	|	|	2.76
377.000	0.00	0.01	3.310	O	|	|	|	2.76
377.083	0.00	0.01	3.309	O	|	|	|	2.76
377.167	0.00	0.01	3.309	O	|	|	|	2.76

377.250	0.00	0.01	3.309	O				2.76
377.333	0.00	0.01	3.309	O				2.76
377.417	0.00	0.01	3.309	O				2.76
377.500	0.00	0.01	3.309	O				2.76
377.583	0.00	0.01	3.309	O				2.76
377.667	0.00	0.01	3.309	O				2.76
377.750	0.00	0.01	3.309	O				2.76
377.833	0.00	0.01	3.309	O				2.76
377.917	0.00	0.01	3.309	O				2.76
378.000	0.00	0.01	3.309	O				2.76
378.083	0.00	0.01	3.309	O				2.76
378.167	0.00	0.01	3.309	O				2.76
378.250	0.00	0.01	3.309	O				2.76
378.333	0.00	0.01	3.308	O				2.76
378.417	0.00	0.01	3.308	O				2.76
378.500	0.00	0.01	3.308	O				2.76
378.583	0.00	0.01	3.308	O				2.76
378.667	0.00	0.01	3.308	O				2.76
378.750	0.00	0.01	3.308	O				2.76
378.833	0.00	0.01	3.308	O				2.76
378.917	0.00	0.01	3.308	O				2.76
379.000	0.00	0.01	3.308	O				2.76
379.083	0.00	0.01	3.308	O				2.76
379.167	0.00	0.01	3.308	O				2.76
379.250	0.00	0.01	3.308	O				2.76
379.333	0.00	0.01	3.308	O				2.76
379.417	0.00	0.01	3.308	O				2.76
379.500	0.00	0.01	3.307	O				2.76
379.583	0.00	0.01	3.307	O				2.76
379.667	0.00	0.01	3.307	O				2.76
379.750	0.00	0.01	3.307	O				2.76
379.833	0.00	0.01	3.307	O				2.76
379.917	0.00	0.01	3.307	O				2.76
380.000	0.00	0.01	3.307	O				2.76
380.083	0.00	0.01	3.307	O				2.76
380.167	0.00	0.01	3.307	O				2.76
380.250	0.00	0.01	3.307	O				2.76
380.333	0.00	0.01	3.307	O				2.76
380.417	0.00	0.01	3.307	O				2.76
380.500	0.00	0.01	3.307	O				2.76
380.583	0.00	0.01	3.307	O				2.76
380.667	0.00	0.01	3.307	O				2.76
380.750	0.00	0.01	3.306	O				2.76
380.833	0.00	0.01	3.306	O				2.76
380.917	0.00	0.01	3.306	O				2.76
381.000	0.00	0.01	3.306	O				2.76
381.083	0.00	0.01	3.306	O				2.76
381.167	0.00	0.01	3.306	O				2.76
381.250	0.00	0.01	3.306	O				2.76
381.333	0.00	0.01	3.306	O				2.75

381.417	0.00	0.01	3.306	O	|	|	|	2.75
381.500	0.00	0.01	3.306	O	|	|	|	2.75
381.583	0.00	0.01	3.306	O	|	|	|	2.75
381.667	0.00	0.01	3.306	O	|	|	|	2.75
381.750	0.00	0.01	3.306	O	|	|	|	2.75
381.833	0.00	0.01	3.306	O	|	|	|	2.75
381.917	0.00	0.01	3.305	O	|	|	|	2.75
382.000	0.00	0.01	3.305	O	|	|	|	2.75
382.083	0.00	0.01	3.305	O	|	|	|	2.75
382.167	0.00	0.01	3.305	O	|	|	|	2.75
382.250	0.00	0.01	3.305	O	|	|	|	2.75
382.333	0.00	0.01	3.305	O	|	|	|	2.75
382.417	0.00	0.01	3.305	O	|	|	|	2.75
382.500	0.00	0.01	3.305	O	|	|	|	2.75
382.583	0.00	0.01	3.305	O	|	|	|	2.75
382.667	0.00	0.01	3.305	O	|	|	|	2.75
382.750	0.00	0.01	3.305	O	|	|	|	2.75
382.833	0.00	0.01	3.305	O	|	|	|	2.75
382.917	0.00	0.01	3.305	O	|	|	|	2.75
383.000	0.00	0.01	3.305	O	|	|	|	2.75
383.083	0.00	0.01	3.305	O	|	|	|	2.75
383.167	0.00	0.01	3.304	O	|	|	|	2.75
383.250	0.00	0.01	3.304	O	|	|	|	2.75
383.333	0.00	0.01	3.304	O	|	|	|	2.75
383.417	0.00	0.01	3.304	O	|	|	|	2.75
383.500	0.00	0.01	3.304	O	|	|	|	2.75
383.583	0.00	0.01	3.304	O	|	|	|	2.75
383.667	0.00	0.01	3.304	O	|	|	|	2.75
383.750	0.00	0.01	3.304	O	|	|	|	2.75
383.833	0.00	0.01	3.304	O	|	|	|	2.75
383.917	0.00	0.01	3.304	O	|	|	|	2.75
384.000	0.00	0.01	3.304	O	|	|	|	2.75
384.083	0.00	0.01	3.304	O	|	|	|	2.75
384.167	0.00	0.01	3.304	O	|	|	|	2.75
384.250	0.00	0.01	3.304	O	|	|	|	2.75
384.333	0.00	0.01	3.303	O	|	|	|	2.75
384.417	0.00	0.01	3.303	O	|	|	|	2.75
384.500	0.00	0.01	3.303	O	|	|	|	2.75
384.583	0.00	0.01	3.303	O	|	|	|	2.75
384.667	0.00	0.01	3.303	O	|	|	|	2.75
384.750	0.00	0.01	3.303	O	|	|	|	2.75
384.833	0.00	0.01	3.303	O	|	|	|	2.75
384.917	0.00	0.01	3.303	O	|	|	|	2.75
385.000	0.00	0.01	3.303	O	|	|	|	2.75
385.083	0.00	0.01	3.303	O	|	|	|	2.75
385.167	0.00	0.01	3.303	O	|	|	|	2.75
385.250	0.00	0.01	3.303	O	|	|	|	2.75
385.333	0.00	0.01	3.303	O	|	|	|	2.75
385.417	0.00	0.01	3.303	O	|	|	|	2.75
385.500	0.00	0.01	3.303	O	|	|	|	2.75

385.583	0.00	0.01	3.302	O	|	|	|	| 2.75
385.667	0.00	0.01	3.302	O	|	|	|	| 2.75
385.750	0.00	0.01	3.302	O	|	|	|	| 2.75
385.833	0.00	0.01	3.302	O	|	|	|	| 2.75
385.917	0.00	0.01	3.302	O	|	|	|	| 2.75
386.000	0.00	0.01	3.302	O	|	|	|	| 2.75
386.083	0.00	0.01	3.302	O	|	|	|	| 2.75
386.167	0.00	0.01	3.302	O	|	|	|	| 2.75
386.250	0.00	0.01	3.302	O	|	|	|	| 2.75
386.333	0.00	0.01	3.302	O	|	|	|	| 2.75
386.417	0.00	0.01	3.302	O	|	|	|	| 2.75
386.500	0.00	0.01	3.302	O	|	|	|	| 2.75
386.583	0.00	0.01	3.302	O	|	|	|	| 2.75
386.667	0.00	0.01	3.302	O	|	|	|	| 2.75
386.750	0.00	0.01	3.301	O	|	|	|	| 2.75
386.833	0.00	0.01	3.301	O	|	|	|	| 2.75
386.917	0.00	0.01	3.301	O	|	|	|	| 2.75
387.000	0.00	0.01	3.301	O	|	|	|	| 2.75
387.083	0.00	0.01	3.301	O	|	|	|	| 2.75
387.167	0.00	0.01	3.301	O	|	|	|	| 2.75
387.250	0.00	0.01	3.301	O	|	|	|	| 2.75
387.333	0.00	0.01	3.301	O	|	|	|	| 2.75
387.417	0.00	0.01	3.301	O	|	|	|	| 2.75
387.500	0.00	0.01	3.301	O	|	|	|	| 2.75
387.583	0.00	0.01	3.301	O	|	|	|	| 2.75
387.667	0.00	0.01	3.301	O	|	|	|	| 2.75
387.750	0.00	0.01	3.301	O	|	|	|	| 2.75
387.833	0.00	0.01	3.301	O	|	|	|	| 2.75
387.917	0.00	0.01	3.301	O	|	|	|	| 2.75
388.000	0.00	0.01	3.300	O	|	|	|	| 2.75
388.083	0.00	0.01	3.300	O	|	|	|	| 2.75
388.167	0.00	0.01	3.300	O	|	|	|	| 2.75
388.250	0.00	0.01	3.300	O	|	|	|	| 2.75
388.333	0.00	0.01	3.300	O	|	|	|	| 2.75
388.417	0.00	0.01	3.300	O	|	|	|	| 2.75
388.500	0.00	0.01	3.300	O	|	|	|	| 2.75
388.583	0.00	0.01	3.300	O	|	|	|	| 2.75
388.667	0.00	0.01	3.300	O	|	|	|	| 2.75
388.750	0.00	0.01	3.300	O	|	|	|	| 2.75
388.833	0.00	0.01	3.300	O	|	|	|	| 2.75
388.917	0.00	0.01	3.300	O	|	|	|	| 2.75
389.000	0.00	0.01	3.300	O	|	|	|	| 2.75
389.083	0.00	0.01	3.300	O	|	|	|	| 2.75
389.167	0.00	0.01	3.299	O	|	|	|	| 2.75
389.250	0.00	0.01	3.299	O	|	|	|	| 2.75
389.333	0.00	0.01	3.299	O	|	|	|	| 2.75
389.417	0.00	0.01	3.299	O	|	|	|	| 2.75
389.500	0.00	0.01	3.299	O	|	|	|	| 2.75
389.583	0.00	0.01	3.299	O	|	|	|	| 2.75
389.667	0.00	0.01	3.299	O	|	|	|	| 2.75

389.750	0.00	0.01	3.299	O				2.75
389.833	0.00	0.01	3.299	O				2.75
389.917	0.00	0.01	3.299	O				2.75
390.000	0.00	0.01	3.299	O				2.75
390.083	0.00	0.01	3.299	O				2.75
390.167	0.00	0.01	3.299	O				2.75
390.250	0.00	0.01	3.299	O				2.75
390.333	0.00	0.01	3.299	O				2.75
390.417	0.00	0.01	3.298	O				2.75
390.500	0.00	0.01	3.298	O				2.75
390.583	0.00	0.01	3.298	O				2.75
390.667	0.00	0.01	3.298	O				2.75
390.750	0.00	0.01	3.298	O				2.75
390.833	0.00	0.01	3.298	O				2.75
390.917	0.00	0.01	3.298	O				2.75
391.000	0.00	0.01	3.298	O				2.75
391.083	0.00	0.01	3.298	O				2.75
391.167	0.00	0.01	3.298	O				2.75
391.250	0.00	0.01	3.298	O				2.75
391.333	0.00	0.01	3.298	O				2.75
391.417	0.00	0.01	3.298	O				2.75
391.500	0.00	0.01	3.298	O				2.75
391.583	0.00	0.01	3.297	O				2.75
391.667	0.00	0.01	3.297	O				2.75
391.750	0.00	0.01	3.297	O				2.75
391.833	0.00	0.01	3.297	O				2.75
391.917	0.00	0.01	3.297	O				2.75
392.000	0.00	0.01	3.297	O				2.75
392.083	0.00	0.01	3.297	O				2.75
392.167	0.00	0.01	3.297	O				2.75
392.250	0.00	0.01	3.297	O				2.75
392.333	0.00	0.01	3.297	O				2.75
392.417	0.00	0.01	3.297	O				2.75
392.500	0.00	0.01	3.297	O				2.75
392.583	0.00	0.01	3.297	O				2.75
392.667	0.00	0.01	3.297	O				2.75
392.750	0.00	0.01	3.297	O				2.75
392.833	0.00	0.01	3.296	O				2.75
392.917	0.00	0.01	3.296	O				2.75
393.000	0.00	0.01	3.296	O				2.75
393.083	0.00	0.01	3.296	O				2.75
393.167	0.00	0.01	3.296	O				2.75
393.250	0.00	0.01	3.296	O				2.75
393.333	0.00	0.01	3.296	O				2.75
393.417	0.00	0.01	3.296	O				2.75
393.500	0.00	0.01	3.296	O				2.75
393.583	0.00	0.01	3.296	O				2.75
393.667	0.00	0.01	3.296	O				2.75
393.750	0.00	0.01	3.296	O				2.75
393.833	0.00	0.01	3.296	O				2.75

393.917	0.00	0.01	3.296	O				2.75
394.000	0.00	0.01	3.295	O				2.75
394.083	0.00	0.01	3.295	O				2.75
394.167	0.00	0.01	3.295	O				2.75
394.250	0.00	0.01	3.295	O				2.75
394.333	0.00	0.01	3.295	O				2.75
394.417	0.00	0.01	3.295	O				2.75
394.500	0.00	0.01	3.295	O				2.75
394.583	0.00	0.01	3.295	O				2.75
394.667	0.00	0.01	3.295	O				2.75
394.750	0.00	0.01	3.295	O				2.75
394.833	0.00	0.01	3.295	O				2.75
394.917	0.00	0.01	3.295	O				2.75
395.000	0.00	0.01	3.295	O				2.75
395.083	0.00	0.01	3.295	O				2.75
395.167	0.00	0.01	3.295	O				2.75
395.250	0.00	0.01	3.294	O				2.75
395.333	0.00	0.01	3.294	O				2.75
395.417	0.00	0.01	3.294	O				2.75
395.500	0.00	0.01	3.294	O				2.75
395.583	0.00	0.01	3.294	O				2.75
395.667	0.00	0.01	3.294	O				2.75
395.750	0.00	0.01	3.294	O				2.75
395.833	0.00	0.01	3.294	O				2.74
395.917	0.00	0.01	3.294	O				2.74
396.000	0.00	0.01	3.294	O				2.74
396.083	0.00	0.01	3.294	O				2.74
396.167	0.00	0.01	3.294	O				2.74
396.250	0.00	0.01	3.294	O				2.74
396.333	0.00	0.01	3.294	O				2.74
396.417	0.00	0.01	3.293	O				2.74
396.500	0.00	0.01	3.293	O				2.74
396.583	0.00	0.01	3.293	O				2.74
396.667	0.00	0.01	3.293	O				2.74
396.750	0.00	0.01	3.293	O				2.74
396.833	0.00	0.01	3.293	O				2.74
396.917	0.00	0.01	3.293	O				2.74
397.000	0.00	0.01	3.293	O				2.74
397.083	0.00	0.01	3.293	O				2.74
397.167	0.00	0.01	3.293	O				2.74
397.250	0.00	0.01	3.293	O				2.74
397.333	0.00	0.01	3.293	O				2.74
397.417	0.00	0.01	3.293	O				2.74
397.500	0.00	0.01	3.293	O				2.74
397.583	0.00	0.01	3.293	O				2.74
397.667	0.00	0.01	3.292	O				2.74
397.750	0.00	0.01	3.292	O				2.74
397.833	0.00	0.01	3.292	O				2.74
397.917	0.00	0.01	3.292	O				2.74
398.000	0.00	0.01	3.292	O				2.74

398.083	0.00	0.01	3.292	O				2.74
398.167	0.00	0.01	3.292	O				2.74
398.250	0.00	0.01	3.292	O				2.74
398.333	0.00	0.01	3.292	O				2.74
398.417	0.00	0.01	3.292	O				2.74
398.500	0.00	0.01	3.292	O				2.74
398.583	0.00	0.01	3.292	O				2.74
398.667	0.00	0.01	3.292	O				2.74
398.750	0.00	0.01	3.292	O				2.74
398.833	0.00	0.01	3.291	O				2.74
398.917	0.00	0.01	3.291	O				2.74
399.000	0.00	0.01	3.291	O				2.74
399.083	0.00	0.01	3.291	O				2.74
399.167	0.00	0.01	3.291	O				2.74
399.250	0.00	0.01	3.291	O				2.74
399.333	0.00	0.01	3.291	O				2.74
399.417	0.00	0.01	3.291	O				2.74
399.500	0.00	0.01	3.291	O				2.74
399.583	0.00	0.01	3.291	O				2.74
399.667	0.00	0.01	3.291	O				2.74
399.750	0.00	0.01	3.291	O				2.74
399.833	0.00	0.01	3.291	O				2.74
399.917	0.00	0.01	3.291	O				2.74
400.000	0.00	0.01	3.291	O				2.74
400.083	0.00	0.01	3.290	O				2.74
400.167	0.00	0.01	3.290	O				2.74
400.250	0.00	0.01	3.290	O				2.74
400.333	0.00	0.01	3.290	O				2.74
400.417	0.00	0.01	3.290	O				2.74
400.500	0.00	0.01	3.290	O				2.74
400.583	0.00	0.01	3.290	O				2.74
400.667	0.00	0.01	3.290	O				2.74
400.750	0.00	0.01	3.290	O				2.74
400.833	0.00	0.01	3.290	O				2.74
400.917	0.00	0.01	3.290	O				2.74
401.000	0.00	0.01	3.290	O				2.74
401.083	0.00	0.01	3.290	O				2.74
401.167	0.00	0.01	3.290	O				2.74
401.250	0.00	0.01	3.289	O				2.74
401.333	0.00	0.01	3.289	O				2.74
401.417	0.00	0.01	3.289	O				2.74
401.500	0.00	0.01	3.289	O				2.74
401.583	0.00	0.01	3.289	O				2.74
401.667	0.00	0.01	3.289	O				2.74
401.750	0.00	0.01	3.289	O				2.74
401.833	0.00	0.01	3.289	O				2.74
401.917	0.00	0.01	3.289	O				2.74
402.000	0.00	0.01	3.289	O				2.74
402.083	0.00	0.01	3.289	O				2.74
402.167	0.00	0.01	3.289	O				2.74

402.250	0.00	0.01	3.289	O	|	|	|	2.74
402.333	0.00	0.01	3.289	O	|	|	|	2.74
402.417	0.00	0.01	3.289	O	|	|	|	2.74
402.500	0.00	0.01	3.288	O	|	|	|	2.74
402.583	0.00	0.01	3.288	O	|	|	|	2.74
402.667	0.00	0.01	3.288	O	|	|	|	2.74
402.750	0.00	0.01	3.288	O	|	|	|	2.74
402.833	0.00	0.01	3.288	O	|	|	|	2.74
402.917	0.00	0.01	3.288	O	|	|	|	2.74
403.000	0.00	0.01	3.288	O	|	|	|	2.74
403.083	0.00	0.01	3.288	O	|	|	|	2.74
403.167	0.00	0.01	3.288	O	|	|	|	2.74
403.250	0.00	0.01	3.288	O	|	|	|	2.74
403.333	0.00	0.01	3.288	O	|	|	|	2.74
403.417	0.00	0.01	3.288	O	|	|	|	2.74
403.500	0.00	0.01	3.288	O	|	|	|	2.74
403.583	0.00	0.01	3.288	O	|	|	|	2.74
403.667	0.00	0.01	3.287	O	|	|	|	2.74
403.750	0.00	0.01	3.287	O	|	|	|	2.74
403.833	0.00	0.01	3.287	O	|	|	|	2.74
403.917	0.00	0.01	3.287	O	|	|	|	2.74
404.000	0.00	0.01	3.287	O	|	|	|	2.74
404.083	0.00	0.01	3.287	O	|	|	|	2.74
404.167	0.00	0.01	3.287	O	|	|	|	2.74
404.250	0.00	0.01	3.287	O	|	|	|	2.74
404.333	0.00	0.01	3.287	O	|	|	|	2.74
404.417	0.00	0.01	3.287	O	|	|	|	2.74
404.500	0.00	0.01	3.287	O	|	|	|	2.74
404.583	0.00	0.01	3.287	O	|	|	|	2.74
404.667	0.00	0.01	3.287	O	|	|	|	2.74
404.750	0.00	0.01	3.287	O	|	|	|	2.74
404.833	0.00	0.01	3.287	O	|	|	|	2.74
404.917	0.00	0.01	3.286	O	|	|	|	2.74
405.000	0.00	0.01	3.286	O	|	|	|	2.74
405.083	0.00	0.01	3.286	O	|	|	|	2.74
405.167	0.00	0.01	3.286	O	|	|	|	2.74
405.250	0.00	0.01	3.286	O	|	|	|	2.74
405.333	0.00	0.01	3.286	O	|	|	|	2.74
405.417	0.00	0.01	3.286	O	|	|	|	2.74
405.500	0.00	0.01	3.286	O	|	|	|	2.74
405.583	0.00	0.01	3.286	O	|	|	|	2.74
405.667	0.00	0.01	3.286	O	|	|	|	2.74
405.750	0.00	0.01	3.286	O	|	|	|	2.74
405.833	0.00	0.01	3.286	O	|	|	|	2.74
405.917	0.00	0.01	3.286	O	|	|	|	2.74
406.000	0.00	0.01	3.286	O	|	|	|	2.74
406.083	0.00	0.01	3.285	O	|	|	|	2.74
406.167	0.00	0.01	3.285	O	|	|	|	2.74
406.250	0.00	0.01	3.285	O	|	|	|	2.74
406.333	0.00	0.01	3.285	O	|	|	|	2.74

406.417	0.00	0.01	3.285	O				2.74
406.500	0.00	0.01	3.285	O				2.74
406.583	0.00	0.01	3.285	O				2.74
406.667	0.00	0.01	3.285	O				2.74
406.750	0.00	0.01	3.285	O				2.74
406.833	0.00	0.01	3.285	O				2.74
406.917	0.00	0.01	3.285	O				2.74
407.000	0.00	0.01	3.285	O				2.74
407.083	0.00	0.01	3.285	O				2.74
407.167	0.00	0.01	3.285	O				2.74
407.250	0.00	0.01	3.285	O				2.74
407.333	0.00	0.01	3.284	O				2.74
407.417	0.00	0.01	3.284	O				2.74
407.500	0.00	0.01	3.284	O				2.74
407.583	0.00	0.01	3.284	O				2.74
407.667	0.00	0.01	3.284	O				2.74
407.750	0.00	0.01	3.284	O				2.74
407.833	0.00	0.01	3.284	O				2.74
407.917	0.00	0.01	3.284	O				2.74
408.000	0.00	0.01	3.284	O				2.74
408.083	0.00	0.01	3.284	O				2.74
408.167	0.00	0.01	3.284	O				2.74
408.250	0.00	0.01	3.284	O				2.74
408.333	0.00	0.01	3.284	O				2.74
408.417	0.00	0.01	3.284	O				2.74
408.500	0.00	0.01	3.284	O				2.74
408.583	0.00	0.01	3.283	O				2.74
408.667	0.00	0.01	3.283	O				2.74
408.750	0.00	0.01	3.283	O				2.74
408.833	0.00	0.01	3.283	O				2.74
408.917	0.00	0.01	3.283	O				2.74
409.000	0.00	0.01	3.283	O				2.74
409.083	0.00	0.01	3.283	O				2.74
409.167	0.00	0.01	3.283	O				2.74
409.250	0.00	0.01	3.283	O				2.74
409.333	0.00	0.01	3.283	O				2.74
409.417	0.00	0.01	3.283	O				2.74
409.500	0.00	0.01	3.283	O				2.74
409.583	0.00	0.01	3.283	O				2.74
409.667	0.00	0.01	3.283	O				2.74
409.750	0.00	0.01	3.282	O				2.74
409.833	0.00	0.01	3.282	O				2.74
409.917	0.00	0.01	3.282	O				2.74
410.000	0.00	0.01	3.282	O				2.74
410.083	0.00	0.01	3.282	O				2.74
410.167	0.00	0.01	3.282	O				2.74
410.250	0.00	0.01	3.282	O				2.74
410.333	0.00	0.01	3.282	O				2.73
410.417	0.00	0.01	3.282	O				2.73
410.500	0.00	0.01	3.282	O				2.73

410.583	0.00	0.01	3.282	O	|	|	|	2.73
410.667	0.00	0.01	3.282	O	|	|	|	2.73
410.750	0.00	0.01	3.282	O	|	|	|	2.73
410.833	0.00	0.01	3.282	O	|	|	|	2.73
410.917	0.00	0.01	3.282	O	|	|	|	2.73
411.000	0.00	0.01	3.281	O	|	|	|	2.73
411.083	0.00	0.01	3.281	O	|	|	|	2.73
411.167	0.00	0.01	3.281	O	|	|	|	2.73
411.250	0.00	0.01	3.281	O	|	|	|	2.73
411.333	0.00	0.01	3.281	O	|	|	|	2.73
411.417	0.00	0.01	3.281	O	|	|	|	2.73
411.500	0.00	0.01	3.281	O	|	|	|	2.73
411.583	0.00	0.01	3.281	O	|	|	|	2.73
411.667	0.00	0.01	3.281	O	|	|	|	2.73
411.750	0.00	0.01	3.281	O	|	|	|	2.73
411.833	0.00	0.01	3.281	O	|	|	|	2.73
411.917	0.00	0.01	3.281	O	|	|	|	2.73
412.000	0.00	0.01	3.281	O	|	|	|	2.73
412.083	0.00	0.01	3.281	O	|	|	|	2.73
412.167	0.00	0.01	3.280	O	|	|	|	2.73
412.250	0.00	0.01	3.280	O	|	|	|	2.73
412.333	0.00	0.01	3.280	O	|	|	|	2.73
412.417	0.00	0.01	3.280	O	|	|	|	2.73
412.500	0.00	0.01	3.280	O	|	|	|	2.73
412.583	0.00	0.01	3.280	O	|	|	|	2.73
412.667	0.00	0.01	3.280	O	|	|	|	2.73
412.750	0.00	0.01	3.280	O	|	|	|	2.73
412.833	0.00	0.01	3.280	O	|	|	|	2.73
412.917	0.00	0.01	3.280	O	|	|	|	2.73
413.000	0.00	0.01	3.280	O	|	|	|	2.73
413.083	0.00	0.01	3.280	O	|	|	|	2.73
413.167	0.00	0.01	3.280	O	|	|	|	2.73
413.250	0.00	0.01	3.280	O	|	|	|	2.73
413.333	0.00	0.01	3.280	O	|	|	|	2.73
413.417	0.00	0.01	3.279	O	|	|	|	2.73
413.500	0.00	0.01	3.279	O	|	|	|	2.73
413.583	0.00	0.01	3.279	O	|	|	|	2.73
413.667	0.00	0.01	3.279	O	|	|	|	2.73
413.750	0.00	0.01	3.279	O	|	|	|	2.73
413.833	0.00	0.01	3.279	O	|	|	|	2.73
413.917	0.00	0.01	3.279	O	|	|	|	2.73
414.000	0.00	0.01	3.279	O	|	|	|	2.73
414.083	0.00	0.01	3.279	O	|	|	|	2.73
414.167	0.00	0.01	3.279	O	|	|	|	2.73
414.250	0.00	0.01	3.279	O	|	|	|	2.73
414.333	0.00	0.01	3.279	O	|	|	|	2.73
414.417	0.00	0.01	3.279	O	|	|	|	2.73
414.500	0.00	0.01	3.279	O	|	|	|	2.73
414.583	0.00	0.01	3.278	O	|	|	|	2.73
414.667	0.00	0.01	3.278	O	|	|	|	2.73

414.750	0.00	0.01	3.278	O	|	|	|	2.73
414.833	0.00	0.01	3.278	O	|	|	|	2.73
414.917	0.00	0.01	3.278	O	|	|	|	2.73
415.000	0.00	0.01	3.278	O	|	|	|	2.73
415.083	0.00	0.01	3.278	O	|	|	|	2.73
415.167	0.00	0.01	3.278	O	|	|	|	2.73
415.250	0.00	0.01	3.278	O	|	|	|	2.73
415.333	0.00	0.01	3.278	O	|	|	|	2.73
415.417	0.00	0.01	3.278	O	|	|	|	2.73
415.500	0.00	0.01	3.278	O	|	|	|	2.73
415.583	0.00	0.01	3.278	O	|	|	|	2.73
415.667	0.00	0.01	3.278	O	|	|	|	2.73
415.750	0.00	0.01	3.278	O	|	|	|	2.73
415.833	0.00	0.01	3.277	O	|	|	|	2.73
415.917	0.00	0.01	3.277	O	|	|	|	2.73
416.000	0.00	0.01	3.277	O	|	|	|	2.73
416.083	0.00	0.01	3.277	O	|	|	|	2.73
416.167	0.00	0.01	3.277	O	|	|	|	2.73
416.250	0.00	0.01	3.277	O	|	|	|	2.73
416.333	0.00	0.01	3.277	O	|	|	|	2.73
416.417	0.00	0.01	3.277	O	|	|	|	2.73
416.500	0.00	0.01	3.277	O	|	|	|	2.73
416.583	0.00	0.01	3.277	O	|	|	|	2.73
416.667	0.00	0.01	3.277	O	|	|	|	2.73

Remaining water in basin = 3.28 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 5001
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 74.542 (CFS)
Total volume = 9.363 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 08/08/22

IEN
Basin C
100-year Developed

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: BasinC100yr.rte
**********HYDROGRAPH DATA**********
Number of intervals = 303
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 93.069 (CFS)
Total volume = 10.153 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 100.000 to Point/Station 103.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 303
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)

Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.450	0.001	1.450	1.450
2.000	1.940	0.001	1.940	1.940
2.500	2.420	0.001	2.420	2.420
3.000	2.910	0.001	2.910	2.910
3.500	3.390	40.000	3.252	3.528
4.000	3.880	70.000	3.639	4.121
4.500	4.170	80.000	3.895	4.445
5.000	4.250	80.000	3.975	4.525

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 23.3 46.53 69.80 93.07	Depth (Ft.)
0.083	0.07	0.00	0.000	O | | | |	0.00
0.167	0.57	0.00	0.002	O | | | |	0.00
0.250	1.13	0.00	0.008	O | | | |	0.01
0.333	1.38	0.00	0.017	O | | | |	0.02
0.417	1.52	0.00	0.027	O | | | |	0.03
0.500	1.62	0.00	0.038	O | | | |	0.04
0.583	1.69	0.00	0.049	O | | | |	0.05
0.667	1.75	0.00	0.061	O | | | |	0.06
0.750	1.79	0.00	0.073	O | | | |	0.08
0.833	1.83	0.00	0.086	O | | | |	0.09
0.917	1.85	0.00	0.098	O | | | |	0.10
1.000	1.87	0.00	0.111	O | | | |	0.11
1.083	1.89	0.00	0.124	O | | | |	0.13
1.167	1.91	0.00	0.137	O | | | |	0.14
1.250	1.92	0.00	0.150	O | | | |	0.16
1.333	1.93	0.00	0.164	O | | | |	0.17
1.417	1.94	0.00	0.177	O | | | |	0.18
1.500	1.95	0.00	0.190	O | | | |	0.20
1.583	1.95	0.00	0.204	O | | | |	0.21
1.667	1.96	0.00	0.217	O | | | |	0.22
1.750	1.97	0.00	0.231	O | | | |	0.24
1.833	1.97	0.00	0.244	O | | | |	0.25
1.917	1.98	0.00	0.258	O | | | |	0.27
2.000	1.99	0.00	0.272	O | | | |	0.28
2.083	2.00	0.00	0.285	O | | | |	0.30
2.167	2.00	0.00	0.299	O | | | |	0.31

2.250	2.01	0.00	0.313	O	|	|	|	|	0.32
2.333	2.02	0.00	0.327	O	|	|	|	|	0.34
2.417	2.03	0.00	0.341	O	|	|	|	|	0.35
2.500	2.03	0.00	0.355	O	|	|	|	|	0.37
2.583	2.04	0.00	0.369	O	|	|	|	|	0.38
2.667	2.05	0.00	0.383	O	|	|	|	|	0.40
2.750	2.06	0.00	0.397	O	|	|	|	|	0.41
2.833	2.07	0.00	0.411	O	|	|	|	|	0.43
2.917	2.07	0.00	0.425	O	|	|	|	|	0.44
3.000	2.08	0.00	0.440	O	|	|	|	|	0.45
3.083	2.09	0.00	0.454	O	|	|	|	|	0.47
3.167	2.10	0.00	0.469	O	|	|	|	|	0.48
3.250	2.11	0.00	0.483	O	|	|	|	|	0.50
3.333	2.12	0.00	0.498	O	|	|	|	|	0.51
3.417	2.12	0.00	0.512	O	|	|	|	|	0.53
3.500	2.13	0.00	0.527	O	|	|	|	|	0.54
3.583	2.14	0.00	0.541	O	|	|	|	|	0.56
3.667	2.15	0.00	0.556	O	|	|	|	|	0.58
3.750	2.16	0.00	0.571	O	|	|	|	|	0.59
3.833	2.17	0.00	0.586	O	|	|	|	|	0.61
3.917	2.18	0.00	0.601	O	|	|	|	|	0.62
4.000	2.19	0.00	0.616	O	|	|	|	|	0.64
4.083	2.20	0.00	0.631	O	|	|	|	|	0.65
4.167	2.20	0.00	0.646	O	|	|	|	|	0.67
4.250	2.21	0.00	0.661	O	|	|	|	|	0.68
4.333	2.22	0.00	0.677	O	|	|	|	|	0.70
4.417	2.23	0.00	0.692	O	|	|	|	|	0.72
4.500	2.24	0.00	0.707	O	|	|	|	|	0.73
4.583	2.25	0.00	0.723	O	|	|	|	|	0.75
4.667	2.26	0.00	0.738	O	|	|	|	|	0.76
4.750	2.27	0.00	0.754	O	|	|	|	|	0.78
4.833	2.28	0.00	0.770	O	|	|	|	|	0.80
4.917	2.29	0.00	0.786	O	|	|	|	|	0.81
5.000	2.31	0.00	0.801	O	|	|	|	|	0.83
5.083	2.32	0.00	0.817	O	|	|	|	|	0.85
5.167	2.33	0.00	0.833	O	|	|	|	|	0.86
5.250	2.34	0.00	0.849	O	|	|	|	|	0.88
5.333	2.35	0.00	0.866	O	|	|	|	|	0.90
5.417	2.36	0.00	0.882	O	|	|	|	|	0.91
5.500	2.37	0.00	0.898	O	|	|	|	|	0.93
5.583	2.38	0.00	0.914	O	|	|	|	|	0.95
5.667	2.40	0.00	0.931	O	|	|	|	|	0.96
5.750	2.41	0.00	0.947	O	|	|	|	|	0.98
5.833	2.42	0.00	0.964	O	|	|	|	|	1.00
5.917	2.43	0.00	0.981	O	|	|	|	|	1.01
6.000	2.44	0.00	0.997	O	|	|	|	|	1.03
6.083	2.46	0.00	1.014	O	|	|	|	|	1.05
6.167	2.47	0.00	1.031	O	|	|	|	|	1.07
6.250	2.48	0.00	1.048	O	|	|	|	|	1.08
6.333	2.49	0.00	1.065	O	|	|	|	|	1.10

6.417	2.51	0.00	1.083	O				1.12
6.500	2.52	0.00	1.100	O				1.14
6.583	2.53	0.00	1.117	O				1.16
6.667	2.55	0.00	1.135	O				1.17
6.750	2.56	0.00	1.152	O				1.19
6.833	2.58	0.00	1.170	O				1.21
6.917	2.59	0.00	1.188	O				1.23
7.000	2.60	0.00	1.206	O				1.25
7.083	2.62	0.00	1.224	O				1.27
7.167	2.63	0.00	1.242	O				1.28
7.250	2.65	0.00	1.260	O				1.30
7.333	2.67	0.00	1.278	O				1.32
7.417	2.68	0.00	1.297	O				1.34
7.500	2.70	0.00	1.315	O				1.36
7.583	2.71	0.00	1.334	O				1.38
7.667	2.73	0.00	1.353	O				1.40
7.750	2.75	0.00	1.371	O				1.42
7.833	2.76	0.00	1.390	O				1.44
7.917	2.78	0.00	1.410	O				1.46
8.000	2.80	0.00	1.429	O				1.48
8.083	2.81	0.00	1.448	O				1.50
8.167	2.83	0.00	1.467	O				1.52
8.250	2.85	0.00	1.487	O				1.54
8.333	2.87	0.00	1.507	O				1.56
8.417	2.89	0.00	1.527	O				1.58
8.500	2.91	0.00	1.547	O				1.60
8.583	2.93	0.00	1.567	OI				1.62
8.667	2.95	0.00	1.587	OI				1.64
8.750	2.97	0.00	1.607	OI				1.66
8.833	2.99	0.00	1.628	OI				1.68
8.917	3.01	0.00	1.648	OI				1.70
9.000	3.03	0.00	1.669	OI				1.72
9.083	3.05	0.00	1.690	OI				1.74
9.167	3.08	0.00	1.711	OI				1.77
9.250	3.10	0.00	1.732	OI				1.79
9.333	3.12	0.00	1.754	OI				1.81
9.417	3.15	0.00	1.775	OI				1.83
9.500	3.17	0.00	1.797	OI				1.85
9.583	3.19	0.00	1.819	OI				1.88
9.667	3.22	0.00	1.841	OI				1.90
9.750	3.24	0.00	1.863	OI				1.92
9.833	3.27	0.00	1.886	OI				1.94
9.917	3.30	0.00	1.908	OI				1.97
10.000	3.32	0.00	1.931	OI				1.99
10.083	3.35	0.00	1.954	OI				2.01
10.167	3.38	0.00	1.977	OI				2.04
10.250	3.41	0.00	2.001	OI				2.06
10.333	3.44	0.00	2.024	OI				2.09
10.417	3.47	0.00	2.048	OI				2.11
10.500	3.50	0.00	2.072	OI				2.14

10.583	3.53	0.00	2.096	OI	|	|	|	2.16
10.667	3.57	0.00	2.121	OI	|	|	|	2.19
10.750	3.60	0.00	2.146	OI	|	|	|	2.21
10.833	3.63	0.00	2.170	OI	|	|	|	2.24
10.917	3.67	0.00	2.196	OI	|	|	|	2.27
11.000	3.71	0.00	2.221	OI	|	|	|	2.29
11.083	3.74	0.00	2.247	OI	|	|	|	2.32
11.167	3.78	0.00	2.272	OI	|	|	|	2.35
11.250	3.82	0.00	2.299	OI	|	|	|	2.37
11.333	3.86	0.00	2.325	OI	|	|	|	2.40
11.417	3.90	0.00	2.352	OI	|	|	|	2.43
11.500	3.94	0.00	2.379	OI	|	|	|	2.46
11.583	3.99	0.00	2.406	OI	|	|	|	2.49
11.667	4.03	0.00	2.434	OI	|	|	|	2.51
11.750	4.08	0.00	2.462	OI	|	|	|	2.54
11.833	4.13	0.00	2.490	OI	|	|	|	2.57
11.917	4.17	0.00	2.518	OI	|	|	|	2.60
12.000	4.22	0.00	2.547	OI	|	|	|	2.63
12.083	4.27	0.00	2.577	OI	|	|	|	2.66
12.167	4.27	0.00	2.606	OI	|	|	|	2.69
12.250	4.26	0.00	2.635	OI	|	|	|	2.72
12.333	4.29	0.00	2.665	OI	|	|	|	2.75
12.417	4.33	0.00	2.694	OI	|	|	|	2.78
12.500	4.38	0.00	2.724	OI	|	|	|	2.81
12.583	4.44	0.00	2.755	OI	|	|	|	2.84
12.667	4.50	0.00	2.785	OI	|	|	|	2.87
12.750	4.56	0.00	2.817	OI	|	|	|	2.90
12.833	4.63	0.00	2.848	OI	|	|	|	2.94
12.917	4.70	0.00	2.880	OI	|	|	|	2.97
13.000	4.77	0.19	2.912	OI	|	|	|	3.00
13.083	4.85	2.25	2.937	OI	|	|	|	3.03
13.167	4.93	3.43	2.951	|O	|	|	|	3.04
13.250	5.02	4.12	2.959	|O	|	|	|	3.05
13.333	5.11	4.54	2.964	|O	|	|	|	3.06
13.417	5.20	4.81	2.968	|O	|	|	|	3.06
13.500	5.30	5.01	2.970	|O	|	|	|	3.06
13.583	5.41	5.16	2.972	|O	|	|	|	3.06
13.667	5.52	5.30	2.974	|O	|	|	|	3.07
13.750	5.63	5.42	2.975	|O	|	|	|	3.07
13.833	5.76	5.54	2.976	|O	|	|	|	3.07
13.917	5.88	5.67	2.978	|OI	|	|	|	3.07
14.000	6.02	5.79	2.980	|OI	|	|	|	3.07
14.083	6.17	5.93	2.981	| O	|	|	|	3.07
14.167	6.33	6.07	2.983	| O	|	|	|	3.08
14.250	6.50	6.23	2.985	| O	|	|	|	3.08
14.333	6.68	6.39	2.987	| O	|	|	|	3.08
14.417	6.88	6.56	2.989	| O	|	|	|	3.08
14.500	7.08	6.75	2.991	| O	|	|	|	3.08
14.583	7.30	6.95	2.993	| O	|	|	|	3.09
14.667	7.55	7.16	2.996	| O	|	|	|	3.09

14.750	7.81	7.39	2.999	O					3.09
14.833	8.10	7.64	3.002	O					3.10
14.917	8.41	7.92	3.005	O					3.10
15.000	8.79	8.22	3.009	OI					3.10
15.083	9.20	8.57	3.013	OI					3.11
15.167	9.69	8.96	3.017	O					3.11
15.250	10.23	9.41	3.023	O					3.12
15.333	10.87	9.92	3.029	O					3.12
15.417	11.51	10.49	3.036	O					3.13
15.500	11.76	11.00	3.042	OI					3.14
15.583	12.05	11.40	3.047	OI					3.14
15.667	13.00	11.90	3.053	O					3.15
15.750	14.39	12.70	3.062	O					3.16
15.833	16.49	13.92	3.077	OI					3.17
15.917	19.60	15.76	3.099	OI					3.20
16.000	25.56	18.80	3.136	O I					3.24
16.083	42.27	25.54	3.216	O I					3.32
16.167	90.31	42.90	3.437	O				I	3.55
16.250	93.07	59.89	3.715	O				I	3.83
16.333	53.90	64.62	3.792	I O					3.91
16.417	37.60	58.05	3.685	I	O				3.80
16.500	29.27	49.48	3.545	I	O				3.66
16.583	23.85	41.50	3.414	I O					3.52
16.667	19.90	33.17	3.308	I O					3.41
16.750	16.96	26.60	3.229	I O					3.33
16.833	14.62	21.78	3.171	I O					3.27
16.917	12.65	18.15	3.128	I O					3.23
17.000	10.93	15.31	3.094	I O					3.19
17.083	9.91	13.13	3.068	IO					3.16
17.167	9.34	11.57	3.049	O					3.14
17.250	8.43	10.37	3.034	IO					3.13
17.333	7.61	9.32	3.022	IO					3.12
17.417	6.48	8.31	3.010	O					3.10
17.500	6.11	7.41	2.999	O					3.09
17.583	5.82	6.77	2.991	IO					3.08
17.667	5.56	6.29	2.985	IO					3.08
17.750	5.33	5.91	2.981	IO					3.07
17.833	5.12	5.60	2.977	O					3.07
17.917	4.94	5.35	2.974	O					3.07
18.000	4.77	5.13	2.972	O					3.06
18.083	4.62	4.94	2.969	O					3.06
18.167	4.54	4.78	2.967	O					3.06
18.250	4.47	4.66	2.966	O					3.06
18.333	4.38	4.55	2.965	O					3.06
18.417	4.28	4.45	2.963	O					3.06
18.500	4.19	4.36	2.962	O					3.05
18.583	4.09	4.26	2.961	O					3.05
18.667	4.00	4.17	2.960	O					3.05
18.750	3.92	4.08	2.959	O					3.05
18.833	3.84	3.99	2.958	O					3.05

18.917	3.76	3.91	2.957	|O	|	|	|	3.05
19.000	3.69	3.83	2.956	|O	|	|	|	3.05
19.083	3.62	3.75	2.955	|O	|	|	|	3.05
19.167	3.55	3.68	2.954	|O	|	|	|	3.05
19.250	3.49	3.61	2.953	|O	|	|	|	3.05
19.333	3.43	3.54	2.952	|O	|	|	|	3.04
19.417	3.37	3.48	2.952	|O	|	|	|	3.04
19.500	3.31	3.42	2.951	|O	|	|	|	3.04
19.583	3.26	3.36	2.950	|O	|	|	|	3.04
19.667	3.21	3.30	2.950	|O	|	|	|	3.04
19.750	3.16	3.25	2.949	|O	|	|	|	3.04
19.833	3.11	3.20	2.948	|O	|	|	|	3.04
19.917	3.07	3.15	2.948	|O	|	|	|	3.04
20.000	3.02	3.10	2.947	|O	|	|	|	3.04
20.083	2.98	3.06	2.947	|O	|	|	|	3.04
20.167	2.94	3.01	2.946	|O	|	|	|	3.04
20.250	2.90	2.97	2.946	IO	|	|	|	3.04
20.333	2.86	2.93	2.945	IO	|	|	|	3.04
20.417	2.83	2.89	2.945	O	|	|	|	3.04
20.500	2.79	2.85	2.944	O	|	|	|	3.04
20.583	2.76	2.82	2.944	O	|	|	|	3.04
20.667	2.72	2.78	2.943	O	|	|	|	3.03
20.750	2.69	2.75	2.943	O	|	|	|	3.03
20.833	2.66	2.72	2.943	O	|	|	|	3.03
20.917	2.63	2.68	2.942	O	|	|	|	3.03
21.000	2.60	2.65	2.942	O	|	|	|	3.03
21.083	2.57	2.62	2.941	O	|	|	|	3.03
21.167	2.54	2.59	2.941	O	|	|	|	3.03
21.250	2.51	2.56	2.941	O	|	|	|	3.03
21.333	2.49	2.54	2.940	O	|	|	|	3.03
21.417	2.46	2.51	2.940	O	|	|	|	3.03
21.500	2.44	2.48	2.940	O	|	|	|	3.03
21.583	2.41	2.46	2.939	O	|	|	|	3.03
21.667	2.39	2.43	2.939	O	|	|	|	3.03
21.750	2.37	2.41	2.939	O	|	|	|	3.03
21.833	2.34	2.38	2.939	O	|	|	|	3.03
21.917	2.32	2.36	2.938	O	|	|	|	3.03
22.000	2.30	2.34	2.938	O	|	|	|	3.03
22.083	2.28	2.32	2.938	O	|	|	|	3.03
22.167	2.26	2.30	2.938	O	|	|	|	3.03
22.250	2.24	2.27	2.937	O	|	|	|	3.03
22.333	2.22	2.25	2.937	O	|	|	|	3.03
22.417	2.20	2.23	2.937	O	|	|	|	3.03
22.500	2.18	2.21	2.937	O	|	|	|	3.03
22.583	2.16	2.20	2.936	O	|	|	|	3.03
22.667	2.15	2.18	2.936	O	|	|	|	3.03
22.750	2.13	2.16	2.936	O	|	|	|	3.03
22.833	2.11	2.14	2.936	O	|	|	|	3.03
22.917	2.09	2.12	2.935	O	|	|	|	3.03
23.000	2.08	2.11	2.935	O	|	|	|	3.03

23.083	2.06	2.09	2.935	O	|	|	|	3.03
23.167	2.05	2.07	2.935	O	|	|	|	3.03
23.250	2.03	2.06	2.935	O	|	|	|	3.03
23.333	2.01	2.04	2.934	O	|	|	|	3.03
23.417	2.00	2.03	2.934	O	|	|	|	3.03
23.500	1.99	2.01	2.934	O	|	|	|	3.03
23.583	1.97	2.00	2.934	O	|	|	|	3.02
23.667	1.96	1.98	2.934	O	|	|	|	3.02
23.750	1.94	1.97	2.934	O	|	|	|	3.02
23.833	1.93	1.95	2.933	O	|	|	|	3.02
23.917	1.92	1.94	2.933	O	|	|	|	3.02
24.000	1.90	1.93	2.933	O	|	|	|	3.02
24.083	1.82	1.90	2.933	O	|	|	|	3.02
24.167	1.31	1.75	2.931	O	|	|	|	3.02
24.250	0.75	1.43	2.927	O	|	|	|	3.02
24.333	0.50	1.07	2.923	O	|	|	|	3.01
24.417	0.35	0.78	2.919	O	|	|	|	3.01
24.500	0.25	0.57	2.917	O	|	|	|	3.01
24.583	0.19	0.41	2.915	O	|	|	|	3.01
24.667	0.14	0.30	2.914	O	|	|	|	3.00
24.750	0.10	0.22	2.913	O	|	|	|	3.00
24.833	0.07	0.16	2.912	O	|	|	|	3.00
24.917	0.05	0.11	2.911	O	|	|	|	3.00
25.000	0.04	0.08	2.911	O	|	|	|	3.00
25.083	0.03	0.06	2.911	O	|	|	|	3.00
25.167	0.01	0.04	2.910	O	|	|	|	3.00
25.250	0.01	0.03	2.910	O	|	|	|	3.00
25.333	0.00	0.02	2.910	O	|	|	|	3.00
25.417	0.00	0.01	2.910	O	|	|	|	3.00
25.500	0.00	0.01	2.910	O	|	|	|	3.00
25.583	0.00	0.00	2.910	O	|	|	|	3.00
25.667	0.00	0.00	2.910	O	|	|	|	3.00
25.750	0.00	0.00	2.910	O	|	|	|	3.00

Remaining water in basin = 2.91 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 309
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 64.624 (CFS)
Total volume = 7.243 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 08/08/22

IEN
Basin D
100-year Developed

Program License Serial Number 6385

********** HYDROGRAPH INFORMATION **********

From study/file name: BasinD100yr.rte
**********HYDROGRAPH DATA**********
Number of intervals = 301
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 102.939 (CFS)
Total volume = 9.887 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 100.000 to Point/Station 109.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 301
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)

Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.500	1.410	0.001	1.410	1.410
2.000	1.890	0.001	1.890	1.890
2.500	2.360	0.001	2.360	2.360
3.000	2.830	0.001	2.830	2.830
3.500	3.030	40.000	2.892	3.168
4.000	3.760	70.000	3.519	4.001
4.500	4.060	80.000	3.785	4.335
5.000	4.140	80.000	3.865	4.415

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 25.7 51.47 77.20 102.94	Depth (Ft.)
0.083	0.09	0.00	0.000	O | | | |	0.00
0.167	0.71	0.00	0.003	O | | | |	0.00
0.250	1.21	0.00	0.010	O | | | |	0.01
0.333	1.42	0.00	0.019	O | | | |	0.02
0.417	1.55	0.00	0.029	O | | | |	0.03
0.500	1.64	0.00	0.040	O | | | |	0.04
0.583	1.70	0.00	0.051	O | | | |	0.05
0.667	1.75	0.00	0.063	O | | | |	0.07
0.750	1.78	0.00	0.075	O | | | |	0.08
0.833	1.81	0.00	0.088	O | | | |	0.09
0.917	1.82	0.00	0.100	O | | | |	0.11
1.000	1.84	0.00	0.113	O | | | |	0.12
1.083	1.86	0.00	0.126	O | | | |	0.13
1.167	1.87	0.00	0.139	O | | | |	0.15
1.250	1.88	0.00	0.151	O | | | |	0.16
1.333	1.89	0.00	0.164	O | | | |	0.17
1.417	1.89	0.00	0.177	O | | | |	0.19
1.500	1.90	0.00	0.190	O | | | |	0.20
1.583	1.91	0.00	0.204	O | | | |	0.22
1.667	1.91	0.00	0.217	O | | | |	0.23
1.750	1.92	0.00	0.230	O | | | |	0.24
1.833	1.93	0.00	0.243	O | | | |	0.26
1.917	1.93	0.00	0.256	O | | | |	0.27
2.000	1.94	0.00	0.270	O | | | |	0.29
2.083	1.95	0.00	0.283	O | | | |	0.30
2.167	1.95	0.00	0.297	O | | | |	0.32

2.250	1.96	0.00	0.310	O	|	|	|	0.33
2.333	1.97	0.00	0.324	O	|	|	|	0.34
2.417	1.98	0.00	0.337	O	|	|	|	0.36
2.500	1.98	0.00	0.351	O	|	|	|	0.37
2.583	1.99	0.00	0.365	O	|	|	|	0.39
2.667	2.00	0.00	0.378	O	|	|	|	0.40
2.750	2.01	0.00	0.392	O	|	|	|	0.42
2.833	2.01	0.00	0.406	O	|	|	|	0.43
2.917	2.02	0.00	0.420	O	|	|	|	0.45
3.000	2.03	0.00	0.434	O	|	|	|	0.46
3.083	2.04	0.00	0.448	O	|	|	|	0.48
3.167	2.05	0.00	0.462	O	|	|	|	0.49
3.250	2.05	0.00	0.476	O	|	|	|	0.51
3.333	2.06	0.00	0.490	O	|	|	|	0.52
3.417	2.07	0.00	0.504	O	|	|	|	0.54
3.500	2.08	0.00	0.519	O	|	|	|	0.55
3.583	2.09	0.00	0.533	O	|	|	|	0.57
3.667	2.10	0.00	0.547	O	|	|	|	0.58
3.750	2.11	0.00	0.562	O	|	|	|	0.60
3.833	2.11	0.00	0.576	O	|	|	|	0.61
3.917	2.12	0.00	0.591	O	|	|	|	0.63
4.000	2.13	0.00	0.606	O	|	|	|	0.64
4.083	2.14	0.00	0.620	O	|	|	|	0.66
4.167	2.15	0.00	0.635	O	|	|	|	0.68
4.250	2.16	0.00	0.650	O	|	|	|	0.69
4.333	2.17	0.00	0.665	O	|	|	|	0.71
4.417	2.18	0.00	0.680	O	|	|	|	0.72
4.500	2.19	0.00	0.695	O	|	|	|	0.74
4.583	2.20	0.00	0.710	O	|	|	|	0.76
4.667	2.21	0.00	0.725	O	|	|	|	0.77
4.750	2.22	0.00	0.740	O	|	|	|	0.79
4.833	2.23	0.00	0.756	O	|	|	|	0.80
4.917	2.24	0.00	0.771	O	|	|	|	0.82
5.000	2.25	0.00	0.787	O	|	|	|	0.84
5.083	2.26	0.00	0.802	O	|	|	|	0.85
5.167	2.27	0.00	0.818	O	|	|	|	0.87
5.250	2.28	0.00	0.833	O	|	|	|	0.89
5.333	2.29	0.00	0.849	O	|	|	|	0.90
5.417	2.30	0.00	0.865	O	|	|	|	0.92
5.500	2.31	0.00	0.881	O	|	|	|	0.94
5.583	2.33	0.00	0.897	O	|	|	|	0.95
5.667	2.34	0.00	0.913	O	|	|	|	0.97
5.750	2.35	0.00	0.929	O	|	|	|	0.99
5.833	2.36	0.00	0.945	O	|	|	|	1.01
5.917	2.37	0.00	0.961	O	|	|	|	1.02
6.000	2.38	0.00	0.978	O	|	|	|	1.04
6.083	2.40	0.00	0.994	O	|	|	|	1.06
6.167	2.41	0.00	1.011	O	|	|	|	1.08
6.250	2.42	0.00	1.027	O	|	|	|	1.09
6.333	2.43	0.00	1.044	O	|	|	|	1.11

6.417	2.45	0.00	1.061	O				1.13
6.500	2.46	0.00	1.078	O				1.15
6.583	2.47	0.00	1.095	O				1.16
6.667	2.49	0.00	1.112	O				1.18
6.750	2.50	0.00	1.129	O				1.20
6.833	2.51	0.00	1.146	O				1.22
6.917	2.53	0.00	1.164	O				1.24
7.000	2.54	0.00	1.181	O				1.26
7.083	2.56	0.00	1.199	O				1.28
7.167	2.57	0.00	1.216	O				1.29
7.250	2.59	0.00	1.234	O				1.31
7.333	2.60	0.00	1.252	O				1.33
7.417	2.62	0.00	1.270	O				1.35
7.500	2.63	0.00	1.288	O				1.37
7.583	2.65	0.00	1.306	O				1.39
7.667	2.66	0.00	1.324	O				1.41
7.750	2.68	0.00	1.343	O				1.43
7.833	2.70	0.00	1.361	O				1.45
7.917	2.71	0.00	1.380	O				1.47
8.000	2.73	0.00	1.399	O				1.49
8.083	2.75	0.00	1.418	O				1.51
8.167	2.77	0.00	1.437	O				1.53
8.250	2.78	0.00	1.456	O				1.55
8.333	2.80	0.00	1.475	O				1.57
8.417	2.82	0.00	1.494	O				1.59
8.500	2.84	0.00	1.514	O				1.61
8.583	2.86	0.00	1.533	O				1.63
8.667	2.88	0.00	1.553	O				1.65
8.750	2.90	0.00	1.573	O				1.67
8.833	2.92	0.00	1.593	O				1.69
8.917	2.94	0.00	1.613	O				1.71
9.000	2.96	0.00	1.633	O				1.73
9.083	2.98	0.00	1.654	O				1.75
9.167	3.00	0.00	1.674	O				1.78
9.250	3.03	0.00	1.695	O				1.80
9.333	3.05	0.00	1.716	O				1.82
9.417	3.07	0.00	1.737	O				1.84
9.500	3.10	0.00	1.758	O				1.86
9.583	3.12	0.00	1.780	O				1.89
9.667	3.14	0.00	1.801	O				1.91
9.750	3.17	0.00	1.823	O				1.93
9.833	3.20	0.00	1.845	O				1.95
9.917	3.22	0.00	1.867	OI				1.98
10.000	3.25	0.00	1.889	OI				2.00
10.083	3.27	0.00	1.912	OI				2.02
10.167	3.30	0.00	1.935	OI				2.05
10.250	3.33	0.00	1.957	OI				2.07
10.333	3.36	0.00	1.980	OI				2.10
10.417	3.39	0.00	2.004	OI				2.12
10.500	3.42	0.00	2.027	OI				2.15

10.583	3.45	0.00	2.051	OI	|	|	|	2.17
10.667	3.49	0.00	2.075	OI	|	|	|	2.20
10.750	3.52	0.00	2.099	OI	|	|	|	2.22
10.833	3.55	0.00	2.123	OI	|	|	|	2.25
10.917	3.59	0.00	2.148	OI	|	|	|	2.27
11.000	3.62	0.00	2.172	OI	|	|	|	2.30
11.083	3.66	0.00	2.198	OI	|	|	|	2.33
11.167	3.70	0.00	2.223	OI	|	|	|	2.35
11.250	3.73	0.00	2.248	OI	|	|	|	2.38
11.333	3.77	0.00	2.274	OI	|	|	|	2.41
11.417	3.81	0.00	2.300	OI	|	|	|	2.44
11.500	3.86	0.00	2.327	OI	|	|	|	2.46
11.583	3.90	0.00	2.353	OI	|	|	|	2.49
11.667	3.94	0.00	2.380	OI	|	|	|	2.52
11.750	3.99	0.00	2.408	OI	|	|	|	2.55
11.833	4.04	0.00	2.435	OI	|	|	|	2.58
11.917	4.08	0.00	2.463	OI	|	|	|	2.61
12.000	4.13	0.00	2.492	OI	|	|	|	2.64
12.083	4.17	0.00	2.520	OI	|	|	|	2.67
12.167	4.16	0.00	2.549	OI	|	|	|	2.70
12.250	4.15	0.00	2.578	OI	|	|	|	2.73
12.333	4.19	0.00	2.606	OI	|	|	|	2.76
12.417	4.23	0.00	2.635	OI	|	|	|	2.79
12.500	4.28	0.00	2.665	OI	|	|	|	2.82
12.583	4.34	0.00	2.694	OI	|	|	|	2.86
12.667	4.40	0.00	2.724	OI	|	|	|	2.89
12.750	4.46	0.00	2.755	OI	|	|	|	2.92
12.833	4.53	0.00	2.786	OI	|	|	|	2.95
12.917	4.60	0.00	2.817	OI	|	|	|	2.99
13.000	4.67	2.26	2.841	OI	|	|	|	3.03
13.083	4.75	4.26	2.851	|O	|	|	|	3.05
13.167	4.83	4.69	2.853	|O	|	|	|	3.06
13.250	4.92	4.84	2.854	|O	|	|	|	3.06
13.333	5.01	4.94	2.855	|O	|	|	|	3.06
13.417	5.10	5.03	2.855	|O	|	|	|	3.06
13.500	5.20	5.13	2.856	|O	|	|	|	3.06
13.583	5.30	5.23	2.856	|O	|	|	|	3.07
13.667	5.41	5.33	2.857	|O	|	|	|	3.07
13.750	5.53	5.44	2.857	|O	|	|	|	3.07
13.833	5.65	5.56	2.858	|O	|	|	|	3.07
13.917	5.78	5.69	2.858	|O	|	|	|	3.07
14.000	5.92	5.82	2.859	|O	|	|	|	3.07
14.083	6.06	5.96	2.860	|O	|	|	|	3.07
14.167	6.23	6.11	2.861	|O	|	|	|	3.08
14.250	6.39	6.27	2.861	|O	|	|	|	3.08
14.333	6.58	6.44	2.862	| O	|	|	|	3.08
14.417	6.76	6.63	2.863	| O	|	|	|	3.08
14.500	6.97	6.82	2.864	| O	|	|	|	3.09
14.583	7.19	7.03	2.865	| O	|	|	|	3.09
14.667	7.44	7.26	2.866	| O	|	|	|	3.09

14.750	7.69	7.51	2.868	O					3.09
14.833	7.99	7.78	2.869	O					3.10
14.917	8.30	8.08	2.870	O					3.10
15.000	8.69	8.42	2.872	O					3.11
15.083	9.10	8.81	2.874	O					3.11
15.167	9.61	9.25	2.876	O					3.12
15.250	10.14	9.76	2.879	O					3.12
15.333	10.81	10.34	2.882	O					3.13
15.417	11.41	10.97	2.885	O					3.14
15.500	11.55	11.39	2.887	O					3.14
15.583	11.92	11.67	2.888	O					3.15
15.667	12.99	12.31	2.892	OI					3.15
15.750	14.41	13.44	2.897	O					3.17
15.833	16.72	15.18	2.906	OI					3.19
15.917	19.98	17.76	2.919	OI					3.22
16.000	26.75	22.33	2.942	O	I				3.28
16.083	46.00	33.79	2.999		O	I			3.42
16.167	102.94	48.20	3.229			O		I	3.64
16.250	85.21	59.57	3.506			O	I		3.83
16.333	48.67	61.40	3.551			I	O		3.86
16.417	34.07	56.43	3.430		I	O			3.77
16.500	26.57	49.96	3.272		I	O			3.67
16.583	21.52	43.54	3.116	I	O				3.56
16.667	17.94	32.22	2.991	I	O				3.40
16.750	15.12	19.42	2.927	I O					3.24
16.833	12.78	14.96	2.905	IO					3.19
16.917	10.97	12.44	2.892	O					3.16
17.000	10.18	10.92	2.885	O					3.14
17.083	9.17	9.90	2.880	IO					3.12
17.167	8.08	8.86	2.874	O					3.11
17.250	6.85	7.72	2.869	O					3.10
17.333	6.42	6.83	2.864	IO					3.09
17.417	6.07	6.35	2.862	O					3.08
17.500	5.78	6.00	2.860	O					3.08
17.583	5.51	5.71	2.859	O					3.07
17.667	5.28	5.46	2.857	O					3.07
17.750	5.08	5.23	2.856	O					3.07
17.833	4.89	5.03	2.855	O					3.06
17.917	4.72	4.85	2.854	O					3.06
18.000	4.57	4.68	2.853	O					3.06
18.083	4.44	4.54	2.853	O					3.06
18.167	4.38	4.43	2.852	O					3.06
18.250	4.31	4.36	2.852	O					3.05
18.333	4.22	4.28	2.851	O					3.05
18.417	4.13	4.19	2.851	O					3.05
18.500	4.04	4.10	2.851	O					3.05
18.583	3.95	4.01	2.850	O					3.05
18.667	3.86	3.93	2.850	O					3.05
18.750	3.78	3.84	2.849	O					3.05
18.833	3.71	3.76	2.849	O					3.05

18.917	3.63	3.69	2.848	|O	|	|	|	3.05
19.000	3.56	3.62	2.848	|O	|	|	|	3.05
19.083	3.50	3.55	2.848	|O	|	|	|	3.04
19.167	3.43	3.48	2.847	|O	|	|	|	3.04
19.250	3.37	3.42	2.847	|O	|	|	|	3.04
19.333	3.31	3.36	2.847	|O	|	|	|	3.04
19.417	3.26	3.30	2.846	|O	|	|	|	3.04
19.500	3.20	3.24	2.846	IO	|	|	|	3.04
19.583	3.15	3.19	2.846	O	|	|	|	3.04
19.667	3.10	3.14	2.846	O	|	|	|	3.04
19.750	3.06	3.09	2.845	O	|	|	|	3.04
19.833	3.01	3.04	2.845	O	|	|	|	3.04
19.917	2.97	3.00	2.845	O	|	|	|	3.04
20.000	2.93	2.96	2.845	O	|	|	|	3.04
20.083	2.89	2.91	2.845	O	|	|	|	3.04
20.167	2.85	2.87	2.844	O	|	|	|	3.04
20.250	2.81	2.84	2.844	O	|	|	|	3.04
20.333	2.77	2.80	2.844	O	|	|	|	3.03
20.417	2.74	2.76	2.844	O	|	|	|	3.03
20.500	2.70	2.73	2.844	O	|	|	|	3.03
20.583	2.67	2.69	2.843	O	|	|	|	3.03
20.667	2.64	2.66	2.843	O	|	|	|	3.03
20.750	2.61	2.63	2.843	O	|	|	|	3.03
20.833	2.58	2.60	2.843	O	|	|	|	3.03
20.917	2.55	2.57	2.843	O	|	|	|	3.03
21.000	2.52	2.54	2.843	O	|	|	|	3.03
21.083	2.49	2.51	2.843	O	|	|	|	3.03
21.167	2.46	2.48	2.842	O	|	|	|	3.03
21.250	2.44	2.46	2.842	O	|	|	|	3.03
21.333	2.41	2.43	2.842	O	|	|	|	3.03
21.417	2.39	2.41	2.842	O	|	|	|	3.03
21.500	2.36	2.38	2.842	O	|	|	|	3.03
21.583	2.34	2.36	2.842	O	|	|	|	3.03
21.667	2.32	2.33	2.842	O	|	|	|	3.03
21.750	2.29	2.31	2.842	O	|	|	|	3.03
21.833	2.27	2.29	2.841	O	|	|	|	3.03
21.917	2.25	2.27	2.841	O	|	|	|	3.03
22.000	2.23	2.25	2.841	O	|	|	|	3.03
22.083	2.21	2.23	2.841	O	|	|	|	3.03
22.167	2.19	2.21	2.841	O	|	|	|	3.03
22.250	2.17	2.19	2.841	O	|	|	|	3.03
22.333	2.15	2.17	2.841	O	|	|	|	3.03
22.417	2.13	2.15	2.841	O	|	|	|	3.03
22.500	2.12	2.13	2.841	O	|	|	|	3.03
22.583	2.10	2.11	2.841	O	|	|	|	3.03
22.667	2.08	2.09	2.840	O	|	|	|	3.03
22.750	2.07	2.08	2.840	O	|	|	|	3.03
22.833	2.05	2.06	2.840	O	|	|	|	3.03
22.917	2.03	2.04	2.840	O	|	|	|	3.03
23.000	2.02	2.03	2.840	O	|	|	|	3.03

23.083	2.00	2.01	2.840	O	|	|	|	|	3.03
23.167	1.99	2.00	2.840	O	|	|	|	|	3.02
23.250	1.97	1.98	2.840	O	|	|	|	|	3.02
23.333	1.96	1.97	2.840	O	|	|	|	|	3.02
23.417	1.94	1.95	2.840	O	|	|	|	|	3.02
23.500	1.93	1.94	2.840	O	|	|	|	|	3.02
23.583	1.91	1.92	2.840	O	|	|	|	|	3.02
23.667	1.90	1.91	2.840	O	|	|	|	|	3.02
23.750	1.89	1.90	2.839	O	|	|	|	|	3.02
23.833	1.87	1.88	2.839	O	|	|	|	|	3.02
23.917	1.86	1.87	2.839	O	|	|	|	|	3.02
24.000	1.85	1.86	2.839	O	|	|	|	|	3.02
24.083	1.74	1.81	2.839	O	|	|	|	|	3.02
24.167	1.12	1.50	2.837	O	|	|	|	|	3.02
24.250	0.61	0.98	2.835	O	|	|	|	|	3.01
24.333	0.40	0.59	2.833	O	|	|	|	|	3.01
24.417	0.27	0.38	2.832	O	|	|	|	|	3.00
24.500	0.19	0.26	2.831	O	|	|	|	|	3.00
24.583	0.13	0.18	2.831	O	|	|	|	|	3.00
24.667	0.09	0.12	2.831	O	|	|	|	|	3.00
24.750	0.06	0.08	2.830	O	|	|	|	|	3.00
24.833	0.04	0.06	2.830	O	|	|	|	|	3.00
24.917	0.03	0.04	2.830	O	|	|	|	|	3.00
25.000	0.02	0.03	2.830	O	|	|	|	|	3.00
25.083	0.01	0.01	2.830	O	|	|	|	|	3.00
25.167	0.00	0.01	2.830	O	|	|	|	|	3.00
25.250	0.00	0.00	2.830	O	|	|	|	|	3.00

Remaining water in basin = 2.83 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 303
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 61.400 (CFS)
Total volume = 7.057 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

Appendix H2

Preliminary Water Quality Management Plan

Priority Project

Water Quality Management Plan

For:

Inland Empire North Logistics Center

APN 0472-231-08

Prepared for:

FGFW IV LLC

150 N. Market Street
Wichita, KS 67206
(702) 330-1715

Prepared by:

David Evans and Associates
18484 Outer Highway 18 North, Suite 225
Apple Valley, CA 92307
Tel: (760) 524-9100
Attn: Bret Thorpe

Submittal Date: August 18, 2023

Revision No. and Date: Insert No and Current Revision Date

Revision No. and Date: Insert No and Current Revision Date

Final Approval Date:_____

Project Owner's Certification

This Town of Apple Valley Water Quality Management Plan (WQMP) has been prepared for FGFW IV LLC by David Evans and Associates. The WQMP is intended to comply with the requirements of the Town of Apple Valley and the Phase II Small MS4 General Permit for the Mojave River Watershed. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the Phase II Small MS4 Permit and the intent of the Town of Apple Valley's compliance efforts. Once the undersigned transfers its interest in the property, its successors in interest and the Town of Apple Valley shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):	TBD	Grading Permit Number(s):	TBD
Tract/Parcel Map Number(s):		Building Permit Number(s):	TBD
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			0472-231-08

Owner's Signature			
Owner Name:			
Title			
Company	FGFW IV LLC		
Address	150 N. Market Street, Wichita, KS 67206		
Email			
Telephone #	(702) 330-1715		
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):	TBD	Grading Permit Number(s):	TBD
Tract/Parcel Map Number(s):		Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			0472-231-08

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of State of California Water Resources Control Board Order No. 2013-0001-DWQ.

Engineer: Bret Thorpe PE		PE Stamp Below
Title	Project Manager	
Company	David Evans and Associates, Inc	
Address	18484 Outer Highway 18 north Apple Valley, CA 92307	
Email	bthorpe@deainc.com	
Telephone #	(760) 524-9100	
Signature		
Date		

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Appendix J: Geotechnical Report

Appendix J: Grading Plan

Section I – Introduction

This WQMP template has been prepared specifically for the Phase II Small MS4 General Permit in the Mojave River Watershed. This location is within the jurisdiction of the Lahontan Regional Water Quality Control Board (LRWQCB) only. This document should not be confused with the WQMP template for the Santa Ana Phase I area of San Bernardino County.

WQMP preparers must refer to the MS4 Permit for the Mojave Watershed WQMP template and Technical Guidance (TGD) document found at: http://cms.sbcounty.gov/dpw/Land/NPDES.aspx to find pertinent arid region and Mojave River Watershed specific references and requirements.

Section 1 Discretionary Permit(s)

Form 1-1 Project Information

Project Name	Inland Empire North Logistics Center				
Project Owner Contact Name:	Jessica Haughton				
Mailing Address:	FGFW IV, LLC 150 N. Market Street, Wichita, KS 67206	E-mail Address:	jhaughton@synergyconsultingca.com	Telephone:	(702) 330-1715
Permit/Application Number(s):	TBD		Tract/Parcel Map Number(s):	APN: 0472-231-08	
Additional Information/ Comments:	This is a Preliminary WQMP				
Description of Project:	The Project site fronts the I-15 freeway south of the Stoddard Wells Rd. intersection located on the east side of the freeway in Apple Valley. The site is approximately 180 acres gross and 171.5 acres net. The site slopes up at an average slope of 4%, is primarily vacant except for a mining site at the Project site southeasterly boundary. The proposed project consists of two large warehouse type building, loading docks, parking for trucks and separate parking for passenger cars and landscaping. Four large infiltration basins are proposed, as well as some small LIDS areas where practical.				
Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	Provide a Town of Apple Valley specific WQMP for approval.				

Section 2 Project Description

2.1 Project Information

This section of the WQMP should provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long-term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

2.1.1 Project Sizing Categorization

If the Project is greater than 5,000 square feet, and not on the excluded list as found on Section 1.4 of the TGD, the Project is a Regulated Development Project.

If the Project is creating and/or replacing greater than 2,500 square feet but less than 5,000 square feet of impervious surface area, then it is considered a Site Design Only project. This criterion is applicable to all development types including detached single-family homes that create and/or replace greater than 2,500 square feet of impervious area and are not part of a larger plan of development.

Form 2.1-1 Description of Proposed Project

1 Regulated Development Project Category (Select all that apply):

☒ #1 New development involving the creation of 5,000 ft² or more of impervious surface collectively over entire site	☐ #2 Significant re-development involving the addition or replacement of 5,000 ft² or more of impervious surface on an already developed site	☐ #3 Road Project – any road, sidewalk, or bicycle lane project that creates greater than 5,000 square feet of contiguous impervious surface	☐ #4 LUPs – linear underground/overhead projects that has a discrete location with 5,000 sq. ft. or more new constructed impervious surface

☐ Site Design Only (Project Total Square Feet > 2,500 but < 5,000 sq.ft) *Will require source control Site Design LID BMPs and other LIP requirements. See section 4. (Please go to Forms 4.1-3 and 4.3-2)*

2 Project Area (ft2):	7,473,154	**3** Number of Dwelling Units:		**4** SIC Code:	4225

5 Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:

The Property owner will be responsible for all the on-site BMPS such as infiltration basins, pre-treatment devices, landscaping and LID areas. Site maintenance BMPs is vested in;

FGFW IV LLC
150 N. Market Street
Wichita, KS 67206
(702) 330-1715

2.3 Potential Stormwater Pollutants

Best Management Practices (BMP) measures for pollutant generating activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment (or an equivalent manual). Pollutant generating activities must be considered when determining the overall pollutants of concern for the Project as presented in Form 2.3-1.

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-2 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern

Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	Potential source - Parking lot, trash, wild bird,animal and pet wastes.
Nutrients - Phosphorous	E ☒	N ☐	Potential source - Landscape
Nutrients - Nitrogen	E ☒	N ☐	Potential Source - Landscape
Noxious Aquatic Plants	E ☐	N ☒	Can not see any potential source unless it is brought in with landscape plants and if the landscaping is maintained as required there is still no source. This type of plants can not survive within dry washes.
Sediment	E ☒	N ☐	Solid materials/ suspended solids from land surface is expected in addition to sediments from erosion.
Metals	E ☒	N ☐	Metal pollutants expected from vehicles circulating the parking lot, including tire wear and brake dust.
Oil and Grease	E ☒	N ☐	Surface area of parking lot and drive-thru will contribute to pollution from leaking vehicles and grease for production
Trash/Debris	E ☒	N ☐	Trash and debris pollution from general litter is expected on site from facility occupants, visitors and any work that may be performed on site premises.
Pesticides / Herbicides	E ☒	N ☐	Expected pollutants from maintenance of the site landscape area is expected.
Organic Compounds	E ☒	N ☐	Use of cleaning solvents/chemicals and maintenace of landscape area will contribute to pollution from organic compounds.
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

Section 3 Site and Watershed Description

Describe the project site conditions that will facilitate the selection of BMP through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed Drainage Management Areas (DMAs)) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. ***If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet. A map presenting the DMAs must be included as an appendix to the WQMP document.***

Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34d 34m 32s	Longitude -117d 16m 1s	Thomas Bros Map page
1 San Bernardino County climatic region: ☒ Desert			
2 Does the site have more than one drainage area (DA): Yes☒ No☐ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*			

Conveyance	Briefly describe on-site drainage features to convey runoff that is not retained within a DMA
DA1 DMA C flows to DA1 DMA A	*Ex. Bioretention overflow to vegetated bioswale with 4' bottom width, 5:1 side slopes and bed slope of 0.01. Conveys runoff for 1000' through DMA 1 to existing catch basin on SE corner of property*
DA1 DMA A to Outlet 1	
DA1 DMA B to Outlet 1	
DA2 to Outlet 2	

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1				
For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA A	DMA B	DMA C	DMA D
1 DMA drainage area (ft^2)	270,508	872,942	524,462	2,019,877
2 Existing site impervious area (ft^2)	0	0	0	0
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	2	2	2	2
4 Hydrologic soil group *Refer to County Hydrology Manual Addendum for Arid Regions – http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_addendum.pdf*	C	C	C	C
5 Longest flowpath length (ft)	883	1,238	1,401	2,401
6 Longest flowpath slope (ft/ft)	0.0147	0.041	0.044	0.043
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Barren	Barren	Barren	Barren
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	Poor	Poor	Poor	Poor

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1 (use only as needed for additional DMA w/in DA 1)

For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA E	DMA F	DMA G	DMA H
1 DMA drainage area (ft^2)	2,351,369	1,072,447		
2 Existing site impervious area (ft^2)	0	0		
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	2	2		
4 Hydrologic soil group *County Hydrology Manual Addendum for Arid Regions – http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_addendum.pdf*	C	C		
5 Longest flowpath length (ft)	2,458	1,985		
6 Longest flowpath slope (ft/ft)	0.041	0.047		
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Barren	Barren		
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	poor	poor		

Form 3-3 Watershed Description for Drainage Area

Receiving waters Refer to CWRCB site: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml	Mojave River
Applicable TMDLs *http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml*	None
303(d) listed impairments *http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml*	Mojave River, upper to lower narrows Oxygen dissolved, Fluoride, Sulfates, TDS, Manganese, Sodium
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool –* *http://sbcounty.permitrack.com/WAP*	SW Willow Flycatcher Desert Tortoise Cat (3) Mojave Ground Squirrel
Hydromodification Assessment	☒ Yes *Complete Hydromodification Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-9 in submittal* ☐ No

Section 4 Best Management Practices (BMP)

4.1 Source Control and Site Design BMPs

The information and data in this section are required for both Regulated Development and Site Design Only Projects. Source Control and Site Design BMPs are the basis of site-specific pollution management.

4.1.1 Source Control BMPs

Non-structural and structural source control BMPs are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

The identified list of source control BMPs correspond to the CASQA Stormwater BMP Handbook for New Development and Redevelopment.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	General information will be provided to the owner on housekeeping practices that contribute to the protection of storm water. The property owner and property manager will be familiar with the contents of this document and the BMPs used on the site. The owner will provide education materials to tenants (if applicable) on BMPs and housekeeping practices that contribute to the protection of storm water.
N2	Activity Restrictions	☒	☐	The property owner/manager shall control the discharge of the stormwater pollutants from this site through activity restrictions. Restrictions shall be provided to all new tenants/occupants through lease terms, or other mechanism upon first occupancy of the lease space and annually thereafter. Enforcement of activity restriction shall be on going during the operation of the project site.
N3	Landscape Management BMPs	☒	☐	The property owner, building operators, and landscape maintenance contractors will practice on going landscape maintenance BMPs consistent with applicable local ordinances and will regular inspect the irrigation system for signs of erosion or sediment debris buildup and clean/repair as needed.
N4	BMP Maintenance	☒	☐	The property owner/manager will maintain all post construction BMPs consistent with the O&M plan described in section 5 of this document (Form 5-1).
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	Hazardous wastes are not anticipated to be stored or handled of-site.
N6	Local Water Quality Ordinances	☒	☐	he owner shall comply with the Town of Apple Valley Stormwater Ordinance through the implementation of BMP's.
N7	Spill Contingency Plan	☒	☐	Building operators shall prepare specific plans based on materials onsite for the cleanup of spills. Plans shall mandate stock piling of cleanup materials, notification of agencies, disposal, documentation, etc. Storage shall comply with Hazmat Regulations and any required contingency plans.

Form 4.1-1 Non-Structural Source Control BMPs				
N8	Underground Storage Tank Compliance	☐	☒	No underground storage tanks proposed.
N9	Hazardous Materials Disclosure Compliance	☐	☒	The storing of hazardous materials is not proposed.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	This project will be developed and operated in accordance with Article 80 of the Uniform Fire Code.
N11	Litter/Debris Control Program	☒	☐	The building operator shall prepare and implement an employee training program. This program shall include trash managementa and litter control procedures including on spill cleanup, litter control, and material storage procedures.
N12	Employee Training	☒	☐	The property owner/manager shall prepare and implement an employee-training program in accordance with California Storm Water Quality Association Standards and BMP. This program shall be reviewed on a bi-annual basis or with the every new edition of the Stormwater Best Management Practice Handbook for Industrial and Commercial. See appendix for all educational material.
N13	Housekeeping of Loading Docks	☒	☐	Loading docks shall be regulary maintained by keeping clean and orderly condition through a regular program of sweeping and litter control, cleaning up spills and broken containers immediately. Clean up should minimize use of water and do not discharge wash water into the storm drain.
N14	Catch Basin Inspection Program	☒	☐	Catch basins shall be inspected visually on a monthly basis; the entire storm drain system shall be inspected and cleaned prior to the start of the rainy season.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	Parking and dock areas will be swept regularly using a vacuum assisted sweeper. Frequency will depend on waste accumulations with a minimum of once per month and prior to the start of the rainy season.
N16	Other Non-structural Measures for Public Agency Projects	☐	☒	Not a Public Agency project.

N17	Comply with all other applicable NPDES permits	☒	☐	he developer will comply with the California statwide Construction General Permit during construction and all future occupants of the site shall comply with the requirements of the statewide General Stormwater Permit.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	All storm drain inlets shall have Stenciling illustrating an anti-dumping message.
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	This development does not include the storage of materials outdoors.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Trash storage areas shall be located away from storm drain inlets. All trash dumpsters/containers will be required to have a lid on at all times to prevent direct precipitation and prevent any rainfall from entering containers.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	Irrigation systems will be designed to each landscaped area's specific water need. Irrigation controls shall include rain-triggered shutoff devices to prevent irrigation after precipitation.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	Landscaped areas shall be below a minimum of 1" to 2" below the top of curb or walk.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☒	☐	Install permanent stabilization BMPs on slopes as quickly as possible. Install drought resistant landscaping. Runoff to be conveyed away from tops of slopes.
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	No covered dock areas within the new development.
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	No covered maintenance bays within the new development.
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	No vehicle wash areas proposed.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	No covered outdoor processing areas are proposed

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	No equipment wash areas.
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	No fueling areas.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☐	☒	No natural existing hillsides on the project site.
S14	Wash water control for food preparation areas	☐	☒	No food preparation is proposed
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	No Community car wash racks

4.1.2 Site Design BMPs

As part of the planning phase of a project, the site design practices associated with new LID requirements in the Phase II Small MS4 Permit must be considered. Site design BMPs can result in smaller DCV to be managed by both LID and hydromodification control BMPs by reducing runoff generation.

As is stated in the Permit, it is necessary to evaluate site conditions such as soil type(s), existing vegetation and flow paths will influence the overall site design.

Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Site Design Practices Checklist

Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☒ No ☐ Explanation: Impervious areas are minimized to the Maximum Extent Possible without costing the facility inefficiencies in circulation, parking and loading and unloading.
Maximize natural infiltration capacity; Including improvement and maintenance of soil: Yes ☒ No ☐ Explanation: Underground infiltration system bottom with natural soils, no compaction. Landscaped areas will amend the soil and be depressed to facilitate infiltration.
Preserve existing drainage patterns and time of concentration: Yes ☐ No ☒ Explanation: The site could not be developed due to the site topography as it is. The cost would be infeasible.
Disconnect impervious areas. Including rerouting of rooftop drainage pipes to drain stormwater to storage or infiltration BMPs instead of to storm drain: Yes ☒ No ☐ Explanation: The site layout lends itself for some smaller parking areas to drain into impervious areas.
Use of Porous Pavement: Yes ☐ No ☒ Explanation: Not practical with truck loading.
Protect existing vegetation and sensitive areas: Yes ☐ No ☒ Explanation: There are no sensitive areas and site will have to be mass graded to develop it.
Re-vegetate disturbed areas. Including planting and preservation of drought tolerant vegetation: Yes ☒ No ☐ Explanation: There is 10% minimum landscaping proposed which will incorporate drought tolerant vegetation.

Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐ Explanation: Site to be mass graded. Basin are attempted to be placed in fill areas to minimize excavation and thus avoid compaction. However, it is unknown if the preliminary Geotechnical report could recommend to over excavation.
Utilize naturalized/rock-lined drainage swales in place of underground piping or imperviously lined swales: Yes ☐ No ☒ Explanation: Not practical in this development. The storm drain infrastructure is necessary to develop the site.
Stake off areas that will be used for landscaping to minimize compaction during construction: Yes ☐ No ☒ Explanation: Site will be mass graded.
Use of Rain Barrels and Cisterns, Including the use of on-site water collection systems: Yes ☒ No ☐ Explanation: The underground infiltration systems serve as a cistern where storm water is collected for infiltration as required by Town's storm water program and is number one on the BMP hierarchy list.
Stream Setbacks. Includes a specified distance from an adjacent steam: Yes ☐ No ☒ Explanation: Not adjacent to a know stream.

It is noted that, in the Phase II Small MS4 Permit, site design elements for green roofs and vegetative swales are required. Due to the local climatology in the Mojave River Watershed, proactive measures are taken to maximize the amount of drought tolerant vegetation. It is not practical in this region to have green roofs or vegetative swales. As part of site design the project proponent should utilize locally recommended vegetation types for landscaping. Typical landscaping recommendations are found in following local references:

San Bernardino County Special Districts:

Guide to High Desert Landscaping -
http://www.specialdistricts.org/Modules/ShowDocument.aspx?documentid=795

Recommended High-Desert Plants -
http://www.specialdistricts.org/modules/showdocument.aspx?documentid=553

Mojave Water Agency:

Desert Ranch: http://www.mojavewater.org/files/desertranchgardenprototype.pdf

Summertree: http://www.mojavewater.org/files/Summertree-Native-Plant-Brochure.pdf

Thornless Garden: http://www.mojavewater.org/files/thornlessgardenprototype.pdf

Mediterranean Garden: http://www.mojavewater.org/files/mediterraneangardenprototype.pdf

Lush and Efficient Garden: http://www.mojavewater.org/files/lushandefficientgardenprototype.pdf

Alliance for Water Awareness and Conservation (AWAC) outdoor tips – http://hdawac.org/save-outdoors.html

4.2 Treatment BMPs

After implementation and design of both Source Control and Site Design BMPs, any remaining runoff from impervious DMAs must be directed to one or more on-site, treatment BMPs (LID or biotreatment) designed to infiltrate, evaportranspire, and/or bioretain the amount of runoff specified in Permit Section E.12.e (ii)(c) Numeric Sizing Criteria for Storm Water Retention and Treatment.

4.2.1 Project Specific Hydrology Characterization

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in the Phase II Small MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection from hydromodification.

If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.

It is noted that in the Phase II Small MS4 Permit jurisdictions, the LID BMP Design Capture Volume criteria is based on the 2-year rain event. The hydromodification performance criterion is based on the 10-year rain event.

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), San Bernardino County requires use of the P_6 method (Form 4.2-1) For pre- and post-development hydrologic calculation, San Bernardino County requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for hydromodification performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 1)		
[1] Project area DA 1 (ft^2): 2,065,180	[2] Imperviousness after applying preventative site design practices (Imp%): 0.1	[3] Runoff Coefficient (Rc): _0.733 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
[4] Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.353 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
[5] Compute P_6, Mean 6-hr Precipitation (inches): 0.44 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Desert = 1.2371)*		
[6] Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
[7] Compute design capture volume, DCV (ft^3): 108,150 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-2 Summary of Hydromodification Assessment (DA 1)

Is the change in post- and pre- condition flows captured on-site? : Yes ☒ No ☐

If "Yes", then complete Hydromodification assessment of site hydrology for 10yr storm event using Forms 4.2-3 through 4.2-5 and insert results below *(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual- Addendum 1)*

If "No," then proceed to Section 4.3 BMP Selection and Sizing

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	[1] 82,447 *Form 4.2-3 Item 12*	[2] 7.17 *Form 4.2-4 Item 13*	[3] 70 *Form 4.2-5 Item 10*
Post-developed	[4] 308,736 *Form 4.2-3 Item 13*	[5] 13.25 *Form 4.2-4 Item 14*	[6] 20.2 *Form 4.2-5 Item 14*
Difference	[7] *226,289* *Item 4 – Item 1*	[8] *(-6.08)* *Item 2 – Item 5*	[9] *(-49.8)* *Item 6 – Item 3*
Difference (as % of pre-developed)	[10] 274% *Item 7 / Item 1*	[11] *(-85%)* *Item 8 / Item 2*	[12] *(-70)%* *Item 9 / Item 3*

Form 4.2-3 Hydromodification Assessment for Runoff Volume (DA 1)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

See HCOC Analysis and unit hydrograph computations in Appendix D

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 10 yr, 24 hr storm (in): 2.13
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft^3): 82,447
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft^3): 308,736
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet hydromodification requirement, (ft^3): 210,852
*Vhydro = (Item 13 * 0.95) – Item 12*

Form 4.2-4 Hydromodification Assessment for Time of Concentration (DA 1)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1 *Use additional forms if there are more than 4 DMA*				Post-developed DA1 *Use additional forms if there are more than 4 DMA*			
	DMA A	DMA B	DMA C	DMA D	DMA A	DMA B	DMA C	DMA D
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o = *Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} = *(1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t = *Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c = *Item 5 + Item 11*								

See HCOC Analysis and unit hydrograph computations in Appendix D

13 Pre-developed time of concentration (min): 7.17 *Minimum of Item 12 pre-developed DMA*

14 Post-developed time of concentration (min): 13.252 *Minimum of Item 12 post-developed DMA*

15 Additional time of concentration needed to meet hydromodification requirement (min): 0 $T_{C\text{-}Hydro}$ = *(Item 13 * 0.95) – Item 14*

Existing TC was taken from Rational method, shortest TC in the longest run = 7.17 min.
TC developed is more (longer) than TC existing as developed condition slopes are much flatter. (4% ex vs 0.5% dev.)

Form 4.2-5 Hydromodification Assessment for Peak Runoff (DA 1)

Compute peak runoff for pre- and post-developed conditions

Variables		Pre-developed DA to Project Outlet (*Use additional forms if more than 3 DMA*)			Post-developed DA to Project Outlet (*Use additional forms if more than 3 DMA*)		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.7 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (Acres) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

See HCOC Analysis and unit hydrograph computations in Appendix D

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*

10 Peak runoff from pre-developed condition confluence analysis (cfs): 70 *Maximum of Item 8, 9, and 10 (including additional forms as needed)*

11 Post-developed Q_p at T_c for DMA A: 20.2 *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*

14 Peak runoff from post-developed condition confluence analysis (cfs): 20.2 *Maximum of Item 11, 12, and 13 (including additional forms as needed)*

15 Peak runoff reduction needed to meet Hydromodification Requirement (cfs): 0 *$Q_{p\text{-}hydro}$ = (Item 14 * 0.95) – Item 10*

4.3 BMP Selection and Sizing

Complete the following forms for each project site DA to document that the proposed treatment (LID/Bioretention) BMPs conform to the project DCV developed to meet performance criteria specified in the Phase II Small MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the Phase II Small MS4 Permit (see Section 5.3 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design BMPs (Form 4.3-2)
- Retention and Infiltration BMPs (Form 4.3-3) or
- Biotreatment BMPs (Form 4.3-4).

> Please note that the selected BMPs may also be used as dual purpose for on-site, hydromodification mitigation and management.

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Form 4.3-2 to determine the feasibility of applicable Site Design BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable Site Design BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combinations of site design, retention and/or infiltration BMPs is unable to mitigate the entire DCV, then the remainder of the volume-based performance criteria that cannot be achieved with site design, retention and/or infiltration BMPs must be managed through biotreatment BMPs. If biotreatment BMPs are used, then they must be sized to provide equivalent effectiveness based on Template Section 4.3.4.

4.3.1 Exceptions to Requirements for Bioretention Facilities

Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box-type biofilters or in-vault media filters) may be used for the following categories of Regulated Projects:

1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;

2) Facilities receiving runoff solely from existing (pre-project) impervious areas; and

3) Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)
Feasibility Criterion – Complete evaluation for each DA on the Project Site
[1] Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒ *Refer to Section 5.3.2.1 of the TGD for WQMP*
If Yes, Provide basis: (attach)
[2] Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒ (Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert): • The location is less than 50 feet away from slopes steeper than 15 percent • The location is less than ten feet from building foundations or an alternative setback. • A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.
If Yes, Provide basis: (attach)
[3] Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒
If Yes, Provide basis: (attach)
[4] Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒
If Yes, Provide basis: (attach)
[5] Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒
If Yes, Provide basis: (attach)
[6] Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒ *See Section 3.5 of the TGD for WQMP and WAP*
If Yes, Provide basis: (attach)
[7] Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒ *If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Selection and Evaluation of Biotreatment BMP BMP. If no, then proceed to Item 8 below.* [8] Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒ *If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Site Design BMP. If no, then proceed to Item 9, below.* [9] All answers to Item 1 through Item 6 are "No": *Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP. Proceed to Form 4.3-2, Site Design BMPs.*

4.3.2 Site Design BMP

Section E.12.e. of the Small Phase II MS4 Permit emphasizes the use of LID preventative measures; and the use of Site Design BMPs reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable Site Design shall be provided except where they are mutually exclusive with each

other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of Site Design BMPs. If a project cannot feasibly meet BMP sizing requirements or cannot fully address hydromodification, feasibility of all applicable Site Design BMPs must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Complete Form 4.3-2 to identify and calculate estimated retention volume from implementing site design BMP. Refer to Section 5.4 in the TGD for more detailed guidance.

Form 4.3-2 Site Design BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☐ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3):		$V_{retention}$ *=Sum of Item 4 for all BMPs*	
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☒ No ☐ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA 1A DMA A BMP Type HSC	DA 1 DMA A BMP Type HSC	DA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)	25,000		
8 Ponding depth (ft) (min. 0.5 ft.)	2.5	1	
9 Surface area of amended soil/gravel (ft^2)	25,000		
10 Average depth of amended soil/gravel (ft) (min. 1 ft.)	1		
11 Average porosity of amended soil/gravel	0.4		
12 Retention volume achieved from on-lot infiltration (ft^3) $V_{retention}$ *= (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*	72,500		

Form 4.3-2 cont. Site Design BMPs (DA 1)

13 Runoff volume retention from on-lot infiltration (ft^3): 72,500 $V_{retention}$ =*Sum of Item 12 for all BMPs*

14 Implementation of Street Trees: Yes ☐ No ☐ *If yes, complete Items 14-18. If no, proceed to Item 19*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Number of Street Trees			
16 Average canopy cover over impervious area (ft^2)			
17 Runoff volume retention from street trees (ft^3) $V_{retention}$ = *Item 15 * Item 16 * (0.05/12) assume runoff retention of 0.05 inches*			

18 Runoff volume retention from street tree BMPs (ft^3): $V_{retention}$ = *Sum of Item 17 for all BMPs*

19 Total Retention Volume from Site Design BMPs: 72,500 *Sum of Items 5, 13 and 18*

4.3.3 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix C of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

4.3.3.1 Allowed Variations for Special Site Conditions

The bioretention system design parameters of this Section may be adjusted for the following special site conditions:

1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.

2) Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).

3) Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.

4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide additional treatment to address pollutants of concern unless these high-risk areas are isolated from storm water runoff or bioretention areas with little chance of spill migration.

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Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 1)

1 Remaining LID DCV not met by site design BMP (ft^3): 35,650 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item19*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*			
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*			
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*			
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*			
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*			
8 Infiltrating surface area, *SA_{BMP}* (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*			
9 Amended soil depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity			
11 Gravel depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*			
12 Gravel porosity			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*	227,392		

16 Total Retention Volume from LID Infiltration BMPs: 227,392 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 100% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained onsite with combination of hydrologic source control and LID retention/infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-4 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV. Biotreatment computations are included as follows:

- Use Form 4.3-5 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-6 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-7 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-4 Selection and Evaluation of Biotreatment BMP (DA 1)

1 Remaining LID DCV not met by site design , or infiltration, BMP for potential biotreatment (ft^3): *Form 4.2-1 Item 7 - Form 4.3-2 Item 19 – Form 4.3-3 Item 16*	List pollutants of concern *Copy from Form 2.3-1.*	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-5 and 4.3-6 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-7 to compute treated flow*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet exte ☐ Dry exte	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): *Form 4.3-5 Item 15 + Form 4.3-6 Item 13*	**4** Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	**5** Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

Not used

Form 4.3-5 Volume Based Biotreatment (DA 1) – Bioretention and Planter Boxes with Underdrains

Biotreatment BMP Type *(Bioretention w/underdrain, planter box w/underdrain, other comparable BMP)*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*			
2 Amended soil infiltration rate *Typical ~ 5.0*			
3 Amended soil infiltration safety factor *Typical ~ 2.0*			
4 Amended soil design percolation rate (in/hr) P_{design} *= Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy* **Not used**			
6 Maximum ponding depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Ponding Depth (ft) d_{BMP} *= Minimum of (1/12 * Item 4 * Item 5) or Item 6*			
8 Amended soil surface area (ft^2)			
9 Amended soil depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity, *n*			
11 Gravel depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
12 Gravel porosity, *n*			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Biotreated Volume (ft^3) $V_{biotreated}$ *= Item 8 * [(Item 7/2) + (Item 9 * Item 10) +(Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Total biotreated volume from bioretention and/or planter box with underdrains BMP: *Sum of Item 14 for all volume-based BMPs included in this form*			

Form 4.3-6 Volume Based Biotreatment (DA 1) – Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft^2) A_{bottom} = *Item 2 * Item 3*				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft^2) $A_{surface}$ =*(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))*				
8 Storage volume (ft^3) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =*Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]*				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = *(Item $8_{forebay}$ + Item 8_{basin}) / (Item 9 * 3600)*				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft^3) $V_{biotreated}$ = *(Item $8_{forebay}$ + Item 8_{basin}) +(Item 10 * Item 11 * 3600)*				
13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention : *(Sum of Item 12 for all BMP included in plan)*				

not used

Form 4.3-7 Flow Based Biotreatment (DA 1)

Biotreatment BMP Type *Vegetated swale, vegetated filter strip, or other comparable proprietary BMP*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in TGD Table 5-5*			
2 Flow depth for water quality treatment (ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
3 Bed slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
4 Manning's roughness coefficient			
5 Bottom width (ft) b_w = *(Form 4.3-5 Item 6 * Item 4) / (1.49 * Item 2^1.67 * Item 3^0.5)*			
6 Side Slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Cross sectional area (ft^2) *A = (Item 5 * Item 2) + (Item 6 * Item 2^2)*			
8 Water quality flow velocity (ft/sec) *V = Form 4.3-5 Item 6 / Item 7*			
9 Hydraulic residence time (min) *Pollutant specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Length of flow based BMP (ft) *L = Item 8 * Item 9 * 60*			
11 Water surface area at water quality flow depth (ft^2) SA_{top} = *(Item 5 + (2 * Item 2 * Item 6)) * Item 10*			

Not used

4.3.5 Conformance Summary

Complete Form 4.3-8 to demonstrate how on-site LID DCV is met with proposed site design, infiltration, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-8 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 108,150 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design BMP (ft^3): 72,500 *Copy Item18 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 227,392 *Copy Item 16 in Form 4.3-3*

4 On-site biotreatment with volume based biotreatment BMP (ft^3): *Copy Item 3 in Form 4.3-4*

5 Flow capacity provided by flow based biotreatment BMP (cfs): *Copy Item 6 in Form 4.3-4*

6 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design or infiltration BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible; therefore biotreatment BMP provides biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

7 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of Site Design, retention and infiltration, , and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes if Form 4.3-4 Item 7is checked yes, Form 4.3-4 Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*

- Facilities, or a combination of facilities, of a different design than in Section E.12.e.(ii)(f) may be permitted if all of the following Phase II Small MS4 General Permit 2013-0001-DWQ 55 February 5, 2013 measures of equivalent effectiveness are demonstrated:
  1) Equal or greater amount of runoff infiltrated or evapotranspired; ☐
  2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment; ☐
  3) Equal or greater protection against shock loadings and spills; ☐
  4) Equal or greater accessibility and ease of inspection and maintenance. ☐

4.3.6 Hydromodification Control BMP

Use Form 4.3-9 to compute the remaining runoff volume retention, after Site Design BMPs are implemented, needed to address hydromodification, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential hydromodification. Describe the proposed hydromodification treatment control BMP. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

Form 4.3-9 Hydromodification Control BMPs (DA 1)

1 Volume reduction needed for hydromodification performance criteria (ft^3): 226,051 *(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*	**2** On-site retention with site design and infiltration, BMP (ft^3): 299,892 *Sum of Form 4.3-8 Items 2, 3, and 4. Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving hydromodification volume reduction*
3 Remaining volume for hydromodification volume capture (ft^3): 0 *Item 1 – Item 2*	**4** Volume capture provided by incorporating additional on-site BMPs (ft^3):

5 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☒ No ☐

If yes, hydromodification performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site BMP ☐
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐

6 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☒ No ☐

If yes, hydromodification performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site retention BMPs ☐

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance.

Not used

Alternative Designs — Facilities n of facilities, of a different design than in Permit Section E.12.e.(ii)(f) may be permitted if all of the fc of equivalent effectiveness are demonstrated:

1) Equal or greater amount of runoff infiltrated or evapotranspired;

2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;

3) Equal or greater protection against shock loadings and spills;

4) Equal or greater accessibility and ease of inspection and maintenance.

The Project Proponent will need to obtain written approval for an alternative design from the Lahontan Regional Water Board Executive Officer (see Section 6 of the TGD for WQMP).

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 2)

1 Project area DA 2 (ft^2): 2,091,751	**2** Imperviousness after applying preventative site design practices (Imp%): 90	**3** Runoff Coefficient (Rc): _0.73 *$R_c = 0.858(Imp\%)^{\wedge 3}-0.78(Imp\%)^{\wedge 2}+0.774(Imp\%)+0.04$*

4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.353 http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

5 Compute P_6, Mean 6-hr Precipitation (inches): 0.44

*P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*

6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*	24-hrs ☐ 48-hrs ☒

7 Compute design capture volume, DCV (ft^3): 109,133

*DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)*
Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2

Form 4.2-2 Summary of HCOC Assessment (DA 2)

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☒ No ☐

Go to: http://sbcounty.permitrack.com/WAP/

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	**1** 83,508 *Form 4.2-3 Item 12*	**2** 7.2 *Form 4.2-4 Item 13*	**3** 71 *Form 4.2-5 Item 10*
Post-developed	**4** 312,713 *Form 4.2-3 Item 13*	**5** 17.2 *Form 4.2-4 Item 14*	**6** 20.1 *Form 4.2-5 Item 14*
Difference	**7** *229,205* *Item 4 – Item 1*	**8** *(-10)* *Item 2 – Item 5*	**9** *(-50.9)* *Item 6 – Item 3*
Difference (as % of pre-developed)	**10** *274%* *Item 7 / Item 1*	**11** *(-138)%* *Item 8 / Item 2*	**12** *72%* *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 2)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft² *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B				DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft² *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

See HCOC Analysis and unit hydrograph computations in Appendix D

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in): 2.13
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft³): 83,508
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft³): 312,713
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft³): 213,569
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 2)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1				Post-developed DA1			
	DMA E	DMA F	DMA G	DMA H	DMA E	DMA F	DMA G	DMA H
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o = *Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} = *(1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t = *Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c = *Item 5 + Item 11*								

See HCOC Analysis and unit hydrograph computations in Appendix D

13 Pre-developed time of concentration (min): 7.2 *Minimum of Item 12 pre-developed DMA*

14 Post-developed time of concentration (min): 17.2 *Minimum of Item 12 post-developed DMA*

15 Additional time of concentration needed to meet HCOC requirement (min): 0 $T_{C\text{-}HCOC}$ = *(Item 13 * 0.95) – Item 14*

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 2)

Compute peak runoff for pre and post developed conditions

Variables		Pre-developed DA to Project Outlet *Use additional forms if more than 3 DMA*			Post-developed DA to Project Outlet *Use additional forms if more than 3 DMA*		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (ft²) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

See HCOC Analysis and unit hydrograph computations in Appendix D

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*

10 Peak runoff from pre-developed condition confluence analysis (cfs): 71 *Maximum of Item 8, 9, and 10 (including additional forms as needed)*

11 Post-developed Q_p at T_c for DMA A: 20.1 *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*

14 Peak runoff from post-developed condition confluence analysis (cfs): 20.1 *Maximum of Item 11, 12, and 13 (including additional forms as needed)*

15 Peak runoff reduction needed to meet HCOC Requirement (cfs): 0 *$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*

Form 4.3-1 Infiltration BMP Feasibility (DA 2)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

1 Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒

Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

2 Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒

(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

3 Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

4 Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

5 Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

6 Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒

See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

7 Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒

If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

8 Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒

If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP.
If no, then proceed to Item 9, below.

9 All answers to Item 1 through Item 6 are "No":

Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Hydrologic Source Control BMP.

Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 2)

1 Remaining LID DCV not met by site design HSC BMP (ft^3): 109,133 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 2 DMA A BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*			
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*			
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*			
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*			
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*			
8 Infiltrating surface area, *SA_{BMP}* (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*			
9 Amended soil depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity			
11 Gravel depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*			
12 Gravel porosity			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*			

16 Total Retention Volume from LID Infiltration BMPs: 227,392 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 208% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained on-site with combination of hydrologic source control and LID retention and infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

Form 4.3-8 Conformance Summary and Alternative Compliance Volume Estimate (DA 2)

1 Total LID DCV for the Project DA 2 (ft^3): 109,133 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 230,364 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

Form 4.3-9 Hydromodification Control BMPs (DA 2)

1 Volume reduction needed for HCOC performance criteria (ft^3): 210,852
*(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*

2 On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): 230,364 *Sum of Form 4.3-9 Items 2, 3, and 4*
Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction

3 Remaining volume for HCOC volume capture (ft^3): 0 *Item 1 – Item 2*

4 Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☒ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☒ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 3)

1 Project area DA 3 (ft^2): 1,680,109	**2** Imperviousness after applying preventative site design practices (Imp%): 90	**3** Runoff Coefficient (Rc): _0.73 *$R_c = 0.858(Imp\%)^{\wedge 3}-0.78(Imp\%)^{\wedge 2}+0.774(Imp\%)+0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.353 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.44 *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 87,635 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-2 Summary of HCOC Assessment (DA 3)

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☒ No ☐

Go to: http://sbcounty.permitrack.com/WAP/

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	**1** 67,074 *Form 4.2-3 Item 12*	**2** 7.2 *Form 4.2-4 Item 13*	**3** 57 *Form 4.2-5 Item 10*
Post-developed	**4** 183,902 *Form 4.2-3 Item 13*	**5** 12.5 *Form 4.2-4 Item 14*	**6** 13.2 *Form 4.2-5 Item 14*
Difference	**7** *116,198* *Item 4 – Item 1*	**8** *(-5.3)* *Item 2 – Item 5*	**9** *(-43.8)* *Item 6 – Item 3*
Difference (as % of pre-developed)	**10** *173%* *Item 7 / Item 1*	**11** *(-74)%* *Item 8 / Item 2*	**12** *77%* *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 3)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft² *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DM			MA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft² *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

See HCOC Analysis and unit hydrograph computations in Appendix D

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in): 2.13
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft³): 67,074
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft³): 183,902
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft³): 107,634
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 3)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1				Post-developed DA1			
	DMA E	DMA F	DMA G	DMA H	DMA E	DMA F	DMA G	DMA H
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o = *Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} = *(1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t = *Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c = *Item 5 + Item 11*								

See HCOC Analysis and unit hydrograph computations in Appendix D

13 Pre-developed time of concentration (min): 7.2 *Minimum of Item 12 pre-developed DMA*

14 Post-developed time of concentration (min): 12.5 *Minimum of Item 12 post-developed DMA*

15 Additional time of concentration needed to meet HCOC requirement (min): 0 $T_{C\text{-}HCOC}$ = *(Item 13 * 0.95) – Item 14*

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 3)

Compute peak runoff for pre and post developed conditions

Variables		Pre-developed DA to Project Outlet *Use additional forms if more than 3 DMA*			Post-developed DA to Project Outlet *Use additional forms if more than 3 DMA*		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (ft²) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

See HCOC Analysis and unit hydrograph computations in Appendix D

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*

10 Peak runoff from pre-developed condition confluence analysis (cfs): 57 *Maximum of Item 8, 9, and 10 (including additional forms as needed)*

11 Post-developed Q_p at T_c for DMA A: 13.2 *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*

14 Peak runoff from post-developed condition confluence analysis (cfs): 13.2 *Maximum of Item 11, 12, and 13 (including additional forms as needed)*

15 Peak runoff reduction needed to meet HCOC Requirement (cfs): 0 *$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*

Form 4.3-1 Infiltration BMP Feasibility (DA 3)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

1 Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒

Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

2 Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒

(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

3 Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

4 Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

5 Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

6 Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒

See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

7 Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒

If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

8 Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒

If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP.
If no, then proceed to Item 9, below.

9 All answers to Item 1 through Item 6 are "No":

Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Hydrologic Source Control BMP.

Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 3)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☐ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3): *$V_{retention}$ =Sum of Item 4 for all BMPs*			
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☐ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA 3 DMA C BMP Type HSC	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)	22,000		
8 Ponding depth (ft)	1.5		
9 Surface area of amended soil/gravel (ft^2)	15,000		
10 Average depth of amended soil/gravel (ft)	1		
11 Average porosity of amended soil/gravel	0.4		
12 Retention volume achieved from on-lot infiltration (ft^3) *$V_{retention}$ = (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*	39,000		
13 Runoff volume retention from on-lot infiltration (ft^3): 39,000 *$V_{retention}$ =Sum of Item 12 for all BMPs*			

Form 4.3-2 cont. Site Design Hydrologic Source Control BMPs (DA 3)

14 Implementation of evapotranspiration BMP (green, brown, or blue roofs): Yes ☐ No ☐ *If yes, complete Items 15-20. If no, proceed to Item 21*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Rooftop area planned for ET BMP (ft^2)			
16 Average wet season ET demand (in/day) *Use local values, typical ~ 0.1*			
17 Daily ET demand (ft^3/day) *Item 15 * (Item 16 / 12)*			
18 Drawdown time (hrs) *Copy Item 6 in Form 4.2-1*			
19 Retention Volume (ft^3) *$V_{retention}$ = Item 17 * (Item 18 / 24)*			
20 Runoff volume retention from evapotranspiration BMPs (ft^3): *$V_{retention}$ =Sum of Item 19 for all BMPs*			
21 Implementation of Street Trees: Yes ☐ No ☐ *If yes, complete Items 22-25. If no, proceed to Item 26*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
22 Number of Street Trees			
23 Average canopy cover over impervious area (ft^2)			
24 Runoff volume retention from street trees (ft^3) *$V_{retention}$ = Item 22 * Item 23 * (0.05/12) assume runoff retention of 0.05 inches*			
25 Runoff volume retention from street tree BMPs (ft^3): *$V_{retention}$ = Sum of Item 24 for all BMPs*			
26 Implementation of residential rain barrels/cisterns: Yes ☐ No ☐ *If yes, complete Items 27-29; If no, proceed to Item 30*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
27 Number of rain barrels/cisterns			
28 Runoff volume retention from rain barrels/cisterns (ft^3) *$V_{retention}$ = Item 27 * 3*			
29 Runoff volume retention from residential rain barrels/Cisterns (ft3): *$V_{retention}$ =Sum of Item 28 for all BMPs*			
30 Total Retention Volume from Site Design Hydrologic Source Control BMPs: 39,000 *Sum of Items 5, 13, 20, 25 and 29*			

Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 3)

1 Remaining LID DCV not met by site design HSC BMP (ft^3): 48,635 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 3 DMA A BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*			
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*			
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*			
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*			
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*			
8 Infiltrating surface area, *SA_{BMP}* (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*			
9 Amended soil depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity			
11 Gravel depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*			
12 Gravel porosity			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*			

16 Total Retention Volume from LID Infiltration BMPs: 185,343 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 211% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained on-site with combination of hydrologic source control and LID retention and infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

Form 4.3-8 Conformance Summary and Alternative Compliance Volume Estimate (DA 3)

1 Total LID DCV for the Project DA 3 (ft^3): 87,635 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): 39,000 *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 185,343 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

Form 4.3-9 Hydromodification Control BMPs (DA 3)

1 Volume reduction needed for HCOC performance criteria (ft^3): 107,634
*(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*

2 On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): 224,343 *Sum of Form 4.3-9 Items 2, 3, and 4*
Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction

3 Remaining volume for HCOC volume capture (ft^3): 0 *Item 1 – Item 2*

4 Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☒ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☒ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 4)

1 Project area DA 4 (ft^2): 1,636,114	**2** Imperviousness after applying preventative site design practices (Imp%): 90	**3** Runoff Coefficient (Rc): _0.73 *$R_c = 0.858(Imp\%)^{\wedge 3}-0.78(Imp\%)^{\wedge 2}+0.774(Imp\%)+0.04$*

4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.353 http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

5 Compute P_6, Mean 6-hr Precipitation (inches): 0.44

*P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*

6 Drawdown Rate

Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.

24-hrs ☐
48-hrs ☒

7 Compute design capture volume, DCV (ft^3): 85,336

*DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)*
Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2

Form 4.2-2 Summary of HCOC Assessment (DA 4)

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☒ No ☐

Go to: http://sbcounty.permitrack.com/WAP/

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	**1** 65,317 *Form 4.2-3 Item 12*	**2** 7.2 *Form 4.2-4 Item 13*	**3** 55.5 *Form 4.2-5 Item 10*
Post-developed	**4** 179,086 *Form 4.2-3 Item 13*	**5** 11.04 *Form 4.2-4 Item 14*	**6** 10.2 *Form 4.2-5 Item 14*
Difference	**7** *113,769* *Item 4 – Item 1*	**8** *(-3.8)* *Item 2 – Item 5*	**9** *(-45.3)* *Item 6 – Item 3*
Difference (as % of pre-developed)	**10** *174%* *Item 7 / Item 1*	**11** *(-53)%* *Item 8 / Item 2*	**12** *(-82)%* *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 4)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

See HCOC Analysis and unit hydrograph computations in Appendix D

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in): 2.13
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft^3): 65,317
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft^3): 179,086
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft^3): 104,815
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 4)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1				Post-developed DA1			
	DMA E	DMA F	DMA G	DMA H	DMA E	DMA F	DMA G	DMA H
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o = *Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} = *(1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t = *Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c = *Item 5 + Item 11*								

See HCOC Analysis and unit hydrograph computations in Appendix D

13 Pre-developed time of concentration (min): 7.2 *Minimum of Item 12 pre-developed DMA*

14 Post-developed time of concentration (min): 11.04 *Minimum of Item 12 post-developed DMA*

15 Additional time of concentration needed to meet HCOC requirement (min): 0 $T_{C\text{-}HCOC}$ = *(Item 13 * 0.95) – Item 14*

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 4)

Compute peak runoff for pre and post developed conditions

Variables		Pre-developed DA to Project Outlet *Use additional forms if more than 3 DMA*			Post-developed DA to Project Outlet *Use additional forms if more than 3 DMA*		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (ft²) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

See HCOC Analysis and unit hydrograph computations in Appendix D

8 Pre-developed Q_p at T_c for DMA A: 55.5 *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*
10 Peak runoff from pre-developed condition confluence analysis (cfs): 55.5 *Maximum of Item 8, 9, and 10 (including additional forms as needed)*		
11 Post-developed Q_p at T_c for DMA A: 10.2 *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*
14 Peak runoff from post-developed condition confluence analysis (cfs): 10.2 *Maximum of Item 11, 12, and 13 (including additional forms as needed)*		
15 Peak runoff reduction needed to meet HCOC Requirement (cfs): 0 *$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*		

Form 4.3-1 Infiltration BMP Feasibility (DA 4)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

1 Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒

Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

2 Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒

(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

3 Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

4 Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

5 Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

6 Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒

See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

7 Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒

If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

8 Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒

If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP.
If no, then proceed to Item 9, below.

9 All answers to Item 1 through Item 6 are "No":

Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Hydrologic Source Control BMP.

Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 4)

1 Remaining LID DCV not met by site design HSC BMP (ft^3): 85,336 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 4 DMA A BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*			
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*			
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*			
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*			
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*			
8 Infiltrating surface area, *SA_{BMP}* (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*			
9 Amended soil depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity			
11 Gravel depth, *d_{media}* (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*			
12 Gravel porosity			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*			

16 Total Retention Volume from LID Infiltration BMPs: 180,500 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 211% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained on-site with combination of hydrologic source control and LID retention and infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

Form 4.3-8 Conformance Summary and Alternative Compliance Volume Estimate (DA 4)

1 Total LID DCV for the Project DA 4 (ft^3): 85,336 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): 0 *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 180,500 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

Form 4.3-9 Hydromodification Control BMPs (DA 4)

1 Volume reduction needed for HCOC performance criteria (ft^3): 104,815
*(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*

2 On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): 180,500 *Sum of Form 4.3-9 Items 2, 3, and 4*
Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction

3 Remaining volume for HCOC volume capture (ft^3): 0 *Item 1 – Item 2*

4 Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☒ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☒ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMPs included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and a Maintenance Agreement. The Maintenance Agreement must also be attached to the WQMP.

Note that at time of Project construction completion, the Maintenance Covenant must be completed, signed, notarized and submitted to the Town's Engineering Department

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Site Design on-lot infiltration	FGFW IV, LLC	Inspect Basin for trash, buildup of sediment and weeds. Clean out weeds and trash, remove sediment build up. Maintain landscaping around sides and adjacent area.	Twice yearly, April and October suggested.
Underground infiltration	FGFW IV, LLC	Inspect and Flush debris and sediment after major storms. . Ensure outflow orifices are clear of debris.	Minimum once yearly and after a major rainstorm.
Storm drain and Catch basin stenciling	FGFW IV, LLC	Inspect catch basins, check for illicit dumping or spills, Inspect storm drain for trash and sediment. Clean if necessary. Refresh stenciling if needed.	Once yearly prior to rainy season
Parking lot sweeping	FGFW IV, LLC	Inspect for spills, oil drips and trash. Clean any spills, oil immediately. Inspect for accumulation of dirt/dust. Sweep parking as needed.	Monthly
Catch basin inserts	FGFW IV, LLC	Inspect for trash and debris and check the oil absorbing pillow.	Twice a year.
Irrigation and Landscaping	FGFW IV, LLC	Maintain landscaping, replace dead material. Inspect irrigation, fix and repair leaks.	Weekly to monthly.

Trash Enclosures	FGFW IV, LLC	Inspect and clean trash and debris. Do not wash area. Ensure lids are closed and enclosure properly maintained.	Weekly

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their local Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

Attach all O&M Plans and Maintenance Covenant for BMP to the WQMP. See following page for Maintenance Covenant Template

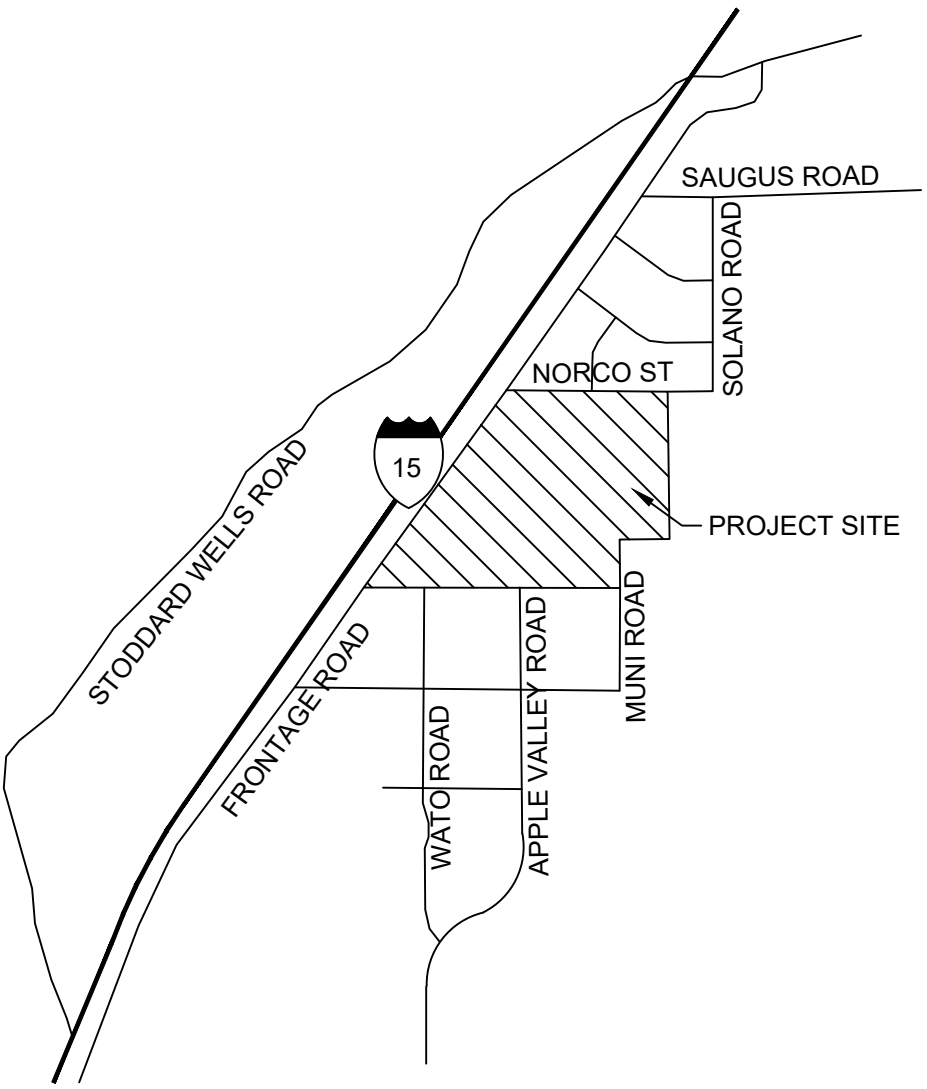
6.4 Other Supporting Documentation

- BMP Educational Materials
- Activity Restriction-C, C&R's & Lease Agreements

Appendix A

Vicinity Map

INLAND EMPIRE NORTH LOGISTICS CENTER



VICINITY MAP

N.T.S.

DAVID EVANS AND ASSOCIATES INC.
18484 Outer Highway 18N Suite 225
Apple Valley California 92307
Phone: 760.524.9100

VICINITY MAP

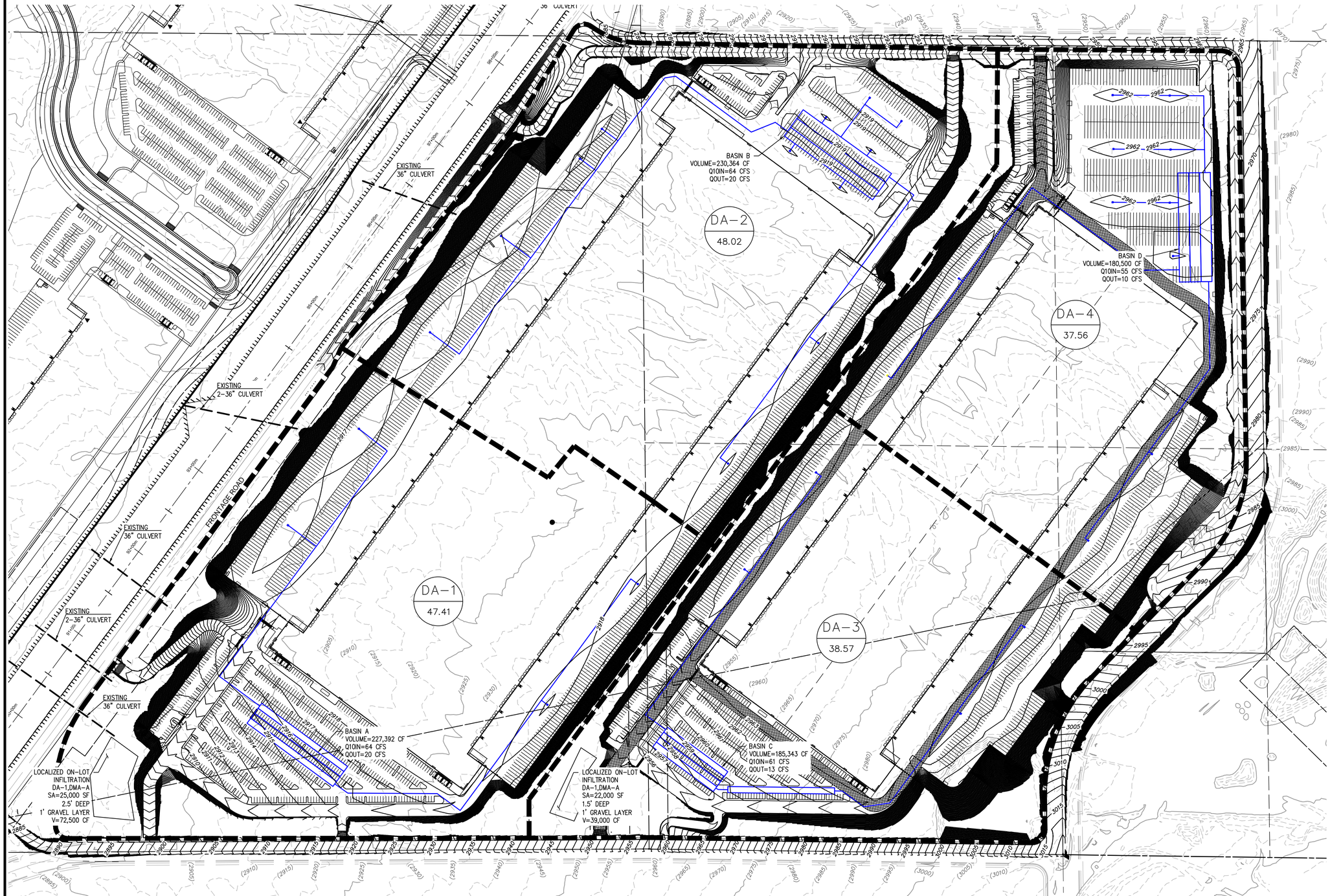
TOWN OF APPLE VALLEY

Appendix B

- WQMP Exhibit

INLAND EMPIRE NORTH LOGISTICS CENTER

WQMP SITE PLAN



LEGEND

- HYDROLOGY BOUNDARY
- A / 7.96 — DRAINAGE MANAGMENT AREA ID / ACREAGE
- PROPOSED DRAINAGE FLOW
- PROPOSED AC PAVEMENT
- PROPOSED PCC PAVEMENT
- PROPOSED UNDERGROUND DETENTION AREA
- PROPOSED LANDSCAPE
- PROPOSED BIO-INFILTRATION AREA
- XXXX — PROPOSED CONTOUR
- (XXXX) — EXISTING CONTOUR
- PROPOSED ROOF DRAIN

Area ID (Acre)	Area	DVC (CF)	HCOC (Min.) (CF)	UG Storage/ Infiltration (CF) Provided	
DA-1	47.41	108,150	226,051	227,392	Basin A
DA-2	48.02	109,133	228,960	230,364	Basin B
DA-3	38.57	87,635	183,902	185,343	Basin C
DA-4	37.57	85,336	179,086	180,500	Basin D
Total		390,254.00	817,999.00	823,599	

Basin Routing	Qin (CFS)	Qout (CFS)
Basin A	63.7	20.1
Basin B	64.4	20.1
Basin C	51	13.2
Basin D	55.4	10.2
Total	234.5	63.6

Existing Site Q10 = 252.9 cfs
Developed Site Q = 63.6 cfs
(25% reduction)

N

150 0 150 300
scale 1" = 150' feet

18484 Outer Highway 18 N Suite 225
Apple Valley California 92307
Phone: 760.524.9100

DAVID EVANS AND ASSOCIATES INC.

Drawing Name: P:\KSF\WO00020\01.0450NFO\06TRReports\WQMP\CAD\WQMP Exhibit.dwg
Last Opened: Aug 17, 2022 - 2:09pm By: Jra

Appendix C

LID BMP sizing Calculations

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture

SUBJECT	By	Date	Job No	Area
San Bernardino County Volume BMP	Helen Wilson	9-Aug-22	FGFW0001	Area DA 1

Design Procedure for BMP Design Volume

85th percentile runoff

Designer: Helen Wilson
Company: DEA Inc
Date: 9-Aug-2022
Project: Inland Empire North Logistics Center
Location: San Bernardino County

1. Determine Runoff coefficient				
a. Determine total impervious area	$I_{mpervious}$ =	42.76	acres	**(1)**
b. Determine total tributary area	A_{total} =	47.41	acres	**(2)**
c. Determine impervious fraction **i = (1) / (2)**	i =	0.90		**(3)**
d. Composite Runoff Coefficient $C = 0.858i^3 - 0.780i^2 + 0.774i + 0.040$	C_{BMP} =	0.733		**(4)**
2. Determine the Area Averaged "6-hour Mean Storm Rainfall"				
a. Regression Coefficient	P_{6r} =	1.24		**(5)**
b. Rainfall	P =	0.353	in	**(6)**
c. 6 Hour Mean Storm Rainfall **P_6 = (5)*(6)**	P_6 =	0.44	in	**(7)**
a. Drawdown time a =1.582 for 24 hours a = 1.963 for 48 hours	a =	1.963		**(8)**
b. P_0 = a*CBMP*P_6 **P_o = (8)*(4)*(7)**	P_0 =	0.63		**(9)**
4. Calculate Target Storage Volume				
a. V_0 = (P0*A)/12 = **(9) x (2)/12** [in-feet]	V_0 =	2.48	acre-ft	**(10)**
	V_0 =	**108,150.36**	**ft^3**	**(11)**

Tustin Office: 714.665.4500 Tel / 714.665-4501 Fax
Santa Clarita Office: 661.284.7400 Tel / 661.284.7401 Fax
Victorville Office: 760.524.9100 Tel / 760.524.9101 Fax
Temecula Office: 909.294.9300 Tel / 909.294.9301 Fax

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SUBJECT	By	Date	Job No	Area
San Bernardino County Volume BMP	Helen Wilson	9-Aug-22	FGFW0001	Area DA 2

Design Procedure for BMP Design Volume

85th percentile runoff

Designer: Helen Wilson
Company: DEA Inc
Date: 9-Aug-2022
Project: Inland Empire North Logistics Center
Location: San Bernardino County

1. Determine Runoff coefficient				
a. Determine total impervious area	$I_{mpervious}$ =	43.22	acres	**(1)**
b. Determine total tributary area	A_{total} =	48.02	acres	**(2)**
c. Determine impervious fraction **i = (1) / (2)**	i =	0.90		**(3)**
d. Composite Runoff Coefficient $C = 0.858i^3 - 0.780i^2 + 0.774i + 0.040$	C_{BMP} =	0.730		**(4)**
2. Determine the Area Averaged "6-hour Mean Storm Rainfall"				
a. Regression Coefficient	P_{6r} =	1.24		**(5)**
b. Rainfall	P =	0.353	in	**(6)**
c. 6 Hour Mean Storm Rainfall **P_6 = (5)*(6)**	P_6 =	0.44	in	**(7)**
a. Drawdown time a =1.582 for 24 hours a = 1.963 for 48 hours	a =	1.963		**(8)**
b. P_0 = a*CBMP*P_6 **P_o = (8)*(4)*(7)**	P_0 =	0.63		**(9)**
4. Calculate Target Storage Volume				
a. V_0 = (P0*A)/12 = **(9) x (2)/12** [in-feet]	V_0 =	2.51	acre-ft	**(10)**
	V_0 =	**109,132.78**	**ft^3**	**(11)**

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SUBJECT	By	Date	Job No	Area
San Bernardino County Volume BMP	Helen Wilson	9-Aug-22	FGFW0001	Area DA 3

Design Procedure for BMP Design Volume

85th percentile runoff

Designer: Helen Wilson
Company: DEA Inc
Date: 9-Aug-2022
Project: Inland Empire North Logistics Center
Location: San Bernardino County

1. Determine Runoff coefficient				
a. Determine total impervious area	$I_{mpervious}$ =	34.71	acres	**(1)**
b. Determine total tributary area	A_{total} =	38.57	acres	**(2)**
c. Determine impervious fraction **i = (1) / (2)**	i =	0.90		**(3)**
d. Composite Runoff Coefficient $C = 0.858i^3 - 0.780i^2 + 0.774i + 0.040$	C_{BMP} =	0.730		**(4)**
2. Determine the Area Averaged "6-hour Mean Storm Rainfall"				
a. Regression Coefficient	P_{6r} =	1.24		**(5)**
b. Rainfall	P =	0.353	in	**(6)**
c. 6 Hour Mean Storm Rainfall **P_6 = (5)*(6)**	P_6 =	0.44	in	**(7)**
a. Drawdown time a =1.582 for 24 hours a = 1.963 for 48 hours	a =	1.963		**(8)**
b. P_0 = a*CBMP*P_6 **P_o = (8)*(4)*(7)**	P_0 =	0.63		**(9)**
4. Calculate Target Storage Volume				
a. V_0 = (P0*A)/12 = **(9) x (2)/12** [in-feet]	V_0 =	2.01	acre-ft	**(10)**
	V_0 =	**87,635.36**	**ft^3**	**(11)**

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SUBJECT	By	Date	Job No	Area
San Bernardino County Volume BMP	Helen Wilson	9-Aug-22	FGFW0001	Area DA 4

Design Procedure for BMP Design Volume

85th percentile runoff

Designer: Helen Wilson
Company: DEA Inc
Date: 9-Aug-2022
Project: Inland Empire North Logistics Center
Location: San Bernardino County

1. Determine Runoff coefficient				
a. Determine total impervious area	$I_{mpervious}$ =	33.80	acres	**(1)**
b. Determine total tributary area	A_{total} =	37.56	acres	**(2)**
c. Determine impervious fraction **i = (1) / (2)**	i =	0.90		**(3)**
d. Composite Runoff Coefficient $C = 0.858i^3 - 0.780i^2 + 0.774i + 0.040$	C_{BMP} =	0.730		**(4)**
2. Determine the Area Averaged "6-hour Mean Storm Rainfall"				
a. Regression Coefficient	P_{6r} =	1.24		**(5)**
b. Rainfall	P =	0.353	in	**(6)**
c. 6 Hour Mean Storm Rainfall **P_6 = (5)*(6)**	P_6 =	0.44	in	**(7)**
a. Drawdown time a =1.582 for 24 hours a = 1.963 for 48 hours	a =	1.963		**(8)**
b. P_0 = a*CBMP*P_6 **P_o = (8)*(4)*(7)**	P_0 =	0.63		**(9)**
4. Calculate Target Storage Volume				
a. V_0 = (P0*A)/12 = **(9) x (2)/12** [in-feet]	V_0 =	1.96	acre-ft	**(10)**
	V_0 =	**85,335.64**	**ft^3**	**(11)**

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Appendix D

HCOC Analysis

Unit Hydrograph Analysis

Unit Hydrograph

Area ID	TC (hour)	Qp10 (cfs)	Volume10 (Ac ft)	Qp100 (cfs)	Volume100 (Ac ft)
Area A	0.12	252.9	6.8491	553.8	32.1453
Developed					
Area A-D		299.2	25.6714*	542.47	45.0234*
Difference		**46.3**	**18.7773** (817,939 CF)**	**11.3**	**12.8691* (560,578 CF)**

* Tentative values for Developed for initial design consideration and to compare with Developed, 10year below. This initial value uses only HSG C, whereas the areas in the table below used HSG A, C, and D which are estimated off the USDA soils information for the site.

**10-year volume difference is larger than 100-year, therefore 10-year prevails as to volume mitigation.

Unit Hydrograph by Area

Developed, 10-year

Area ID	TC (hour)	Qp (cfs)	Qp (cfs) after basin routing	Volume (Ac ft)	Volume (CF)
Area A	0.22087	62.17	20.2	6.9477	302,642
Area B	0.2196	62.89	20.1	7.0372	306,540
Area C	0.208	49.79	13.2	5.6539	246,280
Area D	0.184	54.05	10.2	5.5083	239,942
Total		**228.9**	**67.7**	**25.1522**	**1,095,404**

Take difference in 10-year volume=817,939 cf divided by site acreage = 171.56 ac= 4,768 cf/acre.

Area	Acreage	Minimum Volume by acre (cf)
A	47.41	226,051
B	48.02	228,960
C	38.57	183,902
D	37.56	179,086
Total	**171.56**	**817,999 > 817,939 provided ok**

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/07/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IENLC
10-year existing
on-site

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
171.56	1	0.61
Rainfall data for year 10		
171.56	6	1.24
Rainfall data for year 10		
171.56	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	171.56	1.000	0.548	1.000	0.548

Area-averaged adjusted loss rate Fm (In/Hr) = 0.548

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
171.56	1.000	69.0	69.0	4.49	0.124

Area-averaged catchment yield fraction, Y = 0.124
Area-averaged low loss fraction, Yb = 0.876
User entry of time of concentration = 0.120 (hours)
++
Watershed area = 171.56(Ac.)
Catchment Lag time = 0.096 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 87.1688
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.548(In/Hr)
Average low loss rate fraction (Yb) = 0.876 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 171.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.992 Adjusted rainfall = 0.287(In)
30-minute factor = 0.992 Adjusted rainfall = 0.491(In)
1-hour factor = 0.992 Adjusted rainfall = 0.604(In)
3-hour factor = 0.999 Adjusted rainfall = 0.941(In)
6-hour factor = 0.999 Adjusted rainfall = 1.239(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
++
Interval 'S' Graph Unit Hydrograph

Number	Mean values	((CFS))
	(K = 2074.80 (CFS))	
1	13.019	270.127
2	61.403	1003.856
3	80.329	392.689
4	88.806	175.876
5	93.470	96.766
6	96.332	59.379
7	97.934	33.240
8	98.945	20.986
9	100.000	10.493

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2867	0.2867
2	0.3529	0.0663
3	0.3986	0.0456
4	0.4345	0.0359
5	0.4646	0.0301
6	0.4907	0.0261
7	0.5139	0.0232
8	0.5349	0.0210
9	0.5542	0.0192
10	0.5719	0.0178
11	0.5885	0.0166
12	0.6041	0.0156
13	0.6239	0.0198
14	0.6428	0.0189
15	0.6610	0.0181
16	0.6784	0.0174
17	0.6952	0.0168
18	0.7114	0.0162
19	0.7271	0.0157
20	0.7423	0.0152
21	0.7570	0.0147
22	0.7714	0.0143
23	0.7853	0.0140
24	0.7989	0.0136
25	0.8122	0.0133
26	0.8251	0.0129
27	0.8378	0.0127
28	0.8502	0.0124
29	0.8623	0.0121
30	0.8742	0.0119
31	0.8858	0.0116
32	0.8972	0.0114
33	0.9084	0.0112
34	0.9194	0.0110

35	0.9302	0.0108
36	0.9408	0.0106
37	0.9511	0.0103
38	0.9613	0.0101
39	0.9713	0.0100
40	0.9811	0.0098
41	0.9908	0.0097
42	1.0003	0.0095
43	1.0097	0.0094
44	1.0190	0.0093
45	1.0281	0.0091
46	1.0371	0.0090
47	1.0460	0.0089
48	1.0548	0.0088
49	1.0635	0.0087
50	1.0721	0.0086
51	1.0806	0.0085
52	1.0889	0.0084
53	1.0972	0.0083
54	1.1054	0.0082
55	1.1135	0.0081
56	1.1215	0.0080
57	1.1294	0.0079
58	1.1373	0.0078
59	1.1450	0.0078
60	1.1527	0.0077
61	1.1603	0.0076
62	1.1678	0.0075
63	1.1753	0.0075
64	1.1826	0.0074
65	1.1900	0.0073
66	1.1972	0.0072
67	1.2044	0.0072
68	1.2115	0.0071
69	1.2185	0.0071
70	1.2255	0.0070
71	1.2325	0.0069
72	1.2393	0.0069
73	1.2460	0.0067
74	1.2527	0.0066
75	1.2592	0.0066
76	1.2658	0.0065
77	1.2723	0.0065
78	1.2787	0.0064
79	1.2851	0.0064
80	1.2914	0.0063
81	1.2977	0.0063
82	1.3039	0.0062
83	1.3101	0.0062
84	1.3162	0.0061

85	1.3223	0.0061
86	1.3284	0.0061
87	1.3344	0.0060
88	1.3404	0.0060
89	1.3463	0.0059
90	1.3522	0.0059
91	1.3580	0.0058
92	1.3638	0.0058
93	1.3696	0.0058
94	1.3753	0.0057
95	1.3810	0.0057
96	1.3867	0.0057
97	1.3923	0.0056
98	1.3979	0.0056
99	1.4034	0.0056
100	1.4090	0.0055
101	1.4144	0.0055
102	1.4199	0.0055
103	1.4253	0.0054
104	1.4307	0.0054
105	1.4361	0.0054
106	1.4414	0.0053
107	1.4467	0.0053
108	1.4519	0.0053
109	1.4572	0.0052
110	1.4624	0.0052
111	1.4676	0.0052
112	1.4727	0.0051
113	1.4778	0.0051
114	1.4829	0.0051
115	1.4880	0.0051
116	1.4930	0.0050
117	1.4980	0.0050
118	1.5030	0.0050
119	1.5080	0.0050
120	1.5129	0.0049
121	1.5178	0.0049
122	1.5227	0.0049
123	1.5276	0.0049
124	1.5324	0.0048
125	1.5372	0.0048
126	1.5420	0.0048
127	1.5468	0.0048
128	1.5515	0.0047
129	1.5563	0.0047
130	1.5610	0.0047
131	1.5656	0.0047
132	1.5703	0.0047
133	1.5749	0.0046
134	1.5795	0.0046

135	1.5841	0.0046
136	1.5887	0.0046
137	1.5933	0.0046
138	1.5978	0.0045
139	1.6023	0.0045
140	1.6068	0.0045
141	1.6113	0.0045
142	1.6157	0.0045
143	1.6202	0.0044
144	1.6246	0.0044
145	1.6290	0.0044
146	1.6333	0.0044
147	1.6377	0.0044
148	1.6420	0.0043
149	1.6464	0.0043
150	1.6507	0.0043
151	1.6550	0.0043
152	1.6592	0.0043
153	1.6635	0.0043
154	1.6677	0.0042
155	1.6719	0.0042
156	1.6761	0.0042
157	1.6803	0.0042
158	1.6845	0.0042
159	1.6887	0.0042
160	1.6928	0.0041
161	1.6969	0.0041
162	1.7010	0.0041
163	1.7051	0.0041
164	1.7092	0.0041
165	1.7133	0.0041
166	1.7173	0.0040
167	1.7213	0.0040
168	1.7254	0.0040
169	1.7294	0.0040
170	1.7334	0.0040
171	1.7373	0.0040
172	1.7413	0.0040
173	1.7452	0.0039
174	1.7492	0.0039
175	1.7531	0.0039
176	1.7570	0.0039
177	1.7609	0.0039
178	1.7648	0.0039
179	1.7686	0.0039
180	1.7725	0.0039
181	1.7763	0.0038
182	1.7801	0.0038
183	1.7840	0.0038
184	1.7878	0.0038

185	1.7915	0.0038
186	1.7953	0.0038
187	1.7991	0.0038
188	1.8028	0.0038
189	1.8066	0.0037
190	1.8103	0.0037
191	1.8140	0.0037
192	1.8177	0.0037
193	1.8214	0.0037
194	1.8251	0.0037
195	1.8287	0.0037
196	1.8324	0.0037
197	1.8361	0.0036
198	1.8397	0.0036
199	1.8433	0.0036
200	1.8469	0.0036
201	1.8505	0.0036
202	1.8541	0.0036
203	1.8577	0.0036
204	1.8613	0.0036
205	1.8648	0.0036
206	1.8684	0.0035
207	1.8719	0.0035
208	1.8754	0.0035
209	1.8789	0.0035
210	1.8824	0.0035
211	1.8859	0.0035
212	1.8894	0.0035
213	1.8929	0.0035
214	1.8964	0.0035
215	1.8998	0.0035
216	1.9033	0.0034
217	1.9067	0.0034
218	1.9101	0.0034
219	1.9135	0.0034
220	1.9170	0.0034
221	1.9203	0.0034
222	1.9237	0.0034
223	1.9271	0.0034
224	1.9305	0.0034
225	1.9338	0.0034
226	1.9372	0.0034
227	1.9405	0.0033
228	1.9439	0.0033
229	1.9472	0.0033
230	1.9505	0.0033
231	1.9538	0.0033
232	1.9571	0.0033
233	1.9604	0.0033
234	1.9637	0.0033

235	1.9670	0.0033
236	1.9702	0.0033
237	1.9735	0.0033
238	1.9767	0.0032
239	1.9800	0.0032
240	1.9832	0.0032
241	1.9864	0.0032
242	1.9896	0.0032
243	1.9928	0.0032
244	1.9960	0.0032
245	1.9992	0.0032
246	2.0024	0.0032
247	2.0056	0.0032
248	2.0088	0.0032
249	2.0119	0.0032
250	2.0151	0.0032
251	2.0182	0.0031
252	2.0213	0.0031
253	2.0245	0.0031
254	2.0276	0.0031
255	2.0307	0.0031
256	2.0338	0.0031
257	2.0369	0.0031
258	2.0400	0.0031
259	2.0431	0.0031
260	2.0462	0.0031
261	2.0492	0.0031
262	2.0523	0.0031
263	2.0554	0.0031
264	2.0584	0.0030
265	2.0614	0.0030
266	2.0645	0.0030
267	2.0675	0.0030
268	2.0705	0.0030
269	2.0735	0.0030
270	2.0765	0.0030
271	2.0795	0.0030
272	2.0825	0.0030
273	2.0855	0.0030
274	2.0885	0.0030
275	2.0915	0.0030
276	2.0944	0.0030
277	2.0974	0.0030
278	2.1004	0.0030
279	2.1033	0.0029
280	2.1062	0.0029
281	2.1092	0.0029
282	2.1121	0.0029
283	2.1150	0.0029
284	2.1179	0.0029

285	2.1209	0.0029
286	2.1238	0.0029
287	2.1267	0.0029
288	2.1295	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0025	0.0004
2	0.0029	0.0025	0.0004
3	0.0029	0.0025	0.0004
4	0.0029	0.0026	0.0004
5	0.0029	0.0026	0.0004
6	0.0029	0.0026	0.0004
7	0.0029	0.0026	0.0004
8	0.0030	0.0026	0.0004
9	0.0030	0.0026	0.0004
10	0.0030	0.0026	0.0004
11	0.0030	0.0026	0.0004
12	0.0030	0.0026	0.0004
13	0.0030	0.0026	0.0004
14	0.0030	0.0026	0.0004
15	0.0030	0.0027	0.0004
16	0.0030	0.0027	0.0004
17	0.0030	0.0027	0.0004
18	0.0031	0.0027	0.0004
19	0.0031	0.0027	0.0004
20	0.0031	0.0027	0.0004
21	0.0031	0.0027	0.0004
22	0.0031	0.0027	0.0004
23	0.0031	0.0027	0.0004
24	0.0031	0.0027	0.0004
25	0.0031	0.0027	0.0004
26	0.0031	0.0028	0.0004
27	0.0032	0.0028	0.0004
28	0.0032	0.0028	0.0004
29	0.0032	0.0028	0.0004
30	0.0032	0.0028	0.0004
31	0.0032	0.0028	0.0004
32	0.0032	0.0028	0.0004
33	0.0032	0.0028	0.0004
34	0.0032	0.0028	0.0004
35	0.0033	0.0029	0.0004
36	0.0033	0.0029	0.0004
37	0.0033	0.0029	0.0004
38	0.0033	0.0029	0.0004
39	0.0033	0.0029	0.0004
40	0.0033	0.0029	0.0004
41	0.0033	0.0029	0.0004

42	0.0033	0.0029	0.0004
43	0.0034	0.0029	0.0004
44	0.0034	0.0030	0.0004
45	0.0034	0.0030	0.0004
46	0.0034	0.0030	0.0004
47	0.0034	0.0030	0.0004
48	0.0034	0.0030	0.0004
49	0.0034	0.0030	0.0004
50	0.0035	0.0030	0.0004
51	0.0035	0.0030	0.0004
52	0.0035	0.0031	0.0004
53	0.0035	0.0031	0.0004
54	0.0035	0.0031	0.0004
55	0.0035	0.0031	0.0004
56	0.0035	0.0031	0.0004
57	0.0036	0.0031	0.0004
58	0.0036	0.0031	0.0004
59	0.0036	0.0032	0.0004
60	0.0036	0.0032	0.0004
61	0.0036	0.0032	0.0005
62	0.0036	0.0032	0.0005
63	0.0037	0.0032	0.0005
64	0.0037	0.0032	0.0005
65	0.0037	0.0032	0.0005
66	0.0037	0.0033	0.0005
67	0.0037	0.0033	0.0005
68	0.0038	0.0033	0.0005
69	0.0038	0.0033	0.0005
70	0.0038	0.0033	0.0005
71	0.0038	0.0033	0.0005
72	0.0038	0.0033	0.0005
73	0.0039	0.0034	0.0005
74	0.0039	0.0034	0.0005
75	0.0039	0.0034	0.0005
76	0.0039	0.0034	0.0005
77	0.0039	0.0034	0.0005
78	0.0039	0.0035	0.0005
79	0.0040	0.0035	0.0005
80	0.0040	0.0035	0.0005
81	0.0040	0.0035	0.0005
82	0.0040	0.0035	0.0005
83	0.0041	0.0036	0.0005
84	0.0041	0.0036	0.0005
85	0.0041	0.0036	0.0005
86	0.0041	0.0036	0.0005
87	0.0042	0.0036	0.0005
88	0.0042	0.0037	0.0005
89	0.0042	0.0037	0.0005
90	0.0042	0.0037	0.0005
91	0.0043	0.0037	0.0005

92	0.0043	0.0037	0.0005
93	0.0043	0.0038	0.0005
94	0.0043	0.0038	0.0005
95	0.0044	0.0038	0.0005
96	0.0044	0.0038	0.0005
97	0.0044	0.0039	0.0005
98	0.0044	0.0039	0.0006
99	0.0045	0.0039	0.0006
100	0.0045	0.0039	0.0006
101	0.0045	0.0040	0.0006
102	0.0046	0.0040	0.0006
103	0.0046	0.0040	0.0006
104	0.0046	0.0040	0.0006
105	0.0047	0.0041	0.0006
106	0.0047	0.0041	0.0006
107	0.0047	0.0041	0.0006
108	0.0047	0.0042	0.0006
109	0.0048	0.0042	0.0006
110	0.0048	0.0042	0.0006
111	0.0049	0.0043	0.0006
112	0.0049	0.0043	0.0006
113	0.0049	0.0043	0.0006
114	0.0050	0.0043	0.0006
115	0.0050	0.0044	0.0006
116	0.0050	0.0044	0.0006
117	0.0051	0.0045	0.0006
118	0.0051	0.0045	0.0006
119	0.0052	0.0045	0.0006
120	0.0052	0.0046	0.0006
121	0.0053	0.0046	0.0007
122	0.0053	0.0046	0.0007
123	0.0054	0.0047	0.0007
124	0.0054	0.0047	0.0007
125	0.0055	0.0048	0.0007
126	0.0055	0.0048	0.0007
127	0.0056	0.0049	0.0007
128	0.0056	0.0049	0.0007
129	0.0057	0.0050	0.0007
130	0.0057	0.0050	0.0007
131	0.0058	0.0051	0.0007
132	0.0058	0.0051	0.0007
133	0.0059	0.0052	0.0007
134	0.0059	0.0052	0.0007
135	0.0060	0.0053	0.0007
136	0.0061	0.0053	0.0008
137	0.0061	0.0054	0.0008
138	0.0062	0.0054	0.0008
139	0.0063	0.0055	0.0008
140	0.0063	0.0055	0.0008
141	0.0064	0.0056	0.0008

142	0.0065	0.0057	0.0008
143	0.0066	0.0058	0.0008
144	0.0066	0.0058	0.0008
145	0.0069	0.0060	0.0009
146	0.0069	0.0061	0.0009
147	0.0071	0.0062	0.0009
148	0.0071	0.0062	0.0009
149	0.0072	0.0063	0.0009
150	0.0073	0.0064	0.0009
151	0.0075	0.0065	0.0009
152	0.0075	0.0066	0.0009
153	0.0077	0.0067	0.0010
154	0.0078	0.0068	0.0010
155	0.0079	0.0069	0.0010
156	0.0080	0.0070	0.0010
157	0.0082	0.0072	0.0010
158	0.0083	0.0072	0.0010
159	0.0085	0.0074	0.0011
160	0.0086	0.0075	0.0011
161	0.0088	0.0077	0.0011
162	0.0089	0.0078	0.0011
163	0.0091	0.0080	0.0011
164	0.0093	0.0081	0.0012
165	0.0095	0.0084	0.0012
166	0.0097	0.0085	0.0012
167	0.0100	0.0087	0.0012
168	0.0101	0.0089	0.0013
169	0.0106	0.0093	0.0013
170	0.0108	0.0095	0.0013
171	0.0112	0.0098	0.0014
172	0.0114	0.0100	0.0014
173	0.0119	0.0104	0.0015
174	0.0121	0.0106	0.0015
175	0.0127	0.0111	0.0016
176	0.0129	0.0113	0.0016
177	0.0136	0.0119	0.0017
178	0.0140	0.0122	0.0017
179	0.0147	0.0129	0.0018
180	0.0152	0.0133	0.0019
181	0.0162	0.0142	0.0020
182	0.0168	0.0147	0.0021
183	0.0181	0.0159	0.0023
184	0.0189	0.0166	0.0024
185	0.0156	0.0136	0.0019
186	0.0166	0.0145	0.0021
187	0.0192	0.0168	0.0024
188	0.0210	0.0184	0.0026
189	0.0261	0.0229	0.0032
190	0.0301	0.0263	0.0037
191	0.0456	0.0400	0.0057

192	0.0663	0.0457	0.0206
193	0.2867	0.0457	0.2410
194	0.0359	0.0315	0.0045
195	0.0232	0.0203	0.0029
196	0.0178	0.0156	0.0022
197	0.0198	0.0174	0.0025
198	0.0174	0.0153	0.0022
199	0.0157	0.0137	0.0020
200	0.0143	0.0126	0.0018
201	0.0133	0.0116	0.0016
202	0.0124	0.0108	0.0015
203	0.0116	0.0102	0.0014
204	0.0110	0.0096	0.0014
205	0.0103	0.0090	0.0013
206	0.0098	0.0086	0.0012
207	0.0094	0.0082	0.0012
208	0.0090	0.0079	0.0011
209	0.0087	0.0076	0.0011
210	0.0084	0.0073	0.0010
211	0.0081	0.0071	0.0010
212	0.0078	0.0069	0.0010
213	0.0076	0.0067	0.0009
214	0.0074	0.0065	0.0009
215	0.0072	0.0063	0.0009
216	0.0070	0.0061	0.0009
217	0.0067	0.0059	0.0008
218	0.0065	0.0057	0.0008
219	0.0064	0.0056	0.0008
220	0.0062	0.0055	0.0008
221	0.0061	0.0053	0.0008
222	0.0060	0.0052	0.0007
223	0.0058	0.0051	0.0007
224	0.0057	0.0050	0.0007
225	0.0056	0.0049	0.0007
226	0.0055	0.0048	0.0007
227	0.0054	0.0047	0.0007
228	0.0053	0.0047	0.0007
229	0.0052	0.0046	0.0007
230	0.0051	0.0045	0.0006
231	0.0051	0.0044	0.0006
232	0.0050	0.0044	0.0006
233	0.0049	0.0043	0.0006
234	0.0048	0.0042	0.0006
235	0.0048	0.0042	0.0006
236	0.0047	0.0041	0.0006
237	0.0046	0.0041	0.0006
238	0.0046	0.0040	0.0006
239	0.0045	0.0040	0.0006
240	0.0045	0.0039	0.0006
241	0.0044	0.0038	0.0005

242	0.0043	0.0038	0.0005
243	0.0043	0.0038	0.0005
244	0.0042	0.0037	0.0005
245	0.0042	0.0037	0.0005
246	0.0041	0.0036	0.0005
247	0.0041	0.0036	0.0005
248	0.0040	0.0035	0.0005
249	0.0040	0.0035	0.0005
250	0.0040	0.0035	0.0005
251	0.0039	0.0034	0.0005
252	0.0039	0.0034	0.0005
253	0.0038	0.0034	0.0005
254	0.0038	0.0033	0.0005
255	0.0038	0.0033	0.0005
256	0.0037	0.0033	0.0005
257	0.0037	0.0032	0.0005
258	0.0037	0.0032	0.0005
259	0.0036	0.0032	0.0005
260	0.0036	0.0031	0.0004
261	0.0036	0.0031	0.0004
262	0.0035	0.0031	0.0004
263	0.0035	0.0031	0.0004
264	0.0035	0.0030	0.0004
265	0.0034	0.0030	0.0004
266	0.0034	0.0030	0.0004
267	0.0034	0.0030	0.0004
268	0.0034	0.0029	0.0004
269	0.0033	0.0029	0.0004
270	0.0033	0.0029	0.0004
271	0.0033	0.0029	0.0004
272	0.0032	0.0028	0.0004
273	0.0032	0.0028	0.0004
274	0.0032	0.0028	0.0004
275	0.0032	0.0028	0.0004
276	0.0032	0.0028	0.0004
277	0.0031	0.0027	0.0004
278	0.0031	0.0027	0.0004
279	0.0031	0.0027	0.0004
280	0.0031	0.0027	0.0004
281	0.0030	0.0027	0.0004
282	0.0030	0.0026	0.0004
283	0.0030	0.0026	0.0004
284	0.0030	0.0026	0.0004
285	0.0030	0.0026	0.0004
286	0.0029	0.0026	0.0004
287	0.0029	0.0026	0.0004
288	0.0029	0.0025	0.0004

Total soil rain loss = 1.65(In)

Total effective rainfall = 0.48(In)
Peak flow rate in flood hydrograph = 252.93(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

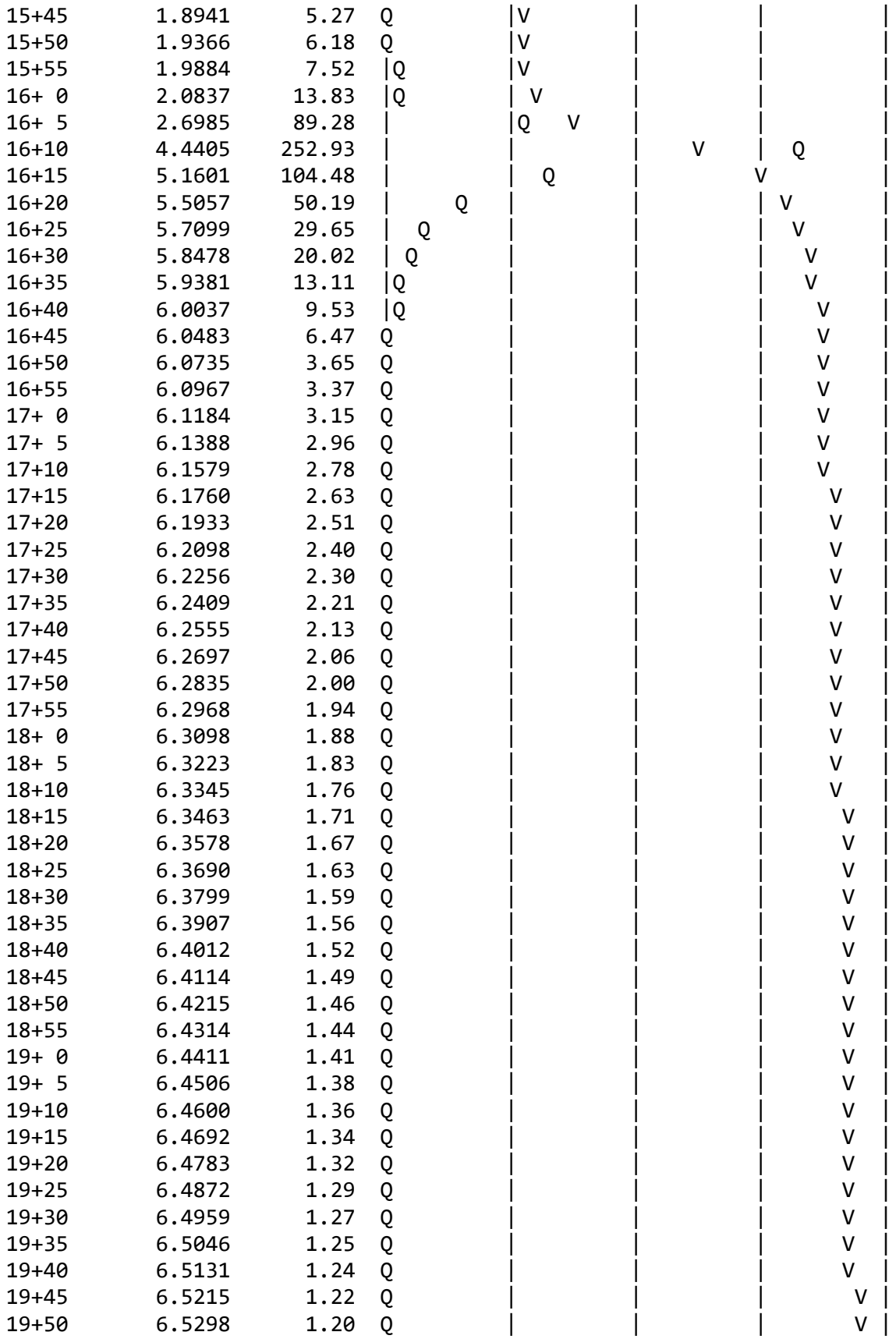
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0007	0.10	Q				
0+10	0.0038	0.46	Q				
0+15	0.0080	0.60	Q				
0+20	0.0125	0.67	Q				
0+25	0.0174	0.70	Q				
0+30	0.0224	0.73	Q				
0+35	0.0275	0.74	Q				
0+40	0.0327	0.75	Q				
0+45	0.0379	0.76	Q				
0+50	0.0431	0.76	Q				
0+55	0.0483	0.76	Q				
1+ 0	0.0536	0.76	Q				
1+ 5	0.0589	0.77	Q				
1+10	0.0642	0.77	Q				
1+15	0.0695	0.77	Q				
1+20	0.0748	0.77	Q				
1+25	0.0802	0.78	Q				
1+30	0.0856	0.78	Q				
1+35	0.0910	0.78	Q				
1+40	0.0964	0.79	Q				
1+45	0.1018	0.79	Q				
1+50	0.1072	0.79	Q				
1+55	0.1127	0.79	Q				
2+ 0	0.1182	0.80	Q				
2+ 5	0.1237	0.80	Q				
2+10	0.1292	0.80	Q				
2+15	0.1348	0.81	Q				
2+20	0.1403	0.81	Q				
2+25	0.1459	0.81	Q				
2+30	0.1515	0.81	Q				
2+35	0.1572	0.82	Q				
2+40	0.1628	0.82	Q				
2+45	0.1685	0.82	Q				
2+50	0.1742	0.83	QV				
2+55	0.1799	0.83	QV				
3+ 0	0.1856	0.83	QV				
3+ 5	0.1914	0.84	QV				
3+10	0.1972	0.84	QV				

3+15	0.2030	0.84	QV	|	|	|	|
3+20	0.2088	0.85	QV	|	|	|	|
3+25	0.2147	0.85	QV	|	|	|	|
3+30	0.2205	0.85	QV	|	|	|	|
3+35	0.2264	0.86	QV	|	|	|	|
3+40	0.2323	0.86	QV	|	|	|	|
3+45	0.2383	0.86	QV	|	|	|	|
3+50	0.2443	0.87	QV	|	|	|	|
3+55	0.2503	0.87	QV	|	|	|	|
4+ 0	0.2563	0.87	QV	|	|	|	|
4+ 5	0.2623	0.88	QV	|	|	|	|
4+10	0.2684	0.88	QV	|	|	|	|
4+15	0.2745	0.88	QV	|	|	|	|
4+20	0.2806	0.89	QV	|	|	|	|
4+25	0.2867	0.89	QV	|	|	|	|
4+30	0.2929	0.90	QV	|	|	|	|
4+35	0.2991	0.90	QV	|	|	|	|
4+40	0.3053	0.90	QV	|	|	|	|
4+45	0.3116	0.91	QV	|	|	|	|
4+50	0.3179	0.91	QV	|	|	|	|
4+55	0.3242	0.92	QV	|	|	|	|
5+ 0	0.3305	0.92	QV	|	|	|	|
5+ 5	0.3369	0.92	QV	|	|	|	|
5+10	0.3433	0.93	Q V	|	|	|	|
5+15	0.3497	0.93	Q V	|	|	|	|
5+20	0.3562	0.94	Q V	|	|	|	|
5+25	0.3627	0.94	Q V	|	|	|	|
5+30	0.3692	0.95	Q V	|	|	|	|
5+35	0.3757	0.95	Q V	|	|	|	|
5+40	0.3823	0.96	Q V	|	|	|	|
5+45	0.3889	0.96	Q V	|	|	|	|
5+50	0.3956	0.97	Q V	|	|	|	|
5+55	0.4023	0.97	Q V	|	|	|	|
6+ 0	0.4090	0.97	Q V	|	|	|	|
6+ 5	0.4157	0.98	Q V	|	|	|	|
6+10	0.4225	0.98	Q V	|	|	|	|
6+15	0.4293	0.99	Q V	|	|	|	|
6+20	0.4362	0.99	Q V	|	|	|	|
6+25	0.4431	1.00	Q V	|	|	|	|
6+30	0.4500	1.01	Q V	|	|	|	|
6+35	0.4569	1.01	Q V	|	|	|	|
6+40	0.4639	1.02	Q V	|	|	|	|
6+45	0.4710	1.02	Q V	|	|	|	|
6+50	0.4780	1.03	Q V	|	|	|	|
6+55	0.4851	1.03	Q V	|	|	|	|
7+ 0	0.4923	1.04	Q V	|	|	|	|
7+ 5	0.4995	1.04	Q V	|	|	|	|
7+10	0.5067	1.05	Q V	|	|	|	|
7+15	0.5140	1.06	Q V	|	|	|	|
7+20	0.5213	1.06	Q V	|	|	|	|

7+25	0.5286	1.07	Q	V				
7+30	0.5360	1.07	Q	V				
7+35	0.5435	1.08	Q	V				
7+40	0.5509	1.09	Q	V				
7+45	0.5585	1.09	Q	V				
7+50	0.5660	1.10	Q	V				
7+55	0.5737	1.11	Q	V				
8+ 0	0.5813	1.11	Q	V				
8+ 5	0.5890	1.12	Q	V				
8+10	0.5968	1.13	Q	V				
8+15	0.6046	1.13	Q	V				
8+20	0.6125	1.14	Q	V				
8+25	0.6204	1.15	Q	V				
8+30	0.6284	1.16	Q	V				
8+35	0.6364	1.16	Q	V				
8+40	0.6445	1.17	Q	V				
8+45	0.6526	1.18	Q	V				
8+50	0.6608	1.19	Q	V				
8+55	0.6690	1.20	Q	V				
9+ 0	0.6773	1.21	Q	V				
9+ 5	0.6857	1.21	Q	V				
9+10	0.6941	1.22	Q	V				
9+15	0.7026	1.23	Q	V				
9+20	0.7111	1.24	Q	V				
9+25	0.7197	1.25	Q	V				
9+30	0.7284	1.26	Q	V				
9+35	0.7371	1.27	Q	V				
9+40	0.7459	1.28	Q	V				
9+45	0.7548	1.29	Q	V				
9+50	0.7637	1.30	Q	V				
9+55	0.7728	1.31	Q	V				
10+ 0	0.7818	1.32	Q	V				
10+ 5	0.7910	1.33	Q	V				
10+10	0.8003	1.34	Q	V				
10+15	0.8096	1.35	Q	V				
10+20	0.8190	1.37	Q	V				
10+25	0.8285	1.38	Q	V				
10+30	0.8380	1.39	Q	V				
10+35	0.8477	1.40	Q	V				
10+40	0.8574	1.42	Q	V				
10+45	0.8672	1.43	Q	V				
10+50	0.8772	1.44	Q	V				
10+55	0.8872	1.45	Q	V				
11+ 0	0.8973	1.47	Q	V				
11+ 5	0.9075	1.48	Q	V				
11+10	0.9179	1.50	Q	V				
11+15	0.9283	1.51	Q	V				
11+20	0.9388	1.53	Q	V				
11+25	0.9495	1.55	Q	V				
11+30	0.9602	1.56	Q	V				

11+35	0.9711	1.58	Q	V	|	|	|	|
11+40	0.9821	1.60	Q	V	|	|	|	|
11+45	0.9932	1.61	Q	V	|	|	|	|
11+50	1.0045	1.63	Q	V	|	|	|	|
11+55	1.0159	1.65	Q	V	|	|	|	|
12+ 0	1.0274	1.67	Q	V	|	|	|	|
12+ 5	1.0391	1.70	Q	V	|	|	|	|
12+10	1.0510	1.74	Q	V	|	|	|	|
12+15	1.0632	1.76	Q	V	|	|	|	|
12+20	1.0755	1.79	Q	V	|	|	|	|
12+25	1.0880	1.81	Q	V	|	|	|	|
12+30	1.1006	1.84	Q	V	|	|	|	|
12+35	1.1134	1.86	Q	V	|	|	|	|
12+40	1.1265	1.89	Q	V	|	|	|	|
12+45	1.1397	1.92	Q	V	|	|	|	|
12+50	1.1531	1.95	Q	V	|	|	|	|
12+55	1.1667	1.98	Q	V	|	|	|	|
13+ 0	1.1805	2.01	Q	V	|	|	|	|
13+ 5	1.1946	2.04	Q	V	|	|	|	|
13+10	1.2089	2.07	Q	V	|	|	|	|
13+15	1.2234	2.11	Q	V	|	|	|	|
13+20	1.2381	2.15	Q	V	|	|	|	|
13+25	1.2532	2.18	Q	V	|	|	|	|
13+30	1.2685	2.23	Q	V	|	|	|	|
13+35	1.2841	2.26	Q	V	|	|	|	|
13+40	1.3000	2.31	Q	V	|	|	|	|
13+45	1.3162	2.36	Q	V	|	|	|	|
13+50	1.3328	2.41	Q	V	|	|	|	|
13+55	1.3498	2.46	Q	V	|	|	|	|
14+ 0	1.3671	2.52	Q	V	|	|	|	|
14+ 5	1.3848	2.58	Q	V	|	|	|	|
14+10	1.4032	2.66	Q	V	|	|	|	|
14+15	1.4220	2.73	Q	V	|	|	|	|
14+20	1.4414	2.82	Q	V	|	|	|	|
14+25	1.4613	2.89	Q	V	|	|	|	|
14+30	1.4818	2.98	Q	V	|	|	|	|
14+35	1.5030	3.07	Q	V	|	|	|	|
14+40	1.5248	3.17	Q	V	|	|	|	|
14+45	1.5473	3.27	Q	V	|	|	|	|
14+50	1.5707	3.40	Q	V	|	|	|	|
14+55	1.5950	3.52	Q	V	|	|	|	|
15+ 0	1.6203	3.68	Q	V	|	|	|	|
15+ 5	1.6467	3.83	Q	V	|	|	|	|
15+10	1.6744	4.02	Q	V	|	|	|	|
15+15	1.7034	4.22	Q	V	|	|	|	|
15+20	1.7342	4.48	Q	V	|	|	|	|
15+25	1.7657	4.56	Q	V	|	|	|	|
15+30	1.7950	4.26	Q	V	|	|	|	|
15+35	1.8250	4.36	Q	V	|	|	|	|
15+40	1.8578	4.75	Q	V	|	|	|	|


15+45 1.8941 5.27
15+50 1.9366 6.18
15+55 1.9884 7.52
16+ 0 2.0837 13.83
16+ 5 2.6985 89.28
16+10 4.4405 252.93
16+15 5.1601 104.48
16+20 5.5057 50.19
16+25 5.7099 29.65
16+30 5.8478 20.02
16+35 5.9381 13.11
16+40 6.0037 9.53
16+45 6.0483 6.47
16+50 6.0735 3.65
16+55 6.0967 3.37
17+ 0 6.1184 3.15
17+ 5 6.1388 2.96
17+10 6.1579 2.78
17+15 6.1760 2.63
17+20 6.1933 2.51
17+25 6.2098 2.40
17+30 6.2256 2.30
17+35 6.2409 2.21
17+40 6.2555 2.13
17+45 6.2697 2.06
17+50 6.2835 2.00
17+55 6.2968 1.94
18+ 0 6.3098 1.88
18+ 5 6.3223 1.83
18+10 6.3345 1.76
18+15 6.3463 1.71
18+20 6.3578 1.67
18+25 6.3690 1.63
18+30 6.3799 1.59
18+35 6.3907 1.56
18+40 6.4012 1.52
18+45 6.4114 1.49
18+50 6.4215 1.46
18+55 6.4314 1.44
19+ 0 6.4411 1.41
19+ 5 6.4506 1.38
19+10 6.4600 1.36
19+15 6.4692 1.34
19+20 6.4783 1.32
19+25 6.4872 1.29
19+30 6.4959 1.27
19+35 6.5046 1.25
19+40 6.5131 1.24
19+45 6.5215 1.22
19+50 6.5298 1.20

19+55	6.5379	1.18	Q	|	|	|	V |
20+ 0	6.5460	1.17	Q	|	|	|	V |
20+ 5	6.5539	1.15	Q	|	|	|	V |
20+10	6.5618	1.14	Q	|	|	|	V |
20+15	6.5695	1.12	Q	|	|	|	V |
20+20	6.5771	1.11	Q	|	|	|	V |
20+25	6.5847	1.10	Q	|	|	|	V |
20+30	6.5922	1.08	Q	|	|	|	V |
20+35	6.5995	1.07	Q	|	|	|	V |
20+40	6.6068	1.06	Q	|	|	|	V |
20+45	6.6140	1.05	Q	|	|	|	V |
20+50	6.6212	1.04	Q	|	|	|	V |
20+55	6.6282	1.02	Q	|	|	|	V |
21+ 0	6.6352	1.01	Q	|	|	|	V |
21+ 5	6.6421	1.00	Q	|	|	|	V |
21+10	6.6489	0.99	Q	|	|	|	V |
21+15	6.6557	0.98	Q	|	|	|	V |
21+20	6.6624	0.97	Q	|	|	|	V |
21+25	6.6690	0.96	Q	|	|	|	V |
21+30	6.6756	0.95	Q	|	|	|	V |
21+35	6.6821	0.94	Q	|	|	|	V |
21+40	6.6885	0.94	Q	|	|	|	V|
21+45	6.6949	0.93	Q	|	|	|	V|
21+50	6.7012	0.92	Q	|	|	|	V|
21+55	6.7075	0.91	Q	|	|	|	V|
22+ 0	6.7137	0.90	Q	|	|	|	V|
22+ 5	6.7199	0.89	Q	|	|	|	V|
22+10	6.7260	0.89	Q	|	|	|	V|
22+15	6.7321	0.88	Q	|	|	|	V|
22+20	6.7381	0.87	Q	|	|	|	V|
22+25	6.7440	0.86	Q	|	|	|	V|
22+30	6.7499	0.86	Q	|	|	|	V|
22+35	6.7558	0.85	Q	|	|	|	V|
22+40	6.7616	0.84	Q	|	|	|	V|
22+45	6.7674	0.84	Q	|	|	|	V|
22+50	6.7731	0.83	Q	|	|	|	V|
22+55	6.7788	0.83	Q	|	|	|	V|
23+ 0	6.7844	0.82	Q	|	|	|	V|
23+ 5	6.7900	0.81	Q	|	|	|	V|
23+10	6.7956	0.81	Q	|	|	|	V|
23+15	6.8011	0.80	Q	|	|	|	V|
23+20	6.8066	0.80	Q	|	|	|	V|
23+25	6.8120	0.79	Q	|	|	|	V|
23+30	6.8174	0.78	Q	|	|	|	V|
23+35	6.8228	0.78	Q	|	|	|	V|
23+40	6.8281	0.77	Q	|	|	|	V|
23+45	6.8334	0.77	Q	|	|	|	V|
23+50	6.8386	0.76	Q	|	|	|	V|
23+55	6.8439	0.76	Q	|	|	|	V|
24+ 0	6.8491	0.75	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/07/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IENLC
10-year
developed condition
onsite

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
171.56	1	0.61
Rainfall data for year 10		
171.56	6	1.24
Rainfall data for year 10		
171.56	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	171.56	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
17.16	0.100	69.0	69.0	4.49	0.124
154.40	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
Direct entry of lag time by user
++
Watershed area = 171.56(Ac.)
Catchment Lag time = 0.120 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 69.7350
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 171.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.992 Adjusted rainfall = 0.287(In)
30-minute factor = 0.992 Adjusted rainfall = 0.491(In)
1-hour factor = 0.992 Adjusted rainfall = 0.604(In)
3-hour factor = 0.999 Adjusted rainfall = 0.941(In)
6-hour factor = 0.999 Adjusted rainfall = 1.239(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 2074.80 (CFS))	
1	7.744	160.671
2	50.264	882.215
3	73.446	480.976
4	83.543	209.492
5	89.449	122.532
6	93.132	76.411
7	95.628	51.795
8	97.303	34.745
9	98.238	19.416
10	99.050	16.835
11	99.701	13.513
12	100.000	6.202

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2867	0.2867
2	0.3529	0.0663
3	0.3986	0.0456
4	0.4345	0.0359
5	0.4646	0.0301
6	0.4907	0.0261
7	0.5139	0.0232
8	0.5349	0.0210
9	0.5542	0.0192
10	0.5719	0.0178
11	0.5885	0.0166
12	0.6041	0.0156
13	0.6239	0.0198
14	0.6428	0.0189
15	0.6610	0.0181
16	0.6784	0.0174
17	0.6952	0.0168
18	0.7114	0.0162
19	0.7271	0.0157
20	0.7423	0.0152
21	0.7570	0.0147
22	0.7714	0.0143
23	0.7853	0.0140
24	0.7989	0.0136
25	0.8122	0.0133
26	0.8251	0.0129
27	0.8378	0.0127
28	0.8502	0.0124
29	0.8623	0.0121
30	0.8742	0.0119

31	0.8858	0.0116
32	0.8972	0.0114
33	0.9084	0.0112
34	0.9194	0.0110
35	0.9302	0.0108
36	0.9408	0.0106
37	0.9511	0.0103
38	0.9613	0.0101
39	0.9713	0.0100
40	0.9811	0.0098
41	0.9908	0.0097
42	1.0003	0.0095
43	1.0097	0.0094
44	1.0190	0.0093
45	1.0281	0.0091
46	1.0371	0.0090
47	1.0460	0.0089
48	1.0548	0.0088
49	1.0635	0.0087
50	1.0721	0.0086
51	1.0806	0.0085
52	1.0889	0.0084
53	1.0972	0.0083
54	1.1054	0.0082
55	1.1135	0.0081
56	1.1215	0.0080
57	1.1294	0.0079
58	1.1373	0.0078
59	1.1450	0.0078
60	1.1527	0.0077
61	1.1603	0.0076
62	1.1678	0.0075
63	1.1753	0.0075
64	1.1826	0.0074
65	1.1900	0.0073
66	1.1972	0.0072
67	1.2044	0.0072
68	1.2115	0.0071
69	1.2185	0.0071
70	1.2255	0.0070
71	1.2325	0.0069
72	1.2393	0.0069
73	1.2460	0.0067
74	1.2527	0.0066
75	1.2592	0.0066
76	1.2658	0.0065
77	1.2723	0.0065
78	1.2787	0.0064
79	1.2851	0.0064
80	1.2914	0.0063

81	1.2977	0.0063
82	1.3039	0.0062
83	1.3101	0.0062
84	1.3162	0.0061
85	1.3223	0.0061
86	1.3284	0.0061
87	1.3344	0.0060
88	1.3404	0.0060
89	1.3463	0.0059
90	1.3522	0.0059
91	1.3580	0.0058
92	1.3638	0.0058
93	1.3696	0.0058
94	1.3753	0.0057
95	1.3810	0.0057
96	1.3867	0.0057
97	1.3923	0.0056
98	1.3979	0.0056
99	1.4034	0.0056
100	1.4090	0.0055
101	1.4144	0.0055
102	1.4199	0.0055
103	1.4253	0.0054
104	1.4307	0.0054
105	1.4361	0.0054
106	1.4414	0.0053
107	1.4467	0.0053
108	1.4519	0.0053
109	1.4572	0.0052
110	1.4624	0.0052
111	1.4676	0.0052
112	1.4727	0.0051
113	1.4778	0.0051
114	1.4829	0.0051
115	1.4880	0.0051
116	1.4930	0.0050
117	1.4980	0.0050
118	1.5030	0.0050
119	1.5080	0.0050
120	1.5129	0.0049
121	1.5178	0.0049
122	1.5227	0.0049
123	1.5276	0.0049
124	1.5324	0.0048
125	1.5372	0.0048
126	1.5420	0.0048
127	1.5468	0.0048
128	1.5515	0.0047
129	1.5563	0.0047
130	1.5610	0.0047

131	1.5656	0.0047
132	1.5703	0.0047
133	1.5749	0.0046
134	1.5795	0.0046
135	1.5841	0.0046
136	1.5887	0.0046
137	1.5933	0.0046
138	1.5978	0.0045
139	1.6023	0.0045
140	1.6068	0.0045
141	1.6113	0.0045
142	1.6157	0.0045
143	1.6202	0.0044
144	1.6246	0.0044
145	1.6290	0.0044
146	1.6333	0.0044
147	1.6377	0.0044
148	1.6420	0.0043
149	1.6464	0.0043
150	1.6507	0.0043
151	1.6550	0.0043
152	1.6592	0.0043
153	1.6635	0.0043
154	1.6677	0.0042
155	1.6719	0.0042
156	1.6761	0.0042
157	1.6803	0.0042
158	1.6845	0.0042
159	1.6887	0.0042
160	1.6928	0.0041
161	1.6969	0.0041
162	1.7010	0.0041
163	1.7051	0.0041
164	1.7092	0.0041
165	1.7133	0.0041
166	1.7173	0.0040
167	1.7213	0.0040
168	1.7254	0.0040
169	1.7294	0.0040
170	1.7334	0.0040
171	1.7373	0.0040
172	1.7413	0.0040
173	1.7452	0.0039
174	1.7492	0.0039
175	1.7531	0.0039
176	1.7570	0.0039
177	1.7609	0.0039
178	1.7648	0.0039
179	1.7686	0.0039
180	1.7725	0.0039

181	1.7763	0.0038
182	1.7801	0.0038
183	1.7840	0.0038
184	1.7878	0.0038
185	1.7915	0.0038
186	1.7953	0.0038
187	1.7991	0.0038
188	1.8028	0.0038
189	1.8066	0.0037
190	1.8103	0.0037
191	1.8140	0.0037
192	1.8177	0.0037
193	1.8214	0.0037
194	1.8251	0.0037
195	1.8287	0.0037
196	1.8324	0.0037
197	1.8361	0.0036
198	1.8397	0.0036
199	1.8433	0.0036
200	1.8469	0.0036
201	1.8505	0.0036
202	1.8541	0.0036
203	1.8577	0.0036
204	1.8613	0.0036
205	1.8648	0.0036
206	1.8684	0.0035
207	1.8719	0.0035
208	1.8754	0.0035
209	1.8789	0.0035
210	1.8824	0.0035
211	1.8859	0.0035
212	1.8894	0.0035
213	1.8929	0.0035
214	1.8964	0.0035
215	1.8998	0.0035
216	1.9033	0.0034
217	1.9067	0.0034
218	1.9101	0.0034
219	1.9135	0.0034
220	1.9170	0.0034
221	1.9203	0.0034
222	1.9237	0.0034
223	1.9271	0.0034
224	1.9305	0.0034
225	1.9338	0.0034
226	1.9372	0.0034
227	1.9405	0.0033
228	1.9439	0.0033
229	1.9472	0.0033
230	1.9505	0.0033

231	1.9538	0.0033
232	1.9571	0.0033
233	1.9604	0.0033
234	1.9637	0.0033
235	1.9670	0.0033
236	1.9702	0.0033
237	1.9735	0.0033
238	1.9767	0.0032
239	1.9800	0.0032
240	1.9832	0.0032
241	1.9864	0.0032
242	1.9896	0.0032
243	1.9928	0.0032
244	1.9960	0.0032
245	1.9992	0.0032
246	2.0024	0.0032
247	2.0056	0.0032
248	2.0088	0.0032
249	2.0119	0.0032
250	2.0151	0.0032
251	2.0182	0.0031
252	2.0213	0.0031
253	2.0245	0.0031
254	2.0276	0.0031
255	2.0307	0.0031
256	2.0338	0.0031
257	2.0369	0.0031
258	2.0400	0.0031
259	2.0431	0.0031
260	2.0462	0.0031
261	2.0492	0.0031
262	2.0523	0.0031
263	2.0554	0.0031
264	2.0584	0.0030
265	2.0614	0.0030
266	2.0645	0.0030
267	2.0675	0.0030
268	2.0705	0.0030
269	2.0735	0.0030
270	2.0765	0.0030
271	2.0795	0.0030
272	2.0825	0.0030
273	2.0855	0.0030
274	2.0885	0.0030
275	2.0915	0.0030
276	2.0944	0.0030
277	2.0974	0.0030
278	2.1004	0.0030
279	2.1033	0.0029
280	2.1062	0.0029

281	2.1092	0.0029
282	2.1121	0.0029
283	2.1150	0.0029
284	2.1179	0.0029
285	2.1209	0.0029
286	2.1238	0.0029
287	2.1267	0.0029
288	2.1295	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026
33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027

38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0038	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033
83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034

88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0038
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047
133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050

138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0071	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0075	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0078	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0106	0.0019	0.0087
170	0.0108	0.0020	0.0088
171	0.0112	0.0021	0.0091
172	0.0114	0.0021	0.0093
173	0.0119	0.0022	0.0097
174	0.0121	0.0022	0.0099
175	0.0127	0.0023	0.0103
176	0.0129	0.0024	0.0106
177	0.0136	0.0025	0.0111
178	0.0140	0.0026	0.0114
179	0.0147	0.0027	0.0120
180	0.0152	0.0028	0.0124
181	0.0162	0.0030	0.0132
182	0.0168	0.0031	0.0137
183	0.0181	0.0033	0.0148
184	0.0189	0.0035	0.0155
185	0.0156	0.0029	0.0127
186	0.0166	0.0030	0.0135
187	0.0192	0.0035	0.0157

188	0.0210	0.0039	0.0172
189	0.0261	0.0046	0.0216
190	0.0301	0.0046	0.0255
191	0.0456	0.0046	0.0411
192	0.0663	0.0046	0.0617
193	0.2867	0.0046	0.2821
194	0.0359	0.0046	0.0314
195	0.0232	0.0043	0.0190
196	0.0178	0.0033	0.0145
197	0.0198	0.0036	0.0162
198	0.0174	0.0032	0.0142
199	0.0157	0.0029	0.0128
200	0.0143	0.0026	0.0117
201	0.0133	0.0024	0.0108
202	0.0124	0.0023	0.0101
203	0.0116	0.0021	0.0095
204	0.0110	0.0020	0.0090
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041
233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038

238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025
283	0.0030	0.0006	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024

288 0.0029 0.0005 0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 299.16(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

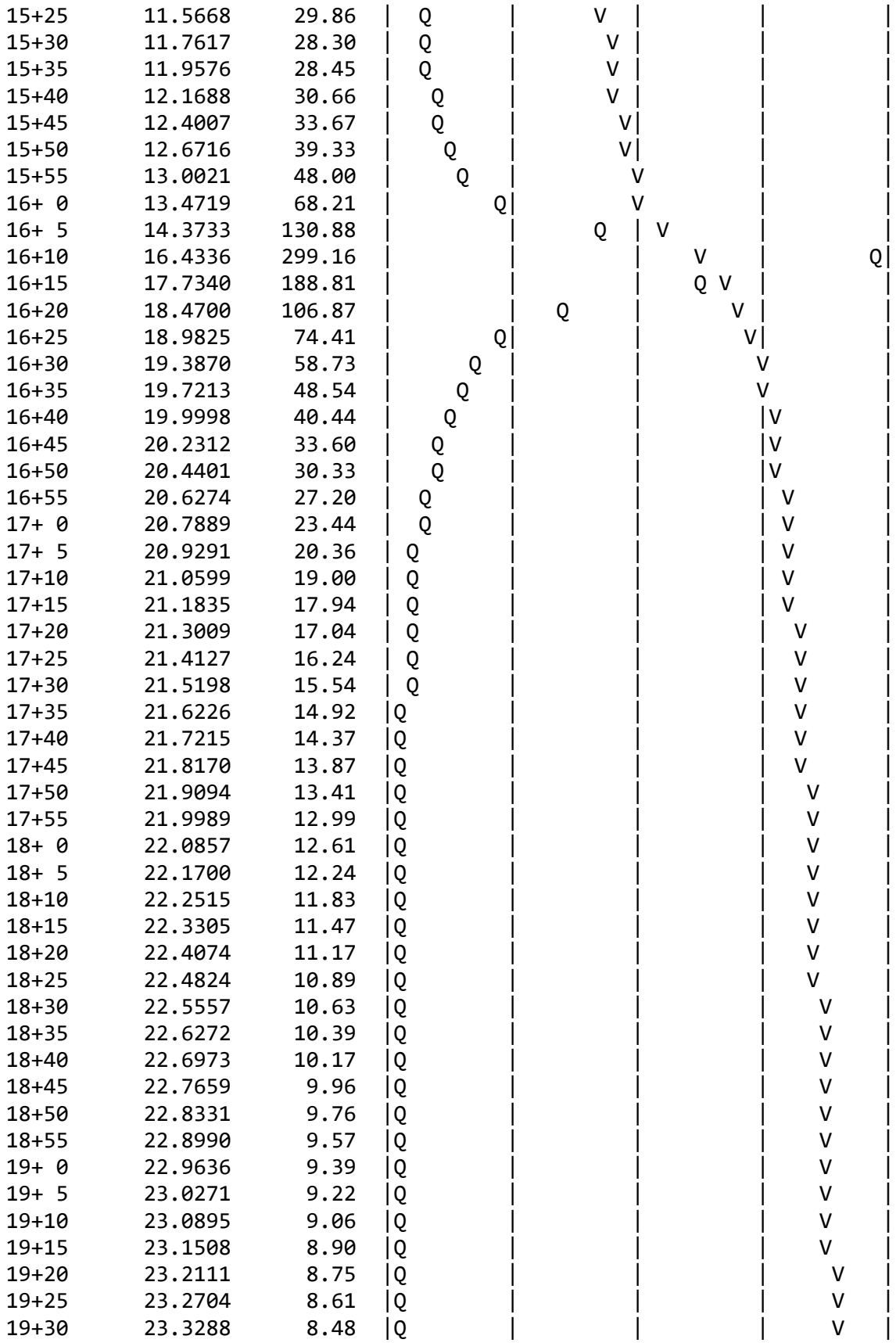
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0026	0.38	Q				
0+10	0.0196	2.46	Q				
0+15	0.0444	3.60	Q				
0+20	0.0727	4.11	Q				
0+25	0.1031	4.41	Q				
0+30	0.1348	4.61	Q				
0+35	0.1675	4.74	Q				
0+40	0.2008	4.84	Q				
0+45	0.2346	4.90	Q				
0+50	0.2687	4.96	Q				
0+55	0.3032	5.01	Q				
1+ 0	0.3379	5.04	Q				
1+ 5	0.3727	5.05	Q				
1+10	0.4077	5.07	Q				
1+15	0.4427	5.09	Q				
1+20	0.4779	5.11	Q				
1+25	0.5132	5.12	Q				
1+30	0.5486	5.14	Q				
1+35	0.5841	5.16	Q				
1+40	0.6198	5.18	Q				
1+45	0.6556	5.20	QV				
1+50	0.6915	5.21	QV				
1+55	0.7275	5.23	QV				
2+ 0	0.7637	5.25	QV				
2+ 5	0.8000	5.27	QV				
2+10	0.8364	5.29	QV				
2+15	0.8730	5.31	QV				
2+20	0.9097	5.33	QV				
2+25	0.9465	5.35	QV				
2+30	0.9835	5.37	QV				
2+35	1.0206	5.39	QV				
2+40	1.0578	5.41	QV				
2+45	1.0952	5.43	QV				
2+50	1.1327	5.45	QV				

2+55	1.1703	5.47	QV	|	|	|	|
3+ 0	1.2082	5.49	QV	|	|	|	|
3+ 5	1.2461	5.51	QV	|	|	|	|
3+10	1.2842	5.53	QV	|	|	|	|
3+15	1.3225	5.55	Q V	|	|	|	|
3+20	1.3609	5.58	Q V	|	|	|	|
3+25	1.3994	5.60	Q V	|	|	|	|
3+30	1.4381	5.62	Q V	|	|	|	|
3+35	1.4770	5.64	Q V	|	|	|	|
3+40	1.5160	5.67	Q V	|	|	|	|
3+45	1.5551	5.69	Q V	|	|	|	|
3+50	1.5945	5.71	Q V	|	|	|	|
3+55	1.6340	5.73	Q V	|	|	|	|
4+ 0	1.6736	5.76	Q V	|	|	|	|
4+ 5	1.7135	5.78	Q V	|	|	|	|
4+10	1.7535	5.81	Q V	|	|	|	|
4+15	1.7936	5.83	Q V	|	|	|	|
4+20	1.8340	5.86	Q V	|	|	|	|
4+25	1.8745	5.88	Q V	|	|	|	|
4+30	1.9151	5.91	Q V	|	|	|	|
4+35	1.9560	5.93	Q V	|	|	|	|
4+40	1.9970	5.96	Q V	|	|	|	|
4+45	2.0382	5.98	Q V	|	|	|	|
4+50	2.0796	6.01	Q V	|	|	|	|
4+55	2.1212	6.04	Q V	|	|	|	|
5+ 0	2.1630	6.07	Q V	|	|	|	|
5+ 5	2.2050	6.09	Q V	|	|	|	|
5+10	2.2471	6.12	Q V	|	|	|	|
5+15	2.2895	6.15	Q V	|	|	|	|
5+20	2.3320	6.18	Q V	|	|	|	|
5+25	2.3748	6.21	Q V	|	|	|	|
5+30	2.4177	6.24	Q V	|	|	|	|
5+35	2.4609	6.26	Q V	|	|	|	|
5+40	2.5042	6.30	Q V	|	|	|	|
5+45	2.5478	6.33	Q V	|	|	|	|
5+50	2.5916	6.36	Q V	|	|	|	|
5+55	2.6356	6.39	Q V	|	|	|	|
6+ 0	2.6798	6.42	Q V	|	|	|	|
6+ 5	2.7242	6.45	Q V	|	|	|	|
6+10	2.7689	6.49	Q V	|	|	|	|
6+15	2.8138	6.52	Q V	|	|	|	|
6+20	2.8589	6.55	Q V	|	|	|	|
6+25	2.9042	6.58	Q V	|	|	|	|
6+30	2.9498	6.62	Q V	|	|	|	|
6+35	2.9956	6.65	Q V	|	|	|	|
6+40	3.0417	6.69	Q V	|	|	|	|
6+45	3.0880	6.72	Q V	|	|	|	|
6+50	3.1346	6.76	Q V	|	|	|	|
6+55	3.1814	6.80	Q V	|	|	|	|
7+ 0	3.2285	6.84	Q V	|	|	|	|

7+ 5	3.2758	6.87	Q	V	|	|	|	|
7+10	3.3234	6.91	Q	V	|	|	|	|
7+15	3.3712	6.95	Q	V	|	|	|	|
7+20	3.4194	6.99	Q	V	|	|	|	|
7+25	3.4678	7.03	Q	V	|	|	|	|
7+30	3.5165	7.07	Q	V	|	|	|	|
7+35	3.5655	7.11	Q	V	|	|	|	|
7+40	3.6147	7.16	Q	V	|	|	|	|
7+45	3.6643	7.20	Q	V	|	|	|	|
7+50	3.7142	7.24	Q	V	|	|	|	|
7+55	3.7643	7.28	Q	V	|	|	|	|
8+ 0	3.8148	7.33	Q	V	|	|	|	|
8+ 5	3.8656	7.37	Q	V	|	|	|	|
8+10	3.9167	7.42	Q	V	|	|	|	|
8+15	3.9681	7.47	Q	V	|	|	|	|
8+20	4.0199	7.52	|Q	V	|	|	|	|
8+25	4.0720	7.56	|Q	V	|	|	|	|
8+30	4.1244	7.62	|Q	V	|	|	|	|
8+35	4.1772	7.66	|Q	V	|	|	|	|
8+40	4.2303	7.72	|Q	V	|	|	|	|
8+45	4.2838	7.77	|Q	V	|	|	|	|
8+50	4.3377	7.82	|Q	V	|	|	|	|
8+55	4.3919	7.87	|Q	V	|	|	|	|
9+ 0	4.4465	7.93	|Q	V	|	|	|	|
9+ 5	4.5015	7.98	|Q	V	|	|	|	|
9+10	4.5569	8.05	|Q	V	|	|	|	|
9+15	4.6127	8.10	|Q	V	|	|	|	|
9+20	4.6689	8.16	|Q	V	|	|	|	|
9+25	4.7256	8.22	|Q	V	|	|	|	|
9+30	4.7826	8.29	|Q	V	|	|	|	|
9+35	4.8401	8.34	|Q	V	|	|	|	|
9+40	4.8980	8.41	|Q	V	|	|	|	|
9+45	4.9564	8.47	|Q	V	|	|	|	|
9+50	5.0152	8.55	|Q	V	|	|	|	|
9+55	5.0745	8.61	|Q	V	|	|	|	|
10+ 0	5.1343	8.68	|Q	V	|	|	|	|
10+ 5	5.1946	8.75	|Q	V	|	|	|	|
10+10	5.2554	8.83	|Q	V	|	|	|	|
10+15	5.3167	8.90	|Q	V	|	|	|	|
10+20	5.3785	8.98	|Q	V	|	|	|	|
10+25	5.4409	9.05	|Q	V	|	|	|	|
10+30	5.5038	9.14	|Q	V	|	|	|	|
10+35	5.5673	9.21	|Q	V	|	|	|	|
10+40	5.6314	9.30	|Q	V	|	|	|	|
10+45	5.6960	9.38	|Q	V	|	|	|	|
10+50	5.7613	9.48	|Q	V	|	|	|	|
10+55	5.8271	9.56	|Q	V	|	|	|	|
11+ 0	5.8936	9.66	|Q	V	|	|	|	|
11+ 5	5.9608	9.75	|Q	V	|	|	|	|
11+10	6.0286	9.85	|Q	V	|	|	|	|

11+15	6.0971	9.95	Q	V			
11+20	6.1664	10.06	Q	V			
11+25	6.2363	10.15	Q	V			
11+30	6.3070	10.27	Q	V			
11+35	6.3785	10.37	Q	V			
11+40	6.4508	10.50	Q	V			
11+45	6.5238	10.61	Q	V			
11+50	6.5978	10.74	Q	V			
11+55	6.6725	10.85	Q	V			
12+ 0	6.7482	10.99	Q	V			
12+ 5	6.8249	11.13	Q	V			
12+10	6.9032	11.37	Q	V			
12+15	6.9828	11.55	Q	V			
12+20	7.0635	11.73	Q	V			
12+25	7.1454	11.88	Q	V			
12+30	7.2284	12.06	Q	V			
12+35	7.3126	12.22	Q	V			
12+40	7.3981	12.41	Q	V			
12+45	7.4847	12.58	Q	V			
12+50	7.5726	12.77	Q	V			
12+55	7.6619	12.95	Q	V			
13+ 0	7.7526	13.17	Q	V			
13+ 5	7.8446	13.36	Q	V			
13+10	7.9382	13.60	Q	V			
13+15	8.0333	13.81	Q	V			
13+20	8.1302	14.06	Q	V			
13+25	8.2286	14.29	Q	V			
13+30	8.3290	14.57	Q	V			
13+35	8.4311	14.83	Q	V			
13+40	8.5353	15.14	Q	V			
13+45	8.6415	15.42	Q	V			
13+50	8.7501	15.76	Q	V			
13+55	8.8608	16.08	Q	V			
14+ 0	8.9742	16.46	Q	V			
14+ 5	9.0901	16.84	Q	V			
14+10	9.2098	17.38	Q	V			
14+15	9.3327	17.84	Q	V			
14+20	9.4592	18.37	Q	V			
14+25	9.5890	18.85	Q	V			
14+30	9.7228	19.43	Q	V			
14+35	9.8604	19.98	Q	V			
14+40	10.0027	20.66	Q	V			
14+45	10.1494	21.30	Q	V			
14+50	10.3017	22.11	Q	V			
14+55	10.4593	22.89	Q	V			
15+ 0	10.6237	23.87	Q	V			
15+ 5	10.7947	24.83	Q	V			
15+10	10.9742	26.06	Q	V			
15+15	11.1621	27.29	Q	V			
15+20	11.3612	28.91	Q	V			



19+35	23.3863	8.35	|Q	|	|	|	V |
19+40	23.4429	8.22	|Q	|	|	|	V |
19+45	23.4987	8.10	|Q	|	|	|	V |
19+50	23.5537	7.99	|Q	|	|	|	V |
19+55	23.6079	7.87	|Q	|	|	|	V |
20+ 0	23.6614	7.77	|Q	|	|	|	V |
20+ 5	23.7142	7.66	|Q	|	|	|	V |
20+10	23.7663	7.56	|Q	|	|	|	V |
20+15	23.8177	7.47	Q	|	|	|	V |
20+20	23.8685	7.37	Q	|	|	|	V |
20+25	23.9186	7.28	Q	|	|	|	V |
20+30	23.9682	7.20	Q	|	|	|	V |
20+35	24.0171	7.11	Q	|	|	|	V |
20+40	24.0655	7.03	Q	|	|	|	V |
20+45	24.1134	6.95	Q	|	|	|	V |
20+50	24.1607	6.87	Q	|	|	|	V |
20+55	24.2075	6.80	Q	|	|	|	V |
21+ 0	24.2538	6.72	Q	|	|	|	V |
21+ 5	24.2996	6.65	Q	|	|	|	V |
21+10	24.3450	6.58	Q	|	|	|	V |
21+15	24.3898	6.52	Q	|	|	|	V |
21+20	24.4343	6.45	Q	|	|	|	V |
21+25	24.4783	6.39	Q	|	|	|	V |
21+30	24.5218	6.32	Q	|	|	|	V |
21+35	24.5650	6.26	Q	|	|	|	V |
21+40	24.6077	6.21	Q	|	|	|	V |
21+45	24.6500	6.15	Q	|	|	|	V |
21+50	24.6920	6.09	Q	|	|	|	V |
21+55	24.7336	6.04	Q	|	|	|	V |
22+ 0	24.7748	5.98	Q	|	|	|	V |
22+ 5	24.8156	5.93	Q	|	|	|	V |
22+10	24.8561	5.88	Q	|	|	|	V |
22+15	24.8963	5.83	Q	|	|	|	V |
22+20	24.9361	5.78	Q	|	|	|	V |
22+25	24.9756	5.73	Q	|	|	|	V |
22+30	25.0147	5.69	Q	|	|	|	V |
22+35	25.0536	5.64	Q	|	|	|	V |
22+40	25.0921	5.60	Q	|	|	|	V |
22+45	25.1303	5.55	Q	|	|	|	V|
22+50	25.1683	5.51	Q	|	|	|	V|
22+55	25.2059	5.47	Q	|	|	|	V|
23+ 0	25.2433	5.43	Q	|	|	|	V|
23+ 5	25.2804	5.39	Q	|	|	|	V|
23+10	25.3172	5.35	Q	|	|	|	V|
23+15	25.3538	5.31	Q	|	|	|	V|
23+20	25.3900	5.27	Q	|	|	|	V|
23+25	25.4261	5.23	Q	|	|	|	V|
23+30	25.4618	5.19	Q	|	|	|	V|
23+35	25.4974	5.16	Q	|	|	|	V|
23+40	25.5327	5.12	Q	|	|	|	V|

```
   23+45      25.5677      5.09  Q        |         |         |        V|
   23+50      25.6025      5.05  Q        |         |         |        V|
   23+55      25.6371      5.02  Q        |         |         |        V|
   24+ 0      25.6714      4.99  Q        |         |         |        V|
-------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/06/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area A
10-year Developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
47.41	1	0.61
Rainfall data for year 10		
47.41	6	1.24
Rainfall data for year 10		
47.41	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	47.41	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
4.74	0.100	69.0	69.0	4.49	0.124
42.67	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.221 (hours)
++
Watershed area = 47.41(Ac.)
Catchment Lag time = 0.177 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 47.1620
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 47.41(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 573.36 (CFS))	
1	3.598	20.628
2	27.153	135.056
3	57.843	175.965
4	71.760	79.798
5	79.835	46.300
6	85.165	30.559
7	89.031	22.163
8	91.745	15.561
9	93.875	12.216
10	95.494	9.280
11	96.745	7.176
12	97.641	5.135
13	98.199	3.199
14	98.740	3.104
15	99.303	3.226
16	99.694	2.242
17	100.000	1.756

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2883	0.2883
2	0.3550	0.0666
3	0.4009	0.0459
4	0.4370	0.0361
5	0.4673	0.0303
6	0.4936	0.0263
7	0.5169	0.0234
8	0.5381	0.0211
9	0.5574	0.0194
10	0.5753	0.0179
11	0.5920	0.0167
12	0.6076	0.0157
13	0.6273	0.0197
14	0.6462	0.0188
15	0.6642	0.0180
16	0.6815	0.0173
17	0.6981	0.0167
18	0.7142	0.0161
19	0.7298	0.0156
20	0.7449	0.0151
21	0.7595	0.0146
22	0.7737	0.0142
23	0.7875	0.0138
24	0.8010	0.0135
25	0.8142	0.0131

26	0.8270	0.0128
27	0.8395	0.0125
28	0.8518	0.0123
29	0.8638	0.0120
30	0.8755	0.0118
31	0.8871	0.0115
32	0.8984	0.0113
33	0.9094	0.0111
34	0.9203	0.0109
35	0.9310	0.0107
36	0.9415	0.0105
37	0.9518	0.0103
38	0.9620	0.0101
39	0.9719	0.0100
40	0.9818	0.0098
41	0.9914	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0196	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0641	0.0087
50	1.0727	0.0086
51	1.0812	0.0085
52	1.0895	0.0084
53	1.0978	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1378	0.0078
59	1.1456	0.0077
60	1.1532	0.0077
61	1.1608	0.0076
62	1.1684	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1977	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2190	0.0070
70	1.2260	0.0070
71	1.2330	0.0069
72	1.2398	0.0069
73	1.2465	0.0067
74	1.2531	0.0066
75	1.2597	0.0066

76	1.2663	0.0065
77	1.2727	0.0065
78	1.2792	0.0064
79	1.2855	0.0064
80	1.2919	0.0063
81	1.2981	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3408	0.0060
89	1.3468	0.0059
90	1.3526	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3872	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4094	0.0055
101	1.4149	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4365	0.0054
106	1.4419	0.0053
107	1.4471	0.0053
108	1.4524	0.0053
109	1.4576	0.0052
110	1.4629	0.0052
111	1.4680	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5085	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5280	0.0049
124	1.5329	0.0048
125	1.5377	0.0048

126	1.5425	0.0048
127	1.5472	0.0048
128	1.5520	0.0047
129	1.5567	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5707	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5982	0.0045
139	1.6027	0.0045
140	1.6072	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6381	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6639	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6849	0.0042
159	1.6891	0.0042
160	1.6932	0.0041
161	1.6974	0.0041
162	1.7015	0.0041
163	1.7056	0.0041
164	1.7096	0.0041
165	1.7137	0.0041
166	1.7177	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7377	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039

176	1.7574	0.0039
177	1.7613	0.0039
178	1.7652	0.0039
179	1.7690	0.0039
180	1.7729	0.0039
181	1.7767	0.0038
182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7920	0.0038
186	1.7957	0.0038
187	1.7995	0.0038
188	1.8032	0.0037
189	1.8070	0.0037
190	1.8107	0.0037
191	1.8144	0.0037
192	1.8181	0.0037
193	1.8218	0.0037
194	1.8255	0.0037
195	1.8292	0.0037
196	1.8328	0.0037
197	1.8365	0.0036
198	1.8401	0.0036
199	1.8437	0.0036
200	1.8473	0.0036
201	1.8509	0.0036
202	1.8545	0.0036
203	1.8581	0.0036
204	1.8617	0.0036
205	1.8652	0.0036
206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
209	1.8793	0.0035
210	1.8828	0.0035
211	1.8863	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
219	1.9139	0.0034
220	1.9173	0.0034
221	1.9207	0.0034
222	1.9241	0.0034
223	1.9275	0.0034
224	1.9309	0.0034
225	1.9342	0.0034

226	1.9376	0.0034
227	1.9409	0.0033
228	1.9443	0.0033
229	1.9476	0.0033
230	1.9509	0.0033
231	1.9542	0.0033
232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
235	1.9673	0.0033
236	1.9706	0.0033
237	1.9739	0.0033
238	1.9771	0.0032
239	1.9803	0.0032
240	1.9836	0.0032
241	1.9868	0.0032
242	1.9900	0.0032
243	1.9932	0.0032
244	1.9964	0.0032
245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
250	2.0154	0.0032
251	2.0186	0.0031
252	2.0217	0.0031
253	2.0248	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0434	0.0031
260	2.0465	0.0031
261	2.0496	0.0031
262	2.0527	0.0031
263	2.0557	0.0031
264	2.0588	0.0030
265	2.0618	0.0030
266	2.0648	0.0030
267	2.0679	0.0030
268	2.0709	0.0030
269	2.0739	0.0030
270	2.0769	0.0030
271	2.0799	0.0030
272	2.0829	0.0030
273	2.0859	0.0030
274	2.0888	0.0030
275	2.0918	0.0030

276	2.0948	0.0030
277	2.0977	0.0030
278	2.1007	0.0030
279	2.1036	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1124	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026

33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033

83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047

133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0091
172	0.0113	0.0021	0.0092
173	0.0118	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0030	0.0131
182	0.0167	0.0031	0.0136

183	0.0180	0.0033	0.0147
184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128
186	0.0167	0.0031	0.0136
187	0.0194	0.0035	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0413
192	0.0666	0.0046	0.0621
193	0.2883	0.0046	0.2838
194	0.0361	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0123	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041

233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025

283	0.0030	0.0005	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 63.66(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

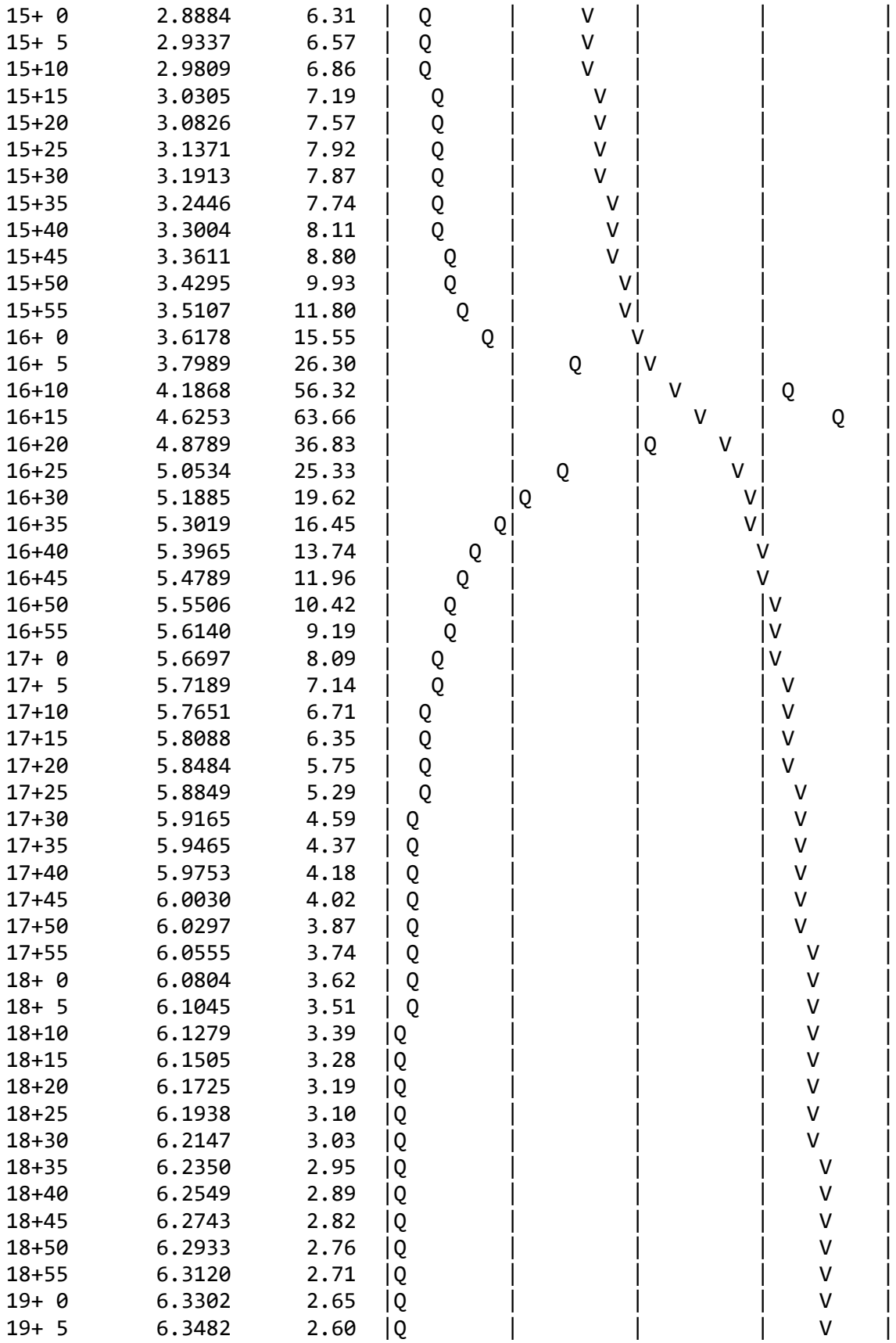
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	17.5	35.0	52.5	70.0
0+ 5	0.0003	0.05	Q				
0+10	0.0029	0.37	Q				
0+15	0.0083	0.78	Q				
0+20	0.0150	0.97	Q				
0+25	0.0225	1.09	Q				
0+30	0.0305	1.16	Q				
0+35	0.0389	1.22	Q				
0+40	0.0475	1.26	Q				
0+45	0.0564	1.29	Q				
0+50	0.0655	1.32	Q				
0+55	0.0747	1.34	Q				
1+ 0	0.0841	1.36	Q				
1+ 5	0.0935	1.37	Q				
1+10	0.1030	1.38	Q				
1+15	0.1126	1.39	Q				
1+20	0.1222	1.40	Q				
1+25	0.1319	1.41	Q				
1+30	0.1417	1.42	Q				
1+35	0.1515	1.42	Q				
1+40	0.1613	1.43	Q				
1+45	0.1711	1.43	Q				
1+50	0.1810	1.44	QV				
1+55	0.1909	1.44	QV				
2+ 0	0.2009	1.45	QV				
2+ 5	0.2109	1.45	QV				
2+10	0.2209	1.46	QV				
2+15	0.2310	1.46	QV				
2+20	0.2411	1.47	QV				
2+25	0.2512	1.47	QV				

2+30	0.2614	1.48	QV	|	|	|	|
2+35	0.2716	1.48	QV	|	|	|	|
2+40	0.2819	1.49	QV	|	|	|	|
2+45	0.2921	1.49	QV	|	|	|	|
2+50	0.3025	1.50	QV	|	|	|	|
2+55	0.3128	1.51	QV	|	|	|	|
3+ 0	0.3232	1.51	QV	|	|	|	|
3+ 5	0.3337	1.52	QV	|	|	|	|
3+10	0.3442	1.52	QV	|	|	|	|
3+15	0.3547	1.53	QV	|	|	|	|
3+20	0.3653	1.53	Q V	|	|	|	|
3+25	0.3759	1.54	Q V	|	|	|	|
3+30	0.3865	1.55	Q V	|	|	|	|
3+35	0.3972	1.55	Q V	|	|	|	|
3+40	0.4080	1.56	Q V	|	|	|	|
3+45	0.4187	1.57	Q V	|	|	|	|
3+50	0.4296	1.57	Q V	|	|	|	|
3+55	0.4404	1.58	Q V	|	|	|	|
4+ 0	0.4513	1.58	Q V	|	|	|	|
4+ 5	0.4623	1.59	Q V	|	|	|	|
4+10	0.4733	1.60	Q V	|	|	|	|
4+15	0.4843	1.60	Q V	|	|	|	|
4+20	0.4954	1.61	Q V	|	|	|	|
4+25	0.5066	1.62	Q V	|	|	|	|
4+30	0.5178	1.62	Q V	|	|	|	|
4+35	0.5290	1.63	Q V	|	|	|	|
4+40	0.5403	1.64	Q V	|	|	|	|
4+45	0.5516	1.65	Q V	|	|	|	|
4+50	0.5630	1.65	Q V	|	|	|	|
4+55	0.5745	1.66	Q V	|	|	|	|
5+ 0	0.5860	1.67	Q V	|	|	|	|
5+ 5	0.5975	1.68	Q V	|	|	|	|
5+10	0.6091	1.68	Q V	|	|	|	|
5+15	0.6207	1.69	Q V	|	|	|	|
5+20	0.6324	1.70	Q V	|	|	|	|
5+25	0.6442	1.71	Q V	|	|	|	|
5+30	0.6560	1.71	Q V	|	|	|	|
5+35	0.6679	1.72	Q V	|	|	|	|
5+40	0.6798	1.73	Q V	|	|	|	|
5+45	0.6918	1.74	Q V	|	|	|	|
5+50	0.7038	1.75	Q V	|	|	|	|
5+55	0.7159	1.76	|Q V	|	|	|	|
6+ 0	0.7281	1.77	|Q V	|	|	|	|
6+ 5	0.7403	1.77	|Q V	|	|	|	|
6+10	0.7526	1.78	|Q V	|	|	|	|
6+15	0.7649	1.79	|Q V	|	|	|	|
6+20	0.7773	1.80	|Q V	|	|	|	|
6+25	0.7898	1.81	|Q V	|	|	|	|
6+30	0.8023	1.82	|Q V	|	|	|	|
6+35	0.8149	1.83	|Q V	|	|	|	|

6+40	0.8276	1.84	|Q V	|	|	|	|
6+45	0.8403	1.85	|Q V	|	|	|	|
6+50	0.8531	1.86	|Q V	|	|	|	|
6+55	0.8659	1.87	|Q V	|	|	|	|
7+ 0	0.8789	1.88	|Q V	|	|	|	|
7+ 5	0.8919	1.89	|Q V	|	|	|	|
7+10	0.9050	1.90	|Q V	|	|	|	|
7+15	0.9181	1.91	|Q V	|	|	|	|
7+20	0.9313	1.92	|Q V	|	|	|	|
7+25	0.9446	1.93	|Q V	|	|	|	|
7+30	0.9580	1.94	|Q V	|	|	|	|
7+35	0.9715	1.95	|Q V	|	|	|	|
7+40	0.9850	1.97	|Q V	|	|	|	|
7+45	0.9986	1.98	|Q V	|	|	|	|
7+50	1.0123	1.99	|Q V	|	|	|	|
7+55	1.0261	2.00	|Q V	|	|	|	|
8+ 0	1.0400	2.01	|Q V	|	|	|	|
8+ 5	1.0539	2.03	|Q V	|	|	|	|
8+10	1.0679	2.04	|Q V	|	|	|	|
8+15	1.0821	2.05	|Q V	|	|	|	|
8+20	1.0963	2.06	|Q V	|	|	|	|
8+25	1.1106	2.08	|Q V	|	|	|	|
8+30	1.1250	2.09	|Q V	|	|	|	|
8+35	1.1395	2.10	|Q V	|	|	|	|
8+40	1.1540	2.12	|Q V	|	|	|	|
8+45	1.1687	2.13	|Q V	|	|	|	|
8+50	1.1835	2.15	|Q V	|	|	|	|
8+55	1.1984	2.16	|Q V	|	|	|	|
9+ 0	1.2134	2.18	|Q V	|	|	|	|
9+ 5	1.2285	2.19	|Q V	|	|	|	|
9+10	1.2437	2.21	|Q V	|	|	|	|
9+15	1.2590	2.22	|Q V	|	|	|	|
9+20	1.2744	2.24	|Q V	|	|	|	|
9+25	1.2899	2.26	|Q V	|	|	|	|
9+30	1.3056	2.27	|Q V	|	|	|	|
9+35	1.3214	2.29	|Q V	|	|	|	|
9+40	1.3372	2.31	|Q V	|	|	|	|
9+45	1.3532	2.32	|Q V	|	|	|	|
9+50	1.3694	2.34	|Q V	|	|	|	|
9+55	1.3856	2.36	|Q V	|	|	|	|
10+ 0	1.4020	2.38	|Q V	|	|	|	|
10+ 5	1.4186	2.40	|Q V	|	|	|	|
10+10	1.4352	2.42	|Q V	|	|	|	|
10+15	1.4520	2.44	|Q V	|	|	|	|
10+20	1.4690	2.46	|Q V	|	|	|	|
10+25	1.4860	2.48	|Q V	|	|	|	|
10+30	1.5033	2.50	|Q V	|	|	|	|
10+35	1.5207	2.52	|Q V	|	|	|	|
10+40	1.5382	2.55	|Q V	|	|	|	|
10+45	1.5559	2.57	|Q V	|	|	|	|

10+50	1.5738	2.59	Q	V			
10+55	1.5918	2.62	Q	V			
11+ 0	1.6100	2.64	Q	V			
11+ 5	1.6284	2.67	Q	V			
11+10	1.6470	2.70	Q	V			
11+15	1.6657	2.72	Q	V			
11+20	1.6847	2.75	Q	V			
11+25	1.7038	2.78	Q	V			
11+30	1.7231	2.81	Q	V			
11+35	1.7427	2.84	Q	V			
11+40	1.7624	2.87	Q	V			
11+45	1.7824	2.90	Q	V			
11+50	1.8026	2.93	Q	V			
11+55	1.8231	2.97	Q	V			
12+ 0	1.8437	3.00	Q	V			
12+ 5	1.8647	3.04	Q	V			
12+10	1.8859	3.09	Q	V			
12+15	1.9076	3.14	Q	V			
12+20	1.9296	3.19	Q	V			
12+25	1.9519	3.24	Q	V			
12+30	1.9745	3.28	Q	V			
12+35	1.9974	3.33	Q	V			
12+40	2.0207	3.38	Q	V			
12+45	2.0443	3.43	Q	V			
12+50	2.0682	3.47	Q	V			
12+55	2.0925	3.53	Q	V			
13+ 0	2.1171	3.58	Q	V			
13+ 5	2.1422	3.64	Q	V			
13+10	2.1676	3.69	Q	V			
13+15	2.1935	3.76	Q	V			
13+20	2.2198	3.82	Q	V			
13+25	2.2466	3.89	Q	V			
13+30	2.2738	3.95	Q	V			
13+35	2.3015	4.03	Q	V			
13+40	2.3298	4.10	Q	V			
13+45	2.3586	4.18	Q	V			
13+50	2.3880	4.27	Q	V			
13+55	2.4180	4.36	Q	V			
14+ 0	2.4487	4.45	Q	V			
14+ 5	2.4800	4.55	Q	V			
14+10	2.5121	4.66	Q	V			
14+15	2.5451	4.78	Q	V			
14+20	2.5788	4.91	Q	V			
14+25	2.6135	5.04	Q	V			
14+30	2.6492	5.18	Q	V			
14+35	2.6859	5.33	Q	V			
14+40	2.7237	5.49	Q	V			
14+45	2.7628	5.67	Q	V			
14+50	2.8032	5.86	Q	V			
14+55	2.8450	6.08	Q	V			



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19+10       6.3657      2.55  |Q        |         |         |    V    |
19+15       6.3830      2.51  |Q        |         |         |    V    |
19+20       6.4000      2.47  |Q        |         |         |    V    |
19+25       6.4167      2.42  |Q        |         |         |     V   |
19+30       6.4331      2.38  |Q        |         |         |     V   |
19+35       6.4493      2.35  |Q        |         |         |     V   |
19+40       6.4652      2.31  |Q        |         |         |     V   |
19+45       6.4809      2.28  |Q        |         |         |     V   |
19+50       6.4963      2.24  |Q        |         |         |     V   |
19+55       6.5115      2.21  |Q        |         |         |     V   |
20+ 0       6.5265      2.18  |Q        |         |         |     V   |
20+ 5       6.5413      2.15  |Q        |         |         |     V   |
20+10       6.5559      2.12  |Q        |         |         |     V   |
20+15       6.5703      2.09  |Q        |         |         |     V   |
20+20       6.5846      2.07  |Q        |         |         |      V  |
20+25       6.5986      2.04  |Q        |         |         |      V  |
20+30       6.6125      2.01  |Q        |         |         |      V  |
20+35       6.6262      1.99  |Q        |         |         |      V  |
20+40       6.6397      1.97  |Q        |         |         |      V  |
20+45       6.6531      1.94  |Q        |         |         |      V  |
20+50       6.6664      1.92  |Q        |         |         |      V  |
20+55       6.6794      1.90  |Q        |         |         |      V  |
21+ 0       6.6924      1.88  |Q        |         |         |      V  |
21+ 5       6.7052      1.86  |Q        |         |         |      V  |
21+10       6.7179      1.84  |Q        |         |         |      V  |
21+15       6.7304      1.82  |Q        |         |         |      V  |
21+20       6.7428      1.80  |Q        |         |         |      V  |
21+25       6.7551      1.78  |Q        |         |         |      V  |
21+30       6.7673      1.77  |Q        |         |         |       V |
21+35       6.7793      1.75  Q         |         |         |       V |
21+40       6.7912      1.73  Q         |         |         |       V |
21+45       6.8030      1.72  Q         |         |         |       V |
21+50       6.8147      1.70  Q         |         |         |       V |
21+55       6.8263      1.68  Q         |         |         |       V |
22+ 0       6.8378      1.67  Q         |         |         |       V |
22+ 5       6.8492      1.65  Q         |         |         |       V |
22+10       6.8605      1.64  Q         |         |         |       V |
22+15       6.8717      1.63  Q         |         |         |       V |
22+20       6.8828      1.61  Q         |         |         |       V |
22+25       6.8938      1.60  Q         |         |         |       V |
22+30       6.9047      1.58  Q         |         |         |       V |
22+35       6.9156      1.57  Q         |         |         |       V |
22+40       6.9263      1.56  Q         |         |         |       V |
22+45       6.9370      1.55  Q         |         |         |       V |
22+50       6.9475      1.53  Q         |         |         |        V|
22+55       6.9580      1.52  Q         |         |         |        V|
23+ 0       6.9684      1.51  Q         |         |         |        V|
23+ 5       6.9787      1.50  Q         |         |         |        V|
23+10       6.9890      1.49  Q         |         |         |        V|
23+15       6.9992      1.48  Q         |         |         |        V|
```

```
   23+20       7.0093      1.47  Q         |          |          |         V|
   23+25       7.0193      1.46  Q         |          |          |         V|
   23+30       7.0293      1.45  Q         |          |          |         V|
   23+35       7.0392      1.44  Q         |          |          |         V|
   23+40       7.0490      1.43  Q         |          |          |         V|
   23+45       7.0587      1.42  Q         |          |          |         V|
   23+50       7.0684      1.41  Q         |          |          |         V|
   23+55       7.0780      1.40  Q         |          |          |         V|
   24+ 0       7.0876      1.39  Q         |          |          |         V|
-----------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/06/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area B
10-year developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
48.02	1	0.61
Rainfall data for year 10		
48.02	6	1.24
Rainfall data for year 10		
48.02	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	48.02	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
4.80	0.100	69.0	69.0	4.49	0.124
43.22	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.220 (hours)
++
Watershed area = 48.02(Ac.)
Catchment Lag time = 0.176 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 47.4347
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 48.02(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
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Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 580.74 (CFS))	
1	3.632	21.094
2	27.477	138.475
3	58.120	177.956
4	71.962	80.389
5	79.999	46.673
6	85.309	30.840
7	89.148	22.291
8	91.848	15.686
9	93.964	12.287
10	95.571	9.334
11	96.810	7.191
12	97.688	5.100
13	98.235	3.179
14	98.784	3.190
15	99.346	3.259
16	99.720	2.176
17	100.000	1.625

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2883	0.2883
2	0.3550	0.0666
3	0.4009	0.0459
4	0.4370	0.0361
5	0.4673	0.0303
6	0.4935	0.0263
7	0.5169	0.0234
8	0.5380	0.0211
9	0.5574	0.0194
10	0.5753	0.0179
11	0.5920	0.0167
12	0.6076	0.0157
13	0.6273	0.0197
14	0.6461	0.0188
15	0.6642	0.0180
16	0.6815	0.0173
17	0.6981	0.0167
18	0.7142	0.0161
19	0.7298	0.0156
20	0.7449	0.0151
21	0.7595	0.0146
22	0.7737	0.0142
23	0.7875	0.0138
24	0.8010	0.0135
25	0.8142	0.0131

26	0.8270	0.0128
27	0.8395	0.0125
28	0.8518	0.0123
29	0.8638	0.0120
30	0.8755	0.0118
31	0.8871	0.0115
32	0.8983	0.0113
33	0.9094	0.0111
34	0.9203	0.0109
35	0.9310	0.0107
36	0.9415	0.0105
37	0.9518	0.0103
38	0.9620	0.0101
39	0.9719	0.0100
40	0.9818	0.0098
41	0.9914	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0196	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0641	0.0087
50	1.0727	0.0086
51	1.0812	0.0085
52	1.0895	0.0084
53	1.0978	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1378	0.0078
59	1.1456	0.0077
60	1.1532	0.0077
61	1.1608	0.0076
62	1.1683	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1977	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2190	0.0070
70	1.2260	0.0070
71	1.2329	0.0069
72	1.2398	0.0069
73	1.2465	0.0067
74	1.2531	0.0066
75	1.2597	0.0066

76	1.2663	0.0065
77	1.2727	0.0065
78	1.2792	0.0064
79	1.2855	0.0064
80	1.2919	0.0063
81	1.2981	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3408	0.0060
89	1.3468	0.0059
90	1.3526	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3871	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4094	0.0055
101	1.4149	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4365	0.0054
106	1.4419	0.0053
107	1.4471	0.0053
108	1.4524	0.0053
109	1.4576	0.0052
110	1.4628	0.0052
111	1.4680	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5084	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5280	0.0049
124	1.5329	0.0048
125	1.5377	0.0048

126	1.5425	0.0048
127	1.5472	0.0048
128	1.5520	0.0047
129	1.5567	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5707	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5982	0.0045
139	1.6027	0.0045
140	1.6072	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6381	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6639	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6849	0.0042
159	1.6891	0.0042
160	1.6932	0.0041
161	1.6973	0.0041
162	1.7015	0.0041
163	1.7055	0.0041
164	1.7096	0.0041
165	1.7137	0.0041
166	1.7177	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7377	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039

176	1.7574	0.0039
177	1.7613	0.0039
178	1.7652	0.0039
179	1.7690	0.0039
180	1.7729	0.0039
181	1.7767	0.0038
182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7919	0.0038
186	1.7957	0.0038
187	1.7995	0.0038
188	1.8032	0.0037
189	1.8070	0.0037
190	1.8107	0.0037
191	1.8144	0.0037
192	1.8181	0.0037
193	1.8218	0.0037
194	1.8255	0.0037
195	1.8292	0.0037
196	1.8328	0.0037
197	1.8365	0.0036
198	1.8401	0.0036
199	1.8437	0.0036
200	1.8473	0.0036
201	1.8509	0.0036
202	1.8545	0.0036
203	1.8581	0.0036
204	1.8617	0.0036
205	1.8652	0.0036
206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
209	1.8793	0.0035
210	1.8828	0.0035
211	1.8863	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
219	1.9139	0.0034
220	1.9173	0.0034
221	1.9207	0.0034
222	1.9241	0.0034
223	1.9275	0.0034
224	1.9309	0.0034
225	1.9342	0.0034

226	1.9376	0.0034
227	1.9409	0.0033
228	1.9443	0.0033
229	1.9476	0.0033
230	1.9509	0.0033
231	1.9542	0.0033
232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
235	1.9673	0.0033
236	1.9706	0.0033
237	1.9739	0.0033
238	1.9771	0.0032
239	1.9803	0.0032
240	1.9836	0.0032
241	1.9868	0.0032
242	1.9900	0.0032
243	1.9932	0.0032
244	1.9964	0.0032
245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
250	2.0154	0.0032
251	2.0186	0.0031
252	2.0217	0.0031
253	2.0248	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0434	0.0031
260	2.0465	0.0031
261	2.0496	0.0031
262	2.0526	0.0031
263	2.0557	0.0031
264	2.0588	0.0030
265	2.0618	0.0030
266	2.0648	0.0030
267	2.0679	0.0030
268	2.0709	0.0030
269	2.0739	0.0030
270	2.0769	0.0030
271	2.0799	0.0030
272	2.0829	0.0030
273	2.0859	0.0030
274	2.0888	0.0030
275	2.0918	0.0030

276	2.0948	0.0030
277	2.0977	0.0030
278	2.1007	0.0030
279	2.1036	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1124	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026

33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033

83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047

133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0091
172	0.0113	0.0021	0.0092
173	0.0118	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0030	0.0131
182	0.0167	0.0031	0.0136

183	0.0180	0.0033	0.0147
184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128
186	0.0167	0.0031	0.0136
187	0.0194	0.0035	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0413
192	0.0666	0.0046	0.0621
193	0.2883	0.0046	0.2838
194	0.0361	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0123	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041

233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025

283	0.0030	0.0005	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 64.41(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	17.5	35.0	52.5	70.0
0+ 5	0.0003	0.05	Q				
0+10	0.0029	0.38	Q				
0+15	0.0084	0.80	Q				
0+20	0.0152	0.99	Q				
0+25	0.0228	1.10	Q				
0+30	0.0310	1.18	Q				
0+35	0.0395	1.24	Q				
0+40	0.0483	1.28	Q				
0+45	0.0573	1.31	Q				
0+50	0.0665	1.34	Q				
0+55	0.0758	1.36	Q				
1+ 0	0.0853	1.37	Q				
1+ 5	0.0948	1.39	Q				
1+10	0.1045	1.40	Q				
1+15	0.1142	1.41	Q				
1+20	0.1240	1.42	Q				
1+25	0.1338	1.43	Q				
1+30	0.1437	1.43	Q				
1+35	0.1536	1.44	Q				
1+40	0.1635	1.44	Q				
1+45	0.1735	1.45	Q				
1+50	0.1835	1.45	QV				
1+55	0.1936	1.46	QV				
2+ 0	0.2037	1.46	QV				
2+ 5	0.2138	1.47	QV				
2+10	0.2239	1.47	QV				
2+15	0.2341	1.48	QV				
2+20	0.2444	1.49	QV				
2+25	0.2546	1.49	QV				

2+30	0.2649	1.50	QV	|	|	|	|
2+35	0.2753	1.50	QV	|	|	|	|
2+40	0.2857	1.51	QV	|	|	|	|
2+45	0.2961	1.51	QV	|	|	|	|
2+50	0.3065	1.52	QV	|	|	|	|
2+55	0.3170	1.52	QV	|	|	|	|
3+ 0	0.3276	1.53	QV	|	|	|	|
3+ 5	0.3382	1.54	QV	|	|	|	|
3+10	0.3488	1.54	QV	|	|	|	|
3+15	0.3595	1.55	QV	|	|	|	|
3+20	0.3702	1.55	Q V	|	|	|	|
3+25	0.3809	1.56	Q V	|	|	|	|
3+30	0.3917	1.57	Q V	|	|	|	|
3+35	0.4025	1.57	Q V	|	|	|	|
3+40	0.4134	1.58	Q V	|	|	|	|
3+45	0.4243	1.59	Q V	|	|	|	|
3+50	0.4353	1.59	Q V	|	|	|	|
3+55	0.4463	1.60	Q V	|	|	|	|
4+ 0	0.4573	1.60	Q V	|	|	|	|
4+ 5	0.4684	1.61	Q V	|	|	|	|
4+10	0.4796	1.62	Q V	|	|	|	|
4+15	0.4908	1.63	Q V	|	|	|	|
4+20	0.5020	1.63	Q V	|	|	|	|
4+25	0.5133	1.64	Q V	|	|	|	|
4+30	0.5246	1.65	Q V	|	|	|	|
4+35	0.5360	1.65	Q V	|	|	|	|
4+40	0.5475	1.66	Q V	|	|	|	|
4+45	0.5589	1.67	Q V	|	|	|	|
4+50	0.5705	1.67	Q V	|	|	|	|
4+55	0.5821	1.68	Q V	|	|	|	|
5+ 0	0.5937	1.69	Q V	|	|	|	|
5+ 5	0.6054	1.70	Q V	|	|	|	|
5+10	0.6171	1.71	Q V	|	|	|	|
5+15	0.6289	1.71	Q V	|	|	|	|
5+20	0.6408	1.72	Q V	|	|	|	|
5+25	0.6527	1.73	Q V	|	|	|	|
5+30	0.6647	1.74	Q V	|	|	|	|
5+35	0.6767	1.75	Q V	|	|	|	|
5+40	0.6888	1.75	|Q V	|	|	|	|
5+45	0.7009	1.76	|Q V	|	|	|	|
5+50	0.7131	1.77	|Q V	|	|	|	|
5+55	0.7253	1.78	|Q V	|	|	|	|
6+ 0	0.7377	1.79	|Q V	|	|	|	|
6+ 5	0.7500	1.80	|Q V	|	|	|	|
6+10	0.7625	1.81	|Q V	|	|	|	|
6+15	0.7750	1.81	|Q V	|	|	|	|
6+20	0.7875	1.82	|Q V	|	|	|	|
6+25	0.8002	1.83	|Q V	|	|	|	|
6+30	0.8129	1.84	|Q V	|	|	|	|
6+35	0.8256	1.85	|Q V	|	|	|	|

6+40	0.8384	1.86	|Q V	|	|	|	|
6+45	0.8513	1.87	|Q V	|	|	|	|
6+50	0.8643	1.88	|Q V	|	|	|	|
6+55	0.8773	1.89	|Q V	|	|	|	|
7+ 0	0.8904	1.90	|Q V	|	|	|	|
7+ 5	0.9036	1.91	|Q V	|	|	|	|
7+10	0.9168	1.92	|Q V	|	|	|	|
7+15	0.9302	1.93	|Q V	|	|	|	|
7+20	0.9436	1.95	|Q V	|	|	|	|
7+25	0.9570	1.96	|Q V	|	|	|	|
7+30	0.9706	1.97	|Q V	|	|	|	|
7+35	0.9842	1.98	|Q V	|	|	|	|
7+40	0.9979	1.99	|Q V	|	|	|	|
7+45	1.0117	2.00	|Q V	|	|	|	|
7+50	1.0256	2.01	|Q V	|	|	|	|
7+55	1.0395	2.03	|Q V	|	|	|	|
8+ 0	1.0536	2.04	|Q V	|	|	|	|
8+ 5	1.0677	2.05	|Q V	|	|	|	|
8+10	1.0819	2.06	|Q V	|	|	|	|
8+15	1.0962	2.08	|Q V	|	|	|	|
8+20	1.1106	2.09	|Q V	|	|	|	|
8+25	1.1251	2.10	|Q V	|	|	|	|
8+30	1.1397	2.12	|Q V	|	|	|	|
8+35	1.1544	2.13	|Q V	|	|	|	|
8+40	1.1692	2.15	|Q V	|	|	|	|
8+45	1.1840	2.16	|Q V	|	|	|	|
8+50	1.1990	2.17	|Q V	|	|	|	|
8+55	1.2141	2.19	|Q V	|	|	|	|
9+ 0	1.2293	2.20	|Q V	|	|	|	|
9+ 5	1.2446	2.22	|Q V	|	|	|	|
9+10	1.2600	2.24	|Q V	|	|	|	|
9+15	1.2755	2.25	|Q V	|	|	|	|
9+20	1.2911	2.27	|Q V	|	|	|	|
9+25	1.3068	2.28	|Q V	|	|	|	|
9+30	1.3227	2.30	|Q V	|	|	|	|
9+35	1.3386	2.32	|Q V	|	|	|	|
9+40	1.3547	2.34	|Q V	|	|	|	|
9+45	1.3709	2.35	|Q V	|	|	|	|
9+50	1.3873	2.37	|Q V	|	|	|	|
9+55	1.4038	2.39	|Q V	|	|	|	|
10+ 0	1.4204	2.41	|Q V	|	|	|	|
10+ 5	1.4371	2.43	|Q V	|	|	|	|
10+10	1.4540	2.45	|Q V	|	|	|	|
10+15	1.4710	2.47	|Q V	|	|	|	|
10+20	1.4882	2.49	|Q V	|	|	|	|
10+25	1.5055	2.51	|Q V	|	|	|	|
10+30	1.5229	2.54	|Q V	|	|	|	|
10+35	1.5406	2.56	|Q V	|	|	|	|
10+40	1.5583	2.58	|Q V	|	|	|	|
10+45	1.5763	2.60	|Q V	|	|	|	|

10+50	1.5944	2.63	Q	V			
10+55	1.6126	2.65	Q	V			
11+ 0	1.6311	2.68	Q	V			
11+ 5	1.6497	2.70	Q	V			
11+10	1.6685	2.73	Q	V			
11+15	1.6875	2.76	Q	V			
11+20	1.7067	2.79	Q	V			
11+25	1.7261	2.81	Q	V			
11+30	1.7457	2.84	Q	V			
11+35	1.7655	2.87	Q	V			
11+40	1.7855	2.91	Q	V			
11+45	1.8057	2.94	Q	V			
11+50	1.8262	2.97	Q	V			
11+55	1.8469	3.01	Q	V			
12+ 0	1.8678	3.04	Q	V			
12+ 5	1.8890	3.08	Q	V			
12+10	1.9106	3.13	Q	V			
12+15	1.9325	3.19	Q	V			
12+20	1.9548	3.23	Q	V			
12+25	1.9774	3.28	Q	V			
12+30	2.0003	3.33	Q	V			
12+35	2.0235	3.37	Q	V			
12+40	2.0471	3.42	Q	V			
12+45	2.0710	3.47	Q	V			
12+50	2.0952	3.52	Q	V			
12+55	2.1198	3.57	Q	V			
13+ 0	2.1448	3.63	Q	V			
13+ 5	2.1702	3.68	Q	V			
13+10	2.1960	3.74	Q	V			
13+15	2.2222	3.81	Q	V			
13+20	2.2488	3.87	Q	V			
13+25	2.2759	3.94	Q	V			
13+30	2.3035	4.01	Q	V			
13+35	2.3316	4.08	Q	V			
13+40	2.3603	4.16	Q	V			
13+45	2.3895	4.24	Q	V			
13+50	2.4192	4.32	Q	V			
13+55	2.4496	4.41	Q	V			
14+ 0	2.4807	4.51	Q	V			
14+ 5	2.5125	4.61	Q	V			
14+10	2.5450	4.72	Q	V			
14+15	2.5784	4.85	Q	V			
14+20	2.6126	4.97	Q	V			
14+25	2.6478	5.11	Q	V			
14+30	2.6839	5.25	Q	V			
14+35	2.7211	5.40	Q	V			
14+40	2.7594	5.57	Q	V			
14+45	2.7990	5.75	Q	V			
14+50	2.8399	5.94	Q	V			
14+55	2.8823	6.16	Q	V			

15+ 0	2.9264	6.39	Q	V			
15+ 5	2.9722	6.66	Q	V			
15+10	3.0201	6.95	Q	V			
15+15	3.0703	7.29	Q	V			
15+20	3.1231	7.67	Q	V			
15+25	3.1784	8.02	Q	V			
15+30	3.2333	7.97	Q	V			
15+35	3.2873	7.84	Q	V			
15+40	3.3439	8.22	Q	V			
15+45	3.4054	8.93	Q	V			
15+50	3.4747	10.07	Q	V			
15+55	3.5572	11.98	Q	V			
16+ 0	3.6660	15.79	Q	V			
16+ 5	3.8503	26.75	Q	V			
16+10	4.2461	57.47	Q	V			
16+15	4.6897	64.41	Q	V			
16+20	4.9457	37.18	Q	V			
16+25	5.1219	25.58	Q	V			
16+30	5.2584	19.83	Q	V			
16+35	5.3728	16.61	Q	V			
16+40	5.4685	13.89	Q	V			
16+45	5.5516	12.07	Q	V			
16+50	5.6241	10.52	Q	V			
16+55	5.6880	9.28	Q	V			
17+ 0	5.7442	8.16	Q	V			
17+ 5	5.7938	7.21	Q	V			
17+10	5.8406	6.79	Q	V			
17+15	5.8848	6.42	Q	V			
17+20	5.9247	5.79	Q	V			
17+25	5.9612	5.31	Q	V			
17+30	5.9932	4.64	Q	V			
17+35	6.0236	4.42	Q	V			
17+40	6.0528	4.23	Q	V			
17+45	6.0808	4.07	Q	V			
17+50	6.1078	3.92	Q	V			
17+55	6.1339	3.79	Q	V			
18+ 0	6.1591	3.66	Q	V			
18+ 5	6.1835	3.55	Q	V			
18+10	6.2072	3.43	Q	V			
18+15	6.2301	3.32	Q	V			
18+20	6.2523	3.23	Q	V			
18+25	6.2739	3.14	Q	V			
18+30	6.2950	3.06	Q	V			
18+35	6.3156	2.99	Q	V			
18+40	6.3357	2.92	Q	V			
18+45	6.3554	2.86	Q	V			
18+50	6.3746	2.80	Q	V			
18+55	6.3935	2.74	Q	V			
19+ 0	6.4120	2.69	Q	V			
19+ 5	6.4302	2.63	Q	V			

```
19+10       6.4480      2.59  |Q        |         |         |    V    |
19+15       6.4655      2.54  |Q        |         |         |    V    |
19+20       6.4827      2.50  |Q        |         |         |    V    |
19+25       6.4996      2.45  |Q        |         |         |     V   |
19+30       6.5162      2.41  |Q        |         |         |     V   |
19+35       6.5325      2.38  |Q        |         |         |     V   |
19+40       6.5487      2.34  |Q        |         |         |     V   |
19+45       6.5645      2.30  |Q        |         |         |     V   |
19+50       6.5802      2.27  |Q        |         |         |     V   |
19+55       6.5956      2.24  |Q        |         |         |     V   |
20+ 0       6.6108      2.21  |Q        |         |         |     V   |
20+ 5       6.6258      2.18  |Q        |         |         |     V   |
20+10       6.6405      2.15  |Q        |         |         |     V   |
20+15       6.6551      2.12  |Q        |         |         |     V   |
20+20       6.6695      2.09  |Q        |         |         |      V  |
20+25       6.6838      2.07  |Q        |         |         |      V  |
20+30       6.6978      2.04  |Q        |         |         |      V  |
20+35       6.7117      2.02  |Q        |         |         |      V  |
20+40       6.7254      1.99  |Q        |         |         |      V  |
20+45       6.7390      1.97  |Q        |         |         |      V  |
20+50       6.7524      1.95  |Q        |         |         |      V  |
20+55       6.7656      1.92  |Q        |         |         |      V  |
21+ 0       6.7787      1.90  |Q        |         |         |      V  |
21+ 5       6.7917      1.88  |Q        |         |         |      V  |
21+10       6.8045      1.86  |Q        |         |         |      V  |
21+15       6.8172      1.84  |Q        |         |         |      V  |
21+20       6.8298      1.82  |Q        |         |         |      V  |
21+25       6.8422      1.81  |Q        |         |         |      V  |
21+30       6.8545      1.79  |Q        |         |         |       V |
21+35       6.8667      1.77  |Q        |         |         |       V |
21+40       6.8788      1.75  |Q        |         |         |       V |
21+45       6.8908      1.74  Q         |         |         |       V |
21+50       6.9026      1.72  Q         |         |         |       V |
21+55       6.9144      1.71  Q         |         |         |       V |
22+ 0       6.9260      1.69  Q         |         |         |       V |
22+ 5       6.9375      1.68  Q         |         |         |       V |
22+10       6.9490      1.66  Q         |         |         |       V |
22+15       6.9603      1.65  Q         |         |         |       V |
22+20       6.9716      1.63  Q         |         |         |       V |
22+25       6.9827      1.62  Q         |         |         |       V |
22+30       6.9938      1.61  Q         |         |         |       V |
22+35       7.0047      1.59  Q         |         |         |       V |
22+40       7.0156      1.58  Q         |         |         |       V |
22+45       7.0264      1.57  Q         |         |         |       V |
22+50       7.0371      1.55  Q         |         |         |        V|
22+55       7.0477      1.54  Q         |         |         |        V|
23+ 0       7.0583      1.53  Q         |         |         |        V|
23+ 5       7.0687      1.52  Q         |         |         |        V|
23+10       7.0791      1.51  Q         |         |         |        V|
23+15       7.0894      1.50  Q         |         |         |        V|
```

```
   23+20       7.0996      1.49  Q         |         |         |         V|
   23+25       7.1098      1.47  Q         |         |         |         V|
   23+30       7.1199      1.46  Q         |         |         |         V|
   23+35       7.1299      1.45  Q         |         |         |         V|
   23+40       7.1398      1.44  Q         |         |         |         V|
   23+45       7.1497      1.43  Q         |         |         |         V|
   23+50       7.1595      1.42  Q         |         |         |         V|
   23+55       7.1693      1.41  Q         |         |         |         V|
   24+ 0       7.1789      1.41  Q         |         |         |         V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/06/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area C
10-year Developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
38.57	1	0.61
Rainfall data for year 10		
38.57	6	1.24
Rainfall data for year 10		
38.57	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	38.57	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
3.86	0.100	69.0	69.0	4.49	0.124
34.71	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.208 (hours)
++
Watershed area = 38.57(Ac.)
Catchment Lag time = 0.166 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 50.0801
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 38.57(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 466.46 (CFS))	
1	3.973	18.532
2	30.607	124.236
3	60.634	140.065
4	73.829	61.548
5	81.493	35.748
6	86.639	24.002
7	90.205	16.637
8	92.803	12.116
9	94.773	9.192
10	96.270	6.981
11	97.365	5.109
12	98.059	3.238
13	98.612	2.579
14	99.213	2.803
15	99.664	2.102
16	100.000	1.570

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2885	0.2885
2	0.3551	0.0667
3	0.4011	0.0459
4	0.4372	0.0362
5	0.4675	0.0303
6	0.4938	0.0263
7	0.5171	0.0234
8	0.5383	0.0211
9	0.5576	0.0194
10	0.5755	0.0179
11	0.5922	0.0167
12	0.6079	0.0157
13	0.6276	0.0197
14	0.6464	0.0188
15	0.6644	0.0180
16	0.6817	0.0173
17	0.6984	0.0167
18	0.7144	0.0161
19	0.7300	0.0156
20	0.7451	0.0151
21	0.7597	0.0146
22	0.7739	0.0142
23	0.7877	0.0138
24	0.8012	0.0135
25	0.8143	0.0131
26	0.8271	0.0128

27	0.8397	0.0125
28	0.8519	0.0123
29	0.8639	0.0120
30	0.8756	0.0117
31	0.8871	0.0115
32	0.8984	0.0113
33	0.9095	0.0111
34	0.9204	0.0109
35	0.9311	0.0107
36	0.9416	0.0105
37	0.9519	0.0103
38	0.9620	0.0101
39	0.9720	0.0100
40	0.9818	0.0098
41	0.9915	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0197	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0642	0.0087
50	1.0728	0.0086
51	1.0812	0.0085
52	1.0896	0.0084
53	1.0979	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1379	0.0078
59	1.1456	0.0077
60	1.1533	0.0077
61	1.1609	0.0076
62	1.1684	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1978	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2191	0.0070
70	1.2261	0.0070
71	1.2330	0.0069
72	1.2399	0.0069
73	1.2465	0.0067
74	1.2532	0.0066
75	1.2598	0.0066
76	1.2663	0.0065

77	1.2728	0.0065
78	1.2792	0.0064
79	1.2856	0.0064
80	1.2919	0.0063
81	1.2982	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3409	0.0060
89	1.3468	0.0059
90	1.3527	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3872	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4095	0.0055
101	1.4149	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4366	0.0054
106	1.4419	0.0053
107	1.4472	0.0053
108	1.4524	0.0053
109	1.4577	0.0052
110	1.4629	0.0052
111	1.4681	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5085	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5281	0.0049
124	1.5329	0.0048
125	1.5377	0.0048
126	1.5425	0.0048

127	1.5473	0.0048
128	1.5520	0.0047
129	1.5567	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5708	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5983	0.0045
139	1.6028	0.0045
140	1.6073	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6382	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6640	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6850	0.0042
159	1.6891	0.0042
160	1.6933	0.0041
161	1.6974	0.0041
162	1.7015	0.0041
163	1.7056	0.0041
164	1.7097	0.0041
165	1.7137	0.0041
166	1.7178	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7378	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039
176	1.7574	0.0039

177	1.7613	0.0039
178	1.7652	0.0039
179	1.7691	0.0039
180	1.7729	0.0039
181	1.7768	0.0038
182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7920	0.0038
186	1.7958	0.0038
187	1.7995	0.0038
188	1.8033	0.0037
189	1.8070	0.0037
190	1.8107	0.0037
191	1.8144	0.0037
192	1.8181	0.0037
193	1.8218	0.0037
194	1.8255	0.0037
195	1.8292	0.0037
196	1.8328	0.0037
197	1.8365	0.0036
198	1.8401	0.0036
199	1.8437	0.0036
200	1.8473	0.0036
201	1.8509	0.0036
202	1.8545	0.0036
203	1.8581	0.0036
204	1.8617	0.0036
205	1.8652	0.0036
206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
209	1.8794	0.0035
210	1.8829	0.0035
211	1.8864	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
219	1.9140	0.0034
220	1.9174	0.0034
221	1.9208	0.0034
222	1.9241	0.0034
223	1.9275	0.0034
224	1.9309	0.0034
225	1.9343	0.0034
226	1.9376	0.0034

227	1.9409	0.0033
228	1.9443	0.0033
229	1.9476	0.0033
230	1.9509	0.0033
231	1.9542	0.0033
232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
235	1.9674	0.0033
236	1.9706	0.0033
237	1.9739	0.0033
238	1.9771	0.0032
239	1.9804	0.0032
240	1.9836	0.0032
241	1.9868	0.0032
242	1.9900	0.0032
243	1.9932	0.0032
244	1.9964	0.0032
245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
250	2.0155	0.0032
251	2.0186	0.0031
252	2.0217	0.0031
253	2.0249	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0435	0.0031
260	2.0465	0.0031
261	2.0496	0.0031
262	2.0527	0.0031
263	2.0557	0.0031
264	2.0588	0.0030
265	2.0618	0.0030
266	2.0649	0.0030
267	2.0679	0.0030
268	2.0709	0.0030
269	2.0739	0.0030
270	2.0769	0.0030
271	2.0799	0.0030
272	2.0829	0.0030
273	2.0859	0.0030
274	2.0889	0.0030
275	2.0918	0.0030
276	2.0948	0.0030

277	2.0978	0.0030
278	2.1007	0.0030
279	2.1037	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1125	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026
33	0.0032	0.0006	0.0026

34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027
36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033
83	0.0041	0.0007	0.0033

84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034
86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047
133	0.0059	0.0011	0.0048

134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049
136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0090
172	0.0113	0.0021	0.0092
173	0.0117	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0029	0.0131
182	0.0167	0.0031	0.0136
183	0.0180	0.0033	0.0147

184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128
186	0.0167	0.0031	0.0136
187	0.0194	0.0035	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0414
192	0.0667	0.0046	0.0621
193	0.2885	0.0046	0.2839
194	0.0362	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0123	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041
233	0.0049	0.0009	0.0040

234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039
236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025
283	0.0030	0.0005	0.0024

284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024
286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 51.01(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	15.0	30.0	45.0	60.0
0+ 5	0.0003	0.04	Q	|	|	|	|
0+10	0.0026	0.34	Q	|	|	|	|
0+15	0.0072	0.67	Q	|	|	|	|
0+20	0.0128	0.82	Q	|	|	|	|
0+25	0.0191	0.90	Q	|	|	|	|
0+30	0.0257	0.96	Q	|	|	|	|
0+35	0.0326	1.00	Q	|	|	|	|
0+40	0.0397	1.04	Q	|	|	|	|
0+45	0.0470	1.06	Q	|	|	|	|
0+50	0.0545	1.08	Q	|	|	|	|
0+55	0.0620	1.10	Q	|	|	|	|
1+ 0	0.0697	1.11	Q	|	|	|	|
1+ 5	0.0774	1.12	Q	|	|	|	|
1+10	0.0851	1.13	Q	|	|	|	|
1+15	0.0930	1.14	Q	|	|	|	|
1+20	0.1009	1.14	Q	|	|	|	|
1+25	0.1088	1.15	Q	|	|	|	|
1+30	0.1167	1.15	Q	|	|	|	|
1+35	0.1247	1.16	Q	|	|	|	|
1+40	0.1327	1.16	Q	|	|	|	|
1+45	0.1407	1.16	Q	|	|	|	|
1+50	0.1487	1.17	QV	|	|	|	|
1+55	0.1568	1.17	QV	|	|	|	|
2+ 0	0.1649	1.18	QV	|	|	|	|
2+ 5	0.1730	1.18	QV	|	|	|	|
2+10	0.1812	1.19	QV	|	|	|	|
2+15	0.1894	1.19	QV	|	|	|	|
2+20	0.1976	1.19	QV	|	|	|	|
2+25	0.2059	1.20	QV	|	|	|	|
2+30	0.2142	1.20	QV	|	|	|	|

2+35	0.2225	1.21	QV	|	|	|	|
2+40	0.2308	1.21	QV	|	|	|	|
2+45	0.2392	1.22	QV	|	|	|	|
2+50	0.2476	1.22	QV	|	|	|	|
2+55	0.2560	1.23	QV	|	|	|	|
3+ 0	0.2645	1.23	QV	|	|	|	|
3+ 5	0.2730	1.23	QV	|	|	|	|
3+10	0.2815	1.24	QV	|	|	|	|
3+15	0.2901	1.24	Q V	|	|	|	|
3+20	0.2987	1.25	Q V	|	|	|	|
3+25	0.3074	1.25	Q V	|	|	|	|
3+30	0.3160	1.26	Q V	|	|	|	|
3+35	0.3247	1.26	Q V	|	|	|	|
3+40	0.3335	1.27	Q V	|	|	|	|
3+45	0.3422	1.27	Q V	|	|	|	|
3+50	0.3511	1.28	Q V	|	|	|	|
3+55	0.3599	1.28	Q V	|	|	|	|
4+ 0	0.3688	1.29	Q V	|	|	|	|
4+ 5	0.3777	1.30	Q V	|	|	|	|
4+10	0.3867	1.30	Q V	|	|	|	|
4+15	0.3957	1.31	Q V	|	|	|	|
4+20	0.4047	1.31	Q V	|	|	|	|
4+25	0.4138	1.32	Q V	|	|	|	|
4+30	0.4229	1.32	Q V	|	|	|	|
4+35	0.4320	1.33	Q V	|	|	|	|
4+40	0.4412	1.33	Q V	|	|	|	|
4+45	0.4505	1.34	Q V	|	|	|	|
4+50	0.4597	1.35	Q V	|	|	|	|
4+55	0.4690	1.35	Q V	|	|	|	|
5+ 0	0.4784	1.36	Q V	|	|	|	|
5+ 5	0.4878	1.36	Q V	|	|	|	|
5+10	0.4972	1.37	Q V	|	|	|	|
5+15	0.5067	1.38	Q V	|	|	|	|
5+20	0.5162	1.38	Q V	|	|	|	|
5+25	0.5258	1.39	Q V	|	|	|	|
5+30	0.5354	1.40	Q V	|	|	|	|
5+35	0.5451	1.40	Q V	|	|	|	|
5+40	0.5548	1.41	Q V	|	|	|	|
5+45	0.5646	1.42	Q V	|	|	|	|
5+50	0.5744	1.42	Q V	|	|	|	|
5+55	0.5842	1.43	Q V	|	|	|	|
6+ 0	0.5941	1.44	Q V	|	|	|	|
6+ 5	0.6040	1.44	Q V	|	|	|	|
6+10	0.6140	1.45	Q V	|	|	|	|
6+15	0.6241	1.46	Q V	|	|	|	|
6+20	0.6342	1.47	Q V	|	|	|	|
6+25	0.6443	1.47	Q V	|	|	|	|
6+30	0.6545	1.48	Q V	|	|	|	|
6+35	0.6648	1.49	Q V	|	|	|	|
6+40	0.6751	1.50	Q V	|	|	|	|

6+45	0.6855	1.50	|Q V	|	|	|	|
6+50	0.6959	1.51	|Q V	|	|	|	|
6+55	0.7064	1.52	|Q V	|	|	|	|
7+ 0	0.7169	1.53	|Q V	|	|	|	|
7+ 5	0.7275	1.54	|Q V	|	|	|	|
7+10	0.7381	1.55	|Q V	|	|	|	|
7+15	0.7489	1.56	|Q V	|	|	|	|
7+20	0.7596	1.56	|Q V	|	|	|	|
7+25	0.7705	1.57	|Q V	|	|	|	|
7+30	0.7814	1.58	|Q V	|	|	|	|
7+35	0.7923	1.59	|Q V	|	|	|	|
7+40	0.8033	1.60	|Q V	|	|	|	|
7+45	0.8144	1.61	|Q V	|	|	|	|
7+50	0.8256	1.62	|Q V	|	|	|	|
7+55	0.8368	1.63	|Q V	|	|	|	|
8+ 0	0.8481	1.64	|Q V	|	|	|	|
8+ 5	0.8594	1.65	|Q V	|	|	|	|
8+10	0.8709	1.66	|Q V	|	|	|	|
8+15	0.8824	1.67	|Q V	|	|	|	|
8+20	0.8939	1.68	|Q V	|	|	|	|
8+25	0.9056	1.69	|Q V	|	|	|	|
8+30	0.9173	1.70	|Q V	|	|	|	|
8+35	0.9291	1.71	|Q V	|	|	|	|
8+40	0.9410	1.73	|Q V	|	|	|	|
8+45	0.9530	1.74	|Q V	|	|	|	|
8+50	0.9650	1.75	|Q V	|	|	|	|
8+55	0.9771	1.76	|Q V	|	|	|	|
9+ 0	0.9893	1.77	|Q V	|	|	|	|
9+ 5	1.0016	1.78	|Q V	|	|	|	|
9+10	1.0140	1.80	|Q V	|	|	|	|
9+15	1.0265	1.81	|Q V	|	|	|	|
9+20	1.0390	1.82	|Q V	|	|	|	|
9+25	1.0517	1.84	|Q V	|	|	|	|
9+30	1.0644	1.85	|Q V	|	|	|	|
9+35	1.0773	1.86	|Q V	|	|	|	|
9+40	1.0902	1.88	|Q V	|	|	|	|
9+45	1.1033	1.89	|Q V	|	|	|	|
9+50	1.1164	1.91	|Q V	|	|	|	|
9+55	1.1297	1.92	|Q V	|	|	|	|
10+ 0	1.1430	1.94	|Q V	|	|	|	|
10+ 5	1.1565	1.95	|Q V	|	|	|	|
10+10	1.1700	1.97	|Q V	|	|	|	|
10+15	1.1837	1.99	|Q V	|	|	|	|
10+20	1.1975	2.00	|Q V	|	|	|	|
10+25	1.2115	2.02	|Q V	|	|	|	|
10+30	1.2255	2.04	|Q V	|	|	|	|
10+35	1.2397	2.06	|Q V	|	|	|	|
10+40	1.2540	2.08	|Q V	|	|	|	|
10+45	1.2684	2.09	|Q V	|	|	|	|
10+50	1.2829	2.11	|Q V	|	|	|	|

10+55	1.2976	2.13	Q V				
11+ 0	1.3125	2.15	Q V				
11+ 5	1.3275	2.18	Q V				
11+10	1.3426	2.20	Q V				
11+15	1.3579	2.22	Q V				
11+20	1.3733	2.24	Q V				
11+25	1.3889	2.26	Q V				
11+30	1.4047	2.29	Q V				
11+35	1.4206	2.31	Q V				
11+40	1.4367	2.34	Q V				
11+45	1.4530	2.36	Q V				
11+50	1.4694	2.39	Q V				
11+55	1.4861	2.42	Q V				
12+ 0	1.5030	2.45	Q V				
12+ 5	1.5200	2.48	Q V				
12+10	1.5374	2.52	Q V				
12+15	1.5550	2.56	Q V				
12+20	1.5730	2.60	Q V				
12+25	1.5912	2.64	Q V				
12+30	1.6096	2.68	Q V				
12+35	1.6283	2.71	Q V				
12+40	1.6473	2.75	Q V				
12+45	1.6665	2.79	Q V				
12+50	1.6860	2.83	Q V				
12+55	1.7058	2.88	Q V				
13+ 0	1.7259	2.92	Q V				
13+ 5	1.7464	2.97	Q V				
13+10	1.7671	3.01	Q V				
13+15	1.7882	3.06	Q V				
13+20	1.8097	3.12	Q V				
13+25	1.8315	3.17	Q V				
13+30	1.8537	3.23	Q V				
13+35	1.8764	3.29	Q V				
13+40	1.8994	3.35	Q V				
13+45	1.9229	3.41	Q V				
13+50	1.9469	3.48	Q V				
13+55	1.9714	3.56	Q V				
14+ 0	1.9965	3.63	Q V				
14+ 5	2.0221	3.72	Q V				
14+10	2.0483	3.81	Q V				
14+15	2.0752	3.90	Q V				
14+20	2.1028	4.01	Q V				
14+25	2.1311	4.11	Q V				
14+30	2.1602	4.23	Q V				
14+35	2.1902	4.35	Q V				
14+40	2.2211	4.49	Q V				
14+45	2.2530	4.63	Q V				
14+50	2.2860	4.79	Q V				
14+55	2.3202	4.97	Q V				
15+ 0	2.3558	5.16	Q V				

15+ 5	2.3928	5.37	Q	V			
15+10	2.4315	5.62	Q	V			
15+15	2.4720	5.89	Q	V			
15+20	2.5147	6.20	Q	V			
15+25	2.5594	6.48	Q	V			
15+30	2.6035	6.40	Q	V			
15+35	2.6469	6.31	Q	V			
15+40	2.6927	6.65	Q	V			
15+45	2.7425	7.23	Q	V			
15+50	2.7991	8.21	Q	V			
15+55	2.8665	9.79	Q	V			
16+ 0	2.9565	13.07	Q	V			
16+ 5	3.1110	22.43	Q	V			
16+10	3.4517	49.48	V	Q			
16+15	3.8030	51.01	V	Q			
16+20	4.0024	28.95	Q	V			
16+25	4.1398	19.94	Q	V			
16+30	4.2473	15.61	Q	V			
16+35	4.3363	12.92	Q	V			
16+40	4.4114	10.91	Q	V			
16+45	4.4762	9.41	Q	V			
16+50	4.5327	8.20	Q	V			
16+55	4.5820	7.17	Q	V			
17+ 0	4.6251	6.26	Q	V			
17+ 5	4.6645	5.72	Q	V			
17+10	4.7019	5.43	Q	V			
17+15	4.7359	4.93	Q	V			
17+20	4.7668	4.49	Q	V			
17+25	4.7935	3.87	Q	V			
17+30	4.8188	3.67	Q	V			
17+35	4.8429	3.51	Q	V			
17+40	4.8661	3.37	Q	V			
17+45	4.8884	3.24	Q	V			
17+50	4.9099	3.12	Q	V			
17+55	4.9307	3.02	Q	V			
18+ 0	4.9508	2.92	Q	V			
18+ 5	4.9703	2.83	Q	V			
18+10	4.9892	2.74	Q	V			
18+15	5.0075	2.65	Q	V			
18+20	5.0252	2.58	Q	V			
18+25	5.0425	2.51	Q	V			
18+30	5.0594	2.45	Q	V			
18+35	5.0758	2.39	Q	V			
18+40	5.0919	2.34	Q	V			
18+45	5.1076	2.28	Q	V			
18+50	5.1230	2.24	Q	V			
18+55	5.1381	2.19	Q	V			
19+ 0	5.1529	2.15	Q	V			
19+ 5	5.1675	2.11	Q	V			
19+10	5.1817	2.07	Q	V			

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19+15       5.1957      2.03  |Q        |         |         |    V    |
19+20       5.2095      2.00  |Q        |         |         |    V    |
19+25       5.2230      1.97  |Q        |         |         |     V   |
19+30       5.2363      1.93  |Q        |         |         |     V   |
19+35       5.2494      1.90  |Q        |         |         |     V   |
19+40       5.2623      1.87  |Q        |         |         |     V   |
19+45       5.2750      1.85  |Q        |         |         |     V   |
19+50       5.2876      1.82  |Q        |         |         |     V   |
19+55       5.2999      1.79  |Q        |         |         |     V   |
20+ 0       5.3121      1.77  |Q        |         |         |     V   |
20+ 5       5.3241      1.74  |Q        |         |         |     V   |
20+10       5.3359      1.72  |Q        |         |         |     V   |
20+15       5.3476      1.70  |Q        |         |         |     V   |
20+20       5.3592      1.68  |Q        |         |         |      V  |
20+25       5.3706      1.66  |Q        |         |         |      V  |
20+30       5.3818      1.63  |Q        |         |         |      V  |
20+35       5.3930      1.62  |Q        |         |         |      V  |
20+40       5.4040      1.60  |Q        |         |         |      V  |
20+45       5.4148      1.58  |Q        |         |         |      V  |
20+50       5.4256      1.56  |Q        |         |         |      V  |
20+55       5.4362      1.54  |Q        |         |         |      V  |
21+ 0       5.4467      1.53  |Q        |         |         |      V  |
21+ 5       5.4571      1.51  |Q        |         |         |      V  |
21+10       5.4674      1.49  Q        |         |         |      V  |
21+15       5.4776      1.48  Q        |         |         |      V  |
21+20       5.4876      1.46  Q        |         |         |      V  |
21+25       5.4976      1.45  Q        |         |         |      V  |
21+30       5.5075      1.43  Q        |         |         |       V |
21+35       5.5173      1.42  Q        |         |         |       V |
21+40       5.5269      1.41  Q        |         |         |       V |
21+45       5.5365      1.39  Q        |         |         |       V |
21+50       5.5460      1.38  Q        |         |         |       V |
21+55       5.5555      1.37  Q        |         |         |       V |
22+ 0       5.5648      1.36  Q        |         |         |       V |
22+ 5       5.5740      1.34  Q        |         |         |       V |
22+10       5.5832      1.33  Q        |         |         |       V |
22+15       5.5923      1.32  Q        |         |         |       V |
22+20       5.6013      1.31  Q        |         |         |       V |
22+25       5.6103      1.30  Q        |         |         |       V |
22+30       5.6191      1.29  Q        |         |         |       V |
22+35       5.6279      1.28  Q        |         |         |       V |
22+40       5.6366      1.27  Q        |         |         |       V |
22+45       5.6453      1.26  Q        |         |         |       V |
22+50       5.6539      1.25  Q        |         |         |        V|
22+55       5.6624      1.24  Q        |         |         |        V|
23+ 0       5.6709      1.23  Q        |         |         |        V|
23+ 5       5.6792      1.22  Q        |         |         |        V|
23+10       5.6876      1.21  Q        |         |         |        V|
23+15       5.6958      1.20  Q        |         |         |        V|
23+20       5.7040      1.19  Q        |         |         |        V|
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   23+25       5.7122      1.18  Q         |         |         |         V|
   23+30       5.7203      1.17  Q         |         |         |         V|
   23+35       5.7283      1.17  Q         |         |         |         V|
   23+40       5.7363      1.16  Q         |         |         |         V|
   23+45       5.7442      1.15  Q         |         |         |         V|
   23+50       5.7521      1.14  Q         |         |         |         V|
   23+55       5.7599      1.13  Q         |         |         |         V|
   24+ 0       5.7677      1.13  Q         |         |         |         V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 08/06/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6385

IEN
Area D
10-year Developed

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
37.56	1	0.61
Rainfall data for year 10		
37.56	6	1.24
Rainfall data for year 10		
37.56	24	2.13

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	SCS curve NO.(AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	69.0	37.56	1.000	0.548	0.100	0.055

Area-averaged adjusted loss rate Fm (In/Hr) = 0.055

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
3.76	0.100	69.0	69.0	4.49	0.124
33.80	0.900	98.0	98.0	0.20	0.894

Area-averaged catchment yield fraction, Y = 0.817
Area-averaged low loss fraction, Yb = 0.183
User entry of time of concentration = 0.184 (hours)
++
Watershed area = 37.56(Ac.)
Catchment Lag time = 0.147 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 56.6123
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.055(In/Hr)
Average low loss rate fraction (Yb) = 0.183 (decimal)
DESERT S-Graph Selected
Computed peak 5-minute rainfall = 0.289(In)
Computed peak 30-minute rainfall = 0.495(In)
Specified peak 1-hour rainfall = 0.609(In)
Computed peak 3-hour rainfall = 0.942(In)
Specified peak 6-hour rainfall = 1.240(In)
Specified peak 24-hour rainfall = 2.130(In)

Rainfall depth area reduction factors:
Using a total area of 37.56(Ac.) (Ref: fig. E-4)

5-minute factor = 0.998 Adjusted rainfall = 0.288(In)
30-minute factor = 0.998 Adjusted rainfall = 0.494(In)
1-hour factor = 0.998 Adjusted rainfall = 0.608(In)
3-hour factor = 1.000 Adjusted rainfall = 0.942(In)
6-hour factor = 1.000 Adjusted rainfall = 1.240(In)
24-hour factor = 1.000 Adjusted rainfall = 2.130(In)

U n i t H y d r o g r a p h
++

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 454.24 (CFS))	
1	4.973	22.590
2	37.958	149.829
3	65.824	126.579
4	77.737	54.117
5	84.689	31.575
6	89.324	21.055
7	92.440	14.153
8	94.734	10.424
9	96.405	7.589
10	97.562	5.257
11	98.253	3.139
12	98.912	2.994
13	99.526	2.788
14	100.000	2.152

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.2885	0.2885
2	0.3551	0.0667
3	0.4011	0.0459
4	0.4372	0.0362
5	0.4675	0.0303
6	0.4938	0.0263
7	0.5172	0.0234
8	0.5383	0.0211
9	0.5577	0.0194
10	0.5756	0.0179
11	0.5923	0.0167
12	0.6079	0.0157
13	0.6276	0.0197
14	0.6464	0.0188
15	0.6644	0.0180
16	0.6817	0.0173
17	0.6984	0.0167
18	0.7145	0.0161
19	0.7300	0.0156
20	0.7451	0.0151
21	0.7597	0.0146
22	0.7739	0.0142
23	0.7877	0.0138
24	0.8012	0.0135
25	0.8143	0.0131
26	0.8271	0.0128
27	0.8397	0.0125
28	0.8519	0.0122

29	0.8639	0.0120
30	0.8756	0.0117
31	0.8872	0.0115
32	0.8984	0.0113
33	0.9095	0.0111
34	0.9204	0.0109
35	0.9311	0.0107
36	0.9416	0.0105
37	0.9519	0.0103
38	0.9620	0.0101
39	0.9720	0.0100
40	0.9818	0.0098
41	0.9915	0.0097
42	1.0010	0.0095
43	1.0104	0.0094
44	1.0197	0.0093
45	1.0288	0.0091
46	1.0378	0.0090
47	1.0467	0.0089
48	1.0555	0.0088
49	1.0642	0.0087
50	1.0728	0.0086
51	1.0812	0.0085
52	1.0896	0.0084
53	1.0979	0.0083
54	1.1060	0.0082
55	1.1141	0.0081
56	1.1221	0.0080
57	1.1300	0.0079
58	1.1379	0.0078
59	1.1456	0.0077
60	1.1533	0.0077
61	1.1609	0.0076
62	1.1684	0.0075
63	1.1758	0.0074
64	1.1832	0.0074
65	1.1905	0.0073
66	1.1978	0.0072
67	1.2049	0.0072
68	1.2120	0.0071
69	1.2191	0.0070
70	1.2261	0.0070
71	1.2330	0.0069
72	1.2399	0.0069
73	1.2465	0.0067
74	1.2532	0.0066
75	1.2598	0.0066
76	1.2663	0.0065
77	1.2728	0.0065
78	1.2792	0.0064

79	1.2856	0.0064
80	1.2919	0.0063
81	1.2982	0.0063
82	1.3044	0.0062
83	1.3106	0.0062
84	1.3167	0.0061
85	1.3228	0.0061
86	1.3289	0.0061
87	1.3349	0.0060
88	1.3409	0.0060
89	1.3468	0.0059
90	1.3527	0.0059
91	1.3585	0.0058
92	1.3643	0.0058
93	1.3701	0.0058
94	1.3758	0.0057
95	1.3815	0.0057
96	1.3872	0.0057
97	1.3928	0.0056
98	1.3984	0.0056
99	1.4039	0.0056
100	1.4095	0.0055
101	1.4150	0.0055
102	1.4204	0.0055
103	1.4258	0.0054
104	1.4312	0.0054
105	1.4366	0.0054
106	1.4419	0.0053
107	1.4472	0.0053
108	1.4524	0.0053
109	1.4577	0.0052
110	1.4629	0.0052
111	1.4681	0.0052
112	1.4732	0.0051
113	1.4783	0.0051
114	1.4834	0.0051
115	1.4885	0.0051
116	1.4935	0.0050
117	1.4985	0.0050
118	1.5035	0.0050
119	1.5085	0.0050
120	1.5134	0.0049
121	1.5183	0.0049
122	1.5232	0.0049
123	1.5281	0.0049
124	1.5329	0.0048
125	1.5377	0.0048
126	1.5425	0.0048
127	1.5473	0.0048
128	1.5520	0.0047

129	1.5568	0.0047
130	1.5614	0.0047
131	1.5661	0.0047
132	1.5708	0.0047
133	1.5754	0.0046
134	1.5800	0.0046
135	1.5846	0.0046
136	1.5892	0.0046
137	1.5937	0.0046
138	1.5983	0.0045
139	1.6028	0.0045
140	1.6073	0.0045
141	1.6117	0.0045
142	1.6162	0.0045
143	1.6206	0.0044
144	1.6250	0.0044
145	1.6294	0.0044
146	1.6338	0.0044
147	1.6382	0.0044
148	1.6425	0.0043
149	1.6468	0.0043
150	1.6511	0.0043
151	1.6554	0.0043
152	1.6597	0.0043
153	1.6640	0.0043
154	1.6682	0.0042
155	1.6724	0.0042
156	1.6766	0.0042
157	1.6808	0.0042
158	1.6850	0.0042
159	1.6891	0.0042
160	1.6933	0.0041
161	1.6974	0.0041
162	1.7015	0.0041
163	1.7056	0.0041
164	1.7097	0.0041
165	1.7137	0.0041
166	1.7178	0.0040
167	1.7218	0.0040
168	1.7258	0.0040
169	1.7298	0.0040
170	1.7338	0.0040
171	1.7378	0.0040
172	1.7417	0.0040
173	1.7457	0.0039
174	1.7496	0.0039
175	1.7535	0.0039
176	1.7574	0.0039
177	1.7613	0.0039
178	1.7652	0.0039

179	1.7691	0.0039
180	1.7729	0.0039
181	1.7768	0.0038
182	1.7806	0.0038
183	1.7844	0.0038
184	1.7882	0.0038
185	1.7920	0.0038
186	1.7958	0.0038
187	1.7995	0.0038
188	1.8033	0.0037
189	1.8070	0.0037
190	1.8107	0.0037
191	1.8144	0.0037
192	1.8181	0.0037
193	1.8218	0.0037
194	1.8255	0.0037
195	1.8292	0.0037
196	1.8328	0.0037
197	1.8365	0.0036
198	1.8401	0.0036
199	1.8437	0.0036
200	1.8473	0.0036
201	1.8509	0.0036
202	1.8545	0.0036
203	1.8581	0.0036
204	1.8617	0.0036
205	1.8652	0.0036
206	1.8688	0.0035
207	1.8723	0.0035
208	1.8758	0.0035
209	1.8794	0.0035
210	1.8829	0.0035
211	1.8864	0.0035
212	1.8898	0.0035
213	1.8933	0.0035
214	1.8968	0.0035
215	1.9002	0.0035
216	1.9037	0.0034
217	1.9071	0.0034
218	1.9105	0.0034
219	1.9140	0.0034
220	1.9174	0.0034
221	1.9208	0.0034
222	1.9242	0.0034
223	1.9275	0.0034
224	1.9309	0.0034
225	1.9343	0.0034
226	1.9376	0.0034
227	1.9410	0.0033
228	1.9443	0.0033

229	1.9476	0.0033
230	1.9509	0.0033
231	1.9542	0.0033
232	1.9575	0.0033
233	1.9608	0.0033
234	1.9641	0.0033
235	1.9674	0.0033
236	1.9706	0.0033
237	1.9739	0.0033
238	1.9771	0.0032
239	1.9804	0.0032
240	1.9836	0.0032
241	1.9868	0.0032
242	1.9900	0.0032
243	1.9932	0.0032
244	1.9964	0.0032
245	1.9996	0.0032
246	2.0028	0.0032
247	2.0060	0.0032
248	2.0091	0.0032
249	2.0123	0.0032
250	2.0155	0.0032
251	2.0186	0.0031
252	2.0217	0.0031
253	2.0249	0.0031
254	2.0280	0.0031
255	2.0311	0.0031
256	2.0342	0.0031
257	2.0373	0.0031
258	2.0404	0.0031
259	2.0435	0.0031
260	2.0465	0.0031
261	2.0496	0.0031
262	2.0527	0.0031
263	2.0557	0.0031
264	2.0588	0.0030
265	2.0618	0.0030
266	2.0649	0.0030
267	2.0679	0.0030
268	2.0709	0.0030
269	2.0739	0.0030
270	2.0769	0.0030
271	2.0799	0.0030
272	2.0829	0.0030
273	2.0859	0.0030
274	2.0889	0.0030
275	2.0918	0.0030
276	2.0948	0.0030
277	2.0978	0.0030
278	2.1007	0.0030

279	2.1037	0.0029
280	2.1066	0.0029
281	2.1095	0.0029
282	2.1125	0.0029
283	2.1154	0.0029
284	2.1183	0.0029
285	2.1212	0.0029
286	2.1241	0.0029
287	2.1270	0.0029
288	2.1299	0.0029

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0029	0.0005	0.0024
2	0.0029	0.0005	0.0024
3	0.0029	0.0005	0.0024
4	0.0029	0.0005	0.0024
5	0.0029	0.0005	0.0024
6	0.0029	0.0005	0.0024
7	0.0029	0.0005	0.0024
8	0.0030	0.0005	0.0024
9	0.0030	0.0005	0.0024
10	0.0030	0.0005	0.0024
11	0.0030	0.0005	0.0024
12	0.0030	0.0005	0.0024
13	0.0030	0.0006	0.0025
14	0.0030	0.0006	0.0025
15	0.0030	0.0006	0.0025
16	0.0030	0.0006	0.0025
17	0.0030	0.0006	0.0025
18	0.0031	0.0006	0.0025
19	0.0031	0.0006	0.0025
20	0.0031	0.0006	0.0025
21	0.0031	0.0006	0.0025
22	0.0031	0.0006	0.0025
23	0.0031	0.0006	0.0025
24	0.0031	0.0006	0.0025
25	0.0031	0.0006	0.0026
26	0.0031	0.0006	0.0026
27	0.0032	0.0006	0.0026
28	0.0032	0.0006	0.0026
29	0.0032	0.0006	0.0026
30	0.0032	0.0006	0.0026
31	0.0032	0.0006	0.0026
32	0.0032	0.0006	0.0026
33	0.0032	0.0006	0.0026
34	0.0032	0.0006	0.0026
35	0.0033	0.0006	0.0027

36	0.0033	0.0006	0.0027
37	0.0033	0.0006	0.0027
38	0.0033	0.0006	0.0027
39	0.0033	0.0006	0.0027
40	0.0033	0.0006	0.0027
41	0.0033	0.0006	0.0027
42	0.0033	0.0006	0.0027
43	0.0034	0.0006	0.0027
44	0.0034	0.0006	0.0028
45	0.0034	0.0006	0.0028
46	0.0034	0.0006	0.0028
47	0.0034	0.0006	0.0028
48	0.0034	0.0006	0.0028
49	0.0034	0.0006	0.0028
50	0.0035	0.0006	0.0028
51	0.0035	0.0006	0.0028
52	0.0035	0.0006	0.0028
53	0.0035	0.0006	0.0029
54	0.0035	0.0006	0.0029
55	0.0035	0.0006	0.0029
56	0.0035	0.0007	0.0029
57	0.0036	0.0007	0.0029
58	0.0036	0.0007	0.0029
59	0.0036	0.0007	0.0029
60	0.0036	0.0007	0.0029
61	0.0036	0.0007	0.0030
62	0.0036	0.0007	0.0030
63	0.0037	0.0007	0.0030
64	0.0037	0.0007	0.0030
65	0.0037	0.0007	0.0030
66	0.0037	0.0007	0.0030
67	0.0037	0.0007	0.0031
68	0.0037	0.0007	0.0031
69	0.0038	0.0007	0.0031
70	0.0038	0.0007	0.0031
71	0.0038	0.0007	0.0031
72	0.0038	0.0007	0.0031
73	0.0039	0.0007	0.0031
74	0.0039	0.0007	0.0032
75	0.0039	0.0007	0.0032
76	0.0039	0.0007	0.0032
77	0.0039	0.0007	0.0032
78	0.0039	0.0007	0.0032
79	0.0040	0.0007	0.0032
80	0.0040	0.0007	0.0033
81	0.0040	0.0007	0.0033
82	0.0040	0.0007	0.0033
83	0.0041	0.0007	0.0033
84	0.0041	0.0007	0.0033
85	0.0041	0.0008	0.0034

86	0.0041	0.0008	0.0034
87	0.0042	0.0008	0.0034
88	0.0042	0.0008	0.0034
89	0.0042	0.0008	0.0034
90	0.0042	0.0008	0.0034
91	0.0043	0.0008	0.0035
92	0.0043	0.0008	0.0035
93	0.0043	0.0008	0.0035
94	0.0043	0.0008	0.0035
95	0.0044	0.0008	0.0036
96	0.0044	0.0008	0.0036
97	0.0044	0.0008	0.0036
98	0.0044	0.0008	0.0036
99	0.0045	0.0008	0.0037
100	0.0045	0.0008	0.0037
101	0.0045	0.0008	0.0037
102	0.0046	0.0008	0.0037
103	0.0046	0.0008	0.0037
104	0.0046	0.0008	0.0038
105	0.0047	0.0009	0.0038
106	0.0047	0.0009	0.0038
107	0.0047	0.0009	0.0039
108	0.0047	0.0009	0.0039
109	0.0048	0.0009	0.0039
110	0.0048	0.0009	0.0039
111	0.0049	0.0009	0.0040
112	0.0049	0.0009	0.0040
113	0.0049	0.0009	0.0040
114	0.0050	0.0009	0.0041
115	0.0050	0.0009	0.0041
116	0.0050	0.0009	0.0041
117	0.0051	0.0009	0.0042
118	0.0051	0.0009	0.0042
119	0.0052	0.0009	0.0042
120	0.0052	0.0010	0.0043
121	0.0053	0.0010	0.0043
122	0.0053	0.0010	0.0043
123	0.0054	0.0010	0.0044
124	0.0054	0.0010	0.0044
125	0.0055	0.0010	0.0045
126	0.0055	0.0010	0.0045
127	0.0056	0.0010	0.0045
128	0.0056	0.0010	0.0046
129	0.0057	0.0010	0.0046
130	0.0057	0.0010	0.0047
131	0.0058	0.0011	0.0047
132	0.0058	0.0011	0.0047
133	0.0059	0.0011	0.0048
134	0.0059	0.0011	0.0048
135	0.0060	0.0011	0.0049

136	0.0061	0.0011	0.0049
137	0.0061	0.0011	0.0050
138	0.0062	0.0011	0.0051
139	0.0063	0.0012	0.0051
140	0.0063	0.0012	0.0052
141	0.0064	0.0012	0.0052
142	0.0065	0.0012	0.0053
143	0.0066	0.0012	0.0054
144	0.0066	0.0012	0.0054
145	0.0069	0.0013	0.0056
146	0.0069	0.0013	0.0057
147	0.0070	0.0013	0.0058
148	0.0071	0.0013	0.0058
149	0.0072	0.0013	0.0059
150	0.0073	0.0013	0.0060
151	0.0074	0.0014	0.0061
152	0.0075	0.0014	0.0061
153	0.0077	0.0014	0.0063
154	0.0077	0.0014	0.0063
155	0.0079	0.0015	0.0065
156	0.0080	0.0015	0.0065
157	0.0082	0.0015	0.0067
158	0.0083	0.0015	0.0068
159	0.0085	0.0016	0.0069
160	0.0086	0.0016	0.0070
161	0.0088	0.0016	0.0072
162	0.0089	0.0016	0.0073
163	0.0091	0.0017	0.0075
164	0.0093	0.0017	0.0076
165	0.0095	0.0017	0.0078
166	0.0097	0.0018	0.0079
167	0.0100	0.0018	0.0081
168	0.0101	0.0019	0.0083
169	0.0105	0.0019	0.0086
170	0.0107	0.0020	0.0087
171	0.0111	0.0020	0.0090
172	0.0113	0.0021	0.0092
173	0.0117	0.0022	0.0096
174	0.0120	0.0022	0.0098
175	0.0125	0.0023	0.0102
176	0.0128	0.0024	0.0105
177	0.0135	0.0025	0.0110
178	0.0138	0.0025	0.0113
179	0.0146	0.0027	0.0119
180	0.0151	0.0028	0.0123
181	0.0161	0.0029	0.0131
182	0.0167	0.0031	0.0136
183	0.0180	0.0033	0.0147
184	0.0188	0.0034	0.0154
185	0.0157	0.0029	0.0128

186	0.0167	0.0031	0.0136
187	0.0194	0.0036	0.0158
188	0.0211	0.0039	0.0173
189	0.0263	0.0046	0.0217
190	0.0303	0.0046	0.0257
191	0.0459	0.0046	0.0414
192	0.0667	0.0046	0.0621
193	0.2885	0.0046	0.2839
194	0.0362	0.0046	0.0316
195	0.0234	0.0043	0.0191
196	0.0179	0.0033	0.0146
197	0.0197	0.0036	0.0161
198	0.0173	0.0032	0.0141
199	0.0156	0.0029	0.0127
200	0.0142	0.0026	0.0116
201	0.0131	0.0024	0.0107
202	0.0122	0.0022	0.0100
203	0.0115	0.0021	0.0094
204	0.0109	0.0020	0.0089
205	0.0103	0.0019	0.0084
206	0.0098	0.0018	0.0080
207	0.0094	0.0017	0.0077
208	0.0090	0.0017	0.0074
209	0.0087	0.0016	0.0071
210	0.0084	0.0015	0.0068
211	0.0081	0.0015	0.0066
212	0.0078	0.0014	0.0064
213	0.0076	0.0014	0.0062
214	0.0074	0.0014	0.0060
215	0.0072	0.0013	0.0059
216	0.0070	0.0013	0.0057
217	0.0067	0.0012	0.0055
218	0.0065	0.0012	0.0053
219	0.0064	0.0012	0.0052
220	0.0062	0.0011	0.0051
221	0.0061	0.0011	0.0050
222	0.0060	0.0011	0.0049
223	0.0058	0.0011	0.0048
224	0.0057	0.0011	0.0047
225	0.0056	0.0010	0.0046
226	0.0055	0.0010	0.0045
227	0.0054	0.0010	0.0044
228	0.0053	0.0010	0.0043
229	0.0052	0.0010	0.0043
230	0.0051	0.0009	0.0042
231	0.0051	0.0009	0.0041
232	0.0050	0.0009	0.0041
233	0.0049	0.0009	0.0040
234	0.0048	0.0009	0.0040
235	0.0048	0.0009	0.0039

236	0.0047	0.0009	0.0038
237	0.0046	0.0008	0.0038
238	0.0046	0.0008	0.0037
239	0.0045	0.0008	0.0037
240	0.0045	0.0008	0.0036
241	0.0044	0.0008	0.0036
242	0.0043	0.0008	0.0035
243	0.0043	0.0008	0.0035
244	0.0042	0.0008	0.0035
245	0.0042	0.0008	0.0034
246	0.0041	0.0008	0.0034
247	0.0041	0.0008	0.0033
248	0.0040	0.0007	0.0033
249	0.0040	0.0007	0.0033
250	0.0040	0.0007	0.0032
251	0.0039	0.0007	0.0032
252	0.0039	0.0007	0.0032
253	0.0038	0.0007	0.0031
254	0.0038	0.0007	0.0031
255	0.0038	0.0007	0.0031
256	0.0037	0.0007	0.0030
257	0.0037	0.0007	0.0030
258	0.0037	0.0007	0.0030
259	0.0036	0.0007	0.0030
260	0.0036	0.0007	0.0029
261	0.0036	0.0007	0.0029
262	0.0035	0.0006	0.0029
263	0.0035	0.0006	0.0029
264	0.0035	0.0006	0.0028
265	0.0034	0.0006	0.0028
266	0.0034	0.0006	0.0028
267	0.0034	0.0006	0.0028
268	0.0034	0.0006	0.0027
269	0.0033	0.0006	0.0027
270	0.0033	0.0006	0.0027
271	0.0033	0.0006	0.0027
272	0.0032	0.0006	0.0027
273	0.0032	0.0006	0.0026
274	0.0032	0.0006	0.0026
275	0.0032	0.0006	0.0026
276	0.0032	0.0006	0.0026
277	0.0031	0.0006	0.0026
278	0.0031	0.0006	0.0025
279	0.0031	0.0006	0.0025
280	0.0031	0.0006	0.0025
281	0.0030	0.0006	0.0025
282	0.0030	0.0006	0.0025
283	0.0030	0.0005	0.0024
284	0.0030	0.0005	0.0024
285	0.0030	0.0005	0.0024

286	0.0029	0.0005	0.0024
287	0.0029	0.0005	0.0024
288	0.0029	0.0005	0.0024

Total soil rain loss = 0.33(In)
Total effective rainfall = 1.80(In)
Peak flow rate in flood hydrograph = 55.36(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	15.0	30.0	45.0	60.0
0+ 5	0.0004	0.05	Q				
0+10	0.0032	0.41	Q				
0+15	0.0080	0.71	Q				
0+20	0.0138	0.84	Q				
0+25	0.0201	0.91	Q				
0+30	0.0267	0.97	Q				
0+35	0.0337	1.00	Q				
0+40	0.0408	1.03	Q				
0+45	0.0480	1.05	Q				
0+50	0.0554	1.07	Q				
0+55	0.0628	1.08	Q				
1+ 0	0.0703	1.09	Q				
1+ 5	0.0779	1.10	Q				
1+10	0.0855	1.11	Q				
1+15	0.0931	1.11	Q				
1+20	0.1008	1.12	Q				
1+25	0.1085	1.12	Q				
1+30	0.1163	1.12	Q				
1+35	0.1240	1.13	Q				
1+40	0.1318	1.13	Q				
1+45	0.1397	1.14	Q				
1+50	0.1475	1.14	QV				
1+55	0.1554	1.14	QV				
2+ 0	0.1633	1.15	QV				
2+ 5	0.1712	1.15	QV				
2+10	0.1792	1.16	QV				
2+15	0.1872	1.16	QV				
2+20	0.1952	1.16	QV				
2+25	0.2032	1.17	QV				
2+30	0.2113	1.17	QV				
2+35	0.2194	1.18	QV				
2+40	0.2275	1.18	QV				

2+45	0.2357	1.19	QV	|	|	|	|
2+50	0.2439	1.19	QV	|	|	|	|
2+55	0.2521	1.19	QV	|	|	|	|
3+ 0	0.2604	1.20	QV	|	|	|	|
3+ 5	0.2687	1.20	QV	|	|	|	|
3+10	0.2770	1.21	QV	|	|	|	|
3+15	0.2854	1.21	Q V	|	|	|	|
3+20	0.2937	1.22	Q V	|	|	|	|
3+25	0.3022	1.22	Q V	|	|	|	|
3+30	0.3106	1.23	Q V	|	|	|	|
3+35	0.3191	1.23	Q V	|	|	|	|
3+40	0.3276	1.24	Q V	|	|	|	|
3+45	0.3362	1.24	Q V	|	|	|	|
3+50	0.3448	1.25	Q V	|	|	|	|
3+55	0.3534	1.25	Q V	|	|	|	|
4+ 0	0.3621	1.26	Q V	|	|	|	|
4+ 5	0.3708	1.26	Q V	|	|	|	|
4+10	0.3795	1.27	Q V	|	|	|	|
4+15	0.3883	1.27	Q V	|	|	|	|
4+20	0.3971	1.28	Q V	|	|	|	|
4+25	0.4059	1.28	Q V	|	|	|	|
4+30	0.4148	1.29	Q V	|	|	|	|
4+35	0.4237	1.30	Q V	|	|	|	|
4+40	0.4327	1.30	Q V	|	|	|	|
4+45	0.4417	1.31	Q V	|	|	|	|
4+50	0.4508	1.31	Q V	|	|	|	|
4+55	0.4598	1.32	Q V	|	|	|	|
5+ 0	0.4690	1.32	Q V	|	|	|	|
5+ 5	0.4781	1.33	Q V	|	|	|	|
5+10	0.4873	1.34	Q V	|	|	|	|
5+15	0.4966	1.34	Q V	|	|	|	|
5+20	0.5059	1.35	Q V	|	|	|	|
5+25	0.5152	1.36	Q V	|	|	|	|
5+30	0.5246	1.36	Q V	|	|	|	|
5+35	0.5340	1.37	Q V	|	|	|	|
5+40	0.5435	1.37	Q V	|	|	|	|
5+45	0.5530	1.38	Q V	|	|	|	|
5+50	0.5626	1.39	Q V	|	|	|	|
5+55	0.5722	1.39	Q V	|	|	|	|
6+ 0	0.5818	1.40	Q V	|	|	|	|
6+ 5	0.5915	1.41	Q V	|	|	|	|
6+10	0.6013	1.42	Q V	|	|	|	|
6+15	0.6111	1.42	Q V	|	|	|	|
6+20	0.6209	1.43	Q V	|	|	|	|
6+25	0.6308	1.44	Q V	|	|	|	|
6+30	0.6408	1.45	Q V	|	|	|	|
6+35	0.6508	1.45	Q V	|	|	|	|
6+40	0.6608	1.46	Q V	|	|	|	|
6+45	0.6710	1.47	Q V	|	|	|	|
6+50	0.6811	1.48	Q V	|	|	|	|

6+55	0.6913	1.48	Q V	|	|	|	|
7+ 0	0.7016	1.49	Q V	|	|	|	|
7+ 5	0.7119	1.50	|Q V	|	|	|	|
7+10	0.7223	1.51	|Q V	|	|	|	|
7+15	0.7328	1.52	|Q V	|	|	|	|
7+20	0.7433	1.53	|Q V	|	|	|	|
7+25	0.7539	1.53	|Q V	|	|	|	|
7+30	0.7645	1.54	|Q V	|	|	|	|
7+35	0.7752	1.55	|Q V	|	|	|	|
7+40	0.7859	1.56	|Q V	|	|	|	|
7+45	0.7968	1.57	|Q V	|	|	|	|
7+50	0.8076	1.58	|Q V	|	|	|	|
7+55	0.8186	1.59	|Q V	|	|	|	|
8+ 0	0.8296	1.60	|Q V	|	|	|	|
8+ 5	0.8407	1.61	|Q V	|	|	|	|
8+10	0.8518	1.62	|Q V	|	|	|	|
8+15	0.8631	1.63	|Q V	|	|	|	|
8+20	0.8744	1.64	|Q V	|	|	|	|
8+25	0.8857	1.65	|Q V	|	|	|	|
8+30	0.8972	1.66	|Q V	|	|	|	|
8+35	0.9087	1.67	|Q V	|	|	|	|
8+40	0.9203	1.68	|Q V	|	|	|	|
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9+ 0	0.9675	1.73	|Q V	|	|	|	|
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9+10	0.9915	1.75	|Q V	|	|	|	|
9+15	1.0037	1.77	|Q V	|	|	|	|
9+20	1.0160	1.78	|Q V	|	|	|	|
9+25	1.0283	1.79	|Q V	|	|	|	|
9+30	1.0408	1.81	|Q V	|	|	|	|
9+35	1.0533	1.82	|Q V	|	|	|	|
9+40	1.0659	1.83	|Q V	|	|	|	|
9+45	1.0787	1.85	|Q V	|	|	|	|
9+50	1.0915	1.86	|Q V	|	|	|	|
9+55	1.1044	1.88	|Q V	|	|	|	|
10+ 0	1.1175	1.89	|Q V	|	|	|	|
10+ 5	1.1306	1.91	|Q V	|	|	|	|
10+10	1.1439	1.92	|Q V	|	|	|	|
10+15	1.1572	1.94	|Q V	|	|	|	|
10+20	1.1707	1.96	|Q V	|	|	|	|
10+25	1.1843	1.97	|Q V	|	|	|	|
10+30	1.1980	1.99	|Q V	|	|	|	|
10+35	1.2119	2.01	|Q V	|	|	|	|
10+40	1.2258	2.03	|Q V	|	|	|	|
10+45	1.2399	2.05	|Q V	|	|	|	|
10+50	1.2541	2.07	|Q V	|	|	|	|
10+55	1.2685	2.08	|Q V	|	|	|	|
11+ 0	1.2830	2.10	|Q V|	|	|	|	|

11+ 5	1.2976	2.12	|Q V|	|	|	|
11+10	1.3124	2.15	|Q V|	|	|	|
11+15	1.3273	2.17	|Q V|	|	|	|
11+20	1.3424	2.19	|Q V|	|	|	|
11+25	1.3577	2.21	|Q V|	|	|	|
11+30	1.3731	2.24	|Q V|	|	|	|
11+35	1.3886	2.26	|Q V|	|	|	|
11+40	1.4044	2.29	|Q V|	|	|	|
11+45	1.4203	2.31	|Q V	|	|	|
11+50	1.4364	2.34	|Q V	|	|	|
11+55	1.4526	2.36	|Q V	|	|	|
12+ 0	1.4691	2.39	|Q V	|	|	|
12+ 5	1.4858	2.42	|Q V	|	|	|
12+10	1.5028	2.47	|Q V	|	|	|
12+15	1.5201	2.51	|Q V	|	|	|
12+20	1.5376	2.55	|Q V	|	|	|
12+25	1.5554	2.58	|Q |V	|	|	|
12+30	1.5735	2.62	|Q |V	|	|	|
12+35	1.5918	2.66	|Q |V	|	|	|
12+40	1.6103	2.69	|Q |V	|	|	|
12+45	1.6291	2.73	|Q |V	|	|	|
12+50	1.6482	2.77	|Q |V	|	|	|
12+55	1.6676	2.81	|Q |V	|	|	|
13+ 0	1.6873	2.86	|Q |V	|	|	|
13+ 5	1.7073	2.90	|Q | V	|	|	|
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13+15	1.7483	3.00	|Q | V	|	|	|
13+20	1.7693	3.05	| Q | V	|	|	|
13+25	1.7907	3.10	| Q | V	|	|	|
13+30	1.8124	3.16	| Q | V	|	|	|
13+35	1.8346	3.22	| Q | V	|	|	|
13+40	1.8572	3.28	| Q | V	|	|	|
13+45	1.8802	3.34	| Q | V	|	|	|
13+50	1.9037	3.41	| Q | V	|	|	|
13+55	1.9277	3.49	| Q | V	|	|	|
14+ 0	1.9523	3.56	| Q | V	|	|	|
14+ 5	1.9774	3.64	| Q | V	|	|	|
14+10	2.0031	3.74	| Q | V	|	|	|
14+15	2.0295	3.83	| Q | V	|	|	|
14+20	2.0566	3.93	| Q | V	|	|	|
14+25	2.0844	4.04	| Q | V	|	|	|
14+30	2.1130	4.16	| Q | V	|	|	|
14+35	2.1424	4.27	| Q | V	|	|	|
14+40	2.1728	4.41	| Q | V	|	|	|
14+45	2.2042	4.55	| Q | V	|	|	|
14+50	2.2367	4.72	| Q | V	|	|	|
14+55	2.2703	4.89	| Q | V	|	|	|
15+ 0	2.3054	5.09	| Q | V	|	|	|
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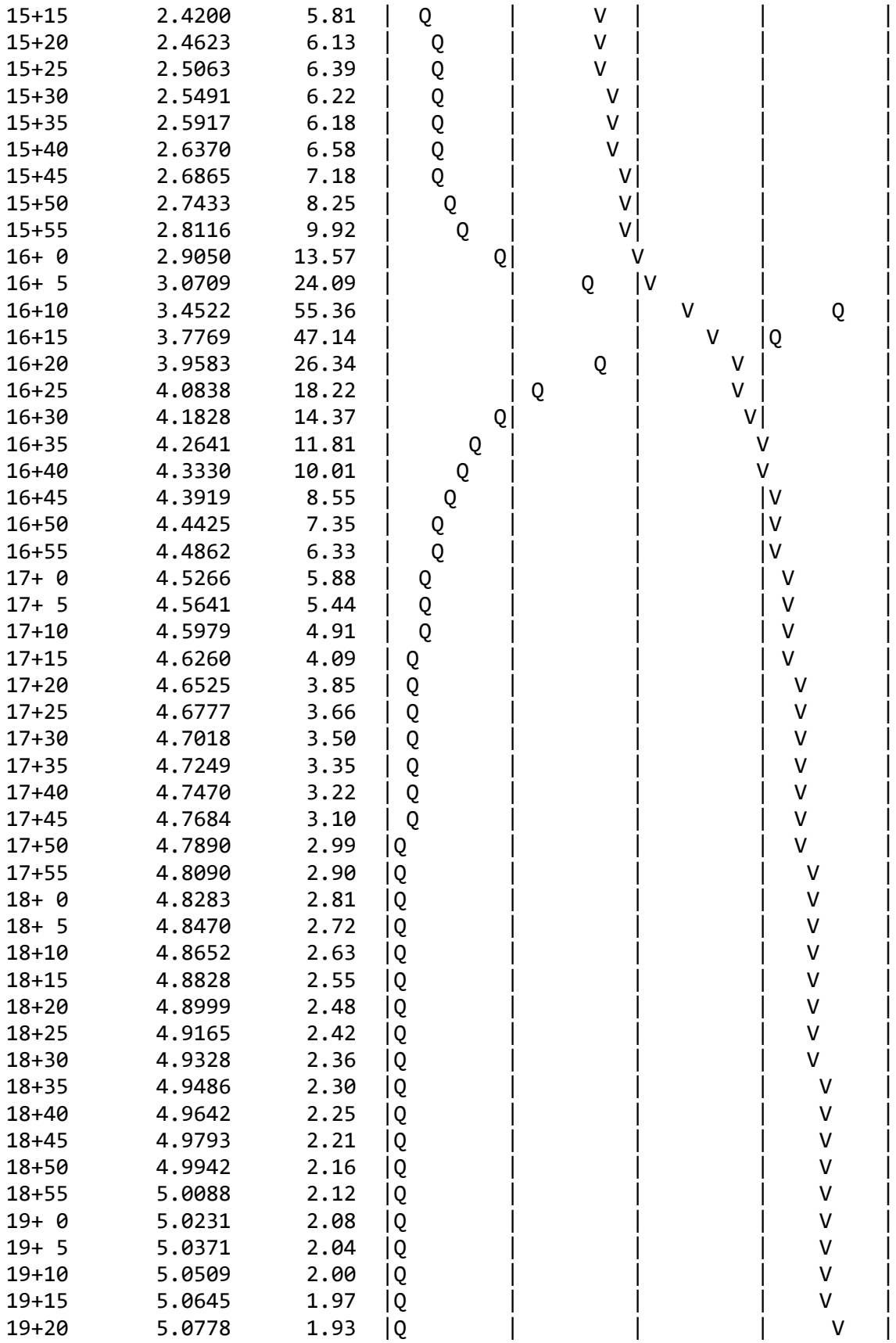
15+10	2.3800	5.54	| Q | V	|	|	|



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19+25       5.0909      1.90  |Q        |         |         |     V   |
19+30       5.1038      1.87  |Q        |         |         |     V   |
19+35       5.1165      1.84  |Q        |         |         |     V   |
19+40       5.1290      1.81  |Q        |         |         |     V   |
19+45       5.1413      1.79  |Q        |         |         |     V   |
19+50       5.1534      1.76  |Q        |         |         |     V   |
19+55       5.1654      1.74  |Q        |         |         |     V   |
20+ 0       5.1772      1.71  |Q        |         |         |     V   |
20+ 5       5.1888      1.69  |Q        |         |         |     V   |
20+10       5.2003      1.67  |Q        |         |         |     V   |
20+15       5.2116      1.65  |Q        |         |         |     V   |
20+20       5.2228      1.62  |Q        |         |         |      V  |
20+25       5.2338      1.60  |Q        |         |         |      V  |
20+30       5.2448      1.58  |Q        |         |         |      V  |
20+35       5.2555      1.57  |Q        |         |         |      V  |
20+40       5.2662      1.55  |Q        |         |         |      V  |
20+45       5.2767      1.53  |Q        |         |         |      V  |
20+50       5.2872      1.51  |Q        |         |         |      V  |
20+55       5.2975      1.50  Q         |         |         |      V  |
21+ 0       5.3076      1.48  Q         |         |         |      V  |
21+ 5       5.3177      1.46  Q         |         |         |      V  |
21+10       5.3277      1.45  Q         |         |         |      V  |
21+15       5.3376      1.43  Q         |         |         |      V  |
21+20       5.3474      1.42  Q         |         |         |      V  |
21+25       5.3570      1.41  Q         |         |         |       V |
21+30       5.3666      1.39  Q         |         |         |       V |
21+35       5.3761      1.38  Q         |         |         |       V |
21+40       5.3855      1.36  Q         |         |         |       V |
21+45       5.3948      1.35  Q         |         |         |       V |
21+50       5.4040      1.34  Q         |         |         |       V |
21+55       5.4132      1.33  Q         |         |         |       V |
22+ 0       5.4222      1.32  Q         |         |         |       V |
22+ 5       5.4312      1.30  Q         |         |         |       V |
22+10       5.4401      1.29  Q         |         |         |       V |
22+15       5.4490      1.28  Q         |         |         |       V |
22+20       5.4577      1.27  Q         |         |         |       V |
22+25       5.4664      1.26  Q         |         |         |       V |
22+30       5.4750      1.25  Q         |         |         |       V |
22+35       5.4835      1.24  Q         |         |         |       V |
22+40       5.4920      1.23  Q         |         |         |       V |
22+45       5.5004      1.22  Q         |         |         |        V|
22+50       5.5087      1.21  Q         |         |         |        V|
22+55       5.5170      1.20  Q         |         |         |        V|
23+ 0       5.5252      1.19  Q         |         |         |        V|
23+ 5       5.5334      1.18  Q         |         |         |        V|
23+10       5.5415      1.17  Q         |         |         |        V|
23+15       5.5495      1.17  Q         |         |         |        V|
23+20       5.5575      1.16  Q         |         |         |        V|
23+25       5.5654      1.15  Q         |         |         |        V|
23+30       5.5732      1.14  Q         |         |         |        V|
```

23+35	5.5810	1.13	Q	|	|	|	V|
23+40	5.5888	1.13	Q	|	|	|	V|
23+45	5.5965	1.12	Q	|	|	|	V|
23+50	5.6041	1.11	Q	|	|	|	V|
23+55	5.6117	1.10	Q	|	|	|	V|
24+ 0	5.6193	1.10	Q	|	|	|	V|

Appendix E
Soils Information

USDA Soils information

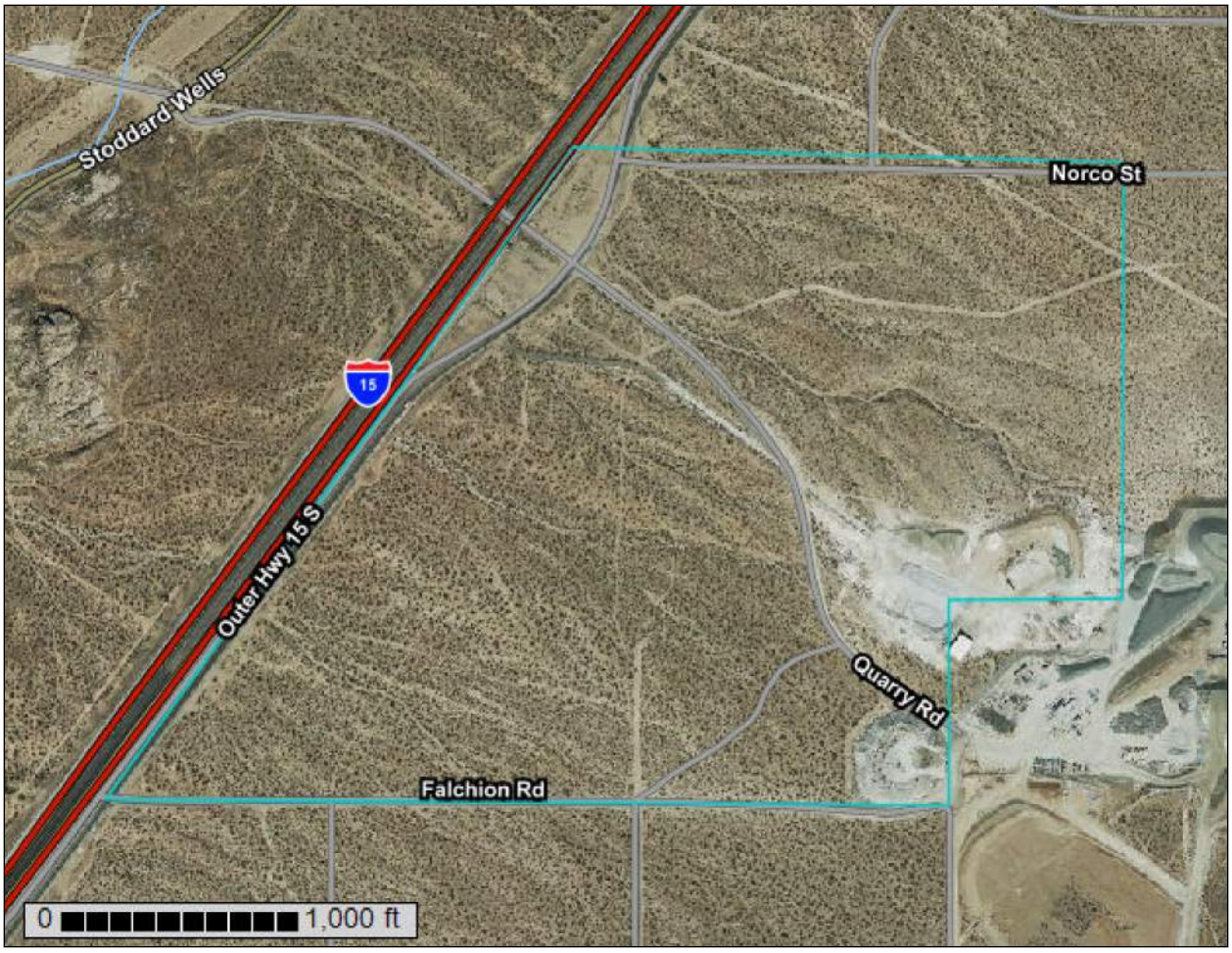
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Bernardino County, California, Mojave River Area



July 15, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

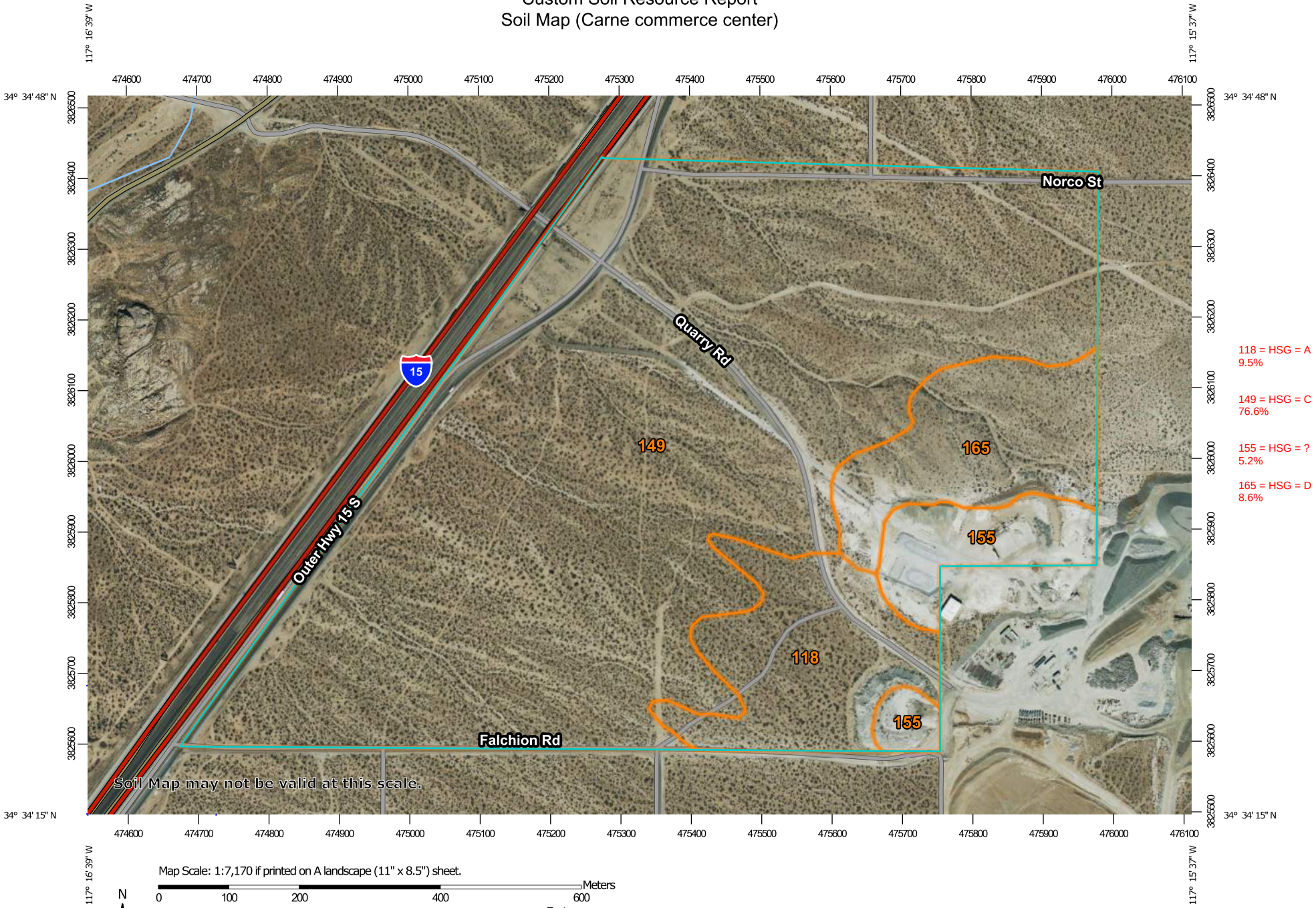
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Carne commerce center)



118 = HSG = A
9.5%

149 = HSG = C
76.6%

155 = HSG = ?
5.2%

165 = HSG = D
8.6%

Map Scale: 1:7,170 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 13, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 27, 2021—May 24, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Carne commerce center)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
118	CAJON-ARIZO COMPLEX, 2 TO 15 PERCENT SLOPES*	18.4	9.5%	HSG = A
149	MIRAGE-JOSHUA COMPLEX, 2 TO 5 PERCENT SLOPES*	147.5	76.6%	HSG = C
155	PITS	10.1	5.2%	HSG = ?
165	TRIGGER-SPARKHULE-ROCK OUTCROP ASSOCIATION, STEEP*	16.6	8.6%	HSG = D
Totals for Area of Interest		**192.5**	**100.0%**	

Map Unit Descriptions (Carne commerce center)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Bernardino County, California, Mojave River Area

118—CAJON-ARIZO COMPLEX, 2 TO 15 PERCENT SLOPES*

Map Unit Setting

National map unit symbol: hkrq
Elevation: 2,800 to 3,300 feet
Mean annual precipitation: 3 to 6 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 290 days
Farmland classification: Not prime farmland

Map Unit Composition

Cajon, gravelly surface, and similar soils: 55 percent
Arizo and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cajon, Gravelly Surface

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 6 inches: gravelly sand
H2 - 6 to 60 inches: gravelly sand

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R030XF028CA - COBBLY SANDY
Hydric soil rating: No

Description of Arizo

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 6 inches: gravelly loamy sand
H2 - 6 to 60 inches: extremely gravelly loamy coarse sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A
Ecological site: R030XF025CA - GRAVELLY COARSE LOAMY
Hydric soil rating: No

Minor Components

Helendale

Percent of map unit: 4 percent
Hydric soil rating: No

Bryman

Percent of map unit: 4 percent
Hydric soil rating: No

Joshua

Percent of map unit: 4 percent
Hydric soil rating: No

Cajon, clayey substratum

Percent of map unit: 3 percent

149—MIRAGE-JOSHUA COMPLEX, 2 TO 5 PERCENT SLOPES*

Map Unit Setting

National map unit symbol: hksq
Elevation: 2,600 to 3,400 feet

Mean annual precipitation: 3 to 5 inches
Mean annual air temperature: 63 to 66 degrees F
Frost-free period: 200 to 290 days
Farmland classification: Not prime farmland

Map Unit Composition

Mirage and similar soils: 50 percent
Joshua and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mirage

Setting

Landform: Fan remnants
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite sources

Typical profile

H1 - 0 to 5 inches: sandy loam
H2 - 5 to 21 inches: gravelly sandy clay loam
H3 - 21 to 39 inches: gravelly sandy loam
H4 - 39 to 60 inches: gravelly loamy sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Strongly saline (16.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R030XG024CA - DESERT PAVEMENT
Hydric soil rating: No

Description of Joshua

Setting

Landform: Fan remnants
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed sources

Typical profile

H1 - 0 to 3 inches: loam
H2 - 3 to 20 inches: gravelly sandy clay loam
H3 - 20 to 55 inches: very gravelly loamy coarse sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R030XG024CA - DESERT PAVEMENT
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 10 percent
Hydric soil rating: No

Nebona

Percent of map unit: 5 percent
Hydric soil rating: No

Cuddeback

Percent of map unit: 5 percent
Hydric soil rating: No

155—PITS

Map Unit Composition

Pits: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits

Setting

Landform: Stream terraces, alluvial fans

Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Mountainflank, side slope, tread
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Arizo

Percent of map unit: 5 percent
Hydric soil rating: No

Cajon

Percent of map unit: 3 percent
Hydric soil rating: No

Yermo

Percent of map unit: 2 percent
Hydric soil rating: No

Riverwash

Percent of map unit: 2 percent
Landform: Channels
Hydric soil rating: Yes

Trigger

Percent of map unit: 1 percent
Hydric soil rating: No

Sparkhule

Percent of map unit: 1 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

165—TRIGGER-SPARKHULE-ROCK OUTCROP ASSOCIATION, STEEP*

Map Unit Setting

National map unit symbol: hkt7
Elevation: 650 to 4,500 feet
Mean annual precipitation: 3 to 5 inches
Mean annual air temperature: 59 to 66 degrees F
Frost-free period: 180 to 290 days
Farmland classification: Not prime farmland

Map Unit Composition

Trigger and similar soils: 40 percent
Sparkhule and similar soils: 30 percent

Rock outcrop: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Trigger

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from calcareous conglomerate

Typical profile

H1 - 0 to 12 inches: gravelly sandy loam
H2 - 12 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 30 to 40 percent
Depth to restrictive feature: 10 to 18 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R030XF033CA - GRAVELLY LOAM
Hydric soil rating: No

Description of Sparkhule

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Colluvium derived from and/or residuum weathered from dacite

Typical profile

H1 - 0 to 2 inches: gravelly sandy loam
H2 - 2 to 18 inches: gravelly sandy clay loam
H3 - 18 to 28 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: 14 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R030XF033CA - GRAVELLY LOAM
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Concave

Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 40 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

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Appendix F

- BMP Fact Sheets

Section 3
Source Control BMPs

3.1 Introduction

This section provides a description of specific source control Best Management Practices (BMPs) for activities related to municipal operations. As noted in Sections 1 and 2, municipal fixed facilities conduct activities that have the potential to generate pollutants. The source control BMPs in this section address these activities (see Table 3-1).

In addition, municipalities conduct various field programs where activities may occur and create pollutants. BMPs for these field programs and associated activities are listed in Table 3-2.

Table 3-1 Municipal Fixed Facility BMPs	
Non-Stormwater Management	
SC-10	Non-Stormwater Discharges
SC-11	Spill Prevention, Control and Cleanup
Vehicle and Equipment Management	
SC-20	Vehicle and Equipment Fueling
SC-21	Vehicle and Equipment Cleaning
SC-22	Vehicle and Equipment Repair
Material and Waste Management	
SC-30	Outdoor Loading/Unloading
SC-31	Outdoor Container Storage
SC-32	Outdoor Equipment Maintenance
SC-33	Outdoor Storage of Raw Materials
SC-34	Waste Handling and Disposal
Building and Grounds Management	
SC-41	Building and Grounds Maintenance
SC-43	Parking/Storage Area Maintenance
Over Water Activities	
SC-50	Over Water Activities
General Stormwater Management	
SC-60	Housekeeping Practices
SC-61	Safer Alternative Products

Table 3-2 Municipal Field Program BMPs	
SC-70	Road and Street Maintenance
SC-71	Plaza and Sidewalk Cleaning
SC-72	Fountains & Pools Maintenance
SC-73	Landscape Maintenance
SC-74	Drainage System Maintenance
SC-75	Waste Handling and Disposal
SC-76	Water and Sewer Utility Maintenance

3.2 Fact Sheet Format

Each BMP fact sheet is a short document that gives all the information about a particular BMP. Typically, each fact sheet contains the information outlined in Figure 3-1. Completed fact sheets for each of the activities listed in Tables 3-1 and 3-2 are provided in Section 3.3.

The fact sheets also contain side bar presentations with information on BMP objectives and targeted constituents.

The information provided in each fact sheet is extensive and may not be applicable to all municipal operations. The readers may find it helpful to modify and simplify the BMP fact sheets to better reflect their existing operations.

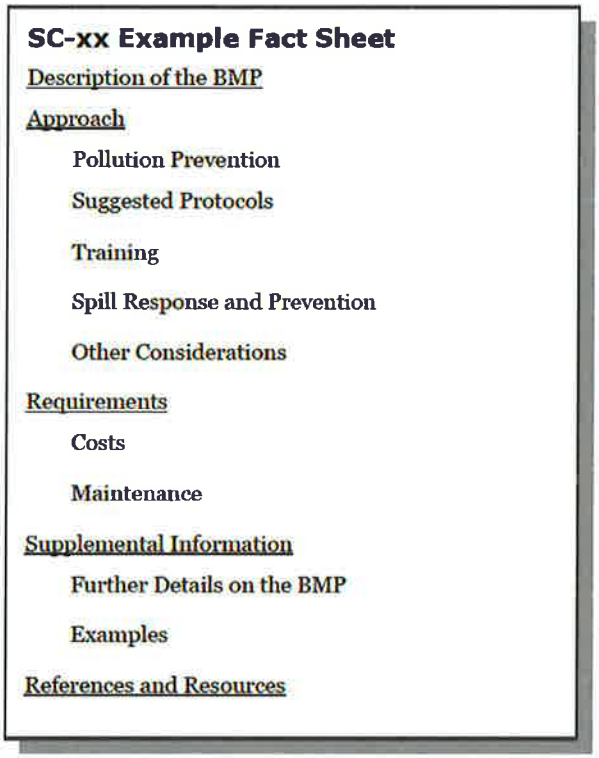

Figure 3-1
Example Fact Sheet

3.3 BMP Fact Sheets

BMP fact sheets for fixed facilities activities and field programs follow. The BMP fact sheets are individually page numbered and are suitable for photocopying and inclusions in stormwater quality management plans. Fresh copies of the fact sheets can be individually downloaded from the California Stormwater BMP Handbook website at http://www.cabmphandbooks.com

Site Design & Landscape Planning SD-10



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Spill Prevention, Control & Cleanup SC-11



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

Targeted Constituents

Sediment	
Nutrients	☑
Trash	
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

- An effective spill response and control plan should include:
  - Spill/leak prevention measures;
  - Spill response procedures;
  - Spill cleanup procedures;
  - Reporting; and
  - Training
- A well thought out and implemented plan can prevent pollutants from entering the storm drainage system and can be used as a tool for training personnel to prevent and control future spills as well.

Pollution Prevention

- Develop and implement a Spill Prevention Control and Response Plan. The plan should include:

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- A description of the facility, the address, activities and materials involved
- Identification of key spill response personnel
- Identification of the potential spill areas or operations prone to spills/leaks
- Identification of which areas should be or are bermed to contain spills/leaks
- Facility map identifying the key locations of areas, activities, materials, structural BMPs, etc.
- Material handling procedures
- Spill response procedures including:
    - Assessment of the site and potential impacts
    - Containment of the material
    - Notification of the proper personnel and evacuation procedures
    - Clean up of the site
    - Disposal of the waste material and
    - Proper record keeping

- Product substitution – use less toxic materials (i.e. use water based paints instead of oil based paints)
- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of materials that are brought into the facility or into the field.

Suggested Protocols

Spill/Leak Prevention Measures

- If possible, move material handling indoors, under cover, or away from storm drains or sensitive water bodies.
- Properly label all containers so that the contents are easily identifiable.
- Berm storage areas so that if a spill or leak occurs, the material is contained.
- Cover outside storage areas either with a permanent structure or with a seasonal one such as a tarp so that rain can not come into contact with the materials.
- Check containers (and any containment sumps) often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect all spilled liquids and properly dispose of them.

- Store, contain and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow or be washed into the storm drainage system, surface waters, or groundwater.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Any collected liquids or soiled absorbent materials should be reused/recycled or properly disposed of.
- For field programs, only transport the minimum amount of material needed for the daily activities and transfer materials between containers at a municipal yard where leaks and spill are easier to control.
- If paved, sweep and clean storage areas monthly, do not use water to hose down the area unless all of the water will be collected and disposed of properly.
- Install a spill control device (such as a tee section) in any catch basins that collect runoff from any storage areas if the materials stored are oil, gas, or other materials that separate from and float on water. This will allow for easier cleanup if a spill occurs.
- If necessary, protect catch basins while conducting field activities so that if a spill occurs, the material will be contained.

Training

- Educate employees about spill prevention, spill response and cleanup on a routine basis.
- Well-trained employees can reduce human errors that lead to accidental releases or spills:
  - The employees should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
  - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan if one is available.
- Training of staff from all municipal departments should focus on recognizing and reporting potential or current spills/leaks and who they should contact.
- Employees responsible for aboveground storage tanks and liquid transfers for large bulk containers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.

Spill Response and Prevention

- Identify key spill response personnel and train employees on who they are.
- Store and maintain appropriate spill cleanup materials in a clearly marked location near storage areas; and train employees to ensure familiarity with the site's spill control plan and/or proper spill cleanup procedures.
- Locate spill cleanup materials, such as absorbents, where they will be readily accessible (e.g. near storage and maintenance areas, on field trucks).

SC-11 Spill Prevention, Control & Cleanup

- Follow the Spill Prevention Control and Countermeasure Plan if one is available.
- If a spill occurs, notify the key spill response personnel immediately. If the material is unknown or hazardous, the local fire department may also need to be contacted.
- If safe to do so, attempt to contain the material and block the nearby storm drains so that the area impacted is minimized. If the material is unknown or hazardous wait for properly trained personnel to contain the materials.
- Perform an assessment of the area where the spill occurred and the downstream area that it could impact. Relay this information to the key spill response and clean up personnel.

Spill Cleanup Procedures

- Small non-hazardous spills
  - Use a rag, damp cloth or absorbent materials for general clean up of liquids
  - Use brooms or shovels for the general clean up of dry materials
  - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
  - Dispose of any waste materials properly
  - Clean or dispose of any equipment used to clean up the spill properly
- Large non-hazardous spills
  - Use absorbent materials for general clean up of liquids
  - Use brooms, shovels or street sweepers for the general clean up of dry materials
  - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
  - Dispose of any waste materials properly
  - Clean or dispose of any equipment used to clean up the spill properly
- For hazardous or very large spills, a private cleanup company or Hazmat team may need to be contacted to assess the situation and conduct the cleanup and disposal of the materials.
- Chemical cleanups of material can be achieved with the use of absorbents, gels, and foams. Remove the adsorbent materials promptly and dispose of according to regulations.
- If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.

Reporting

- Report any spills immediately to the identified key municipal spill response personnel.

- Report spills in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to the Office of Emergency Service (OES)
- Spills that pose an immediate threat to human health or the environment may also need to be reported within 24 hours to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour)
- After the spill has been contained and cleaned up, a detailed report about the incident should be generated and kept on file (see the section on Reporting below). The incident may also be used in briefing staff about proper procedures

Other Considerations

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure Plan (SPCC) Plan (Health & Safety Code Chapter 6.67).
- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.
- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, if permitted to do so, prohibiting any hard connections to the storm drain.

Requirements

Costs

- Will vary depending on the size of the facility and the necessary controls.
- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of wastes, contaminated soil and water is very expensive

Maintenance

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the response and containment of a spill. A good record keeping system helps the municipality minimize incident recurrence, correctly respond with appropriate containment and cleanup activities, and comply with legal requirements.

A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm drain.

These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Examples

The City of Palo Alto includes spill prevention and control as a major element of its highly effective program for municipal vehicle maintenance shops.

References and Resources

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)
http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf

Efficient Irrigation SD-12



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING

– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.
- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Building & Grounds Maintenance SC-41



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	
Organics	

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.

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- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

Suggested Protocols

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

Landscaping Activities

- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- Use hand weeding where practical.

Fertilizer and Pesticide Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.

- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

Training

- Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- Clean up spills immediately.

Other Considerations

Alternative pest/weed controls may not be available, suitable, or effective in many cases.

Requirements

Costs

- Cost will vary depending on the type and size of facility.
- Overall costs should be low in comparison to other BMPs.

Maintenance

Sweep paved areas regularly to collect loose particles. Wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

Supplemental Information

Further Detail of the BMP

Fire Sprinkler Line Flushing

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Parking/Storage Area Maintenance SC-43



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Description

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

Approach

The goal of this program is to ensure stormwater pollution prevention practices are considered when conducting activities on or around parking areas and storage areas to reduce potential for pollutant discharge to receiving waters. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Encourage alternative designs and maintenance strategies for impervious parking lots. (See New Development and Redevelopment BMP Handbook)
- Keep accurate maintenance logs to evaluate BMP implementation.

CASQA California Stormwater Quality Association

SC-43 Parking/Storage Area Maintenance

Suggested Protocols

General

- Keep the parking and storage areas clean and orderly. Remove debris in a timely fashion.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low quantities.
- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.
- Discharge soapy water remaining in mop or wash buckets to the sanitary sewer through a sink, toilet, clean-out, or wash area with drain.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Provide trash receptacles in parking lots to discourage litter.
- Routinely sweep, shovel, and dispose of litter in the trash.

Surface Cleaning

- Use dry cleaning methods (e.g., sweeping, vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system if possible.
- Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- Sweep all parking lots at least once before the onset of the wet season.
- Follow the procedures below if water is used to clean surfaces:
  - Block the storm drain or contain runoff.
  - Collect and pump wash water to the sanitary sewer or discharge to a pervious surface. Do not allow wash water to enter storm drains.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- Follow the procedures below when cleaning heavy oily deposits:
  - Clean oily spots with absorbent materials.
  - Use a screen or filter fabric over inlet, then wash surfaces.

- Do not allow discharges to the storm drain.
- Vacuum/pump discharges to a tank or discharge to sanitary sewer.
- Appropriately dispose of spilled materials and absorbents.

Surface Repair

- Preheat, transfer or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff.
- Cover and seal nearby storm drain inlets where applicable (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.
- Use only as much water as necessary for dust control, to avoid runoff.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Inspection

- Have designated personnel conduct inspections of parking facilities and stormwater conveyance systems associated with parking facilities on a regular basis.
- Inspect cleaning equipment/sweepers for leaks on a regular basis.

Training

- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- Train employees and contractors in proper techniques for spill containment and cleanup.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible or at a central location.
- Clean up fluid spills immediately with absorbent rags or material.
- Dispose of spilled material and absorbents properly.

Other Considerations

Limitations related to sweeping activities at large parking facilities may include high equipment costs, the need for sweeper operator training, and the inability of current sweeper technology to remove oil and grease.

SC-43 Parking/Storage Area Maintenance

Requirements

Costs

Cleaning/sweeping costs can be quite large. Construction and maintenance of stormwater structural controls can be quite expensive as well.

Maintenance

- Sweep parking lot regularly to minimize cleaning with water.
- Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities regularly to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions.

Supplemental Information

Further Detail of the BMP

Surface Repair

Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff. Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal. Only use only as much water as is necessary for dust control to avoid runoff.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Housekeeping Practices SC-60

Description

Promote efficient and safe housekeeping practices (storage, use, and cleanup) when handling potentially harmful materials such as fertilizers, pesticides, cleaning solutions, paint products, automotive products, and swimming pool chemicals. Related information is provided in BMP fact sheets SC-11 Spill Prevention, Control & Cleanup and SC-34 Waste Handling & Disposal.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Approach

Pollution Prevention

- Purchase only the amount of material that will be needed for foreseeable use. In most cases this will result in cost savings in both purchasing and disposal. See SC-61 Safer Alternative Products for additional information.
- Be aware of new products that may do the same job with less environmental risk and for less or the equivalent cost. Total cost must be used here; this includes purchase price, transportation costs, storage costs, use related costs, clean up costs and disposal costs.

Suggested Protocols

General

- Keep work sites clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Dispose of wash water, sweepings, and sediments, properly.
- Recycle or dispose of fluids properly.
- Establish a daily checklist of office, yard and plant areas to confirm cleanliness and adherence to proper storage and security. Specific employees should be assigned specific inspection responsibilities and given the authority to remedy any problems found.
- Post waste disposal charts in appropriate locations detailing for each waste its hazardous nature (poison, corrosive, flammable), prohibitions on its disposal (dumpster, drain, sewer) and the recommended disposal method (recycle, sewer, burn, storage, landfill).
- Summarize the chosen BMPs applicable to your operation and post them in appropriate conspicuous places.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Require a signed checklist from every user of any hazardous material detailing amount taken, amount used, amount returned and disposal of spent material.
- Do a before audit of your site to establish baseline conditions and regular subsequent audits to note any changes and whether conditions are improving or deteriorating.
- Keep records of water, air and solid waste quantities and quality tests and their disposition.
- Maintain a mass balance of incoming, outgoing and on hand materials so you know when there are unknown losses that need to be tracked down and accounted for.
- Use and reward employee suggestions related to BMPs, hazards, pollution reduction, work place safety, cost reduction, alternative materials and procedures, recycling and disposal.
- Have, and review regularly, a contingency plan for spills, leaks, weather extremes etc. Make sure all employees know about it and what their role is so that it comes into force automatically.

Training

- Train all employees, management, office, yard, manufacturing, field and clerical in BMPs and pollution prevention and make them accountable.
- Train municipal employees who handle potentially harmful materials in good housekeeping practices.
- Train personnel who use pesticides in the proper use of the pesticides. The California Department of Pesticide Regulation license pesticide dealers, certify pesticide applicators and conduct onsite inspections.
- Train employees and contractors in proper techniques for spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and Countermeasure (SPCC) plant up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- There are no major limitations to this best management practice.
- There are no regulatory requirements to this BMP. Existing regulations already require municipalities to properly store, use, and dispose of hazardous materials

Requirements

Costs

- Minimal cost associated with this BMP. Implementation of good housekeeping practices may result in cost savings as these procedures may reduce the need for more costly BMPs.

Maintenance

- Ongoing maintenance required to keep a clean site. Level of effort is a function of site size and type of activities.

Supplemental Information

Further Detail of the BMP

- The California Integrated Waste Management Board's Recycling Hotline, 1-800-553-2962, provides information on household hazardous waste collection programs and facilities.

Examples

There are a number of communities with effective programs. The most pro-active include Santa Clara County and the City of Palo Alto, the City and County of San Francisco, and the Municipality of Metropolitan Seattle (Metro).

References and Resources

British Columbia Lake Stewardship Society. Best Management Practices to Protect Water Quality from Non-Point Source Pollution. March 2000.
http://www.nalms.org/bclss/bmphome.html#bmp

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities, Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July, 1998, Revised by California Coastal Commission, February 2002.

Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Mateo STOPPP - (http://stoppp.tripod.com/bmp.html)

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

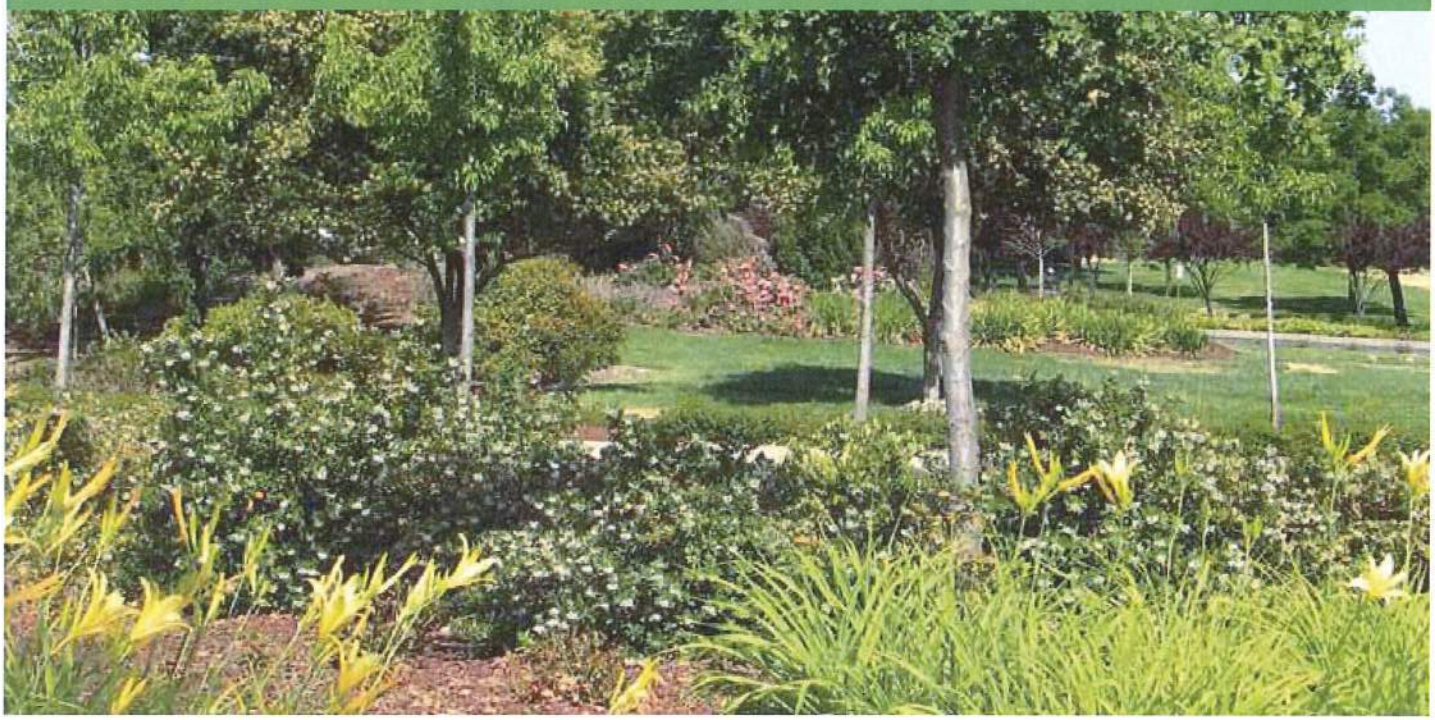
Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Appendix G

- Educational Materials



The Updated Model Water Efficient Landscape Ordinance

CALIFORNIA DEPARTMENT OF WATER RESOURCES

Landscapes are essential to the quality of life in California. They provide areas for recreation, enhance the environment, clean the air and water, prevent erosion, offer fire protection and replace ecosystems lost to development.

California's economic prosperity and environmental quality are dependant on an adequate supply of water for beneficial uses. In California, about half of the urban water used is for landscape irrigation. Ensuring **efficient landscapes** in new developments and reducing water waste in existing landscapes are the most cost-effective ways to stretch our limited water supplies and ensure that we continue to have sufficient water for California to prosper.





The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881, Laird) requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Pursuant to this law, the Department of Water Resources (DWR) has prepared a Model Water Efficient Landscape Ordinance (Model Ordinance) for use by local agencies. The Model Ordinance was approved by the Office of Administrative Law on September 10, 2009. The Model Ordinance became effective on September 10.

All local agencies must adopt a water efficient landscape ordinance by **January 1, 2010**. The local agencies may adopt the state Model Ordinance, or craft an ordinance to fit local conditions. In addition, several local agencies may collaborate and craft a region-wide ordinance. In any case, the adopted ordinance must be as effective as the Model Ordinance in regard to water conservation.

For more information, please visit our web site at
http://www.water.ca.gov/wateruseefficiency/landscapeordinance/

DWR October 2009

Model Water Efficient Landscape Ordinance
CALIFORNIA DEPARTMENT OF WATER RESOURCES



Important points to consider...

Water purveyors have an important role.
The enabling statute was directed to local agencies that make land use decisions and approve land development. Active participation by water purveyors can make the implementation, enforcement and follow-up actions of an ordinance more effective.

Most new and rehabilitated landscapes are subject to a water efficient landscape ordinance. Public landscapes and private development projects including developer installed single family and multi-family residential landscapes with at least 2500 sq. ft. of landscape area are subject to the Model Ordinance .

Homeowner provided landscaping at single family and multi-family homes are subject to the Model Ordinance if the landscape area is at least 5000 sq. ft

Existing landscapes are also subject to the Model Ordinance.
Water waste is common in landscapes that are poorly designed or not well maintained. Water waste (from runoff, overspray, low head drainage, leaks and excessive amounts of applied irrigation water in landscapes is prohibited by Section 2, Article X of the California Constitution.

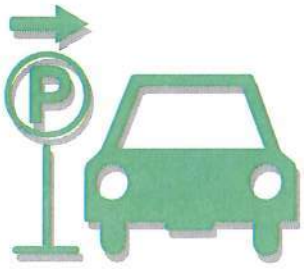
Any landscape installed prior to January 1, 2010, that is at least one acre in size may be subject to irrigation audits, irrigation surveys or water use analysis programs for evaluating irrigation system performance and adherence to the Maximum Applied Water Allowance as defined in the 1992 Model Ordinance with an Evapotranspiration Adjustment Factor (ETAF) of 0.8. Local agencies and water purveyors (designated by the local agency) may institute these or other programs to increase efficiency in existing landscapes.

All new landscapes will be assigned a water budget.
The water budget approach is a provision in the statute that ensures a landscape is allowed sufficient water. There are two water budgets in the Model Ordinance; the Maximum Applied Water Allowance (MAWA) and the Estimated Total Water Use (ETWU).

The MAWA, is the water budget used for compliance and is an annual water allowance based on landscape area, local evapotranspiration and ETAF of 0.7. The ETWU is an annual water use estimation for design purposes and is based on the water needs of the plants actually chosen for a given landscape. The ETWU may not exceed the MAWA.

Water efficient landscapes offer multiple benefits.
Water efficient landscapes will stretch our limited water supplies. Other benefits include reduced irrigation runoff, reduced pollution of waterways, less property damage, less green waste, increased drought resistance and a smaller carbon footprint.

The Department of Water Resources will offer technical assistance.
The Department plans to offer a series of workshops, publications and other assistance for successful adoption and implementation of the Model Ordinance or local water efficient landscape ordinances. Information regarding these resources may be found on the DWR website: **http://www.water.ca.gov/wateruseefficiency/landscapeordinance/**
Questions on the Model Ordinance may be sent by e-mail to DWR staff at: **mweo@water.ca.gov.**



R-3
AUTOMOBILE PARKING

The activities outlined in this fact sheet target the following pollutants:	
Sediment	x
Nutrients	
Bacteria	
Foaming Agents	
Metals	X
Hydrocarbons	X
Hazardous Materials	x
Pesticides and Herbicides	
Other	

Parked automobiles may contribute pollutants to the storm drain because poorly maintained vehicles may leak fluids containing hydrocarbons, metals, and other pollutants. In addition, heavily soiled automobiles may drop clods of dirt onto the parking surface, contributing to the sediment load when runoff is present. During rain events, or wash-down activities, the pollutants may be carried into the storm drain system. The pollution prevention activities outlined in this fact sheets are used to prevent the discharge of pollutants to the storm drain system.

Think before parking your car. Remember - The ocean starts at your front door.

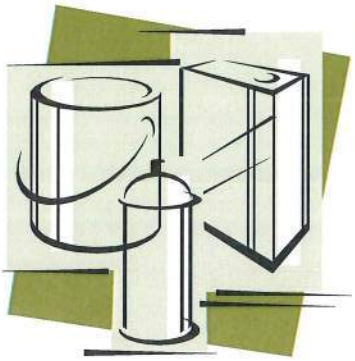
Required Activities

- If required, vehicles have to be removed from the street during designated street sweeping/cleaning times.
- If the automobile is leaking, place a pan or similar collection device under the automobile, until such time as the leak may be repaired.
- Use dry cleaning methods to remove any materials deposited by vehicles (e.g. adsorbents for fluid leaks, sweeping for soil clod deposits).

Recommended Activities

- Park automobiles over permeable surfaces (e.g. gravel, or porous cement).
- Limit vehicle parking to covered areas.
- Perform routine maintenance to minimize fluid leaks, and maximize fuel efficiency.

For additional information contact:
County of Orange, OC **Watershed**
Main: (714) 955-0600/ 24hr Water Pollution Discharge Hotline 1-877-89-SPILL
or visit our website at: www.ocwatersheds.com



R-7
HOUSEHOLD HAZARDOUS WASTE

Household hazardous wastes (HHW) are defined as waste materials which are typically found in homes or similar sources, which exhibit characteristics such as: corrosivity, ignitability, reactivity, and/or toxicity, or are listed as hazardous materials by EPA.

The activities outlined in this fact sheet target the following pollutants:	
Sediment	
Nutrients	
Bacteria	
Foaming Agents	x
Metals	x
Hydrocarbons	x
Hazardous Materials	x
Pesticides and Herbicides	x
Other	x

List of most common HHW products:

Drain openers
Oven cleaners
Wood and metal cleaners and polishes
Automotive oil and fuel additives
Grease and rust solvents
Carburetor and fuel injection cleaners
Starter fluids
Batteries
Paint Thinners
Paint strippers and removers
Adhesives
Herbicides
Pesticides
Fungicides/wood preservatives

Many types of waste can be recycled, however options for each waste type are limited. Recycling is always preferable to disposal of unwanted materials. All gasoline, antifreeze, waste oil, and lead-acid batteries can be recycled. Latex and oil-based paint can be reused, as well as recycled. Materials that cannot be reused or recycled should be disposed of at a properly permitted landfill.

Think before disposing of any household hazardous waste. Remember - The ocean starts at your front door.

RECYCLE USED OIL

Required Activities

- Dispose of HHW at a local collection facility. Call (714) 834-6752 for the household hazardous waste center closest to your area.
- Household hazardous materials must be stored indoors or under cover, and in closed and labeled containers.
- If safe, contain, clean up, and properly dispose all household hazardous waste spills. If an unsafe condition exists, call 911 to activate the proper response team.

Recommended Activities

- Use non-hazardous or less-hazardous products.
- Participate in HHW reuse and recycling. Call (714) 834-6752 for the participating household hazardous waste centers.

The California Integrated Waste Management Board has a Recycling Hotline (800) 553-2962, that provides information and recycling locations for used oil.

For additional information contact:
County of Orange, OC **Watershed**
Main: (714) 955-0600/ 24hr Water Pollution Discharge Hotline 1-877-89-SPILL
or visit our website at: www.ocwatersheds.com



R-8
WATER CONSERVATION

Excessive irrigation and/or the overuse of water is often the most significant factor in transporting pollutants to the storm drain system. Pollutants from a wide variety of sources including automobile repair and maintenance, automobile washing, automobile parking, home and garden care activities and pet care may dissolve in the water and be transported to the storm drain. In addition, particles and materials coated with fertilizers and pesticides may be suspended in the flow and be transported to the storm drain.

The activities outlined in this fact sheet target the following pollutants:	
Sediment	x
Nutrients	x
Bacteria	x
Foaming Agents	x
Metals	x
Hydrocarbons	x
Hazardous Materials	x
Pesticides and Herbicides	x
Other	x

Hosing off outside areas to wash them down not only consumes large quantities of water, but also transports any pollutants, sediments, and waste to the storm drain system. The pollution prevention activities outlined in this fact sheets are used to prevent the discharge of pollutants to the storm drain system.

Think before using water. Remember - The ocean starts at your front door.

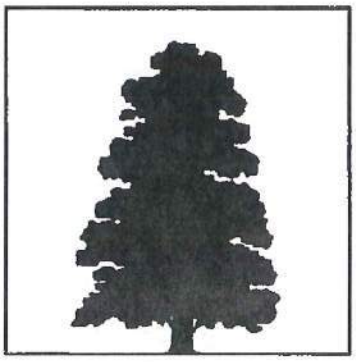
Required Activities

- Irrigation systems must be properly adjusted to reflect seasonal water needs.
- Do not hose off outside surfaces to clean, sweep with a broom instead.

Recommended Activities

- Fix any leaking faucets and eliminate unnecessary water sources.
- Use xeroscaping and drought tolerant landscaping to reduce the watering needs.
- Do not over watering lawns or gardens. Over watering wastes water and promotes diseases.
- Use a bucket to re-soak sponges/rags while washing automobiles and other items outdoors. Use hose only for rinsing.
- Wash automobiles at a commercial car wash employing water recycling.

For additional information contact:
County of Orange, OC **Watershed**
Main: (714) 955-0600/ 24hr Water Pollution Discharge Hotline 1-877-89-SPILL
or visit our website at: www.ocwatersheds.com



FP-2

LANDSCAPE MAINTENANCE

The model procedures described below focus on minimizing the discharge of pesticides and fertilizers, landscape waste, trash, debris, and other pollutants to the storm drain system and receiving waters. Landscape maintenance practices may involve one or more of the following activities:

1. **Mowing, Trimming/Weeding, and Planting**
2. **Irrigation**
3. **Fertilizer and Pesticide Management**
4. **Managing Landscape Waste**
5. **Erosion Control**

POLLUTION PREVENTION:

Pollution prevention measures have been considered and incorporated in the model procedures. Implementation of these measures may be more effective and reduce or eliminate the need to implement other more complicated or costly procedures. Possible pollution prevention measures for landscape maintenance include:

- Implement an integrated pest management (IPM) program. IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools. Refer to Appendix D, Fertilizer and Pesticide Management Guidance for further details.
- Choose low water using flowers, trees, shrubs, and groundcover.
- Appropriate maintenance (i.e. properly timed fertilizing, weeding, pest control, and pruning) will preserve the landscapes water efficiency.
- Once per year, educate municipal staff on pollution prevention measures.

MODEL PROCEDURES:

1. Mowing, Trimming/Weeding, and Planting

Mowing, Trimming/Weeding

✓ Whenever possible, use mechanical methods of vegetation removal rather than applying herbicides. Use hand weeding where practical.

- ✓ When conducting mechanical or manual weed control, avoid loosening the soil, which could erode into streams or storm drains.
- ✓ Use coarse textured mulches or geotextiles to suppress weed growth and reduce the use of herbicides.
- ✓ Do not blow or rake leaves, etc. into the street or place yard waste in gutters or on dirt shoulders. Sweep up any leaves, litter or residue in gutters or on street.
- ✓ Collect lawn and garden clippings, pruning waste, tree trimmings, and weeds. Chip if necessary, and compost or dispose of at a landfill (see waste management section of this procedure sheet).
- ✓ Place temporarily stockpiled material away from watercourses, and berm or cover stockpiles to prevent material releases to storm drains.

Planting

- ✓ Where feasible, retain and/or plant selected native vegetation whose features are determined to be beneficial. Native vegetation usually requires less maintenance (e.g., irrigation, fertilizer) than planting ornamental vegetation.
- ✓ When planting or replanting consider using low water use groundcovers.

OPTIONAL:

- Careful soil mixing and layering techniques using a topsoil mix or composted organic material can be used as an effective measure to reduce herbicide use and watering.

2. Irrigation

- ✓ Utilize water delivery rates that do not exceed the infiltration rate of the soil.
- ✓ Use timers appropriately or a drip system to prevent runoff and then only irrigate as much as is needed.
- ✓ Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- ✓ Where practical, use automatic timers to minimize runoff.
- ✓ Use popup sprinkler heads in areas with a lot of activity or where there is a chance the pipes may be broken. Consider the use of mechanisms that reduce water flow to sprinkler heads if broken.
- ✓ If re-claimed water is used for irrigation, ensure that there is no runoff from the landscaped area(s).
- ✓ If bailing of muddy water is required (e.g. when repairing a water line leak), do not put it in the storm drain; pour over landscaped areas.

3. Fertilizer and Pesticide Management

Usage

- ✓ Utilize a comprehensive management system that incorporates integrated pest management techniques.
- ✓ Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- ✓ Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution.
- ✓ Pesticide application must be under the supervision of a California qualified pesticide applicator.
- ✓ When applicable use the least toxic pesticides that will do the job. Avoid use of copper-based pesticides if possible.
- ✓ Do not mix or prepare pesticides or fertilizers for application near storm drains.
- ✓ Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the pest.
- ✓ Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.
- ✓ Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- ✓ Periodically test soils for determining proper fertilizer use.
- ✓ Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- ✓ Inspect pesticide/fertilizer equipment and transportation vehicles daily.
- ✓ Refer to Appendix D for further guidance on Fertilizer and Pesticide management

OPTIONAL:

- Work fertilizers into the soil rather than dumping or broadcasting them onto the surface.
- Use beneficial insects where possible to control pests (green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seedhead weevils, and spiders prey on detrimental pest species).
- Use slow release fertilizers whenever possible to minimize leaching.

Scheduling

- ✓ Do not use pesticides if rain is expected within 24 hours.
- ✓ Apply pesticides only when wind speeds are low (less than 5 mph).

Disposal

- ✓ Purchase only the amount of pesticide that you can reasonably use in a given time period (month or year depending on the product).
- ✓ Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- ✓ Dispose of empty pesticide containers according to the instructions on the container label.

4. Managing Landscape Waste

Also see Waste Handling and Disposal procedure sheet

- ✓ Compost leaves, sticks, or other collected vegetation or dispose of at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- ✓ Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- ✓ Reduce the use of high nitrogen fertilizers that produce excess growth requiring more frequent mowing or trimming.
- ✓ Inspection of drainage facilities should be conducted to detect illegal dumping of clippings/cuttings in or near these facilities. Materials found should be picked up and properly disposed of.
- ✓ Landscape wastes in and around storm drain inlets should be avoided by either using bagging equipment or by manually picking up the material.

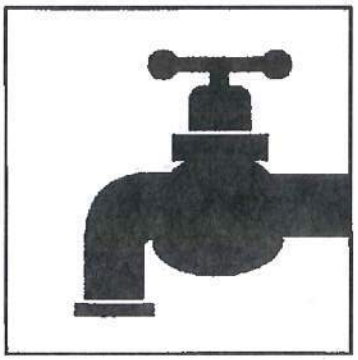
5. Erosion Control

Also see Waste Handling and Disposal procedure sheet

- ✓ Maintain vegetative cover on medians and embankments to prevent soil erosion. Apply mulch or leave clippings to serve as additional cover for soil stabilization and to reduce the velocity of storm water runoff.
- ✓ Minimize the use of disking as a means of vegetation management because the practice may result in erodable barren soil.
- ✓ Confine excavated materials to pervious surfaces away from storm drain inlets, sidewalks, pavement, and ditches. Material must be covered if rain is expected.

LIMITATIONS:

Alternative pest/weed controls may not be available, suitable, or effective in every case.



FP-6

WATER AND SEWER UTILITY OPERATION AND MAINTENANCE

Although the operation and maintenance of public utilities are not considered themselves a chronic source of stormwater pollution, some activities and accidents can result in the discharge of pollutants that can pose a threat to both human health and the quality of receiving waters if they enter the storm drain system. Activities associated with the operation and maintenance of water and sewer utilities to prevent and handle such incidents include the following:

1. **Water Line Maintenance**
2. **Sanitary Sewer Maintenance**
3. **Spill/Leak/Overflow Control, Response, and Containment**

Cities that do not provide maintenance of water and sewer utilities should coordinate with the contracting agency responsible for these activities and ensure that these model procedures are followed.

POLLUTION PREVENTION:

Pollution prevention measures have been considered and incorporated in the model procedures. Implementation of these measures may be more effective and reduce or eliminate the need to implement other more complicated or costly procedures. Possible pollution prevention measures for water and sewer utility operation and maintenance include:

- Inspect potential non-storm water discharge flow paths and clear/cleanup any debris or pollutants found (i.e. remove trash, leaves, sediment, and wipe up liquids, including oil spills).
- Once per year, educate municipal staff on pollution prevention measures.

MODEL PROCEDURES:

1. Water Line Maintenance

Procedures can be employed to reduce pollutants from discharges associated with water utility operation and maintenance activities. Planned discharges may include fire hydrant testing, flushing water supply mains after new construction, flushing lines due to complaints of taste and odor, dewatering mains for maintenance work. Unplanned discharges from treated, recycled water, raw water, and groundwater systems operation and maintenance activities can occur from water main breaks, sheared fire hydrants, equipment malfunction, and operator error.

Planned Discharges

✓ For planned discharges use one of the following options:

- Reuse water for dust suppression, irrigation, or construction compaction
- Discharge to the sanitary sewer system with approval
- Discharge to the storm drain system or to a creek using applicable pollution control measures listed below (this option is ONLY applicable to uncontaminated pumped ground water, water line flushing, fire hydrant testing and flushing, discharges from potable water sources other than water main breaks) and may require a permit from the Regional Water Quality Control Board.

✓ If water is discharged to a storm drain inlet (catch basin), control measures must be put in place to control potential pollutants (i.e. sediment, chlorine, etc.). Examples of some storm drain inlet protection options include:

- Silt fence – appropriate where the inlet drains a relatively flat area.
- Gravel and wire mesh sediment filter – Appropriate where concentrated flows are expected.
- Wooden weir and fabric – use at curb inlets where a compact installation is desired.

✓ Prior to discharge, inspect discharge flow path and clear/cleanup any debris or pollutants found (i.e. remove trash, leaves, sediment, and wipe up liquids, including oil spills).

✓ Select appropriate pollution control measure(s) considering the receiving system (i.e. curb inlet, drop inlet, culvert, creek, etc.) and ensure that the control device(s) fit properly.

✓ General design considerations for inlet protection devices include the following:

- The device should be constructed such that cleaning and disposal of trapped sediment is made easy, while minimizing interference with discharge activities.
- Devices should be constructed so that any standing water resulting from the discharge will not cause excessive inconvenience or flooding/damage to adjacent land or structures.

✓ The effectiveness of control devices must be monitored during the discharge period and any necessary repairs or modifications made as needed.

OPTIONAL:

- Sediment removal may be enhanced by placing filter fabric, gravel bags, etc. at storm drain inlets.

Unplanned Discharges

✓ Stop the discharge as quickly as possible by turning off water source.

✓ Inspect flow path of the discharged water:

- Control erosion along the flow path.
- Identify areas that may produce significant sediment or gullies, use sandbags to redirect the flow.
- Identify erodible areas which may need to be repaired or protected during subsequent repairs or corrective actions

✓ If repairs or corrective action will cause additional discharges of water, select the appropriate procedures for erosion control, chlorine residual, turbidity, and chemical additives. Prevent potential pollutants from entering the flow path and ensure that no additional discharged water enters storm drain inlets.

2. Sanitary Sewer Maintenance

Applicable to municipalities who own and operated a sewage collection system. Facilities that are covered under this program include sanitary sewer pipes and pump stations owned and operated by the Permittee. The owner of the sanitary sewer facilities is the entity responsible for carrying out this prevention and response program.

Sewer System Cleaning

- ✓ Sewer lines should be cleaned on a regular basis to remove grease, grit, and other debris that may lead to sewer backups.
- ✓ Establish routine maintenance program. Cleaning should be conducted at an established minimum frequency and more frequently for problem areas such as restaurants that are identified
- ✓ Cleaning activities may require removal of tree roots and other identified obstructions.

Preventative and Corrective Maintenance

- ✓ During routine maintenance and inspection note the condition of sanitary sewer structures and identify areas that need repair or maintenance. Items to note may include the following:
  - cracked/deteriorating pipes
  - leaking joints/seals at manhole
  - frequent line plugs
  - line generally flows at or near capacity
  - suspected infiltration or exfiltration
- ✓ Document suggestions and requests for repair and report the information to the appropriate manager or supervisor.
- ✓ Prioritize repairs based on the nature and severity of the problem. Immediate clearing of blockage or repair is required where an overflow is currently occurring or for urgent problems that may cause an imminent overflow (e.g. pump station failures, sewer line ruptures, sewer line blockages). These repairs may be temporary until scheduled or capital improvements can be completed.
- ✓ Review previous sewer maintenance records to help identify "hot spots" or areas with frequent maintenance problems and locations of potential system failure.

3. Spill/Leak/Overflow Control, Response, and Containment

Control

Also see Drainage System procedures sheet

- ✓ Refer to countywide *Illicit Discharge Detection and Elimination Program.* Components of this program include:
  - Investigation/inspection and follow-up
  - Elimination of illicit discharges and connections
  - Enforcement of ordinances
  - Respond to sewage spills

- Facilitate public reporting of illicit discharges and connections. A citizen's hotline for reporting observed overflow conditions should be established to supplement the field screening efforts being conducted by the Principal Permittee.

Response and Containment

- ✓ Establish lead department/agency responsible for spill response and containment. Provide coordination within departments.
- ✓ When a spill, leak, and/or overflow occurs, keep sewage from entering the storm drain system to the maximum extent practicable by covering or blocking storm drain inlets or by containing and diverting the sewage away from open channels and other storm drain facilities (using sandbags, inflatable dams, etc.).
- ✓ If a spill reaches the storm drain notify County of Orange Health Care Agency through Control One at (714) 628-7208.
- ✓ Remove the sewage using vacuum equipment or use other measures to divert it back to the sanitary sewer system.
- ✓ Record required information at the spill site.
- ✓ Perform field tests as necessary to determine the source of the spill.
- ✓ Develop additional notification procedures regarding spill reporting as needed.

LIMITATIONS:

Private property access rights needed to perform testing along storm drain right-of-ways. Requirements of municipal ordinance authority for suspected source verification testing necessary for guaranteed rights of entry.

REFERENCES:

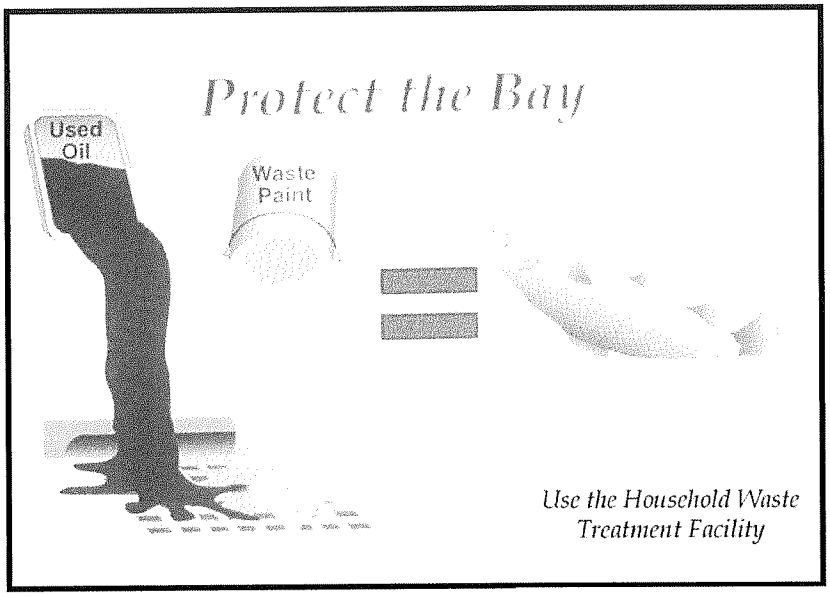
California Storm Water Best Management Practice Handbooks. Municipal Best Management Practice Handbook. Prepared by Camp Dresser & McKee, Larry Walker Associates, Uribe and Associates, Resources Planning Associates for Stormwater Quality Task Force. March 1993.

Los Angeles County Stormwater Quality. Public Agency Activities Model Program. On-line: http://ladpw.org/wmd/npdes/public_TC.cfm

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

Santa Clara Valley Urban Runoff Pollution Prevention Program. Water Utility Pollution Prevention Plan.

Non-Stormwater Discharges SC-10



Graphic by: Margie Winter

Objectives

- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Description

Non-stormwater discharges are those flows that do not consist entirely of stormwater. For municipalities non-stormwater discharges present themselves in two situations. One is from fixed facilities owned and/or operated by the municipality. The other situation is non-stormwater discharges that are discovered during the normal operation of a field program. Some non-stormwater discharges do not include pollutants and may be discharged to the storm drain. These include uncontaminated groundwater and natural springs. There are also some non-stormwater discharges that typically do not contain pollutants and may be discharged to the storm drain with conditions. These include car washing, and surface cleaning. However, there are certain non-stormwater discharges that pose environmental concern. These discharges may originate from illegal dumping or from internal floor drains, appliances, industrial processes, sinks, and toilets that are connected to the nearby storm drainage system. These discharges (which may include: process waste waters, cooling waters, wash waters, and sanitary wastewater) can carry substances (such as paint, oil, fuel and other automotive fluids, chemicals and other pollutants) into storm drains. The ultimate goal is to effectively eliminate non-stormwater discharges to the stormwater drainage system through implementation of measures to detect, correct, and enforce against illicit connections and illegal discharges.

Approach

The municipality must address non-stormwater discharges from its fixed facilities by assessing the types of non-stormwater discharges and implementing BMPs for the discharges determined to pose environmental concern. For field programs the field staff must be

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trained to now what to look for regarding non-stormwater discharges and the procedures to follow in investigating the detected discharges.

Suggested Protocols

Fixed Facility

General

- Post "No Dumping" signs with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Landscaping and beautification efforts of hot spots might also discourage future dumping, as well as provide open space and increase property values.
- Lighting or barriers may also be needed to discourage future dumping.

Illicit Connections

- Locate discharges from the fixed facility drainage system to the municipal storm drain system through review of "as-built" piping schematics.
- Use techniques such as smoke testing, dye testing and television camera inspection (as noted below) to verify physical connections.
- Isolate problem areas and plug illicit discharge points.

Visual Inspection and Inventory

- Inventory and inspect each discharge point during dry weather.
- Keep in mind that drainage from a storm event can continue for several days following the end of a storm and groundwater may infiltrate the underground stormwater collection system. Also, non-stormwater discharges are often intermittent and may require periodic inspections.

Review Infield Piping

- Review the "as-built" piping schematic as a way to determine if there are any connections to the stormwater collection system.
- Inspect the path of floor drains in older buildings.

Smoke Testing

- Smoke testing of wastewater and stormwater collection systems is used to detect connections between the two systems.

- During dry weather the stormwater collection system is filled with smoke and then traced to sources. The appearance of smoke at the base of a toilet indicates that there may be a connection between the sanitary and the stormwater system.

Dye Testing

- A dye test can be performed by simply releasing a dye into either your sanitary or process wastewater system and examining the discharge points from the stormwater collection system for discoloration.

TV Inspection of Storm Sewer

- TV Cameras can be employed to visually identify illicit connections to the fixed facility storm drain system.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Clean up spills on paved surfaces with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.
- See fact sheet SC-11 Spill Prevention, Control, and Clean Up.

Field Program

General

- Develop clear protocols and lines of communication for effectively prohibiting non-stormwater discharges, especially ones that involve more than one jurisdiction and those that are not classified as hazardous, which are often not responded to as effectively as they need to be.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- See SC-74 Stormwater Drainage System Maintenance for additional information.

Field Inspection

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- During routine field program maintenance field staff should look for evidence of illegal discharges or illicit connection:
  - Is there evidence of spills such as paints, discoloring, etc.
  - Are there any odors associated with the drainage system
  - Record locations of apparent illegal discharges/illicit connections and notify appropriate investigating agency.
- If trained, conduct field investigation of non-stormwater discharges to determine whether they pose a threat to water quality.

Recommended Complaint Investigation Equipment

- Field Screening Analysis
  - pH paper or meter
  - Commercial stormwater pollutant screening kit that can detect for reactive phosphorus, nitrate nitrogen, ammonium nitrogen, specific conductance, and turbidity
  - Sample jars
  - Sample collection pole
  - A tool to remove access hole covers
- Laboratory Analysis
  - Sample cooler
  - Ice
  - Sample jars and labels
  - Chain of custody forms.
- Documentation
  - Camera
  - Notebook
  - Pens
  - Notice of Violation forms

- Educational materials

Reporting

- A database is useful for defining and tracking the magnitude and location of the problem.
- Report prohibited non-stormwater discharges observed during the course of normal daily activities so they can be investigated, contained and cleaned up or eliminated.
- Document that non-stormwater discharges have been eliminated by recording tests performed, methods used, dates of testing, and any onsite drainage points observed.
- Maintain documentation of illicit connection and illegal dumping incidents, including significant conditionally exempt discharges that are not properly managed.

Enforcement

- Educate the responsible party if identified on the impacts of their actions, explain the stormwater requirements, and provide information regarding Best Management Practices (BMP), as appropriate. Initiate follow-up and/or enforcement procedures.
- If an illegal discharge is traced to a commercial, residential or industrial source, conduct the following activities or coordinate the following activities with the appropriate agency:
  - Contact the responsible party to discuss methods of eliminating the non-stormwater discharge, including disposal options, recycling, and possible discharge to the sanitary sewer (if within POTW limits).
  - Provide information regarding BMPs to the responsible party, where appropriate.
  - Begin enforcement procedures, if appropriate.
  - Continue inspection and follow-up activities until the illicit discharge activity has ceased.
- If an illegal discharge is traced to a commercial or industrial activity, coordinate information on the discharge with the jurisdiction's commercial and industrial facility inspection program.

Training

- Train technical staff to identify and document illegal dumping incidents.
- Well-trained employees can reduce human errors that lead to accidental releases or spills. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur. Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.
- Train employees to identify non-stormwater discharges and report them to the appropriate departments.
- Train staff who have the authority to conduct surveillance and inspections, and write citations for those caught illegally dumping.

- Train municipal staff responsible for surveillance and inspection in the following:
  - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).
  - OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and federal OSHA 29 CFR 1910.146).
  - Procedural training (field screening, sampling, smoke/dye testing, TV inspection).
- Educate the identified responsible party on the impacts of his or her actions.

Spill Response and Prevention

- See SC-11 Spill Prevention Control and Clean Up

Other Considerations

- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The cost of fees for dumping at a proper waste disposal facility are often more than the fine for an illegal dumping offense, thereby discouraging people from complying with the law. The absence of routine or affordable pickup service for trash and recyclables in some communities also encourages illegal dumping. A lack of understanding regarding applicable laws or the inadequacy of existing laws may also contribute to the problem.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Many facilities do not have accurate, up-to-date schematic drawings.
- Can be difficult to locate illicit connections especially if there is groundwater infiltration.

Requirements

Costs

- Eliminating illicit connections can be expensive especially if structural modifications are required such re-plumbing cross connections under an existing slab.
- Minor cost to train field crews regarding the identification of non-stormwater discharges. The primary cost is for a fully integrated program to identify and eliminate illicit connections and illegal dumping. However, by combining with other municipal programs (i.e. pretreatment program) cost may be lowered.
- Municipal cost for containment and disposal may be borne by the discharger.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

What constitutes a "non-stormwater" discharge?

- Non-stormwater discharges are discharges not made up entirely of stormwater and include water used directly in the manufacturing process (process wastewater), air conditioning condensate and coolant, non-contact cooling water, cooling equipment condensate, outdoor secondary containment water, vehicle and equipment wash water, landscape irrigation, sink and drinking fountain wastewater, sanitary wastes, or other wastewaters.

Permit Requirements

- Current municipal NPDES permits require municipalities to effectively prohibit non-stormwater discharges unless authorized by a separate NPDES permit or allowed in accordance with the current NPDES permit conditions. Typically the current permits allow certain non-stormwater discharges in the storm drain system as long as the discharges are not significant sources of pollutants. In this context the following non-stormwater discharges are typically allowed:
  - Diverted stream flows;
  - Rising found waters;
  - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
  - Uncontaminated pumped ground water;
  - Foundation drains;
  - Springs;
  - Water from crawl space pumps;
  - Footing drains;
  - Air conditioning condensation;
  - Flows from riparian habitats and wetlands;
  - Water line and hydrant flushing ;
  - Landscape irrigation;
  - Planned and unplanned discharges from potable water sources;
  - Irrigation water;
  - Individual residential car washing; and
  - Lawn watering.

Municipal facilities subject to industrial general permit requirements must include a certification that the stormwater collection system has been tested or evaluated for the presence of non-stormwater discharges. The state's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

Illegal Dumping

- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties

Outreach

One of the keys to success of reducing or eliminating illegal dumping is increasing the number of people on the street who are aware of the problem and who have the tools to at least identify the incident, if not correct it. There we a number of ways of accomplishing this:

- Train municipal staff from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report the incidents.
- Deputize municipal staff who may come into contact with illegal dumping with the authority to write illegal dumping tickets for offenders caught in the act (see below).
- Educate the public. As many as 3 out of 4 people do not understand that in most communities the storm drain does not go to the wastewater treatment plant. Unfortunately, with the heavy emphasis in recent years on public education about solid waste management, including recycling and household hazardous waste, the sewer system (both storm and sanitary) has been the likely recipient of cross-media transfers of waste.
- Provide the public with a mechanism for reporting incidents such as a hot line and/or door hanger (see below).
- Help areas where incidents occur more frequently set up environmental watch programs (like crime watch programs).
- Train volunteers to notice and report the presence and suspected source of an observed pollutant to the appropriate public agency.

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- Non-stormwater discharges are discharges not made up entirely of stormwater and include water used directly in the manufacturing process (process wastewater), air conditioning condensate and coolant, non-contact cooling water, cooling equipment condensate, outdoor secondary containment water, vehicle and equipment wash water, landscape irrigation, sink and drinking fountain wastewater, sanitary wastes, or other wastewaters.

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  - Water from crawl space pumps;
  - Footing drains;
  - Air conditioning condensation;
  - Flows from riparian habitats and wetlands;
  - Water line and hydrant flushing ;
  - Landscape irrigation;
  - Planned and unplanned discharges from potable water sources;
  - Irrigation water;
  - Individual residential car washing; and
  - Lawn watering.

Municipal facilities subject to industrial general permit requirements must include a certification that the stormwater collection system has been tested or evaluated for the presence of non-stormwater discharges. The state's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

Storm Drain Stenciling

- Stencil storm drain inlets with a message to prohibit illegal dumpings, especially in areas with waste handling facilities.
- Encourage public reporting of improper waste disposal by a HOTLINE number stenciled onto the storm drain inlet.
- See Supplemental Information section of this fact sheet for further detail on stenciling program approach.

Oil Recycling

- Contract collection and hauling of used oil to a private licensed used oil hauler/recycler.
- Comply with all applicable state and federal regulations regarding storage, handling, and transport of petroleum products.
- Create procedures for collection such as; collection locations and schedule, acceptable containers, and maximum amounts accepted.
- The California Integrated Waste Management Board has a Recycling Hotline, (800) 553-2962, that provides information and recycling locations for used oil.

Household Hazardous Waste

- Provide household hazardous waste (HHW) collection facilities. Several types of collection approaches are available including permanent, periodic, or mobile centers, curbside collection, or a combination of these systems.

Training

- Train municipal employees and contractors in proper and consistent methods for waste disposal.
- Train municipal employees to recognize and report illegal dumping.
- Train employees and subcontractors in proper hazardous waste management.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Federal Regulations (RCRA, SARA, CERCLA) and state regulations exist regarding the disposal of hazardous waste.
- Municipalities are required to have a used oil recycling and a HHW element within their integrate waste management plan.
- Significant liability issues are involved with the collection, handling, and disposal of HHW.

Examples

The City of Palo Alto has developed a public participation program for reporting dumping violations. When a concerned citizen or public employee encounters evidence of illegal dumping, a door hanger (similar in format to hotel "Do Not Disturb" signs) is placed on the front doors in the neighborhood. The door hanger notes that a violation has occurred in the neighborhood, informs the reader why illegal dumping is a problem, and notes that illegal dumping carries a significant financial penalty. Information is also provided on what citizens can do as well as contact numbers for more information or to report a violation.

The Port of Long Beach has a state of the art database incorporating storm drain infrastructure, potential pollutant sources, facility management practices, and a pollutant tracking system.

The State Department of Fish and Game has a hotline for reporting violations called CalTIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).

The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

References and Resources

http://www.stormwatercenter.net/

California's Nonpoint Source Program Plan http://www.co.clark.wa.us/pubworks/bmpman.pdf

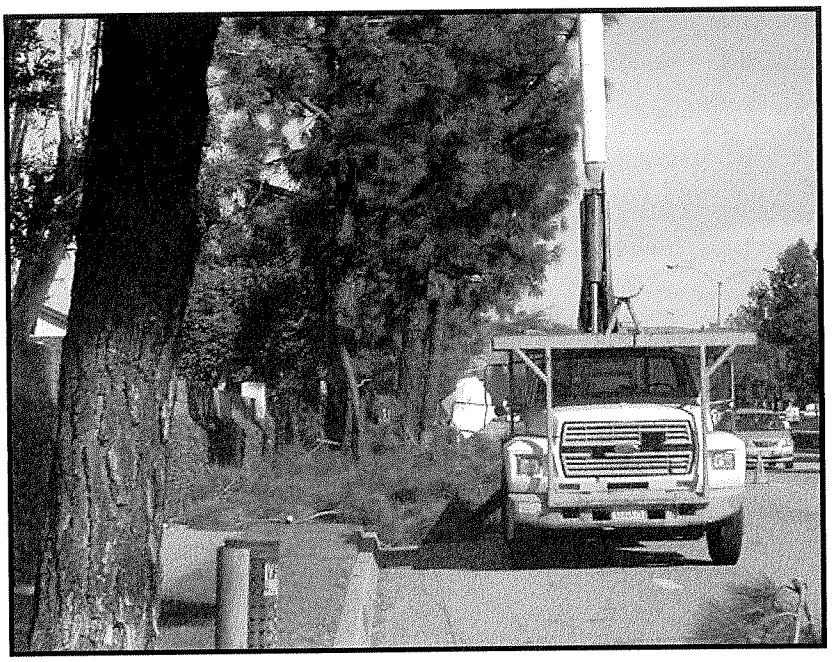
King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program,
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program
(http://www.projectcleanwater.org)

Santa Clara Valley Urban Runoff Pollution Prevention Program
http://www.scvurppp-w2k.com/pdf%20documents/PS_ICID.PDF

Landscape Maintenance SC-73



Objectives

- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	
Bacteria	
Oil and Grease	
Organics	
Oxygen Demanding	☑

Description

Landscape maintenance activities include vegetation removal; herbicide and insecticide application; fertilizer application; watering; and other gardening and lawn care practices. Vegetation control typically involves a combination of chemical (herbicide) application and mechanical methods. All of these maintenance practices have the potential to contribute pollutants to the storm drain system. The major objectives of this BMP are to minimize the discharge of pesticides, herbicides and fertilizers to the storm drain system and receiving waters; prevent the disposal of landscape waste into the storm drain system by collecting and properly disposing of clippings and cuttings, and educating employees and the public.

Approach

Pollution Prevention

- Implement an integrated pest management (IPM) program. IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools.
- Choose low water using flowers, trees, shrubs, and groundcover.
- Consider alternative landscaping techniques such as naturescaping and xeriscaping.
- Conduct appropriate maintenance (i.e. properly timed fertilizing, weeding, pest control, and pruning) to help preserve the landscapes water efficiency.

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- Consider grass cycling (grass cycling is the natural recycling of grass by leaving the clippings on the lawn when mowing. Grass clippings decompose quickly and release valuable nutrients back into the lawn).

Suggested Protocols

Mowing, Trimming, and Weeding

- Whenever possible use mechanical methods of vegetation removal (e.g mowing with tractor-type or push mowers, hand cutting with gas or electric powered weed trimmers) rather than applying herbicides. Use hand weeding where practical.
- Avoid loosening the soil when conducting mechanical or manual weed control, this could lead to erosion. Use mulch or other erosion control measures when soils are exposed.
- Performing mowing at optimal times. Mowing should not be performed if significant rain events are predicted.
- Mulching mowers may be recommended for certain flat areas. Other techniques may be employed to minimize mowing such as selective vegetative planting using low maintenance grasses and shrubs.
- Collect lawn and garden clippings, pruning waste, tree trimmings, and weeds. Chip if necessary, and compost or dispose of at a landfill (see waste management section of this fact sheet).
- Place temporarily stockpiled material away from watercourses, and berm or cover stockpiles to prevent material releases to storm drains.

Planting

- Determine existing native vegetation features (location, species, size, function, importance) and consider the feasibility of protecting them. Consider elements such as their effect on drainage and erosion, hardiness, maintenance requirements, and possible conflicts between preserving vegetation and the resulting maintenance needs.
- Retain and/or plant selected native vegetation whose features are determined to be beneficial, where feasible. Native vegetation usually requires less maintenance (e.g., irrigation, fertilizer) than planting new vegetation.
- Consider using low water use groundcovers when planting or replanting.

Waste Management

- Compost leaves, sticks, or other collected vegetation or dispose of at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Reduce the use of high nitrogen fertilizers that produce excess growth requiring more frequent mowing or trimming.

- Avoid landscape wastes in and around storm drain inlets by either using bagging equipment or by manually picking up the material.

Irrigation

- Where practical, use automatic timers to minimize runoff.
- Use popup sprinkler heads in areas with a lot of activity or where there is a chance the pipes may be broken. Consider the use of mechanisms that reduce water flow to sprinkler heads if broken.
- Ensure that there is no runoff from the landscaped area(s) if re-claimed water is used for irrigation.
- If bailing of muddy water is required (e.g. when repairing a water line leak), do not put it in the storm drain; pour over landscaped areas.
- Irrigate slowly or pulse irrigate to prevent runoff and then only irrigate as much as is needed.
- Apply water at rates that do not exceed the infiltration rate of the soil.

Fertilizer and Pesticide Management

- Utilize a comprehensive management system that incorporates integrated pest management (IPM) techniques. There are many methods and types of IPM, including the following:
  - Mulching can be used to prevent weeds where turf is absent, fencing installed to keep rodents out, and netting used to keep birds and insects away from leaves and fruit.
  - Visible insects can be removed by hand (with gloves or tweezers) and placed in soapy water or vegetable oil. Alternatively, insects can be sprayed off the plant with water or in some cases vacuumed off of larger plants.
  - Store-bought traps, such as species-specific, pheromone-based traps or colored sticky cards, can be used.
  - Slugs can be trapped in small cups filled with beer that are set in the ground so the slugs can get in easily.
  - In cases where microscopic parasites, such as bacteria and fungi, are causing damage to plants, the affected plant material can be removed and disposed of (pruning equipment should be disinfected with bleach to prevent spreading the disease organism).
  - Small mammals and birds can be excluded using fences, netting, tree trunk guards.
  - Beneficial organisms, such as bats, birds, green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seed head weevils, and spiders that prey on detrimental pest species can be promoted.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.

- Use pesticides only if there is an actual pest problem (not on a regular preventative schedule).
- Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 mph).
- Do not mix or prepare pesticides for application near storm drains.
- Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the pest.
- Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- Periodically test soils for determining proper fertilizer use.
- Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Purchase only the amount of pesticide that you can reasonably use in a given time period (month or year depending on the product).
- Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Dispose of empty pesticide containers according to the instructions on the container label.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- Inspect pesticide/fertilizer equipment and transportation vehicles daily.

Training

- Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution. Pesticide application must be under the supervision of a California qualified pesticide applicator.
- Train/encourage municipal maintenance crews to use IPM techniques for managing public green areas.
- Annually train employees within departments responsible for pesticide application on the appropriate portions of the agency's IPM Policy, SOPs, and BMPs, and the latest IPM techniques.

- Employees who are not authorized and trained to apply pesticides should be periodically (at least annually) informed that they cannot use over-the-counter pesticides in or around the workplace.
- Use a training log or similar method to document training.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a know in location
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- The Federal Pesticide, Fungicide, and Rodenticide Act and California Title 3, Division 6, Pesticides and Pest Control Operations place strict controls over pesticide application and handling and specify training, annual refresher, and testing requirements. The regulations generally cover: a list of approved pesticides and selected uses, updated regularly; general application information; equipment use and maintenance procedures; and record keeping. The California Department of Pesticide Regulations and the County Agricultural Commission coordinate and maintain the licensing and certification programs. All public agency employees who apply pesticides and herbicides in "agricultural use" areas such as parks, golf courses, rights-of-way and recreation areas should be properly certified in accordance with state regulations. Contracts for landscape maintenance should include similar requirements.
- All employees who handle pesticides should be familiar with the most recent material safety data sheet (MSDS) files.
- Municipalities do not have the authority to regulate the use of pesticides by school districts, however the California Healthy Schools Act of 2000 (AB 2260) has imposed requirements on California school districts regarding pesticide use in schools. Posting of notification prior to the application of pesticides is now required, and IPM is stated as the preferred approach to pest management in schools.

Requirements

Costs

Additional training of municipal employees will be required to address IPM techniques and BMPs. IPM methods will likely increase labor cost for pest control which may be offset by lower chemical costs.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

Waste Management

Composting is one of the better disposal alternatives if locally available. Most municipalities either have or are planning yard waste composting facilities as a means of reducing the amount of waste going to the landfill. Lawn clippings from municipal maintenance programs as well as private sources would probably be compatible with most composting facilities

Contractors and Other Pesticide Users

Municipal agencies should develop and implement a process to ensure that any contractor employed to conduct pest control and pesticide application on municipal property engages in pest control methods consistent with the IPM Policy adopted by the agency. Specifically, municipalities should require contractors to follow the agency's IPM policy, SOPs, and BMPs; provide evidence to the agency of having received training on current IPM techniques when feasible; provide documentation of pesticide use on agency property to the agency in a timely manner.

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Drainage System Maintenance SC-74

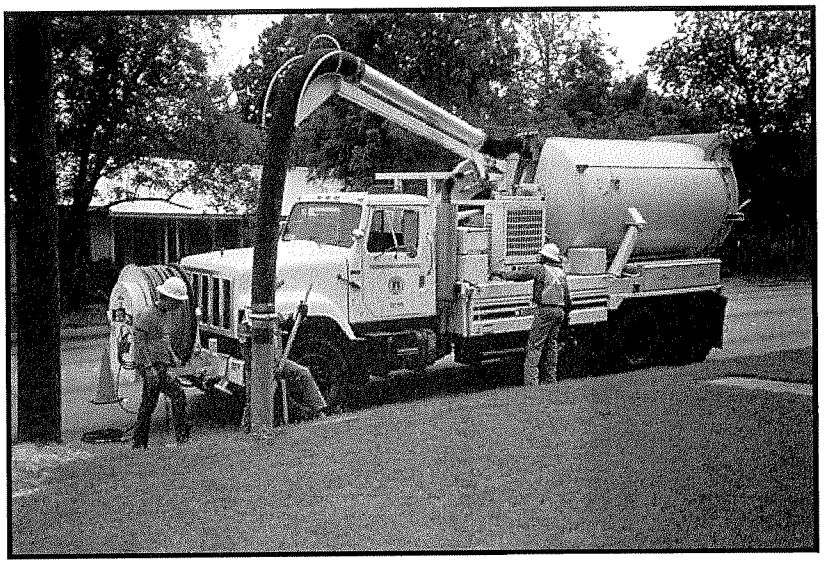

Photo Credit: Geoff Brosseau

Objectives

- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

Suggested Protocols

Catch Basins/Inlet Structures

- Municipal staff should regularly inspect facilities to ensure the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC-75 Waste Handling and Disposal).
- Clean catch basins, storm drain inlets, and other conveyance structures in high pollutant load areas just before the wet season to remove sediments and debris accumulated during the summer.

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- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Record the amount of waste collected.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed of. Do not dewater near a storm drain or stream.
- Except for small communities with relatively few catch basins that may be cleaned manually, most municipalities will require mechanical cleaners such as eductors, vacuums, or bucket loaders.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect flushed effluent and pump to the sanitary sewer for treatment.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge from cleaning a storm drain pump station or other facility to reach the storm drain system.
- Conduct quarterly routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.
- Sample collected sediments to determine if landfill disposal is possible, or illegal discharges in the watershed are occurring.

Open Channel

- Consider modification of storm channel characteristics to improve channel hydraulics, to increase pollutant removals, and to enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies

(SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS

Illicit Connections and Discharges

- During routine maintenance of conveyance system and drainage structures field staff should look for evidence of illegal discharges or illicit connections:
  - Is there evidence of spills such as paints, discoloring, etc.
  - Are there any odors associated with the drainage system
  - Record locations of apparent illegal discharges/illicit connections
  - Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of up gradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
  - Once the origin of flow is established, require illicit discharger to eliminate the discharge.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

- The State Department of Fish and Game has a hotline for reporting violations called Cal TIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).
- The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Only properly trained individuals are allowed to handle hazardous materials/wastes.
- Train municipal employees from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report illegal dumping.
- Train municipal employees and educate businesses, contractors, and the general public in proper and consistent methods for disposal.
- Train municipal staff regarding non-stormwater discharges (See SC-10 Non-Stormwater Discharges).

Spill Response and Prevention

- Refer to SC-11, Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Cleanup activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and disposal of flushed effluent to sanitary sewer may be prohibited in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Private property access rights may be needed to track illegal discharges up gradient.

- Requirements of municipal ordinance authority for suspected source verification testing for illicit connections necessary for guaranteed rights of entry.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget. A careful study of cleaning effectiveness should be undertaken before increased cleaning is implemented. Catch basin cleaning costs are less expensive if vacuum street sweepers are available; cleaning catch basins manually can cost approximately twice as much as cleaning the basins with a vacuum attached to a sweeper.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary. Encouraging reporting of illicit discharges by employees can offset costs by saving expense on inspectors and directing resources more efficiently. Some programs have used funds available from "environmental fees" or special assessment districts to fund their illicit connection elimination programs.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.

- Identifying illicit discharges requires teams of at least two people (volunteers can be used), plus administrative personnel, depending on the complexity of the storm sewer system.

- Arrangements must be made for proper disposal of collected wastes.

- Requires technical staff to detect and investigate illegal dumping violations, and to coordinate public education.

Supplemental Information

Further Detail of the BMP

Storm Drain flushing

Sanitary sewer flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in sanitary sewer systems. The same principles that make sanitary sewer flushing effective can be used to flush storm drains. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as to an open channel, to another point where flushing will be initiated, or over to the sanitary sewer and on to the treatment facilities, thus preventing re-suspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. The deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to

cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce the impacts of stormwater pollution, a second inflatable device, placed well downstream, may be used to re-collect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to re-collect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75 percent for organics and 55-65 percent for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm drain flushing.

Flow Management

Flow management has been one of the principal motivations for designing urban stream corridors in the past. Such needs may or may not be compatible with the stormwater quality goals in the stream corridor.

Downstream flood peaks can be suppressed by reducing through flow velocity. This can be accomplished by reducing gradient with grade control structures or increasing roughness with boulders, dense vegetation, or complex banks forms. Reducing velocity correspondingly increases flood height, so all such measures have a natural association with floodplain open space. Flood elevations laterally adjacent to the stream can be lowered by increasing through flow velocity.

However, increasing velocity increases flooding downstream and inherently conflicts with channel stability and human safety. Where topography permits, another way to lower flood elevation is to lower the level of the floodway with drop structures into a large but subtly excavated bowl where flood flows we allowed to spread out.

Stream Corridor Planning

Urban streams receive and convey stormwater flows from developed or developing watersheds. Planning of stream corridors thus interacts with urban stormwater management programs. If local programs are intended to control or protect downstream environments by managing flows delivered to the channels, then it is logical that such programs should be supplemented by management of the materials, forms, and uses of the downstream riparian corridor. Any proposal for steam alteration or management should be investigated for its potential flow and stability effects on upstream, downstream, and laterally adjacent areas. The timing and rate of flow from various tributaries can combine in complex ways to alter flood hazards. Each section of channel is unique, influenced by its own distribution of roughness elements, management activities, and stream responses.

Flexibility to adapt to stream features and behaviors as they evolve must be included in stream reclamation planning. The amenity and ecology of streams may be enhanced through the landscape design options of 1) corridor reservation, 2) bank treatment, 3) geomorphic restoration, and 4) grade control.

Corridor reservation - Reserving stream corridors and valleys to accommodate natural stream meandering, aggradation, degradation, and over bank flows allows streams to find their own form and generate less ongoing erosion. In California, open stream corridors in recent urban developments have produced recreational open space, irrigation of streamside plantings, and the aesthetic amenity of flowing water.

Bank treatment - The use of armoring, vegetative cover, and flow deflection may be used to influence a channel's form, stability, and biotic habitat. To prevent bank erosion, armoring can be done with rigid construction materials, such as concrete, masonry, wood planks and logs, riprap, and gabions. Concrete linings have been criticized because of their lack of provision of biotic habitat. In contrast, riprap and gabions make relatively porous and flexible linings. Boulders, placed in the bed reduce velocity and erosive power.

Riparian vegetation can stabilize the banks of streams that are at or near a condition of equilibrium. Binding networks of roots increase bank shear strength. During flood flows, resilient vegetation is forced into erosion-inhibiting mats. The roughness of vegetation leads to lower velocity, further reducing erosive effects. Structural flow deflection can protect banks from erosion or alter fish habitat. By concentrating flow, a deflector causes a pool to be scoured in the bed.

Geomorphic restoration – Restoration refers to alteration of disturbed streams so their form and behavior emulate those of undisturbed streams. Natural meanders are retained, with grading to gentle slopes on the inside of curves to allow point bars and riffle-pool sequences to develop. Trees are retained to provide scenic quality, biotic productivity, and roots for bank stabilization, supplemented by plantings where necessary.

A restorative approach can be successful where the stream is already approaching equilibrium. However, if upstream urbanization continues new flow regimes will be generated that could disrupt the equilibrium of the treated system.

Grade Control - A grade control structure is a level shelf of a permanent material, such as stone, masonry, or concrete, over which stream water flows. A grade control structure is called a sill, weir, or drop structure, depending on the relation of its invert elevation to upstream and downstream channels.

A sill is installed at the preexisting channel bed elevation to prevent upstream migration of nick points. It establishes a firm base level below which the upstream channel can not erode.

A weir or check dam is installed with invert above the preexisting bed elevation. A weir raises the local base level of the stream and causes aggradation upstream. The gradient, velocity, and erosive potential of the stream channel are reduced. A drop structure lowers the downstream invert below its preexisting elevation, reducing downstream gradient and velocity. Weirs and drop structure control erosion by dissipating energy and reducing slope velocity.

When carefully applied, grade control structures can be highly versatile in establishing human and environmental benefits in stabilized channels. To be successful, application of grade control structures should be guided by analysis of the stream system both upstream and downstream from the area to he reclaimed.

Examples

The California Department of Water Resources began the Urban Stream Restoration Program in 1985. The program provides grant funds to municipalities and community groups to implement stream restoration projects. The projects reduce damages from streambank aid watershed instability arid floods while restoring streams' aesthetic, recreational, and fish and wildlife values.

In Buena Vista Park, upper floodway slopes are gentle and grassed to achieve continuity of usable park land across the channel of small boulders at the base of the slopes.

The San Diego River is a large, vegetative lined channel, which was planted in a variety of species to support riparian wildlife while stabilizing the steep banks of the floodway.

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Appendix H

- Maintenance Manual & Covenant Agreement

Inland Empire North Logistics Center
For

FGFW IV LLC
150 N. Market Street
Wichita, KS 67206
(702) 330-1715

Attn.

OPERATION
AND MAINTENANCE MANUAL

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1. Discussion

The long-term operation and maintenance of storm water management systems at the Inland Empire North Logistics Center property is critical to BMP performance as its design and construction. Proper operation and maintenance practices are outlined in this plan and will ensure that the BMPs will continue to remove and reduce sources of pollutants effectively over the long-term, and therefore, improve water quality. Without proper maintenance, BMPs are likely to fail and no longer provide the necessary Storm water treatment. Common maintenance issues that are encountered include:

- Maintenance that occurs too infrequently
- Owners not understanding the long-term financial burden for the maintenance of a storm water system
- Lack of the knowledge on the maintenance needs of the system and
- Conflicts between municipalities and landowners on who is responsible for maintenance of a storm water system.

Project Owner: FGFW IV LLC
150 N. Market Street
Wichita, KS 67206
(702) 330-1715

To address these issues the following sections have been developed for the project owner

Maintenance Frequency
Maintenance frequency is outlined in Form 5-1. This form clearly identifies required inspection activities, the maintenance schedule, and directs provider to use a log sheet to document inspections and maintenance activities. There is the potential that a Town or Regional Board inspector could visit this site and request owner to provide Maintenance records.

BMP Fact Sheets
BMP Fact sheets are provided to supplement BMP maintenance background and provide general knowledge on BMPs.

Maintenance Agreement
The maintenance agreement clearly identifies the project owner as the entity responsible for BMP maintenance and associated costs.

Reference Material
Reference material covers proprietary information for BMPs and recommended maintenance activities.

Inspection and Maintenance Log
The inspection and maintenance log provide a form to document inspections and maintenance. This form is a sample form and other forms can be used as long as they provide the minimum information outlined in this sample log.

WQMP Exhibit

The WQMP exhibit illustrates the spatial distribution of BMPS throughout the site and can be cross-referenced with Form 5-1 to identify where maintenance activities are expected to occur onsite.

2.Inspection and Maintenance Responsibility Form 5-1

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)			
BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Site Design on-lot infiltration	FGFW IV, LLC	Inspect Basin for trash, buildup of sediment and weeds. Clean out weeds and trash, remove sediment build up. Maintain landscaping around sides and adjacent area.	Twice yearly, April and October suggested.
Underground infiltration	FGFW IV, LLC	Inspect and Flush debris and sediment after major storms. . Ensure outflow orifices are clear of debris.	Minimum once yearly and after a major rainstorm.
Storm drain and Catch basin stenciling	FGFW IV, LLC	Inspect catch basins, check for illicit dumping or spills, Inspect storm drain for trash and sediment. Clean if necessary. Refresh stenciling if needed.	Once yearly prior to rainy season
Parking lot sweeping	FGFW IV, LLC	Inspect for spills, oil drips and trash. Clean any spills, oil immediately. Inspect for accumulation of dirt/dust. Sweep parking as needed.	Monthly
Catch basin inserts	FGFW IV, LLC	Inspect for trash and debris and check the oil absorbing pillow.	Twice a year.
Irrigation and Landscaping	FGFW IV, LLC	Maintain landscaping, replace dead material. Inspect irrigation, fix and repair leaks.	Weekly to monthly.
Trash Enclosures	FGFW IV, LLC	Inspect and clean trash and debris. Do not wash area. Ensure lids are closed and enclosure properly maintained.	Weekly

Anticipated yearly BMP Maintenance costs are $50,000.00/year

3. Inspection and Maintenance Log

Proprietary BMP
Inspections and Maintenance Checklist

Site Name: Owner Change since last inspection? Y ☐ N ☐

Location:

Owner Name:

Address: Phone Number

Site Status:

Date: Time: Site conditions:

Inspection Frequency Key: A=annual; M=monthly; S=after major storms. ***BOLD*** *= recommended frequency*

Inspection Items	**Inspection Frequency**	**Inspected? (Yes/No)**	**Maintenance Needed? (Yes/No)**	**Comments/Description**
Debris Removal				
Adjacent area free of debris?	A / **M** / S			
Inlets and Outlets free of debris?	A / **M** / S			
Facility (internally) free of debris?	A / **M** / S			
Vegetation				
Surroundng area fully stabilized? (no evidence of material eroding into sand filter)	**A** / M / S			
Grass mowed?	A / **M** / S			
Water Retention (where required)				
Water holding chambers at normal pool?	A / **M** / S			
Evidence of erosion?	A / **M** / S			
Sediment Deposition				
Filtration chamber free of sediments?	**A** / M / S			
Sedimentation chamber not more than 50% full?	**A** / M / S			
Structural Components				
Any evidence of structural deterioration?	**A** / M / S			
Grates in good condition?	**A** / M / S			
Spalling or cracking of structural parts?	**A** / M / S			
Outlet/Overflow Spillway	**A** / M / S			
Other				
Noticeable odors?	**A** / M / S			
Any evidence of filter(s) clogging?	A / **M** / S			
Evidence of flow bypassing facility?	**A** / M / S			

Inspector Comments: _____

_____

_____

_____

Overall Condition of Facility: ☐: Acceptable ☐ Unacceptable

If any of the above Inspection items are checked “Yes” for “Maintenance Needed”, list Maintenance actions and their completion dates below:

Maintenance Action Needed	Due Date

The next routine inspection is scheduled for approximately: _____

Inspected by: (signature) _____

Inspected by: (printed) _____

4. Maintenance Agreement

RECORDING REQUESTED BY:
Town of Apple Valley
Apple Valley, Ca 92307

AND WHEN RECORDED MAIL TO:
Town of Apple Valley
Engineering Department
14955 Dale Evans Pkwy
Apple Valley, CA 92307

SPACE ABOVE THIS LINE FOR RECORDER'S USE

COVENANT AND AGREEMENT REGARDING WATER QUALITY MANAGEMENT PLAN AND STORMWATER BEST MANAGEMENT PRACTICES TRANSFER, ACCESS AND MAINTENANCE

THIS PAGE ADDED TO PROVIDE ADEQUATE SPACE FOR RECORDING INFORMATION

Covenant and Agreement Regarding Water Quality Management Plan and Stormwater Best Management Practices
Transfer, Access and Maintenance

OWNER NAME: FGFW IV, LLC

PROPERTY ADDRESS: _____

_____

APN: 0472-231-08

THIS AGREEMENT is made and entered into in

_____ ,California, this _____ day of

_____ , by and between

_____ , hereinafter

referred to as Owner, and the Town of Apple Valley, a political subdivision of the State of California, hereinafter referred to as "the Town";

WHEREAS, the Owner owns real property ("Property") in the Town, State of California, more specifically described in Exhibit "A" and depicted in Exhibit "B", each of which exhibits is attached hereto and incorporated herein by this reference; and

WHEREAS, at the time of initial approval of development project known as

_____ within the Property described herein, the Town required the project to employ Best Management Practices, hereinafter referred to as "BMPs," to minimize pollutants in urban runoff; and

WHEREAS, the Owner has chosen to install and/or implement BMPs as described in the Water Quality Management Plan, dated _____, on file with the Town and incorporated herein by this reference, hereinafter referred to as "WQMP", to minimize pollutants in urban runoff and to minimize other adverse impacts of urban runoff; and

WHEREAS, said WQMP has been certified by the Owner and reviewed and approved by the Town; and

WHEREAS, the Owner is aware that periodic and continuous maintenance, including, but not necessarily limited to, filter material replacement and sediment removal, is required to assure peak performance of all BMPs in the WQMP and that, furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations, including those

pertaining to confined space and waste disposal methods, in effect at the time such maintenance occurs.

NOW THEREFORE, it is mutually stipulated and agreed as follows:

1. Owner shall comply with the WQMP.

2. All maintenance or replacement of BMPs proposed as part of the WQMP are the sole responsibility of the Owner in accordance with the terms of this Agreement.

3. Owner hereby provides the Town's designee complete access, of any duration, to the BMPs and their immediate vicinity at any time, upon reasonable notice, or in the event of emergency, as determined by the Town of Apple Valley, no advance notice, for the purpose of inspection, sampling, testing of the BMPs, and in case of emergency, to undertake all necessary repairs or other preventative measures at owner's expense as provided in paragraph 5 below. The Town shall make every effort at all times to minimize or avoid interference with Owner's use of the Property. Denial of access to any premises or facility that contains WQMP features is a breach of this Agreement and may also be a violation of the County's Pollutant Discharge Elimination System regulations, which on the effective date of this Agreement are found in County Code Sections 35.0101 et seq. If there is reasonable cause to believe that an illicit discharge or breach of this Agreement is occurring on the premises then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction in addition to other enforcement actions. Owner recognizes that the Town may perform routine and regular inspections, as well as emergency inspections, of the BMPs. Owner or Owner's successors or assigns shall pay Town for all costs incurred by Town in the inspection, sampling, testing of the BMPs within thirty (30) calendar days of Town's invoice.

4. Owner shall use its best efforts diligently to maintain all BMPs in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by Owner and Owner's representative or contractor in the removal and extraction of any material(s) from the BMPs and the ultimate disposal of the material(s) in a manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the Town, the Owner shall provide the Town with documentation identifying the material(s) removed, the quantity, and disposal destination), testing construction or reconstruction.

5. In the event Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within five (5) business days of being given written notice by the Town, the Town is hereby authorized to cause any maintenance necessary to be done and charge the entire cost and expense against the Property and/or to the Owner or Owner's successors or assigns, including administrative costs, attorneys fees and interest thereon at the maximum rate authorized by the Town Code from the date of the notice of expense until paid in full. Owner or Owner's successors or assigns shall pay Town within thirty (30) calendar days of Town's invoice.

6. The Town may require the owner to post security in form and for a time period satisfactory to the Town to guarantee the performance of the obligations stated herein. Should the Owner fail to perform the obligations under the Agreement, the Town may, in the case of a cash bond, act for the Owner using the proceeds from it, or in the case of a surety bond, require the surety(ies) to perform the obligations of this Agreement.

7. The Town agrees, from time to time, within ten (10) business days after request of Owner, to execute and deliver to Owner, or Owner's designee, an estoppel certificate requested by Owner, stating that this Agreement is in full force and effect, and that Owner is not in default hereunder with regard to any maintenance or payment obligations (or specifying in detail the nature of Owner's default). Owner shall pay all costs and expenses incurred by the Town in its investigation of whether to issue an estoppel certificate within thirty (30) calendar days after receipt of a Town invoice and prior to the Town's issuance of such certificate. Where the Town cannot issue an estoppel certificate, Owner shall pay the Town within thirty (30) calendar days of receipt of a Town invoice.

8. Owner shall not change any BMPs identified in the WQMP without an amendment to this Agreement approved by authorized representatives of both the Town and the Owner.

9. TheTown and Owner shall comply with all applicable laws, ordinances, rules, regulations, court orders and government agency orders now or hereinafter in effect in carrying out the terms of this Agreement. If a provision of this Agreement is terminated or held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall remain in full effect.

10. In addition to any remedy available to Town under this Agreement, if Owner violates any term of this Agreement and does not cure the violation within the time already provided in this Agreement, or, if not provided, within thirty (30) calendar days, or within such time authorized by the Town if said cure reasonably requires more than the subject time, the Town may bring an action at law or in equity in a court of competent jurisdiction to enforce compliance by the Owner with the terms of this Agreement. In such action, the Town may recover any damages to which the Town may be entitled for the violation, enjoin the violation by temporary or permanent injunction without the necessity of proving actual damages or the inadequacy of otherwise available legal remedies, or obtain other equitable relief, including, but not limited to, the restoration of the Property and/or the BMPs identified in the WQMP to the condition in which it/they existed prior to any such violation or injury.

11. This Agreement shall be recorded in the Office of the Recorder of San Bernardino County, California, at the expense of the Owner and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth, and also a lien in such amount as will fully reimburse the Town, including interest as herein above set forth, subject to foreclosure in event of default in payment.

12. In event of legal action occasioned by any default or action of the Owner, or its successors or assigns, then the Owner and its successors or assigns agree(s) to hold the Town harmless and pay all costs incurred by the Town in enforcing the terms of this Agreement, including reasonable attorney's fees and costs, and that the same shall become a part of the lien against said Property.

13. It is the intent of the parties hereto that burdens and benefits herein undertaken shall constitute covenants that run with said Property and constitute a lien there against.

14. The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto. The term "Owner" shall include not only the present Owner, but also its heirs, successors, executors, administrators, and assigns. Owner shall notify any successor to title of all or part of the Property about the existence of

this Agreement. Owner shall provide such notice prior to such successor obtaining an interest in all or part of the Property. Owner shall provide a copy of such notice to the Town at the same time such notice is provided to the successor.

15. Time is of the essence in the performance of this Agreement.

16. Any notice to a party required or called for in this Agreement shall be served in person, or by deposit in the U.S. Mail, first class postage prepaid, to the address set forth below. Notice(s) shall be deemed effective upon receipt, or seventy-two (72) hours after deposit in the U.S. Mail, whichever is earlier. A party may change a notice address only by providing written notice thereof to the other party.

17. Owner agrees to indemnify, defend (with counsel reasonably approved by the Town) and hold harmless the Town and its authorized officers, employees, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this Agreement from any cause whatsoever, including the acts, errors or omissions of any person and for any costs or expenses incurred by the Town on account of any claim except where such indemnification is prohibited by law. This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. The Owner's indemnification obligation applies to the Town's "active" as well as "passive" negligence but does not apply to the Town's "sole negligence" or "willful misconduct" within the meaning of Civil Code Section 2782, or to any claims, actions, losses, damages, and/or liabilities, to the extent caused by the acts or omissions of any third party contractors undertaking any work (other than field inspections) or other maintenance on the Property on behalf of the Town under this Agreement..

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IF TO TOWN :	**IF TO OWNER:**
Town Manager	
14955 Dale Evans Parkway	
Apple Valley, CA 92307	

IN WITNESS THEREOF, the parties hereto have affixed their signatures as of the date first written above.

OWNER:

Company/Trust: FGFW IV, LLC

Signature: _____

Name: _____

Title: _____

Date: _____

OWNER:

Company/Trust: _____

Signature: _____

Name: _____

Title: _____

Date: _____

FOR: Maintenance Agreement, dated _____, for the project known as Inland Empire Logistics Center _____ (APN) **0472-231-08**, As described in the WQMP dated _____.

NOTARIES ON FOLLOWING PAGE

A notary acknowledgement is required for recordation.

ACCEPTED BY:

_____

DOUGLAS B. ROBERTSON, TOWN MANAGER

Date: _____

Attachment: Notary Acknowledgement

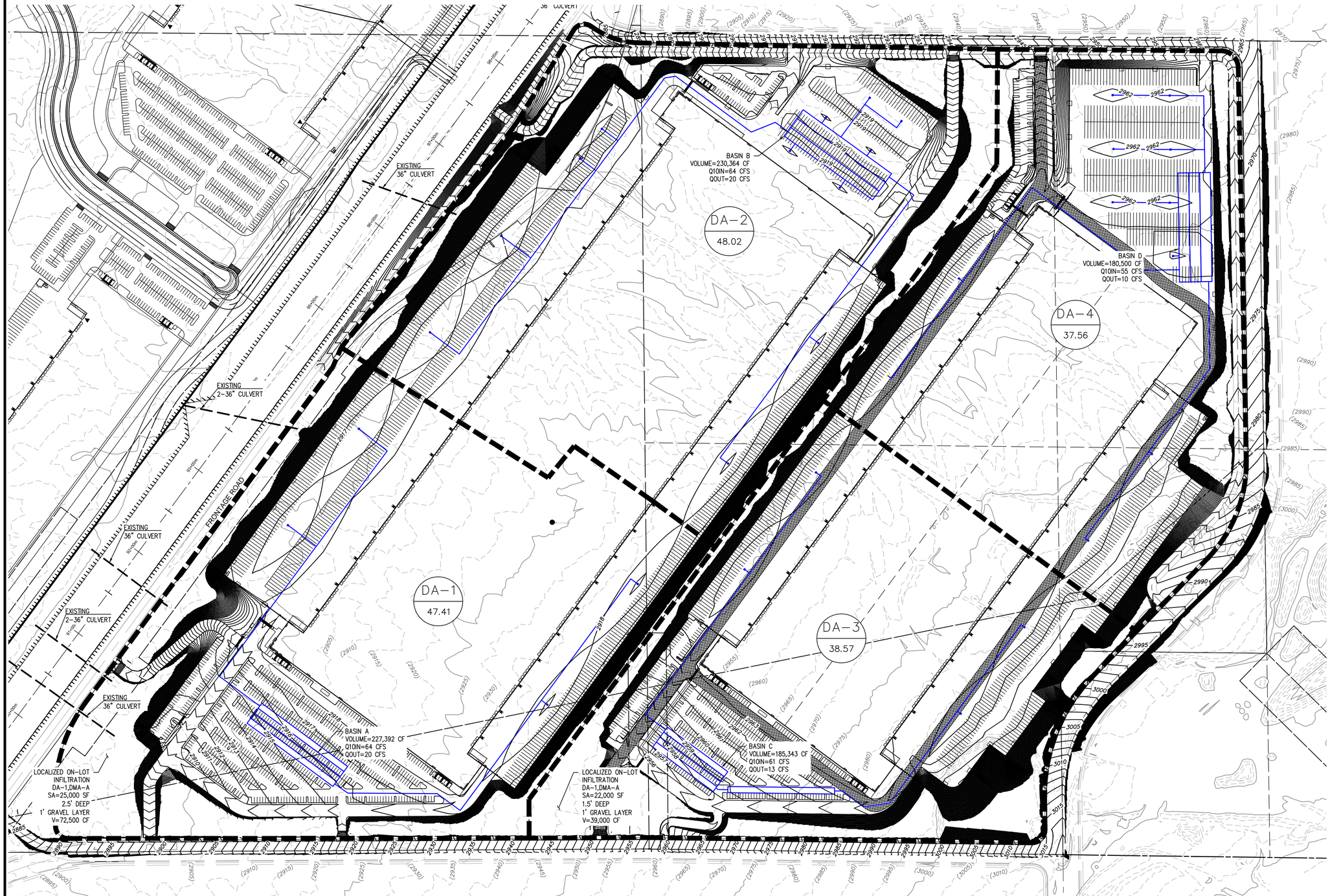
ATTACHMENT 1
Notary Acknowledgement)

EXHIBIT A
(Legal Description)

Parcels 1 and 2 of PM 20625, as recorded in book,xxxx, pages xxxx, San Bernardino County, California

EXHIBIT B
(Map/illustration)

INLAND EMPIRE NORTH LOGISTICS CENTER
WQMP SITE PLAN



LEGEND

- HYDROLOGY BOUNDARY
- A / 7.96 — DRAINAGE MANAGMENT AREA ID / ACREAGE
- PROPOSED DRAINAGE FLOW
- PROPOSED AC PAVEMENT
- PROPOSED PCC PAVEMENT
- PROPOSED UNDERGROUND DETENTION AREA
- PROPOSED LANDSCAPE
- PROPOSED BIO-INFILTRATION AREA
- XXXX — PROPOSED CONTOUR
- (XXXX) — EXISTING CONTOUR
- PROPOSED ROOF DRAIN

Area ID (Acre)	Area	DVC (CF)	HCOC (Min.) (CF)	UG Storage/ Infiltration (CF) Provided	
DA-1	47.41	108,150	226,051	227,392	Basin A
DA-2	48.02	109,133	228,960	230,364	Basin B
DA-3	38.57	87,635	183,902	185,343	Basin C
DA-4	37.57	85,336	179,086	180,500	Basin D
Total		390,254.00	817,999.00	823,599	

Basin Routing	Qin (CFS)	Qout (CFS)
Basin A	63.7	20.1
Basin B	64.4	20.1
Basin C	51	13.2
Basin D	55.4	10.2
Total	234.5	63.6

Existing Site Q10 = 252.9 cfs
Developed Site Q = 63.6 cfs
(25% reduction)

N

150 0 150 300
scale 1"= 150' feet

18484 Outer Highway 18 N Suite 225
Apple Valley California 92307
Phone: 760.524.9100

DAVID EVANS AND ASSOCIATES INC.

Drawing Name: P:\PSFW00002001.06\ENFR\Reports\WQMP\CAD\WQMP Exhibit.dwg
Last Opened: Aug 17, 2022 - 2:09pm By: Jra

5. Reference Material

The following is the Town of Apple Valleys Annual Self Certification Form to be completed and submitted to the Town every year by June 30th.

Town of Apple Valley Engineering
Department 14955 Dale Evans
Parkway Apple Valley, CA 92307
(760) 240-7000

Structural Post-Construction BMPs Annual Self-Certification Form

This self-certification form must be completed by the site owner/operator annually by June 30th of each year to be in compliance with the Town's Storm Water ordinances and NDPES Permit Order No. 2013-0001-DWQ. The purpose of this form is to verify the effectiveness of structural post-construction best management practices (BMPs) in removing pollutants of concern from storm water runoff and/or reducing hydromodification impacts as designed and to verify the maintenance of BMPs.

Date Prepared:
Site Name:
Site Address:
Site Owner/Operator:
Phone:

Parcel No.:
Tract No.:

FIELD OBSERVATIONS AND MAINTENANCE

Please list and describe observations of the condition, maintenance plan and maintenance frequency of structural post-construction BMPs on site. Please attach proof of maintenance performed, if applicable.

BMP 1:
Latitude: **Longitude:**
Observations:
Maintenance Plan:

Maintenance Frequency:

BMP 2:
Latitude: **Longitude:**
Observations:
Maintenance Plan:

Maintenance Frequency:

BMP 3:
Latitude: **Longitude:**
Observations:
Maintenance Plan:

Maintenance Frequency:

BMP 4:
Latitude: **Longitude:**
Observations:
Maintenance Plan:

Maintenance Frequency:

BMP 5:
Latitude: **Longitude:**
Observations:
Maintenance Plan:

Maintenance Frequency:

BMP 6:
Latitude: **Longitude:**
Observations:
Maintenance Plan:

Maintenance Frequency:

*If needed, please attach pages for additional BMPs

CERTIFICATION:

As the owner/operator responsible for the above site, I certify that I have inspected all structural post construction BMPs required per the approved Permit No. 2013-0001-DWQ and all BMP's are effective and maintained.

Signature:

Date of Signature:

Printed Name:

Title:

Phone Number:

6. BMP Fact Sheets

Section 3
Source Control BMPs

3.1 Introduction

This section provides a description of specific source control Best Management Practices (BMPs) for activities related to municipal operations. As noted in Sections 1 and 2, municipal fixed facilities conduct activities that have the potential to generate pollutants. The source control BMPs in this section address these activities (see Table 3-1).

In addition, municipalities conduct various field programs where activities may occur and create pollutants. BMPs for these field programs and associated activities are listed in Table 3-2.

Table 3-1 Municipal Fixed Facility BMPs	
Non-Stormwater Management	
SC-10	Non-Stormwater Discharges
SC-11	Spill Prevention, Control and Cleanup
Vehicle and Equipment Management	
SC-20	Vehicle and Equipment Fueling
SC-21	Vehicle and Equipment Cleaning
SC-22	Vehicle and Equipment Repair
Material and Waste Management	
SC-30	Outdoor Loading/Unloading
SC-31	Outdoor Container Storage
SC-32	Outdoor Equipment Maintenance
SC-33	Outdoor Storage of Raw Materials
SC-34	Waste Handling and Disposal
Building and Grounds Management	
SC-41	Building and Grounds Maintenance
SC-43	Parking/Storage Area Maintenance
Over Water Activities	
SC-50	Over Water Activities
General Stormwater Management	
SC-60	Housekeeping Practices
SC-61	Safer Alternative Products

Table 3-2 Municipal Field Program BMPs	
SC-70	Road and Street Maintenance
SC-71	Plaza and Sidewalk Cleaning
SC-72	Fountains & Pools Maintenance
SC-73	Landscape Maintenance
SC-74	Drainage System Maintenance
SC-75	Waste Handling and Disposal
SC-76	Water and Sewer Utility Maintenance

3.2 Fact Sheet Format

Each BMP fact sheet is a short document that gives all the information about a particular BMP. Typically, each fact sheet contains the information outlined in Figure 3-1. Completed fact sheets for each of the activities listed in Tables 3-1 and 3-2 are provided in Section 3.3.

The fact sheets also contain side bar presentations with information on BMP objectives and targeted constituents.

The information provided in each fact sheet is extensive and may not be applicable to all municipal operations. The readers may find it helpful to modify and simplify the BMP fact sheets to better reflect their existing operations.

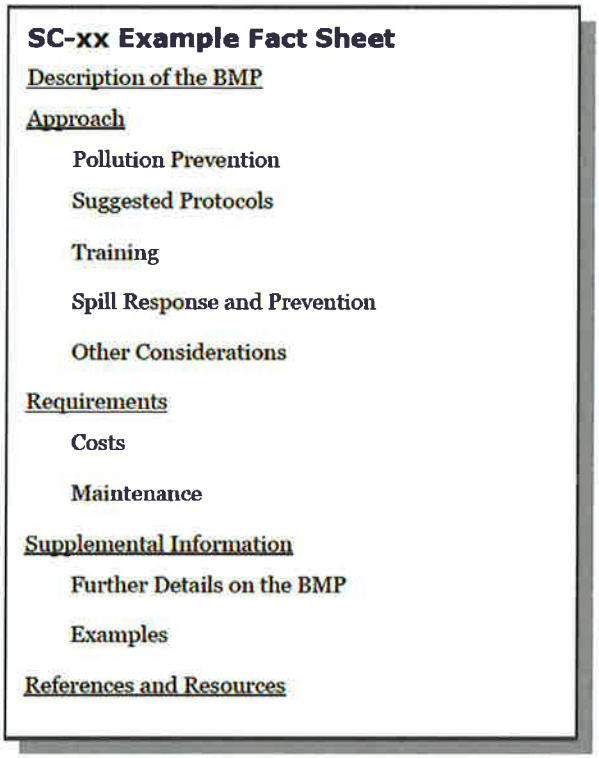


Figure 3-1
Example Fact Sheet

3.3 BMP Fact Sheets

BMP fact sheets for fixed facilities activities and field programs follow. The BMP fact sheets are individually page numbered and are suitable for photocopying and inclusions in stormwater quality management plans. Fresh copies of the fact sheets can be individually downloaded from the California Stormwater BMP Handbook website at http://www.cabmphandbooks.com

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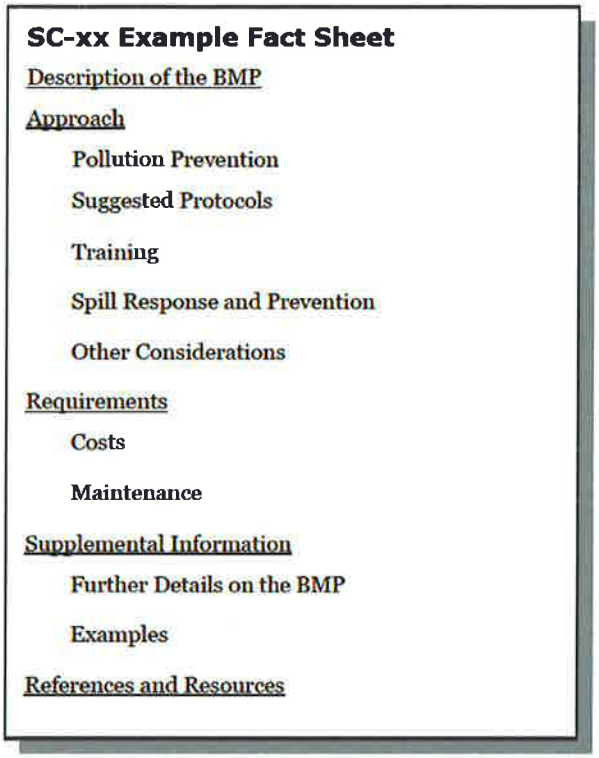

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Site Design & Landscape Planning SD-10



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Spill Prevention, Control & Cleanup SC-11



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

Targeted Constituents

Sediment	
Nutrients	☑
Trash	
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

- An effective spill response and control plan should include:
  - Spill/leak prevention measures;
  - Spill response procedures;
  - Spill cleanup procedures;
  - Reporting; and
  - Training
- A well thought out and implemented plan can prevent pollutants from entering the storm drainage system and can be used as a tool for training personnel to prevent and control future spills as well.

Pollution Prevention

- Develop and implement a Spill Prevention Control and Response Plan. The plan should include:

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- A description of the facility, the address, activities and materials involved
- Identification of key spill response personnel
- Identification of the potential spill areas or operations prone to spills/leaks
- Identification of which areas should be or are bermed to contain spills/leaks
- Facility map identifying the key locations of areas, activities, materials, structural BMPs, etc.
- Material handling procedures
- Spill response procedures including:
    - Assessment of the site and potential impacts
    - Containment of the material
    - Notification of the proper personnel and evacuation procedures
    - Clean up of the site
    - Disposal of the waste material and
    - Proper record keeping

- Product substitution – use less toxic materials (i.e. use water based paints instead of oil based paints)
- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of materials that are brought into the facility or into the field.

Suggested Protocols

Spill/Leak Prevention Measures

- If possible, move material handling indoors, under cover, or away from storm drains or sensitive water bodies.
- Properly label all containers so that the contents are easily identifiable.
- Berm storage areas so that if a spill or leak occurs, the material is contained.
- Cover outside storage areas either with a permanent structure or with a seasonal one such as a tarp so that rain can not come into contact with the materials.
- Check containers (and any containment sumps) often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect all spilled liquids and properly dispose of them.

- Store, contain and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow or be washed into the storm drainage system, surface waters, or groundwater.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Any collected liquids or soiled absorbent materials should be reused/recycled or properly disposed of.
- For field programs, only transport the minimum amount of material needed for the daily activities and transfer materials between containers at a municipal yard where leaks and spill are easier to control.
- If paved, sweep and clean storage areas monthly, do not use water to hose down the area unless all of the water will be collected and disposed of properly.
- Install a spill control device (such as a tee section) in any catch basins that collect runoff from any storage areas if the materials stored are oil, gas, or other materials that separate from and float on water. This will allow for easier cleanup if a spill occurs.
- If necessary, protect catch basins while conducting field activities so that if a spill occurs, the material will be contained.

Training

- Educate employees about spill prevention, spill response and cleanup on a routine basis.
- Well-trained employees can reduce human errors that lead to accidental releases or spills:
  - The employees should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
  - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan if one is available.
- Training of staff from all municipal departments should focus on recognizing and reporting potential or current spills/leaks and who they should contact.
- Employees responsible for aboveground storage tanks and liquid transfers for large bulk containers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.

Spill Response and Prevention

- Identify key spill response personnel and train employees on who they are.
- Store and maintain appropriate spill cleanup materials in a clearly marked location near storage areas; and train employees to ensure familiarity with the site's spill control plan and/or proper spill cleanup procedures.
- Locate spill cleanup materials, such as absorbents, where they will be readily accessible (e.g. near storage and maintenance areas, on field trucks).

SC-11 Spill Prevention, Control & Cleanup

- Follow the Spill Prevention Control and Countermeasure Plan if one is available.
- If a spill occurs, notify the key spill response personnel immediately. If the material is unknown or hazardous, the local fire department may also need to be contacted.
- If safe to do so, attempt to contain the material and block the nearby storm drains so that the area impacted is minimized. If the material is unknown or hazardous wait for properly trained personnel to contain the materials.
- Perform an assessment of the area where the spill occurred and the downstream area that it could impact. Relay this information to the key spill response and clean up personnel.

Spill Cleanup Procedures

- Small non-hazardous spills
  - Use a rag, damp cloth or absorbent materials for general clean up of liquids
  - Use brooms or shovels for the general clean up of dry materials
  - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
  - Dispose of any waste materials properly
  - Clean or dispose of any equipment used to clean up the spill properly
- Large non-hazardous spills
  - Use absorbent materials for general clean up of liquids
  - Use brooms, shovels or street sweepers for the general clean up of dry materials
  - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
  - Dispose of any waste materials properly
  - Clean or dispose of any equipment used to clean up the spill properly
- For hazardous or very large spills, a private cleanup company or Hazmat team may need to be contacted to assess the situation and conduct the cleanup and disposal of the materials.
- Chemical cleanups of material can be achieved with the use of absorbents, gels, and foams. Remove the adsorbent materials promptly and dispose of according to regulations.
- If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.

Reporting

- Report any spills immediately to the identified key municipal spill response personnel.

- Report spills in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to the Office of Emergency Service (OES)
- Spills that pose an immediate threat to human health or the environment may also need to be reported within 24 hours to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour)
- After the spill has been contained and cleaned up, a detailed report about the incident should be generated and kept on file (see the section on Reporting below). The incident may also be used in briefing staff about proper procedures

Other Considerations

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure Plan (SPCC) Plan (Health & Safety Code Chapter 6.67).
- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.
- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, if permitted to do so, prohibiting any hard connections to the storm drain.

Requirements

Costs

- Will vary depending on the size of the facility and the necessary controls.
- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of wastes, contaminated soil and water is very expensive

Maintenance

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the response and containment of a spill. A good record keeping system helps the municipality minimize incident recurrence, correctly respond with appropriate containment and cleanup activities, and comply with legal requirements.

A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm drain.

These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Examples

The City of Palo Alto includes spill prevention and control as a major element of its highly effective program for municipal vehicle maintenance shops.

References and Resources

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)
http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf

Efficient Irrigation SD-12



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING

– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.
- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Building & Grounds Maintenance SC-41



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	
Organics	

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.

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- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

Suggested Protocols

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

Landscaping Activities

- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- Use hand weeding where practical.

Fertilizer and Pesticide Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.

- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

Training

- Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- Clean up spills immediately.

Other Considerations

Alternative pest/weed controls may not be available, suitable, or effective in many cases.

Requirements

Costs

- Cost will vary depending on the type and size of facility.
- Overall costs should be low in comparison to other BMPs.

Maintenance

Sweep paved areas regularly to collect loose particles. Wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

Supplemental Information

Further Detail of the BMP

Fire Sprinkler Line Flushing

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Parking/Storage Area Maintenance SC-43



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Description

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

Approach

The goal of this program is to ensure stormwater pollution prevention practices are considered when conducting activities on or around parking areas and storage areas to reduce potential for pollutant discharge to receiving waters. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Encourage alternative designs and maintenance strategies for impervious parking lots. (See New Development and Redevelopment BMP Handbook)
- Keep accurate maintenance logs to evaluate BMP implementation.

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SC-43 Parking/Storage Area Maintenance

Suggested Protocols

General

- Keep the parking and storage areas clean and orderly. Remove debris in a timely fashion.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low quantities.
- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.
- Discharge soapy water remaining in mop or wash buckets to the sanitary sewer through a sink, toilet, clean-out, or wash area with drain.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Provide trash receptacles in parking lots to discourage litter.
- Routinely sweep, shovel, and dispose of litter in the trash.

Surface Cleaning

- Use dry cleaning methods (e.g., sweeping, vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system if possible.
- Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- Sweep all parking lots at least once before the onset of the wet season.
- Follow the procedures below if water is used to clean surfaces:
  - Block the storm drain or contain runoff.
  - Collect and pump wash water to the sanitary sewer or discharge to a pervious surface. Do not allow wash water to enter storm drains.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- Follow the procedures below when cleaning heavy oily deposits:
  - Clean oily spots with absorbent materials.
  - Use a screen or filter fabric over inlet, then wash surfaces.

- Do not allow discharges to the storm drain.
- Vacuum/pump discharges to a tank or discharge to sanitary sewer.
- Appropriately dispose of spilled materials and absorbents.

Surface Repair

- Preheat, transfer or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff.
- Cover and seal nearby storm drain inlets where applicable (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.
- Use only as much water as necessary for dust control, to avoid runoff.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Inspection

- Have designated personnel conduct inspections of parking facilities and stormwater conveyance systems associated with parking facilities on a regular basis.
- Inspect cleaning equipment/sweepers for leaks on a regular basis.

Training

- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- Train employees and contractors in proper techniques for spill containment and cleanup.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible or at a central location.
- Clean up fluid spills immediately with absorbent rags or material.
- Dispose of spilled material and absorbents properly.

Other Considerations

Limitations related to sweeping activities at large parking facilities may include high equipment costs, the need for sweeper operator training, and the inability of current sweeper technology to remove oil and grease.

SC-43 Parking/Storage Area Maintenance

Requirements

Costs

Cleaning/sweeping costs can be quite large. Construction and maintenance of stormwater structural controls can be quite expensive as well.

Maintenance

- Sweep parking lot regularly to minimize cleaning with water.
- Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities regularly to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions.

Supplemental Information

Further Detail of the BMP

Surface Repair

Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff. Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal. Only use only as much water as is necessary for dust control to avoid runoff.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Housekeeping Practices SC-60

Description

Promote efficient and safe housekeeping practices (storage, use, and cleanup) when handling potentially harmful materials such as fertilizers, pesticides, cleaning solutions, paint products, automotive products, and swimming pool chemicals. Related information is provided in BMP fact sheets SC-11 Spill Prevention, Control & Cleanup and SC-34 Waste Handling & Disposal.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Approach

Pollution Prevention

- Purchase only the amount of material that will be needed for foreseeable use. In most cases this will result in cost savings in both purchasing and disposal. See SC-61 Safer Alternative Products for additional information.
- Be aware of new products that may do the same job with less environmental risk and for less or the equivalent cost. Total cost must be used here; this includes purchase price, transportation costs, storage costs, use related costs, clean up costs and disposal costs.

Suggested Protocols

General

- Keep work sites clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Dispose of wash water, sweepings, and sediments, properly.
- Recycle or dispose of fluids properly.
- Establish a daily checklist of office, yard and plant areas to confirm cleanliness and adherence to proper storage and security. Specific employees should be assigned specific inspection responsibilities and given the authority to remedy any problems found.
- Post waste disposal charts in appropriate locations detailing for each waste its hazardous nature (poison, corrosive, flammable), prohibitions on its disposal (dumpster, drain, sewer) and the recommended disposal method (recycle, sewer, burn, storage, landfill).
- Summarize the chosen BMPs applicable to your operation and post them in appropriate conspicuous places.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Require a signed checklist from every user of any hazardous material detailing amount taken, amount used, amount returned and disposal of spent material.
- Do a before audit of your site to establish baseline conditions and regular subsequent audits to note any changes and whether conditions are improving or deteriorating.
- Keep records of water, air and solid waste quantities and quality tests and their disposition.
- Maintain a mass balance of incoming, outgoing and on hand materials so you know when there are unknown losses that need to be tracked down and accounted for.
- Use and reward employee suggestions related to BMPs, hazards, pollution reduction, work place safety, cost reduction, alternative materials and procedures, recycling and disposal.
- Have, and review regularly, a contingency plan for spills, leaks, weather extremes etc. Make sure all employees know about it and what their role is so that it comes into force automatically.

Training

- Train all employees, management, office, yard, manufacturing, field and clerical in BMPs and pollution prevention and make them accountable.
- Train municipal employees who handle potentially harmful materials in good housekeeping practices.
- Train personnel who use pesticides in the proper use of the pesticides. The California Department of Pesticide Regulation license pesticide dealers, certify pesticide applicators and conduct onsite inspections.
- Train employees and contractors in proper techniques for spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and Countermeasure (SPCC) plant up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- There are no major limitations to this best management practice.
- There are no regulatory requirements to this BMP. Existing regulations already require municipalities to properly store, use, and dispose of hazardous materials

Requirements

Costs

- Minimal cost associated with this BMP. Implementation of good housekeeping practices may result in cost savings as these procedures may reduce the need for more costly BMPs.

Maintenance

- Ongoing maintenance required to keep a clean site. Level of effort is a function of site size and type of activities.

Supplemental Information

Further Detail of the BMP

- The California Integrated Waste Management Board's Recycling Hotline, 1-800-553-2962, provides information on household hazardous waste collection programs and facilities.

Examples

There are a number of communities with effective programs. The most pro-active include Santa Clara County and the City of Palo Alto, the City and County of San Francisco, and the Municipality of Metropolitan Seattle (Metro).

References and Resources

British Columbia Lake Stewardship Society. Best Management Practices to Protect Water Quality from Non-Point Source Pollution. March 2000.
http://www.nalms.org/bclss/bmphome.html#bmp

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities, Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July, 1998, Revised by California Coastal Commission, February 2002.

Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Mateo STOPPP - (http://stoppp.tripod.com/bmp.html)

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

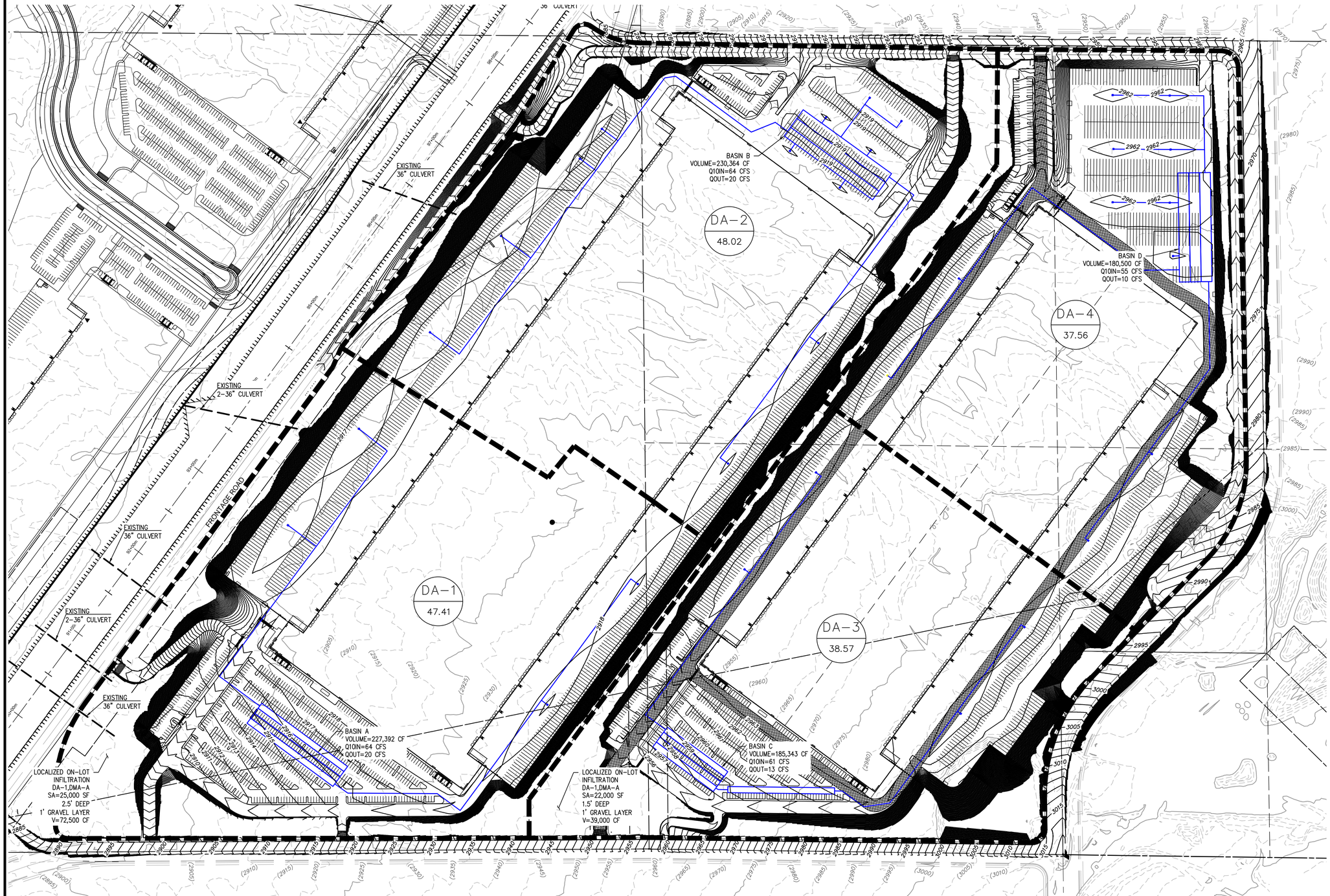
Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

7. WQMP Exhibit

INLAND EMPIRE NORTH LOGISTICS CENTER
WQMP SITE PLAN



LEGEND

- HYDROLOGY BOUNDARY
- A / 7.96 — DRAINAGE MANAGMENT AREA ID / ACREAGE
- PROPOSED DRAINAGE FLOW
- PROPOSED AC PAVEMENT
- PROPOSED PCC PAVEMENT
- PROPOSED UNDERGROUND DETENTION AREA
- PROPOSED LANDSCAPE
- PROPOSED BIO-INFILTRATION AREA
- XXXX — PROPOSED CONTOUR
- (XXXX) — EXISTING CONTOUR
- PROPOSED ROOF DRAIN

Area ID (Acre)	Area	DVC (CF)	HCOC (Min.) (CF)	UG Storage/ Infiltration (CF) Provided	
DA-1	47.41	108,150	226,051	227,392	Basin A
DA-2	48.02	109,133	228,960	230,364	Basin B
DA-3	38.57	87,635	183,902	185,343	Basin C
DA-4	37.57	85,336	179,086	180,500	Basin D
Total		390,254.00	817,999.00	823,599	

Basin Routing	Qin (CFS)	Qout (CFS)
Basin A	63.7	20.1
Basin B	64.4	20.1
Basin C	51	13.2
Basin D	55.4	10.2
Total	234.5	63.6

Existing Site Q10 = 252.9 cfs
Developed Site Q = 63.6 cfs
(25% reduction)

N

150 0 150 300
scale 1"= 150' feet

18484 Outer Highway 18 N Suite 225
Apple Valley California 92307
Phone: 760.524.9100

DAVID EVANS AND ASSOCIATES INC.

Drawing Name: P:\PSFW00002001.06\ENFR\Reports\WQMP\CAD\WQMP Exhibit.dwg
Last Opened: Aug 17, 2022 - 2:09pm By: Jra

Appendix I

Storm Tech reports

Basin A

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	IENLC
Engineer:	N/A
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	226051 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(200 ft. x 330 ft.)

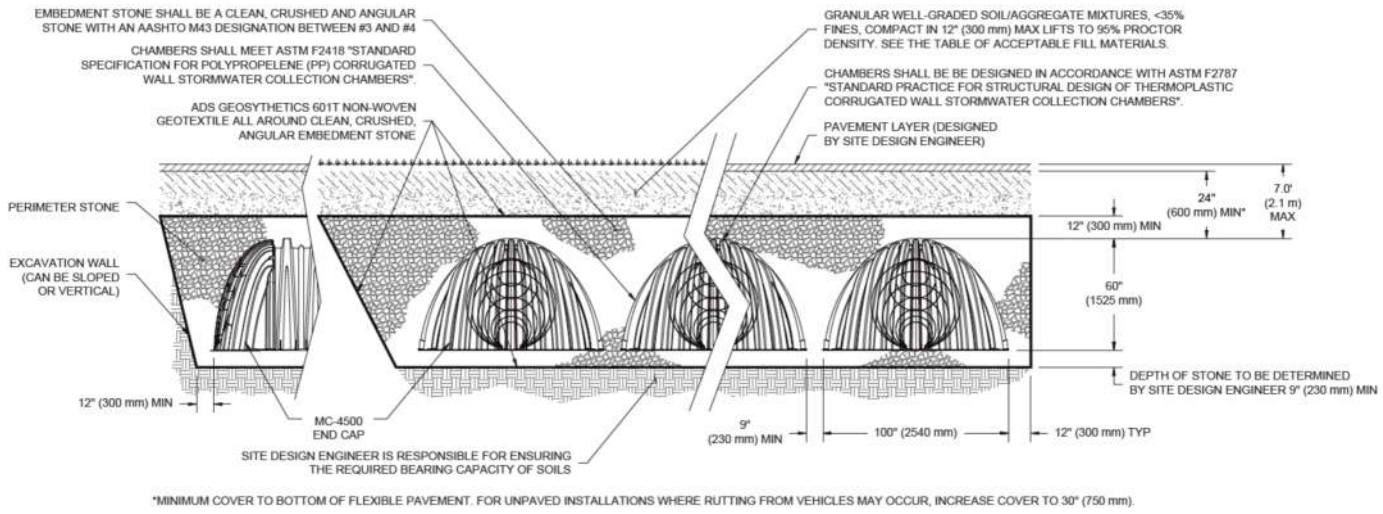
Results

System Volume and Bed Size

Installed Storage Volume:	227391.99 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	825
Number Of End Caps Required:	36
Chamber Rows:	18
Maximum Length:	315.17 ft.
Maximum Width:	165.35 ft.
Approx. Bed Size Required:	51654.92 square ft.

System Components

Amount Of Stone Required:	7486.34 cubic yards
Volume Of Excavation (Not Including Fill):	12913.73 cubic yards
Total Non-woven Geotextile Required:	14647.02 square yards
Woven Geotextile Required (excluding Isolator Row):	191.10 square yards
Woven Geotextile Required (Isolator Row):	720.26 square yards
Total Woven Geotextile Required:	911.36 square yards



Basin B

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	IENLC
Engineer:	N/A
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	228960 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(200 ft. x 330 ft.)

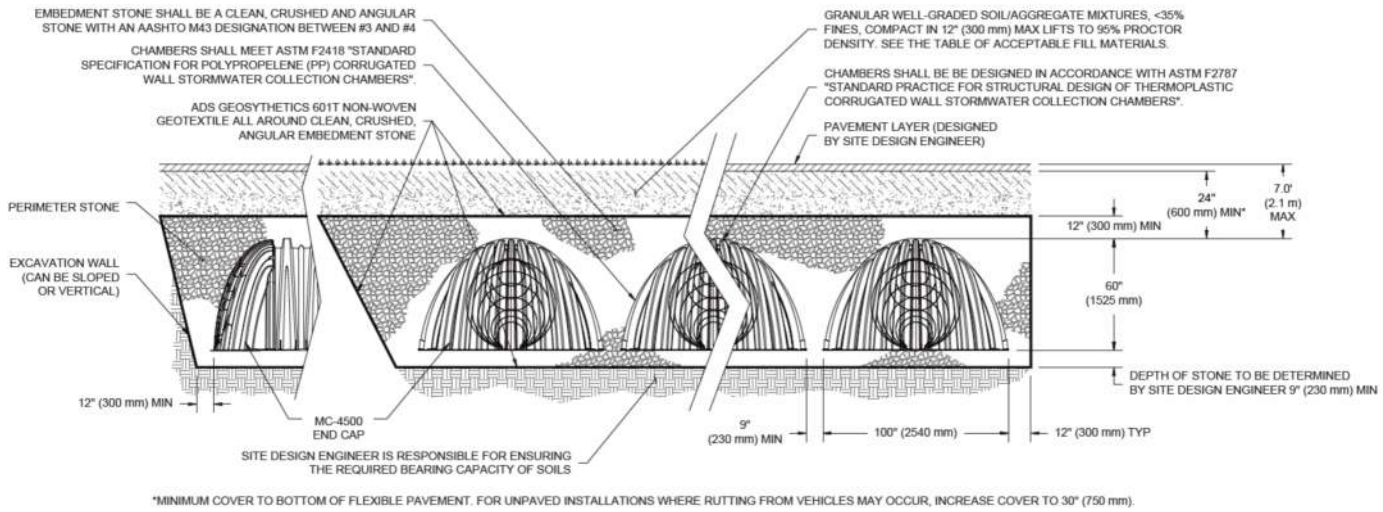
Results

System Volume and Bed Size

Installed Storage Volume:	230364.13 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	836
Number Of End Caps Required:	36
Chamber Rows:	18
Maximum Length:	321.76 ft.
Maximum Width:	165.35 ft.
Approx. Bed Size Required:	52325.74 square ft.

System Components

Amount Of Stone Required:	7582.38 cubic yards
Volume Of Excavation (Not Including Fill):	13081.43 cubic yards
Total Non-woven Geotextile Required:	14837.77 square yards
Woven Geotextile Required (excluding Isolator Row):	191.10 square yards
Woven Geotextile Required (Isolator Row):	735.64 square yards
Total Woven Geotextile Required:	926.74 square yards



Basin C

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	IENLC
Engineer:	N/A
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	183902 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(250 ft. x 250 ft.)

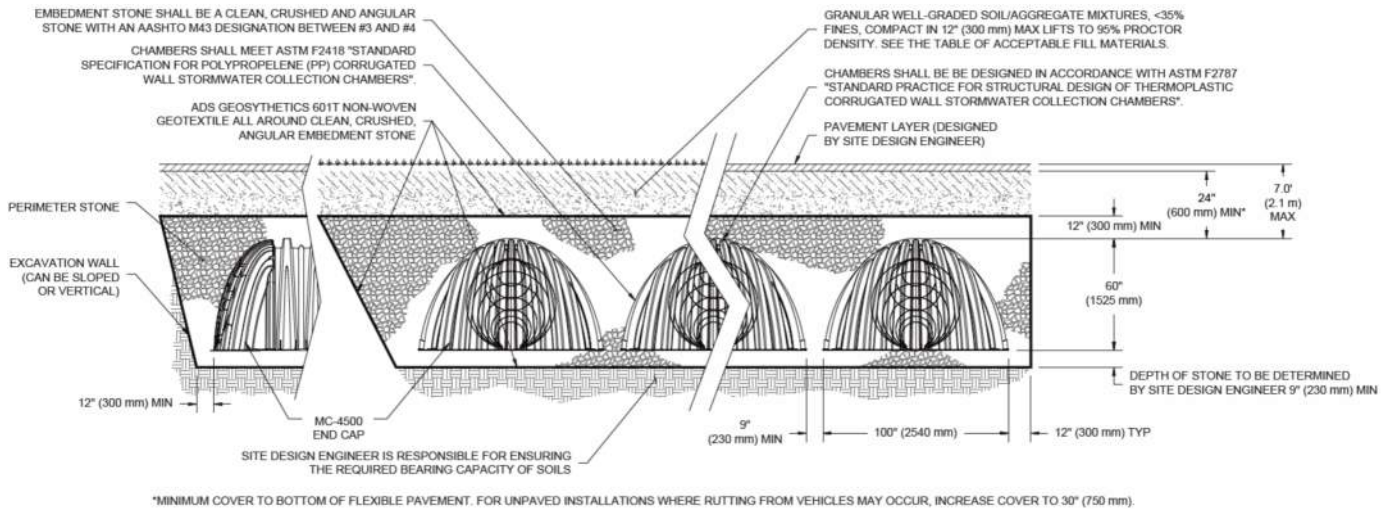
Results

System Volume and Bed Size

Installed Storage Volume:	185342.76 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	668
Number Of End Caps Required:	38
Chamber Rows:	19
Maximum Length:	249.25 ft.
Maximum Width:	174.43 ft.
Approx. Bed Size Required:	42200.53 square ft.

System Components

Amount Of Stone Required:	6142.64 cubic yards
Volume Of Excavation (Not Including Fill):	10550.13 cubic yards
Total Non-woven Geotextile Required:	12023.55 square yards
Woven Geotextile Required (excluding Isolator Row):	191.10 square yards
Woven Geotextile Required (Isolator Row):	566.46 square yards
Total Woven Geotextile Required:	757.56 square yards



Basin D

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	Yes
Project Name:	
Engineer:	N/A
Project Location:	
Measurement Type:	Imperial
Required Storage Volume:	179086 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(175 ft. x 243 ft.)

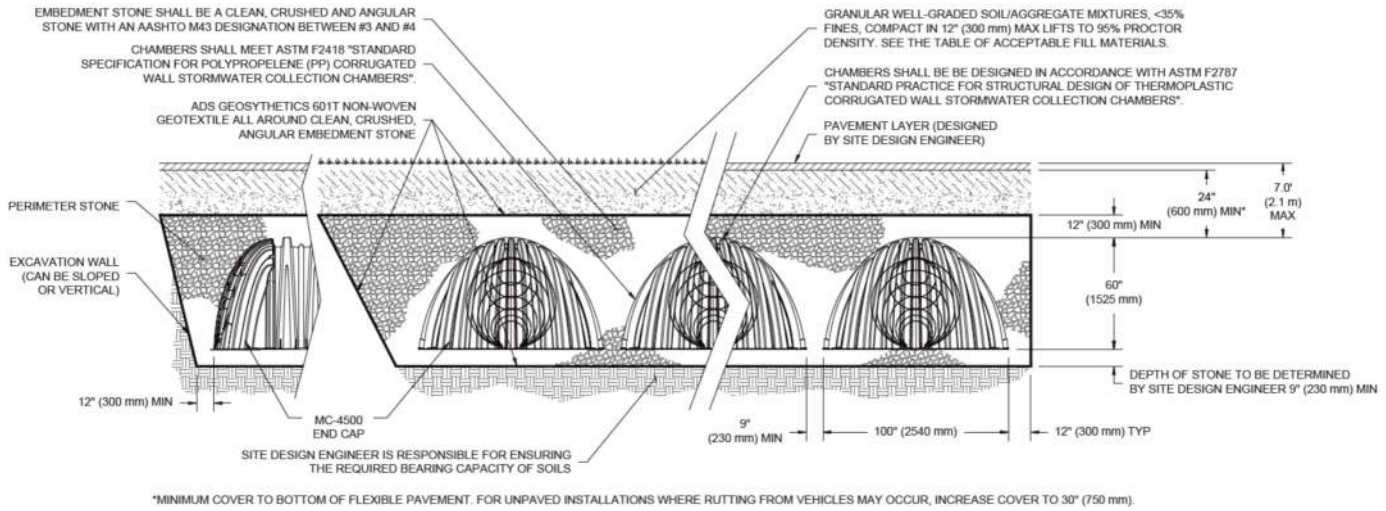
Results

System Volume and Bed Size

Installed Storage Volume:	180500.22 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	650
Number Of End Caps Required:	38
Chamber Rows:	19
Maximum Length:	242.66 ft.
Maximum Width:	174.43 ft.
Approx. Bed Size Required:	41110.60 square ft.

System Components

Amount Of Stone Required:	5988 cubic yards
Volume Of Excavation (Not Including Fill):	10278 cubic yards
Total Non-woven Geotextile Required:	11722 square yards
Woven Geotextile Required (excluding Isolator Row):	192 square yards
Woven Geotextile Required (Isolator Row):	552 square yards
Total Woven Geotextile Required:	743 square yards



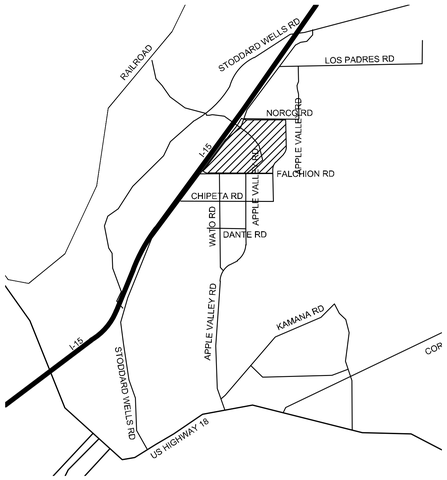
Appendix J

Geotechnical Report **TBD**

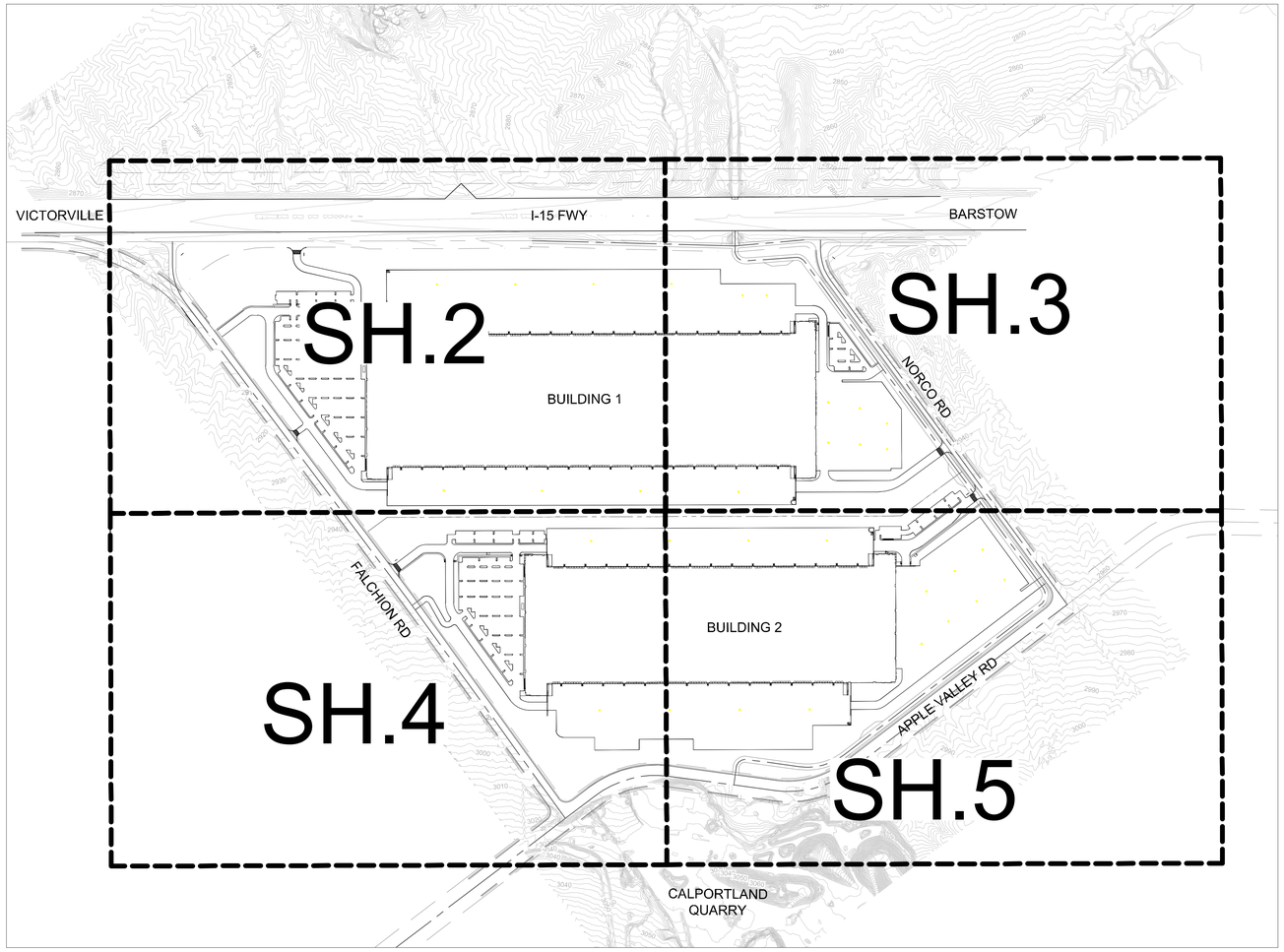
Appendix K

Grading Plans

INLAND EMPIRE
NORTH LOGISTICS CENTER
CONCEPTUAL GRADING DESIGN
TOWN OF APPLE VALLEY



VICINITY MAP
NTS



KEY MAP

SHEET INDEX

1. KEY MAP AND GENERAL INFO
2. CONCEPTUAL GRADING
3. CONCEPTUAL GRADING
4. CONCEPTUAL GRADING
5. CONCEPTUAL GRADING
6. COMPOSITE ONSITE WET UTILITY PLAN
7. OFFSITE UTILITY PLAN
8. SITE SECTIONS

LAND USE CALCULATION:

GROSS AREA:	171.6 AC
NET AREA:	136.0 AC
LANDSCAPE AREA	35.6 AC

EARTHWORK NUMBERS:

RAW CUT	1.5 M C.Y.
RAW FILL	1.5 M C.Y.
NET	0 C.Y.

LEGEND:

2800.00 FS	-	PROPOSED FINISHED SURFACE
2800.00 FG	-	PROPOSED FINISHED GRADE
2800.00 TG	-	PROPOSED TOP OF GRATE
2800.00 FG	-	EXISTING FINISHED GRADE
2800	-	PROPOSED SLOPE
2800	-	EXISTING SLOPE
INV	-	INVERT
EX.	-	EXISTING
PROP.	-	PROPOSED
R/W	-	RIGHT OF WAY
P/L	-	PROPERTY LINE
2800	-	PROPOSED CONTOUR
2800	-	EXISTING CONTOUR
	-	PROPOSED RIGHT OF WAY
	-	FUTURE RIGHT OF WAY
	-	DAYLIGHT LINE / LIMITS OF GRADING
	-	CUT/FILL LINE

HATCHING LEGEND:

- PROPOSED CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED ARCHITECTURAL DRIVEWAY

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18484 Outer Highway 18 N Suite 225
Apple Valley, CA 92307
Phone: 760.524.9100

CALIFORNIA

INLAND EMPIRE NORTH LOGISTICS CENTER

FGFW IV, LLC

KEY MAP AND GENERAL INFO

APPLE VALLEY, CA 92307

DATE: SSCP64

NO.	DATE	REVISION	BY	CK

REVIEWED BY: SSCP63

CHECKED BY:
DESIGNED BY:
DRAWN BY:

FIRST SUBMITTAL DATE:

PROJECT NO.
FGFW0000-0001

SHEET NO.
1 OF 8

OWNER/DEVELOPER:

JESSICA HAUGHTON
FGFW IV LLC
150 N. MARKET STREET
WICHITA, KN 67206
702 330-1715

ARCHITECT:

STEVE HONG
LHA
4590 MACARTHUR BLVD. SUITE 500
NEWPORT BEACH, CA 92660
714 822-1171

LANDSCAPE ARCHITECT:

DAVID EVANS AND ASSOC. INC
18484 OUTER HWY 18 NORTH SUITE 225
APPLE VALLEY, CA 92307
760 524-9123

CIVIL ENGINEER:

DEAN PARADISE
DAVID EVANS AND ASSOC. INC
18484 OUTER HWY 18 NORTH SUITE 225
APPLE VALLEY, CA 92307
760 524-9123

HORI ONTAL DATUM / BASIS OF BEARINGS

THE BEARINGS ARE BASED UPON CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ONE 5, EPOCH 2019.55 IN ACCORDANCE WITH THE CALIFORNIA REPUBLIC RESOURCES CODE SECTIONS 8801-8819 SAID BEARINGS ARE BASED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING CALIFORNIA SPATIAL REFERENCE NETWORK, OR E UIVALENT STATIONS.

PROJECT BECHMARK:

CITY OF VICTORVILLE BENCHMARK V-112
LOCATION: NORTHWEST CORNER OF VENUS ST. DANTE ST. ECR SET IN TOP OF CURB

DATUM: NAVD29
ELEVATION: 2793.07 FEET PUBLISHED HELD

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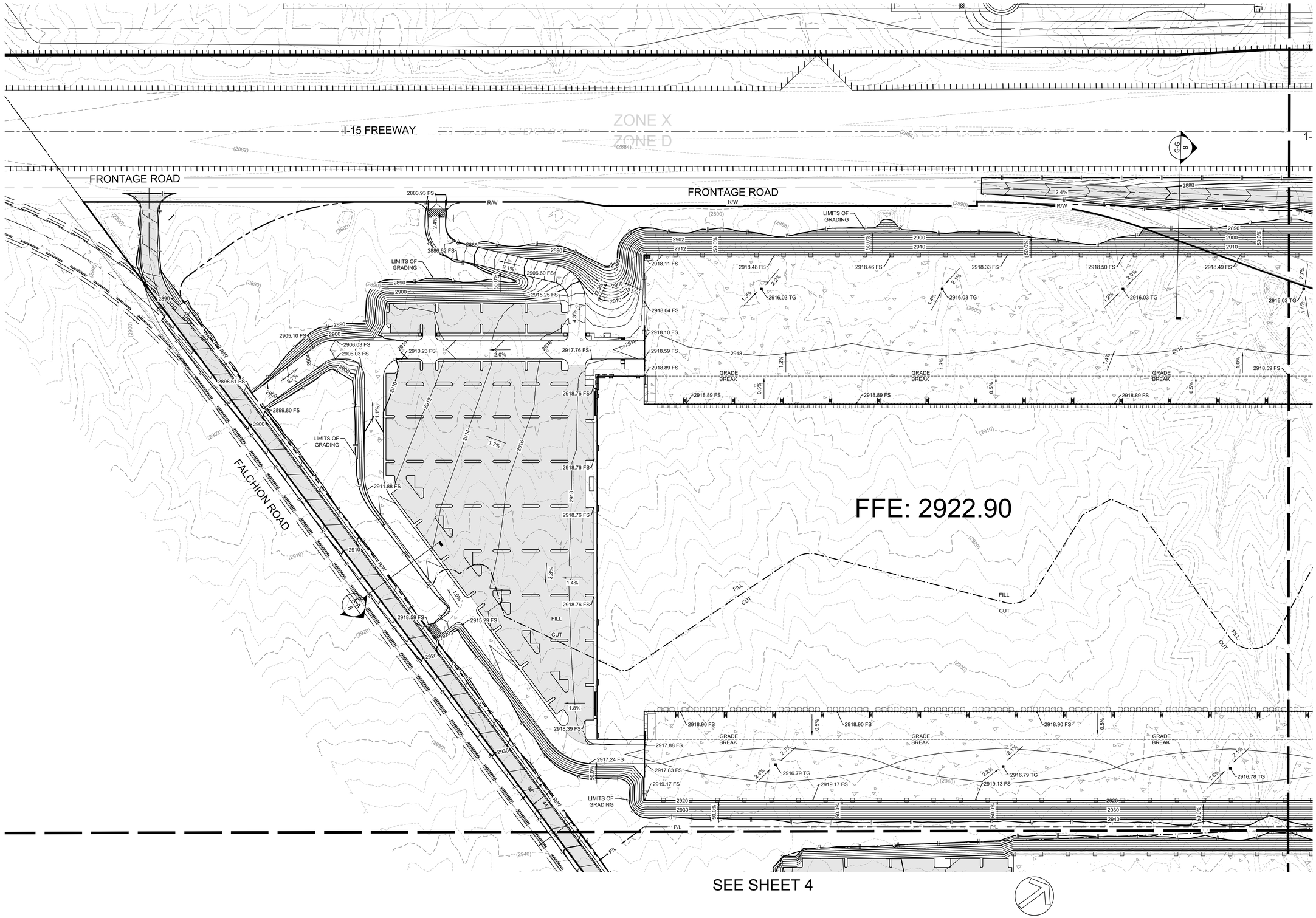

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CALIFORNIA

INLAND EMPIRE NORTH LOGISTICS CENTER

FGFW IV, LLC

CONCEPTUAL GRADING

APPLE VALLEY, CA 92307

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REVIEWED BY: SSCP63 DATE: SSCP64

CHECKED BY:
DESIGNED BY:
DRAWN BY:

FIRST SUBMITTAL DATE:

PROJECT NO.
FGFW0000-0001

SHEET NO.
2 OF 8

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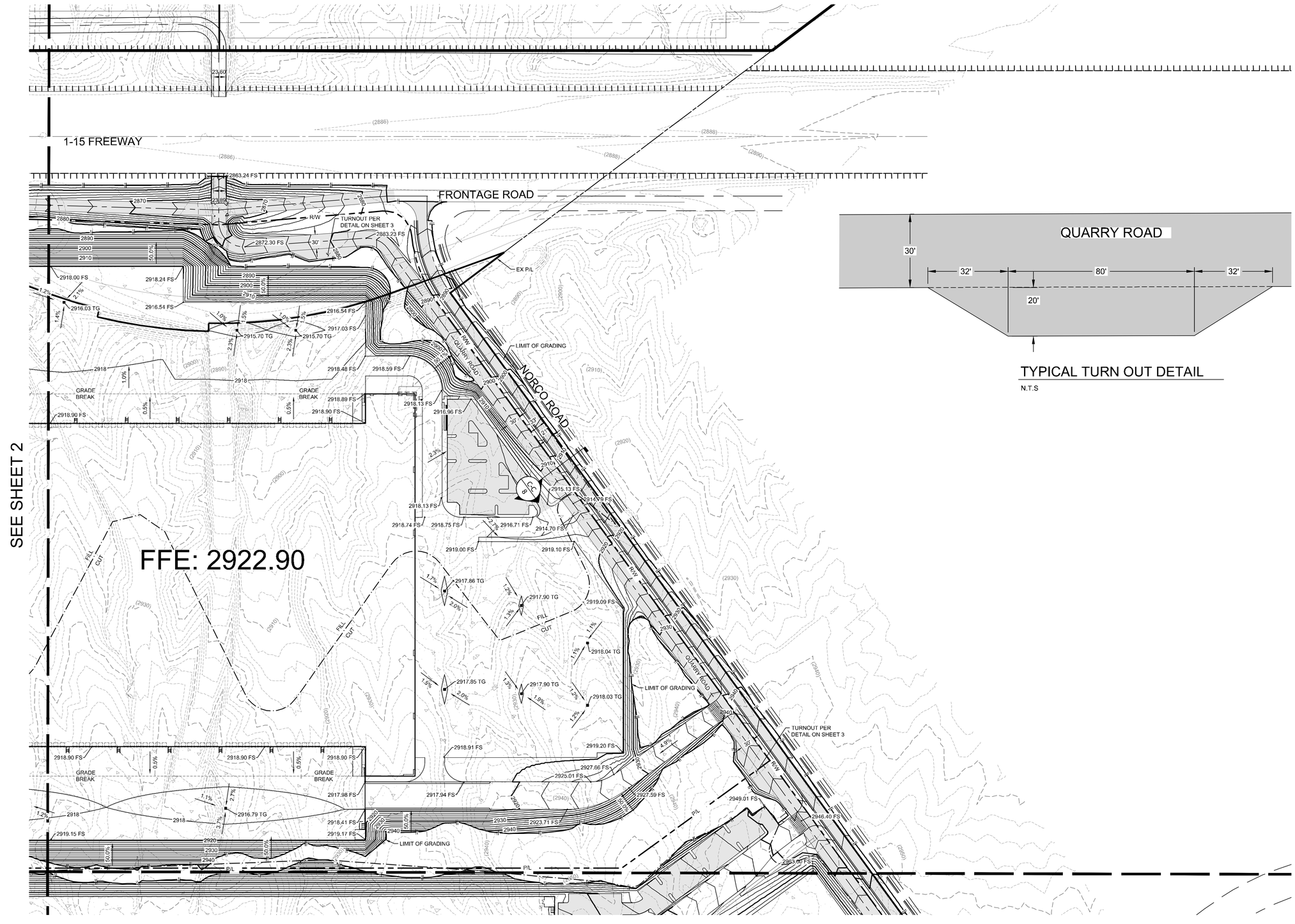

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Phone: 760.524.9100

INLAND EMPIRE NORTH LOGISTICS CENTER

FGFW IV, LLC

CONCEPTUAL GRADING

APPLE VALLEY, CA 92307

CALIFORNIA

NO.	DATE	REVISION	BY	CK

REVIEWED BY: SSCP63 DATE: SSCP64

CHECKED BY:
DESIGNED BY:
DRAWN BY:

FIRST SUBMITTAL DATE:

PROJECT NO.
FGFW0000-0001

SHEET NO.
3 OF 8

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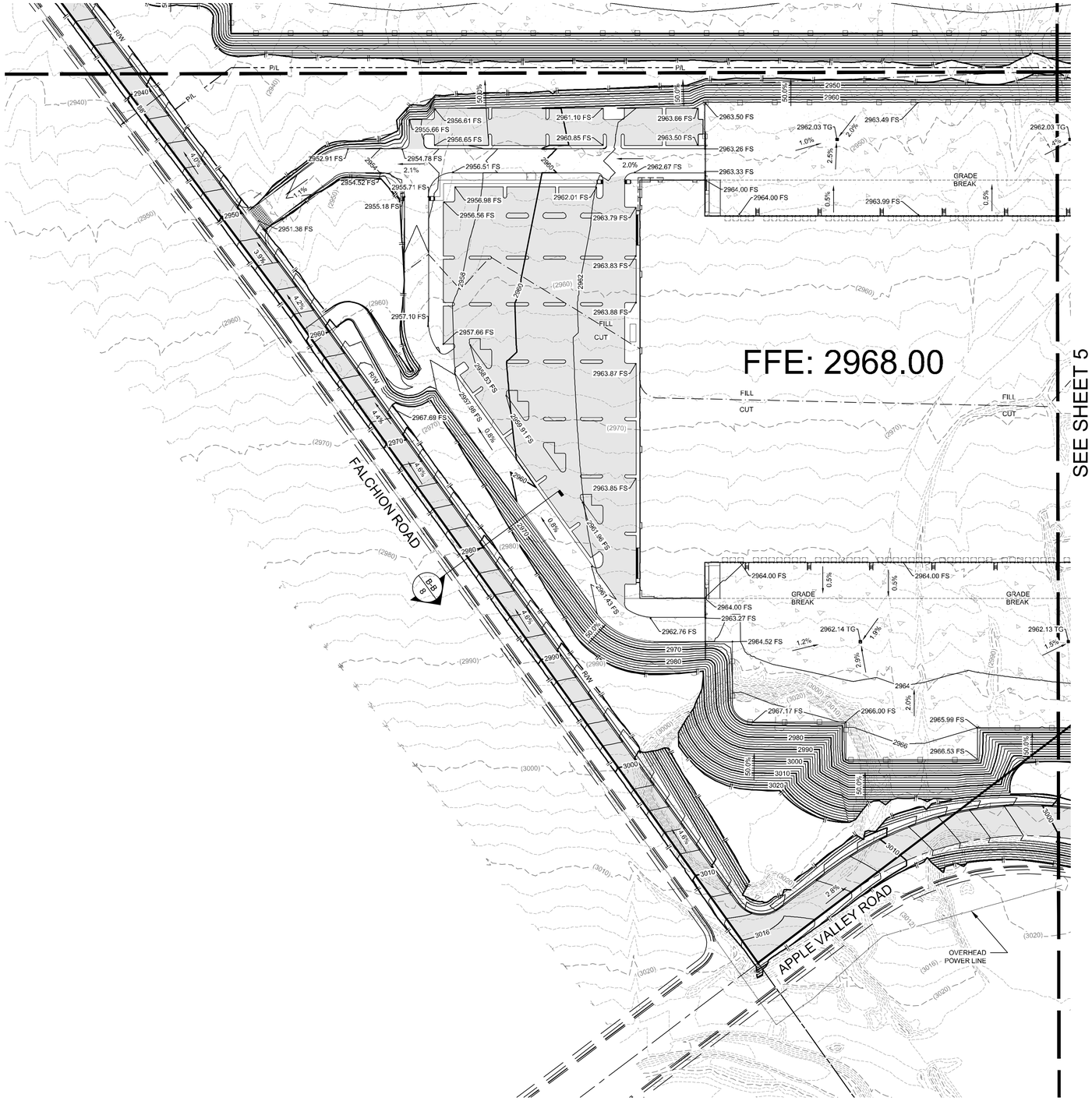
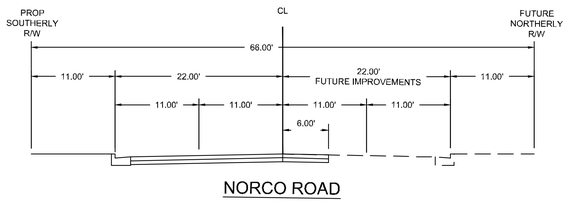
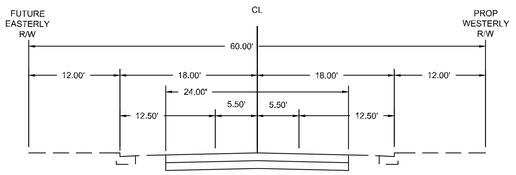
SEE SHEET 2

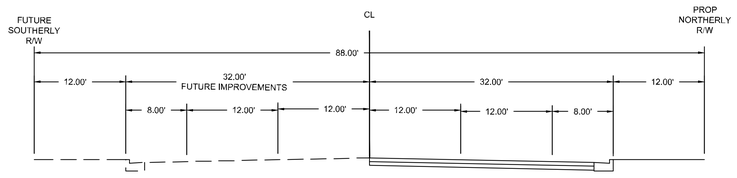




NORCO ROAD



FRONTAGE ROAD



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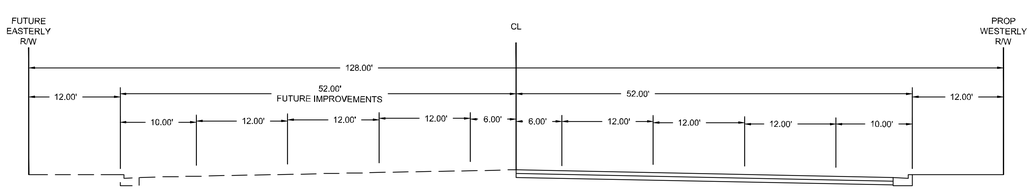

APPLE VALLEY ROAD

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Apple Valley, CA 92307
Phone: 760.524.9100

INLAND EMPIRE NORTH LOGISTICS CENTER

FGFW IV, LLC

APPLE VALLEY, CA 92307 CALIFORNIA

CONCEPTUAL GRADING

NO.	DATE	REVISION	BY	CK

REVIEWED BY: SSCP63

DATE: SSCP64

CHECKED BY:
DESIGNED BY:
DRAWN BY:

FIRST SUBMITTAL DATE:

PROJECT NO.
FGFW0000-0001

SHEET NO.
4 OF 8

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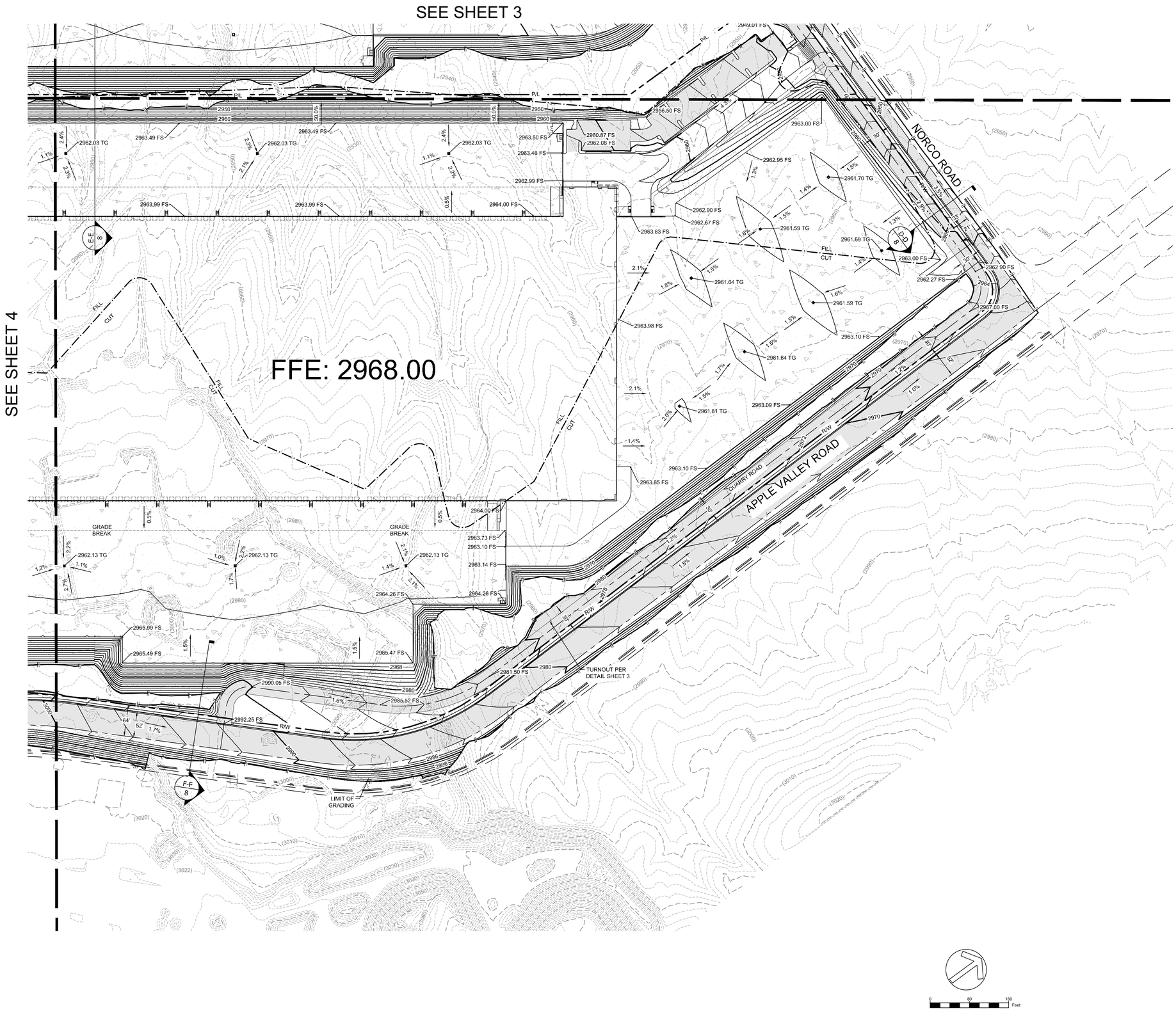

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FGFW IV, LLC

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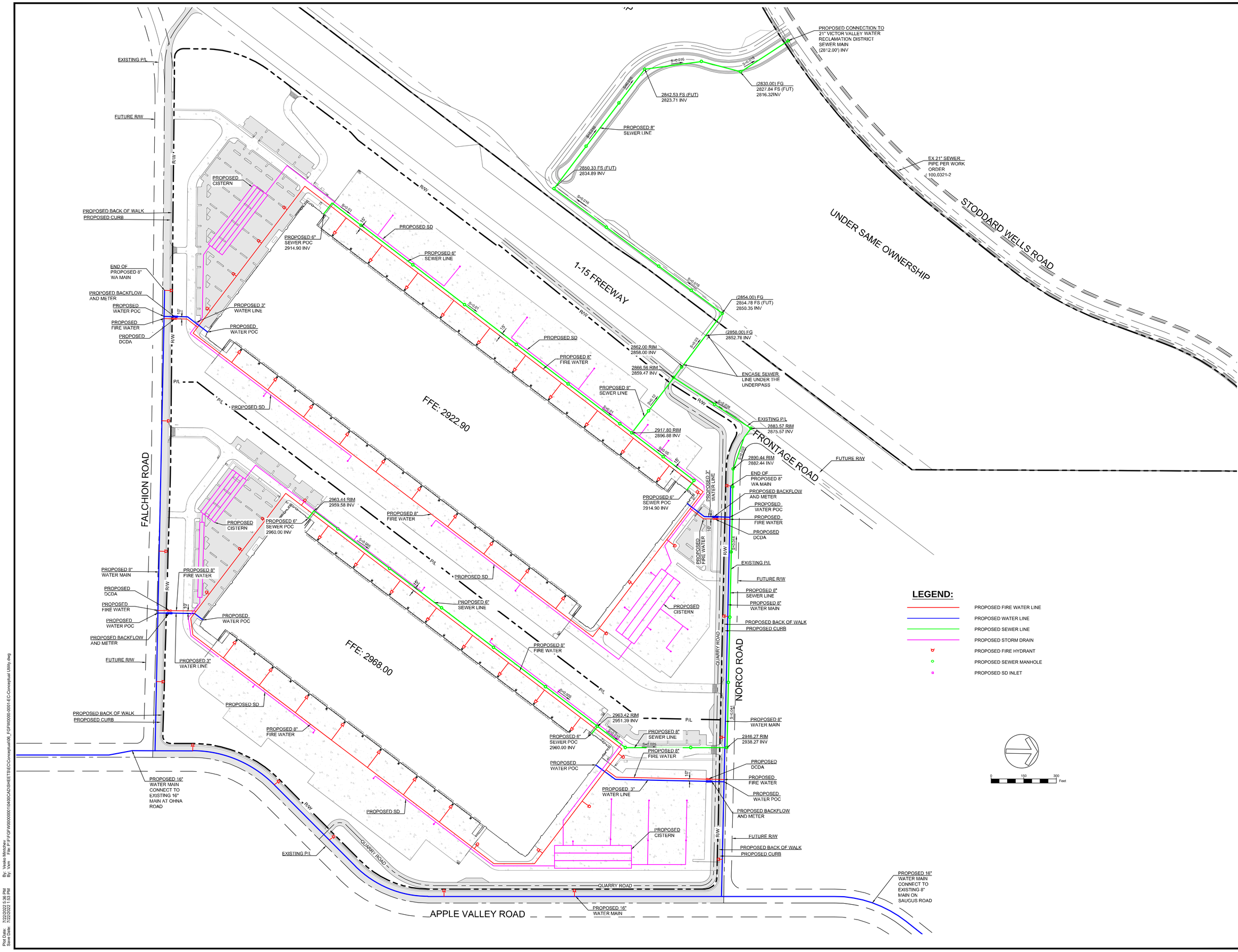

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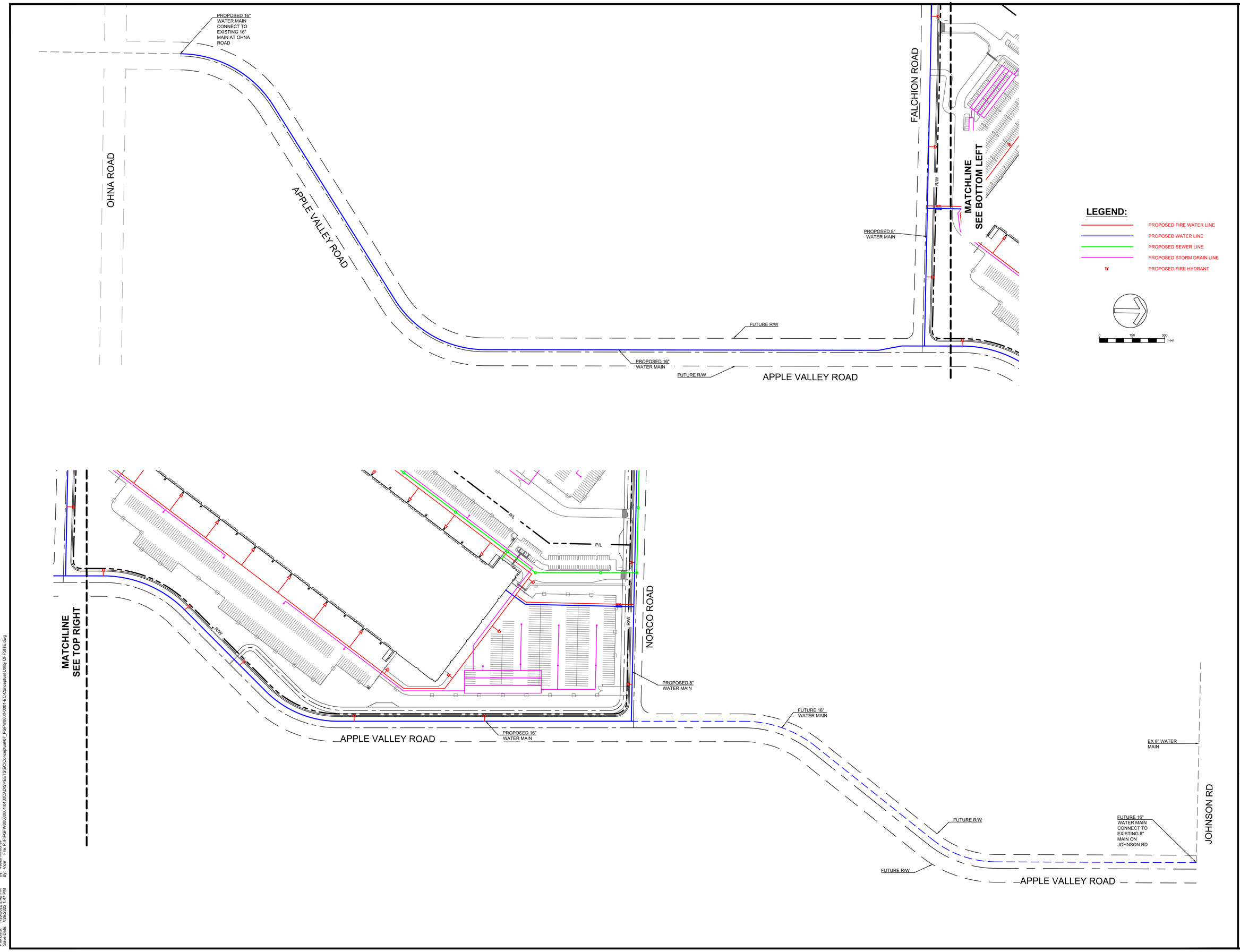

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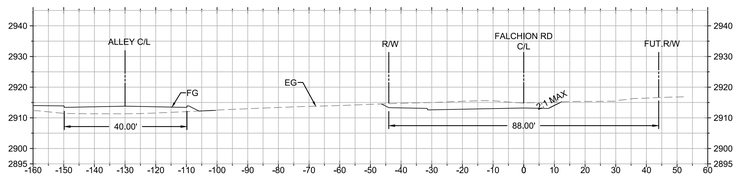

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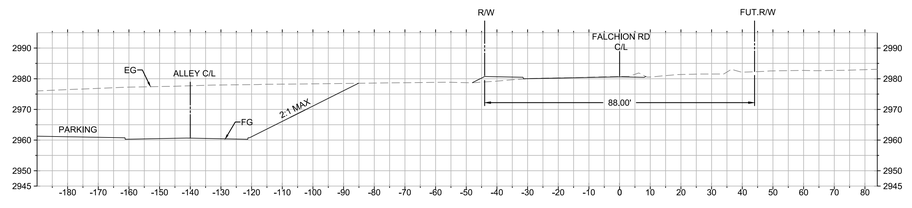

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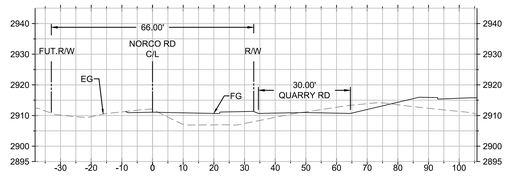

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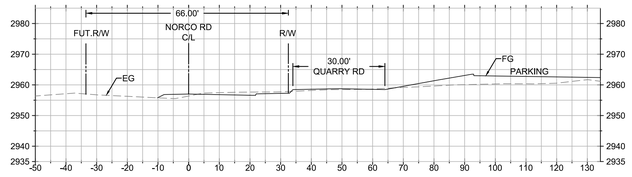

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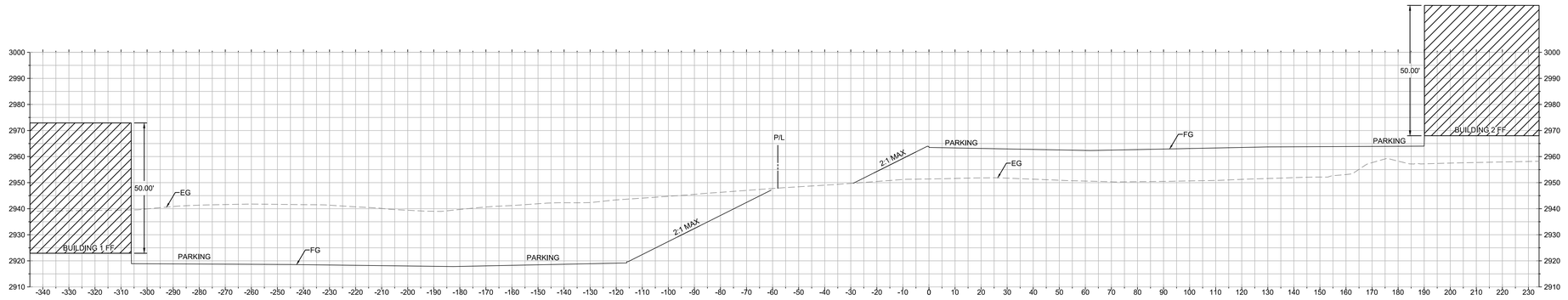

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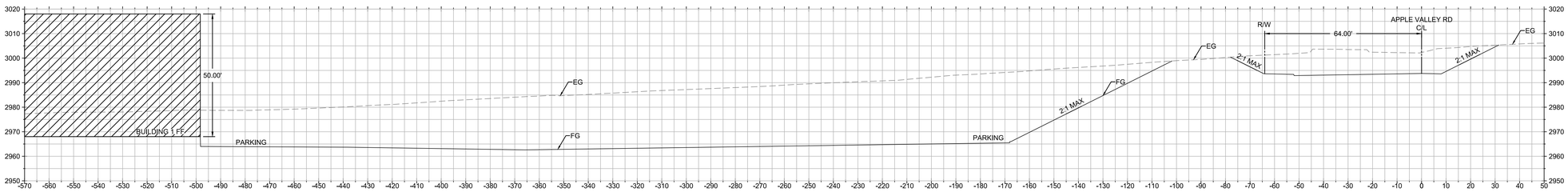

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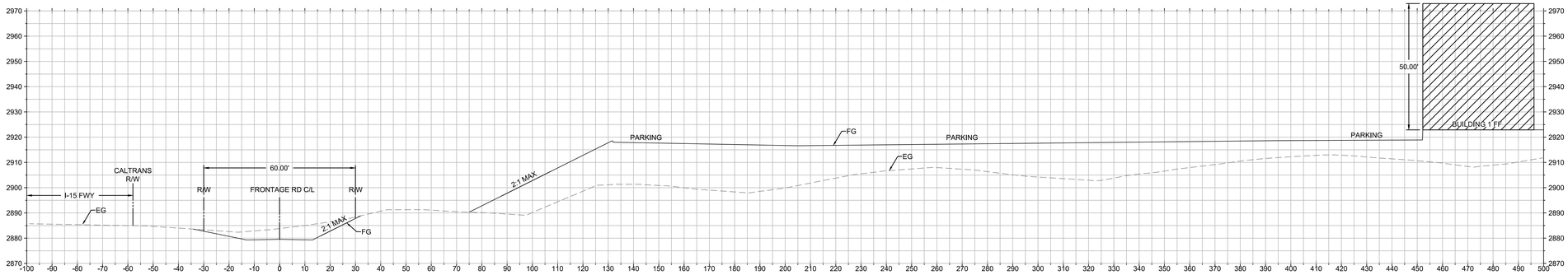

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Appendix H3

Water Supply Assessment Report

DRAFT

Water Supply Assessment

Inland Empire North Logistics Center Apple Valley Project San Bernadino County, California

SEPTEMBER 2023

Prepared for:

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A Site Plan
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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AF	acre-feet
AFY	acre-feet per year
APN	Assessor's Parcel Number
BAP	Base Annual Production
CEQA	California Environmental Quality Act
CWC	California Water Code
DWR	California Department of Water Resources
gpd	gallons per day
gpm	gallons per minute
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IENLCAV	Inland Empire North Logistics Center Apple Valley
mg/L	milligrams per liter
PSY	Production Safe Yield
PWS	public water system
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
USGS	United States Geological Survey
VVWRA	Victor Valley Wastewater Reclamation Authority
Watermaster	Mojave Basin Area Watermaster
WSA	Water Supply Assessment

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1 Introduction

1.1 Purpose of Document

Senate Bills (SB) 610 and 221 were enacted in 2002, amending the California Water Code (CWC) to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of the Bills is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies and ensuring that land use decisions for certain large development projects are fully informed as to whether a sufficient water supply is available to meet project demands. SB 610 requires preparation of a Water Supply Assessment (WSA) for a project that is subject to the California Environmental Quality Act (CEQA) and meets certain requirements.

The Inland Empire North Logistics Center Apple Valley Project (Project) has been determined to be subject to CEQA by the Town of Apple Valley (Town) acting as the CEQA lead agency. The Project qualifies as a "Project" per California Water Code Section 10912(a) because it is a proposed industrial, manufacturing, or processing plant, or industrial park that occupies more than 40 acres of land and has more than 650,000 square-feet of floor space. The lead agency will make an independent determination as to whether there is adequate water supply for the proposed Project, having considered the entire administrative record. In compliance with SB 610, this WSA examines the availability of the identified water supply under normal-year, single-dry-year, and multiple-dry-year conditions over a 20-year projection. This WSA also accounts for the projected water demand of the Project plus other existing and planned future uses of the identified water supply.

1.2 Project Location and Description

The approximately 178-acre Project site is located in the northwestern part of the town of Apple Valley, in the Victor Valley Region of San Bernardino County, California (Figure 1). The Project site is located directly east of I-15, north of Falchion Road and south of Norco Street, located on Assessor's Parcel Number (APN) 0472-031-08. Regional access to the Project site is provided via I-15, which is located adjacent to the Project site's western boundary. The Project site consists of vacant and undeveloped land, as well as disturbed land, unpaved roads, and a structure that is associated with the mining facility that is located directly east of the Project site.

According to the Apple Valley's General Plan Land Use Map and the Town's Zoning Map, the Project site has a land use and zoning designation of Regional Commercial with an additional designation of Industrial Overlay (Town of Apple Valley, 2015; Town of Apple Valley, 2021).

The Project would include construction of two industrial/warehouse buildings and associated improvements totaling approximately 2,604,446 square feet. Building 1 would be approximately 1,507,326 square feet while Building 2 would be approximately 1,097,120 square feet (Appendix A). The Project's associated improvements would include loading docks, truck and vehicle parking, and landscaped areas.

1.3 Water Supply Assessment Applicability

SB 610 amended CWC Sections 10910 and added Sections 66455.3 and 66473.7 to the Government Code with the intention of creating a direct relationship between water supply and land use and to connect developers, planners, and local water agencies at the early stage in the planning process through WSA's.

SB 610 establishes the legal framework for assessing the sufficiency of water supply for new development which qualify as a "Project". Per California Water Code Section 10912(a), a "Project" means any of the following:

- Proposed residential development of more than 500 dwelling units.
- Proposed shopping center or business establishment employing more than 1,000 persons, or having more than 500,000 square-feet of floor space.
- Proposed commercial office building employing more than 1,000 persons or having more than 250,000 square-feet of floor space.
- Proposed hotel or motel or both, having more than 500 rooms.
- Proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square-feet of floor area.
- Proposed mixed-use project that includes one or more of the above components.
- Proposed project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. (Water Code Section 10912(a)).

The Project qualifies as a "Project" per California Water Code Section 10912(a) because it is a proposed industrial, manufacturing, or processing plant, or industrial park that occupies more than 40 acres of land and has more than 650,000 square-feet of floor space.

The CWC, as amended by SB 610, requires that a WSA address the following questions:

- Is there a public water system that will service the project?
- Is there a current Urban Water Management Plan (UWMP) that accounts for the project demand?
- Is groundwater a component of the supplies for the project?
- Are there sufficient supplies to serve the project over the next 20 years?

The primary question to be answered in a WSA per the requirements of SB 610 is: *Will the total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed project, in addition to existing and planned future uses of the identified water supplies, including agricultural and manufacturing uses?*

The response to this question also informs and assists the lead agency in responding to the CEQA Guidelines Utilities and Service Systems question: *Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

1.3.1 Is There a Public Water System that Will Service the Project?

Section 10912 of the CWC defines a "public water system" as a system that has 3,000 or more service connections and provides piped water to the public for human consumption. The Project is located adjacent to the water service area established for Liberty Utilities (Apple Valley Ranchos Water) (also referred to as Liberty Utilities). The service area for Liberty Utilities currently does not include the Project area (Figure 2), but the Project applicant is working with Liberty Utilities to annex the Project site into the service area to supply water for all phases of the Project lifecycle (J. Haughton, personal communication, 2023). Liberty Utilities is an investor-owned public utility, meeting the definition of a Public Water System. Liberty Utilities provides water service primarily within the Town of Apple Valley. As of 2020, Liberty Utilities provides approximately 21,000 municipal connections. (Liberty Utilities, 2021).

Under SB 610, WSA reports must be prepared and furnished to local governments by the water utility serving that community for inclusion in any environmental documentation for projects meeting the specified requirements under Section 10912 (a) of the CWC and subject to CEQA. According to CWC Section 10910 (g)(1), "[…] the governing body of each public water system, or the city or county if either is required to comply with this act […] shall approve the assessment prepared pursuant to this section at a regular or special meeting." According to SB 610, the public water system serving the project area is required to prepare the WSA report.

1.3.2 Urban Water Management Plan Coverage

Urban Water Management Plans (UWMPs) are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. UWMPs must be updated and submitted to the California Department of Water Resources (DWR) every 5 years for review and approval. The DWR has identified the UWMP as a foundational document in the preparation of a WSA, noting that a thorough UWMP can provide the required information to fulfill the standards set forth by SB 610. Every urban water supplier that either delivers more than 3,000 AF per year (AFY) of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple dry-year scenarios; these are the same requirements of a WSA, as specified by SB 610. A WSA may also rely on additional water supply data beyond the information in the UWMP.

An UWMP was created and submitted to DWR to satisfy 2020 requirements by Liberty Utilities. The 2020 UWMP for Liberty Utilities contains detailed information about the urban water supplier's water supply and demand estimates. The 2020 UWMP serves as an update to Liberty Utilities water resource needs, water use efficiency programs, water reliability assessment and strategies to mitigate water shortage conditions and builds upon the last UWMP that was submitted in 2015 (Liberty Utilities, 2021). The water demand for the Project is not specifically accounted for in the UWMP, however, the site is included in the General Plan which shows the existing general plan designation and zoning for the site.

1.3.3 Is Groundwater a Component of the Supplies for the Project?

Groundwater is the only source of water supply for the Liberty Utilities' distribution system and the only source proposed for the Project. Liberty Utilities provides domestic water from potable supply wells within its service area and provides water for agricultural purposes from groundwater wells which are separate from Liberty Utilities' potable water system.

2 Project Water Demand

Construction of the Project is anticipated to commence in January 2024 (if the Project is approved) and be completed by November 2025. Construction water demand was not provided by the Project applicant. During construction, it is anticipated that water would be delivered to the Project by truck by Liberty Utilities.

During operation, water would be supplied to the Project through water mains. Due to the unknown plans of future tenants, water demand from three different commercial warehouse businesses within Liberty Utilities Service area was used to estimate potential annual water volumes for operation and maintenance. Table 2.1 shows the water use for the example warehouse developments provided by Liberty Utilities.

Table 2.1. Water Usage for Example Warehouses

Business	Size (sf)	Gallons per day	Acre feet per year	Gal/day per sq. foot
Big Lots	1,360,875	673	0.75	0.0005
Fresenius Medical Blue	150,000	378	0.42	0.003
WalMart Distribution Center	1,080,000	29,920	33.51	0.03

Source: G. Miles, personal communication, June 20, 2022
Notes: sf = square feet

Table 2.2 shows the three different water use rates applied to the Project footprint. Each scenario has been converted to AFY. According to Liberty Utilities, these water usage estimates account for both operational and irrigation water demand for each building (G. Miles, personal communication, August 30, 2023) and assumes any new Project will utilize low water use plantings and efficient drip irrigation.

Table 2.2. Estimated Project Water Usage for Operation and Landscape Irrigation

Business	Size (sf)	Water Demand (gpd per sf)1	Water Demand (gpd)	Water Demand (AFY) 2	Water Demand Average (AFY)
IENLCAV Project	2,604,446	0.0005	1,302	1.46	33
		0.003	7,813	8.75	
		0.03	78,133	87.52	

Notes: sf=square feet; gpd=gallons per day; AFY = acre-feet per year; 1 acre-foot = 325,851 gallons.
1 Representative similar distribution center project demands. See Table 2.1.
2 Average of similar distribution center projects demands applied to the Project footprint.

Water demand potential for the Project is approximately 33 AFY using an average of the demand estimates presented in Table 2.2. Water demand is expected to remain consistent over the 20-year period post-construction (Table 2.3).

Table 2.3. Projected Water Demand of Project over 20-year period

Supply/Demand	Projected (AF)				
	2025[1]	2030	2035	2040	2045
Total Water Demand (AFY)	33	33	33	33	33

Notes: AF = acre-feet, 1 acre-foot = 325,851 gallons.
1 Construction water demand not provided by Project applicant. Construction water demand is anticipated only in 2024-2025.

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3 Water Resources Plans and Programs

3.1 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) is a package of three bills (Assembly Bill 1739, SB 1168, and SB 1319) and provides local agencies with a framework for managing groundwater basins in a sustainable manner. The SGMA establishes minimum standards for sustainable groundwater management, roles and responsibilities for local agencies that manage groundwater resources, priorities, and timelines to achieve sustainable groundwater management within 20 years of adoption of a Groundwater Sustainability Plan (GSP). The SGMA also requires all high and medium priority basins be sustainably managed. The Mojave Basin Area is considered an adjudicated and very low priority[1] basin in DWR's 2019 SGMA Basin Prioritization and thus is exempt from the requirements of developing a GSP (DWR, 2019). Instead, the basin is managed by a court-appointed water master, as discussed in Section 4.

3.2 Urban Water Management Planning Act

The Urban Water Management Planning Act (CWC Sections 10610–10657) requires urban water suppliers to prepare a UWMP every 5 years and to submit it to the DWR, the California State Library, and any city or county within which the supplier provides water supplies. All urban water suppliers, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) annually are required to prepare a UWMP (CWC Section 10617).

The Urban Water Management Planning Act was enacted in 1983. Over the years, it has been amended in response to water resource challenges and planning imperatives confronting California. A significant amendment was made in 2009 as a result of the governor's call for a statewide 20% reduction in urban water use by 2020, referred to as "20x2020," the Water Conservation Act of 2009, and "SB X7-7." This amendment required urban retail water suppliers to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20% by 2020. Beginning in 2016, urban retail water suppliers were required to comply with the water conservation requirements in SB X7-7 in order to be eligible for state water grants or loans.

A subsequent substantial revision to the Urban Water Management Planning Act was made in 2018 through a pair of bills (i.e., Assembly Bill 1668 and SB 606), described below in Section 3.3, Water Use Efficiency Standards. These changes include, among other things, additional requirements for Water Shortage Contingency Plans, expansion of dry-year supply reliability assessments to a 5-year drought period, establishment of annual drought risk assessment procedures and reporting, and new conservation targets referred to as "annual water use objectives," which will require retailers to continue to reduce water use beyond the 2020 SB X7-7 targets. The Urban Water Management Planning Act contains numerous other requirements that a UWMP must satisfy.

[1] Under the 2019 Basin Prioritization, all adjudicated basins were automatically assigned a very low priority because they are excluded from SGMA. A "very low" priority in this case does not suggest that a basin does not have problems with respect to groundwater.

3.3 Water Use Efficiency Standards

The Water Conservation legislation of 2018 (SB 606 and Assembly Bill 1668)— referred to as "Making Water Conservation a California Way of Life" or the "2018 Water Conservation Legislation"— established a new foundation for long-term improvements in urban water supplier conservation and drought planning in order to adapt to climate change and the longer more intense droughts in California. Together, Assembly Bill 1668 and SB 606 lay out a new long-term water conservation framework for California. This new framework is far-reaching for both the urban and agricultural sectors of California and represents a major shift in focus. Programs and initiatives are organized around four primary goals:

1. Use water more wisely
2. Eliminate water waste
3. Strengthen local drought resilience
4. Improve agricultural water use efficiency and drought planning

Collectively, this legislation provides a road map for all Californians to work together to ensure that we will have enough water now and, in the years, ahead. One of the major outcomes of the legislation is the adoption of long-term standards for the efficient use of water and performance measures for commercial, industrial, and institutional water use on or before June 30, 2022. The bill establishes a standard for indoor water use of 55 gallons per capita daily to be reached by 2025, 52.5 gallons per capita daily beginning in 2025, decreasing to 50 gallons per capita daily beginning in 2030, or an alternative to this standard as determined jointly by DWR and State Water Resources Control Board in accordance with necessary studies and investigations.

On July 8, 2021, the Governor signed Executive Order N-10-21 which asks Californians to voluntarily reduce water use by 15% from 2020 levels. The Executive Order was in direct response to California experiencing the second driest year on record and the ongoing drought.

On January 4, 2022, the State Water Resources Control Board adopted an emergency regulation that prohibits certain wasteful water use practices statewide and encourages Californians to monitor their water use more closely while building habits to use water wisely.

3.4 Water Shortage Contingency Plan

Liberty Utilities includes a water shortage contingency plan within their UWMP that presents how the water supplier will respond in the event of an actual water shortage contingency. The main points are summarized below:

1. Beginning in 2022, Liberty Utilities will be required to submit an Annual Assessment reviewing unconstrainted water demands for the current year and the potential upcoming single dry year.
2. Liberty Utilities will incorporate multiple standard water shortage levels into their management plans ranging from 10 percent to greater than 50 percent.
3. Customers will be required to reduce their consumption levels by the percentage specified in the plan.
4. Increased tracking of customer water usage and outdoor usage restrictions.
5. Emergency Response Plan

4 Water Resources Inventory

4.1 Local Surface Water

Liberty Utilities does not use surface water to meet its water demands, although the Project site is just under 2 miles northeast of the Mojave River. The Mojave River is an important resource in the area and accounts for nearly 80 percent of total basin natural recharge (Liberty Utilities, 2021).

4.2 Groundwater

Liberty Utilities has historically pumped groundwater directly from the Mojave Basin Area and the Project will rely solely on groundwater. Liberty Utilities' historical water supply can be found in Table 4.1.

Table 4.1. Historical Water Supply for Liberty Utilities

Calendar Year	System Water Supply Sources (AF)		Total (AF)
	Mojave Basin Area Groundwater (Potable Use)	Mojave Basin Area Groundwater (Ag. Irrigation)	
2011	12,479	5,751	18,230
2012	12,475	4,314	16,788
2013	12,255	4,869	17,124
2014	12,275	4,211	16,486
2015	9,582	3,933	13,515
2016	9,257	4,467	13,724
2017	9,470	4,637	14,106
2018	9,541	4, 765	14,307
2019	9,367	4,172	13,539
2020	10,067	4,912	14,979

Source: Liberty Utilities, 2021
Notes: AF = acre-feet; 1 acre-foot = 325,851 gallons.

The Basin Area is subdivided into five smaller areas (Oeste, Alto, Este, Centro, and Baja) and the Project will be built within the Alto Subbasin. Groundwater movement occurs between each of the subbasins.

4.2.1 Groundwater Basin Description

The Project is to be located within the Upper Mojave River Valley Groundwater Basin (DWR Basin No. 6-042) as mapped by the California Department of Water Resources (Figure 2) as well as the Mojave Basin (Alto Subarea) as designated by the Mojave Basin Area Watermaster. The Basin is an adjudicated groundwater basin and is exempt from the requirements of developing a GSP as it is designated as a very-low priority basin. Because the Project is within an adjudicated area, it is not subject to the requirements of California's Sustainable Groundwater Management Act, but instead is subject to groundwater pumping allocations under the court adjudication set up to

mitigate long-term overdraft, to keep subareas in balance, and to meet biological resource mitigation obligations (Mojave Basin Area Watermaster, 2023).

Final Judgement was entered in 1996 (Appendix B) in an effort to preserve the limited resources typical of arid regions by regulating groundwater allocations. The adjudication was initiated by a 1990 lawsuit filed by the City of Barstow and Southern California Water Company, claiming excessive water use in the Upper Mojave River Basin, thus reducing the amount of surface and groundwater available to the central Basin. Additional cross-complaints were filed and several parties joined the lawsuit. For more than 18 months, water producers of all types who were reliant upon the Mojave River Basin commenced negotiations which eventually produced the "Final Judgment" on how the groundwater supply could be fairly distributed (Water Education Foundation, 2022). The purpose of the Judgment was to create incentives to conserve local water, guarantee that downstream producers will not be adversely affected by upstream producers, and assess producers to obtain funding for the purchase of imported water. To carry out the Mojave Basin Judgment, the Mojave Water Agency assigned Base Annual Production amounts to each producer using 10-acre feet per year or more.

Mojave Water Agency is the current Court-appointed Watermaster for the Mojave Basin Area Judgment. The Watermaster's main responsibilities are to monitor and verify water production, collect required assessment, conduct studies, and prepare an annual report. The adjudication is primarily concerned with maintaining groundwater levels to help maintain a specified level of groundwater pumping in the area (Mojave Water Agency, 2023). The Watermaster does not have a specific obligation towards maintaining water quality; however, it is noted that continued pumping in depleted areas may result in long- term local negative impacts such as water quality problems due to migration of lesser quality water. The Watermaster is currently responsible for reporting the following types of data in the Mojave Basin Area:

- Verification of reported groundwater production
- Mojave River Flows
- Precipitation Page 6-4 Salt and Nutrient Management Plan, Mojave Water Agency
- Wastewater Discharges
- Subsurface Inflow
- State Water Project and wastewater imports
- Groundwater levels
- Ungauged surface water inflows

The groundwater basin is bounded on the north from basement rock outcrops near Helendale to those in the Shadow Mountains. The southern boundary is the contact between Quaternary sedimentary deposits and unconsolidated basement rocks of the San Bernardino Mountains (Figure 3). The basin is bounded on the southeast by the Helendale fault and on the east by basement exposures of the mountains surrounding Apple Valley. In the west, the boundary is marked by a surface drainage divide between this basin and El Mirage Valley Basin, and a contact between alluvium and basement rocks that form the Shadow Mountains (DWR, 2004). It is important to note that the definition of the Upper Mojave River Valley Groundwater Basin and the Mojave Basin Area are distinctly separate from each other with the Mojave Basin area being smaller in size and more closely following the shape of the Mojave River.

4.2.2 On-Site Well Inventory and Groundwater Levels

The Mojave Basin Area Watermaster monitors groundwater levels that represent conditions throughout the Alto Subarea in three areas: 1) the Western portion located generally west of the Mojave River (the river is included in the western portion); 2) the Eastern portion located generally east of the Mojave River; and 3) the Alto Transition Zone. The Alto Subarea has the largest water supply in the Mojave Basin (Town of Apple Valley, 2009). Alto water levels near the river exhibit seasonal variation, rising in winter and falling in summer. The Mojave Basin Area Watermaster notes that variability showing lower lows and lower highs is an indication of extractions exceeding recharge over time. Water levels in the western portion of Alto in the regional aquifer exhibit declines consistent with locally heavy pumping and limited local recharge. Water levels in the eastern portion of Alto indicate similar trends although to a lesser extent, most likely due to limited pumping in the regional aquifer east of the river. Continued pumping in depleted areas of the regional system may result in long-term local negative impacts such as declining yields and water quality problems. Water levels in wells near the river, particularly in the south part of Alto, experienced a trend of decline for 7 years consistent with limited recharge due to drier than average conditions. Water supply conditions for the past 10 years have been dry (43.3% of Base Period average). The Mojave Basin Area Watermaster has determined that continuation of dry conditions will result in further water level declines (Mojave Basin Area Watermaster, 2023).

According to the SGMA Data Viewer, there is one groundwater well (State Well No. 06N04W26R001S) that is in the Project area. Groundwater levels were last measured in these wells on August 30, 1957 when the depth to groundwater was 186.38 feet below the ground surface. From 1960 to 1995, the groundwater level in the Alto Subarea declined approximately 60 feet from an elevation of 2815 feet to approximately 2,755 feet (Town of Apple Valley, 2009). Since the Final Judgement, however, wells near the Transition zone that are responsible for tracking the recharge of the Alto Subarea have seen water level stability indicating the positive influence of the Mojave Basin Area Watermaster (Mojave Basin Area Watermaster, 2023).

4.2.3 Groundwater Quality

Bulletin 118 as presented by DWR (2004) presents the following information on water quality for the Upper Mojave River Valley Groundwater Basin.

> Calcium bicarbonate character waters are found near the San Bernardino Mountains and near the Mojave River channel. Sodium bicarbonate waters are found near Victorville. Sodium bicarbonate-sulfate waters are found near Adelanto. Sodium-calcium sulfate waters occur west of Victorville. Sodium chloride waters are found in Apple Valley. High nitrate concentrations occur in the southern portion of the basin and high iron and manganese concentrations are found near Oro Grande. Groundwater has been contaminated with trichloroethane (TCE) at the former George Air Force Base, now a federal Superfund site. Leaking underground storage tanks in and around Victorville have introduced fuel additives benzene, toluene, ethlybenzene, xylene, and methyl tertiary butyl ether into groundwater.

However, there are no groundwater quality issues present in groundwater delivered for potable use. The UWMP provides the following information regarding groundwater quality served by Liberty Utilities (2021):

> Liberty Utilities currently obtains potable groundwater supplies from 20 active wells in the Mojave Basin Area. According to Liberty Utilities' annual Consumer Confidence Reports, potable

> groundwater quality within Liberty Utilities' service area currently meets all the regulatory requirements. There have been no contaminants detected that exceed any federal or state drinking water standards. Hundreds of samples analyzed every month and thousands every year by Liberty Utilities contract certified laboratories assure that all primary (health related) and secondary (aesthetic) drinking water standards are met. […] Currently, water quality does not affect water supply reliability in the Liberty Utilities service area. Therefore, no anticipated change in reliability or supply due to water quality is anticipated based on the present data.

4.3 Imported Water and Wastewater/Recycled Water

Liberty Utilities does not purchase imported water supplies to meet its current water demands, however, it does pay a replacement water fee to the Mojave Basin Area Watermaster for any supply it uses in excess of its pumping limits. Base Annual Production limits are discussed in detail in Section 5. The Watermaster also manages the transfer of surplus water between producers in the Basin. Surplus and deficits between the producers are calculated annually.

Liberty Utilities also does not rely on any recycled water at the current time. According to the 2020 UWMP, the Victor Valley Wastewater Reclamation Authority (VVWRA), which provides wastewater collection and treatment services to Liberty Utilities, has constructed facilities to serve recycled water within Liberty Utilities' service area, if needed in the future.

4.4 Climate

The Town of Apple Valley is classified as a semi-arid climate with low humidity, relatively low and irregular precipitation, and high evapotranspiration. Apple Valley averages approximately 5.4 inches of precipitation annually based upon the data collected from 1917 to 2015 (Liberty Utilities, 2021), with the majority of the precipitation occurring between December and March. The Mojave Region Integrated Regional Water Management Plan projects a temperature increate of up to 4.0 °F by 2050, and states the following:

> Increased temperatures will lead to less snowfall at lower elevations and decreased snowpack. By midcentury it is predicted that Sierra Nevada snowpack will reduce by 25 percent to 40 percent of historical average. Decreased snowpack is projected to be greater in the northern Sierra Nevada, closer to the origin of SWP water, than in the southern Sierra Nevada. Furthermore, an increase in "rain on snow" events may lead to earlier runoff. Given these changes water shortages worse than the 1977 drought could occur one out of every six to eight years by the middle of the 21st century and one out of every two to four years by the end of 21st century. Increased demand combined with declining flows will likely lead to decreased carryover storage from year to year.

The Mojave Water Agency and DWR are working to implement statewide restrictions, efficiency, and guidance for how to manage water supply and demand into the future. It will be important for public water systems to implement strategies to achieve long-term sustainability.

5 Reliability of Water Supplies

5.1 Apple Valley Water Demand and Supplies

As the Project applicant is currently working with Liberty Utilities to annex the Project site into its' service area, it is assumed Liberty Utilities will be the sole water provider for the Project. Actual and projected water supplies for the Town of Apple Valley are included in Table 5.1 and Table 5.2. These projections were taken from the 2020 UWMP for the Liberty Utilities – Apple Valley and show the actual and projected supply and demand estimates for a normal water year in 5-year increments. Table 5.3 and Table 5.4 show the estimates for a single dry year and multiple dry years, respectively. The supply and demand differences are zero as Liberty Utilities only pumps the amount of water necessary to serve the demand in any given year.

Table 5.1. Current and Projected Water Demand for Normal Year

	Actual (AF)	Projected (AF)				
Water Sources	2020	2025	2030	2035	2040	2045
Demand						
Single Family	6,486	7,107	7,579	8,077	8,602	9,156
Industrial	2	2	2	2	2	2
Commercial	1,736	1,837	1,909	1,984	2,064	2,149
Institutional/Government	517	547	568	591	615	640
Landscape	588	622	646	672	699	727
Agricultural Irrigation	4,912	4,950	4,950	4,950	4,950	4,950
Losses	710	751	781	812	844	879
Other	28	30	31	32	34	35
Total	**14,979**	**15,846**	**16,466**	**17,120**	**17,810**	**18,538**

Source: Liberty Utilities, 2021
Notes: AF = acre-feet; 1 acre-foot = 325,851 gallons.

Table 5.2. Projected Water Supply and Demand Comparison for Normal Year

	Projected (AF)				
Supply/Demand	2025	2030	2035	2040	2045
Total Water Demand	15,846	16,466	17,120	17,810	18,538
Total Potable Supply	15,846	16,466	17,120	17,810	18,538
Difference	**0**	**0**	**0**	**0**	**0**

Source: Liberty Utilities, 2021
Notes: AF = acre-feet; 1 acre-foot = 325,851 gallons.

Table 5.3. Projected Water Supply and Demand Comparison for Single Dry Year

	Projected (AF)				
Supply/Demand	2025	2030	2035	2040	2045
Total Water Demand	14,922	15,506	16,122	16,772	17,458

Table 5.3. Projected Water Supply and Demand Comparison for Single Dry Year

Supply/Demand	Projected (AF)				
	2025	2030	2035	2040	2045
Total Potable Supply	14,922	15,506	16,122	16,772	17,458
Difference	0	0	0	0	0

Source: Liberty Utilities, 2021
Notes: AF = acre-feet; 1 acre-foot = 325,851 gallons.

Table 5.4. Projected Water Supply and Demand Comparison for Multiple Dry Years

	Projected (AF)					
		2025	2030	2035	2040	2045
First Year	Supply Totals	19,285	20,039	20,835	21,675	22,561
	Demand Totals	19,285	20,039	20,835	21,675	22,561
	Difference	0	0	0	0	0
Second Year	Supply Totals	17,760	18,454	19,188	19,961	20,777
	Demand Totals	17,760	18,454	19,188	19,961	20,777
	Difference	0	0	0	0	0
Third Year	Supply Totals	18,114	18,823	19,571	20,360	21,192
	Demand Totals	18,114	18,823	19,571	20,360	21,192
	Difference	0	0	0	0	0
Fourth Year	Supply Totals	17,440	18,122	18,842	19,602	20,403
	Demand Totals	17,440	18,122	18,842	19,602	20,403
	Difference	0	0	0	0	0
Fifth Year	Supply Totals	14,296	14,856	15,446	16,069	16,726
	Demand Totals	14,296	14,856	15,446	16,069	16,726
	Difference	0	0	0	0	0

Source: Liberty Utilities, 2021
Notes: AF = acre-feet; 1 acre-foot = 325,851 gallons.

The UWMP states the following with regard to limits on groundwater production (Liberty Utilities, 2021):

> The Mojave Basin Area Judgment assigned Base Annual Production rights to producers which historically used 10 AFY or more, based on historical production. BAP is defined as the producer's highest annual use verified for the five-year base period from 1986 to 1990. Parties to the Judgment are assigned a variable Free Production Allowance (FPA) by the Watermaster, which is a percentage of BAP set for each Subarea for each year. The allocated FPA represents each producer's share of the water supply available for that subarea. [Liberty Utilities'] current FPA for the Alto Subarea is 55 percent of BAP for municipal and industrial and 70 percent of BAP for agriculture.
>
> Production Safe Yield (PSY) is determined for each Subarea within the Mojave Basin Area. The PSY in each Subarea is assumed to equal the average net natural water supply plus the expected return flow from the previous year's water production. Exhibit H of the Judgment requires that in the event the FPA exceeds the estimated PSY by five percent or more of BAP, the Watermaster recommends

> a reduction in FPA equal to, but not more than, a full five percent of the aggregate Subarea BAP. […] If Liberty Utilities pumps more than its FPA, then it must pay the Watermaster to purchase SWP replacement water equal to the amount of production in excess of the FPA. Alternatively, Liberty Utilities may meet its obligation by transferring unused FPA from another party within the Subarea.

Liberty Utilities' BAP to the Mojave Basin Area – Alto Subarea was 13,610 AFY and its FPA was 7,940 AF for FY 2021-22 with 7,486 AF being the Base Free Production Allowance (55% of the total BAP), and 454 AF added from a carryover from the previous year (Mojave Area Basin Watermaster, 2023). The BAP for Liberty Utilities has increased approximately 280 AF since FY 2011-2012 as a result of acquiring additional water rights. While water suppliers are allowed to exceed their FPA limits, they are responsible for paying a fee for any water needed in surplus of the FPA. For FY 2021-2022 Liberty Utilities had a replacement water obligation of 792 AF, which the Watermaster was responsible for acquiring. According to the Watermaster 2021-2022 Annual Report:

> Producers in each Subarea are allowed to produce as much water as they need annually to meet their requirements, subject only to compliance with the Physical Solution set forth in the Judgment. An underlying assumption of the Judgment is that sufficient water will be made available to meet the needs of the Basin in the future from a combination of natural supply, imported water, water conservation, water reuse and transfers of FPA among parties.

A comparison of Liberty Utilities' FPA and Verified Production from 2017 to 2022 is shown in Table 5.5. In years where Liberty Utilities uses more water than their FPA, they are required to purchase replacement water at a high cost. Table 5.5 shows that in the last five years, Liberty Utilities has finished with a surplus of unused FPA water in four of them. This is evidence that Liberty Utilities is actively managing their supplies within the confines of their FPA limits.

Table 5.5. Liberty Utilities Free Production Allowance and Verified Production

	2017-2018	2018-2019	2019-2020	2020-2019	2021-2022
Total Free Production Allowance (AF)	10,825	10,715	10,294	9,360	7,940
Verified Production (AF)	8,276	7,907	8,420	8,906	8,732
Unused FPA (AF)	2,549	2,808	1,874	454	0
Replacement Water Obligation (AF)	0	0	0	0	792

Source: Mojave Area Basin Watermaster 2019, 2020, 2021, 2022, 2023
Notes: 1 acre-foot = 325,851 gallons.

The population forecast for Liberty Utilities' service area is presented in Table 5.6. Liberty Utilities is expecting a growth increase for the next 20 years which includes associated building growth such as the Project, which is considered Regional Commercial development. For example, the UWMP projects a 101 acre-foot increase in yearly commercial water demand between 2020 and 2025, and continues to increase it in five-year increments thereafter. According to the UWMP, Liberty Utilities has been able to meet its demands even with decreasing supply. For example, the demand total for Liberty Utilities in 2011 was 18,230 acre-feet, the highest amount in the last 10 years. This supply, however, is nearly equivalent to the to the demand estimated for 2045 and shows that Liberty

Utilities has been able to curb demand and match supply even with a moderate amount of population growth forecasted for the region.

Table 5.6. Liberty Utilities Service Area Population – Current and Projected

	2020	2025	2030	2035	2040	2045
Population Served	61,444	64,828	68,399	72,166	76,141	80,334

Source: Liberty Utilities, 2021

6 Conclusion

As required and stated in Water Code Section 10910(c)(3), if the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses. The previous sections of this WSA discuss these factors and are summarized below:

- Liberty Utilities (Apple Valley Ranchos Water) has been identified as the public water supplier for the Project. The developer is currently working with Liberty Utilities to annex the Project site into Liberty Utilities' service area.
- The Project site is located within the city limits for the Town of Apple Valley and the Project site is included in the 2030 General Plan under land use designated for Regional Commercial - Industrial Overlay.
- The Project site is located within the Upper Mojave River Valley Groundwater Basin. The Basin has seen signs of stabilization of groundwater levels since the adjudication in 1996 and the appointment of a Watermaster.
- The estimated ongoing water demand for the Project is 33 AFY.
- The UWMP projects an increase in commercial water demand growth from 2020 to 2045. The Project and is assumed to be included in this growth scenario based on zoning.
- Recent Watermaster Reports have shown Liberty Utilities is able to meet its demands annually and with a FPA surplus in four of the past five years showing sustainable practices.

Liberty Utilities has met 100 percent of its total demands with supplies from the Mojave Basin area during the last drought between 2011 and 2015. Despite nearly 50% FPA reduction in the Basin and Subbasin, Liberty Utilities has met demand through a series of carry-overs, transfers, and replacement water agreements as well as the implementation of a water shortage contingency plan during severe drought occurrence. Given Liberty Utilities' projected population forecasts the Project's additional water demand reasonably fits within this projected increase. The UWMP and the Watermaster reports indicate that Liberty Utilities can meet this Project's water demands during normal years, single dry years, and a five consecutive year drought period over the next 20 years.

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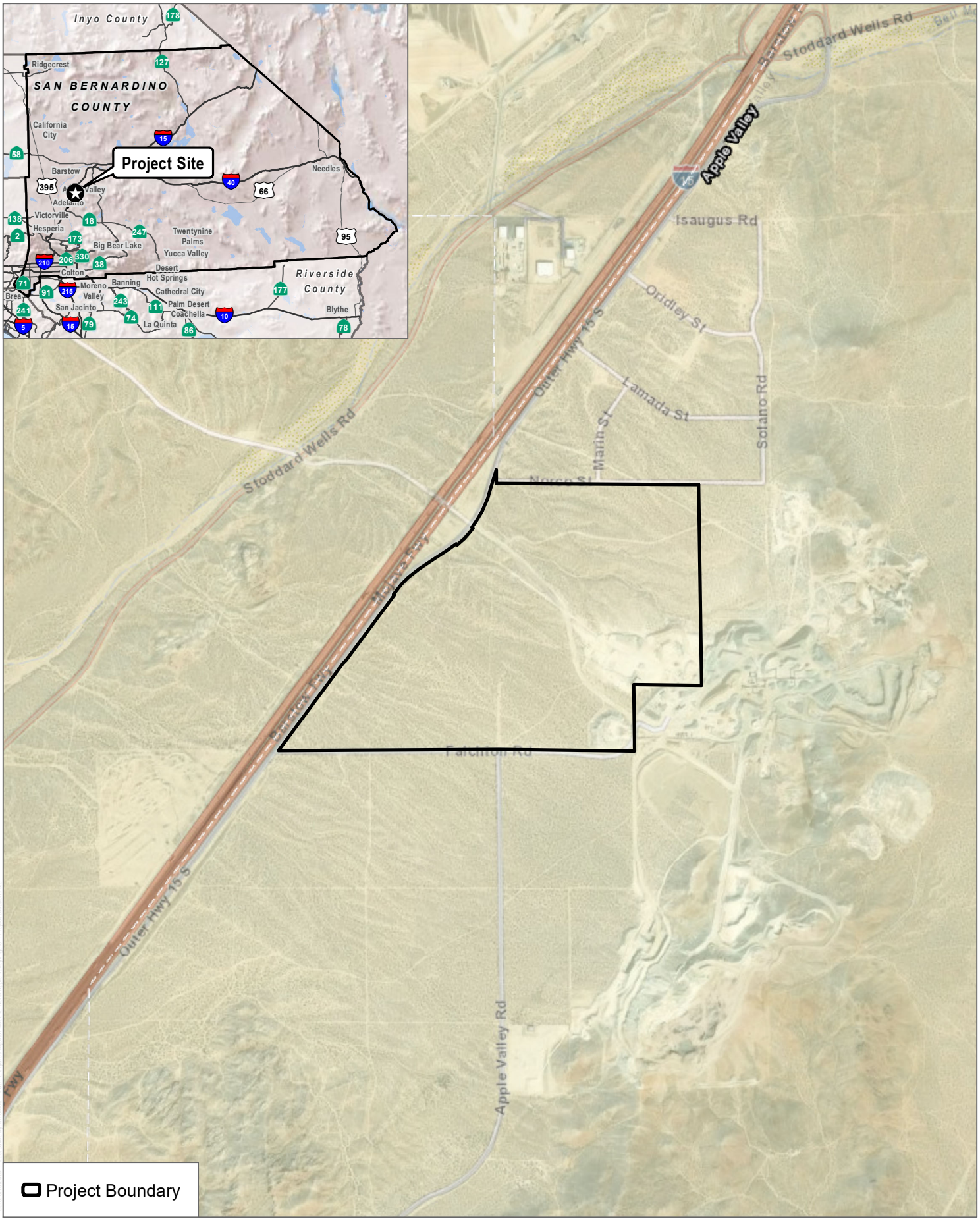

SOURCE: ESRI

DUDEK

0 625 1,250 Feet

FIGURE 1

Project Location

Inland Empire North Logistics Center Apple Valley

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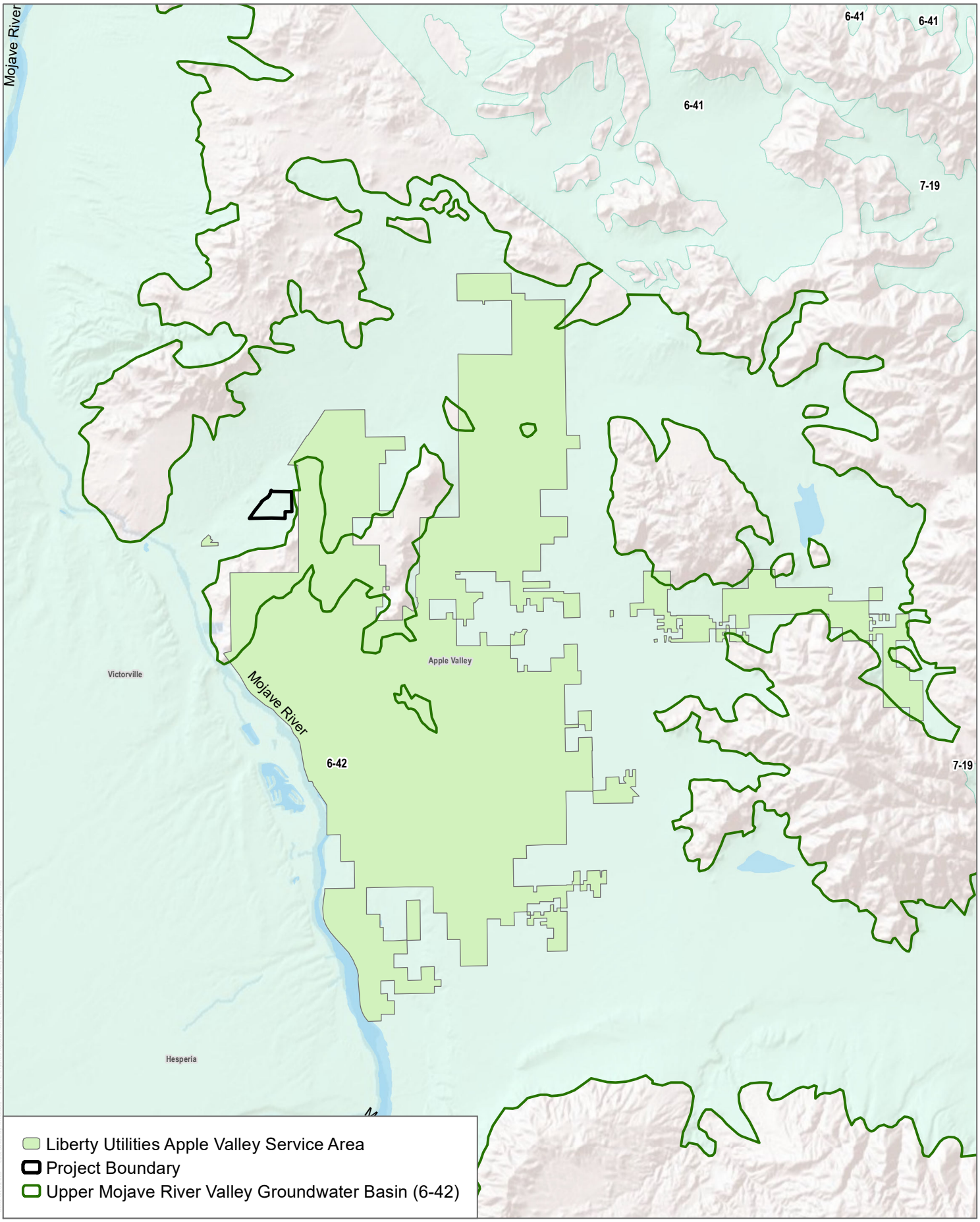

SOURCE: USGS, DWR 2018

DUDEK

0 1 2 Miles

FIGURE 2

Service Area and Hydrologic Area

Inland Empire North Logistics Center Apple Valley

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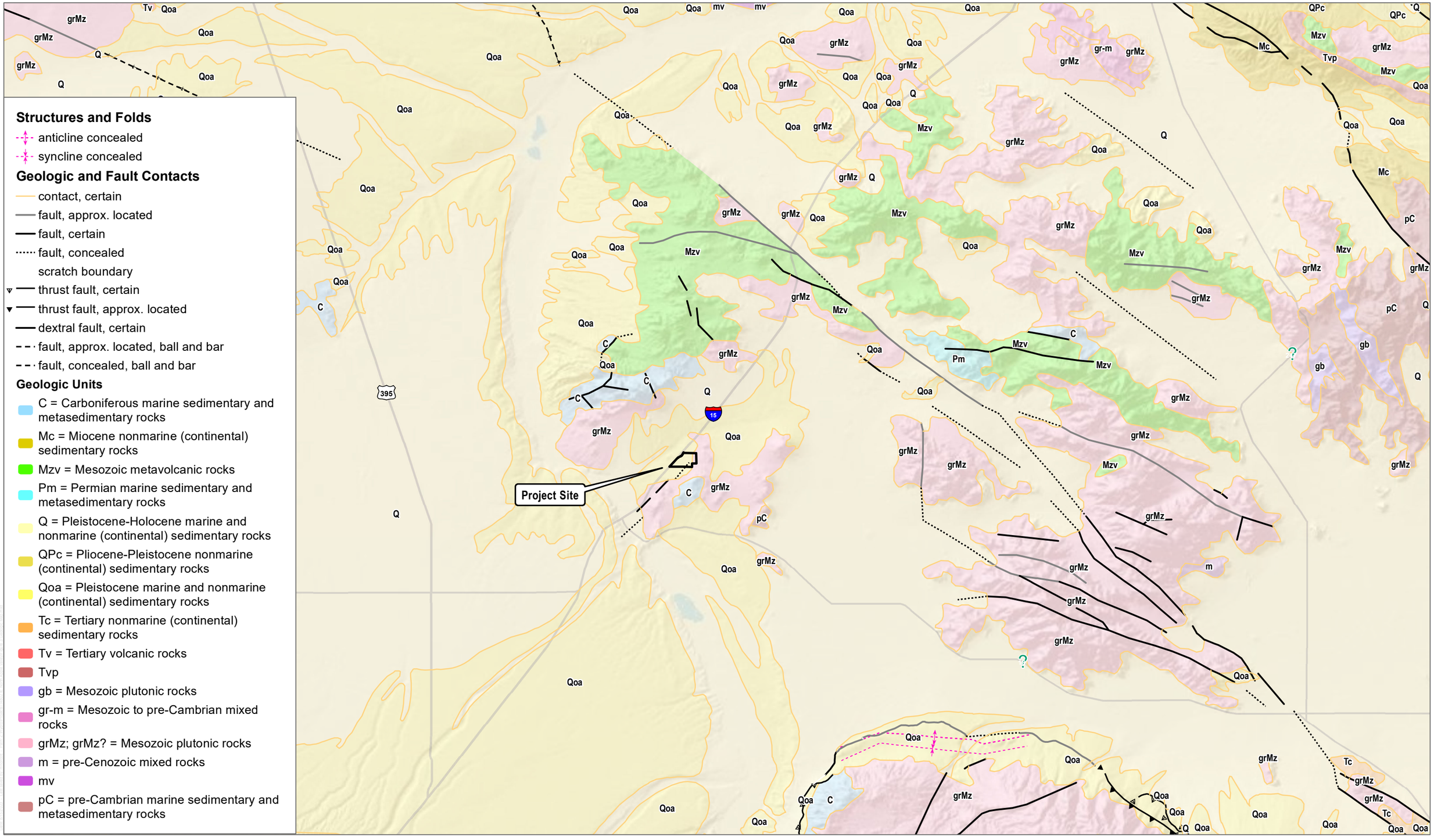

Structures and Folds

- anticline concealed
- syncline concealed

Geologic and Fault Contacts

- contact, certain
- fault, approx. located
- fault, certain
- fault, concealed
- scratch boundary
- thrust fault, certain
- thrust fault, approx. located
- dextral fault, certain
- fault, approx. located, ball and bar
- fault, concealed, ball and bar

Geologic Units

- C = Carboniferous marine sedimentary and metasedimentary rocks
- Mc = Miocene nonmarine (continental) sedimentary rocks
- Mzv = Mesozoic metavolcanic rocks
- Pm = Permian marine sedimentary and metasedimentary rocks
- Q = Pleistocene-Holocene marine and nonmarine (continental) sedimentary rocks
- QPc = Pliocene-Pleistocene nonmarine (continental) sedimentary rocks
- Qoa = Pleistocene marine and nonmarine (continental) sedimentary rocks
- Tc = Tertiary nonmarine (continental) sedimentary rocks
- Tv = Tertiary volcanic rocks
- Tvp
- gb = Mesozoic plutonic rocks
- gr-m = Mesozoic to pre-Cambrian mixed rocks
- grMz; grMz? = Mesozoic plutonic rocks
- m = pre-Cenozoic mixed rocks
- mv
- pC = pre-Cambrian marine sedimentary and metasedimentary rocks

SOURCE: California Geologic Survey 2010

DUDEK 0 1.5 3 Miles

FIGURE 3

Geologic Map

Inland Empire North Logistics Center Apple Valley

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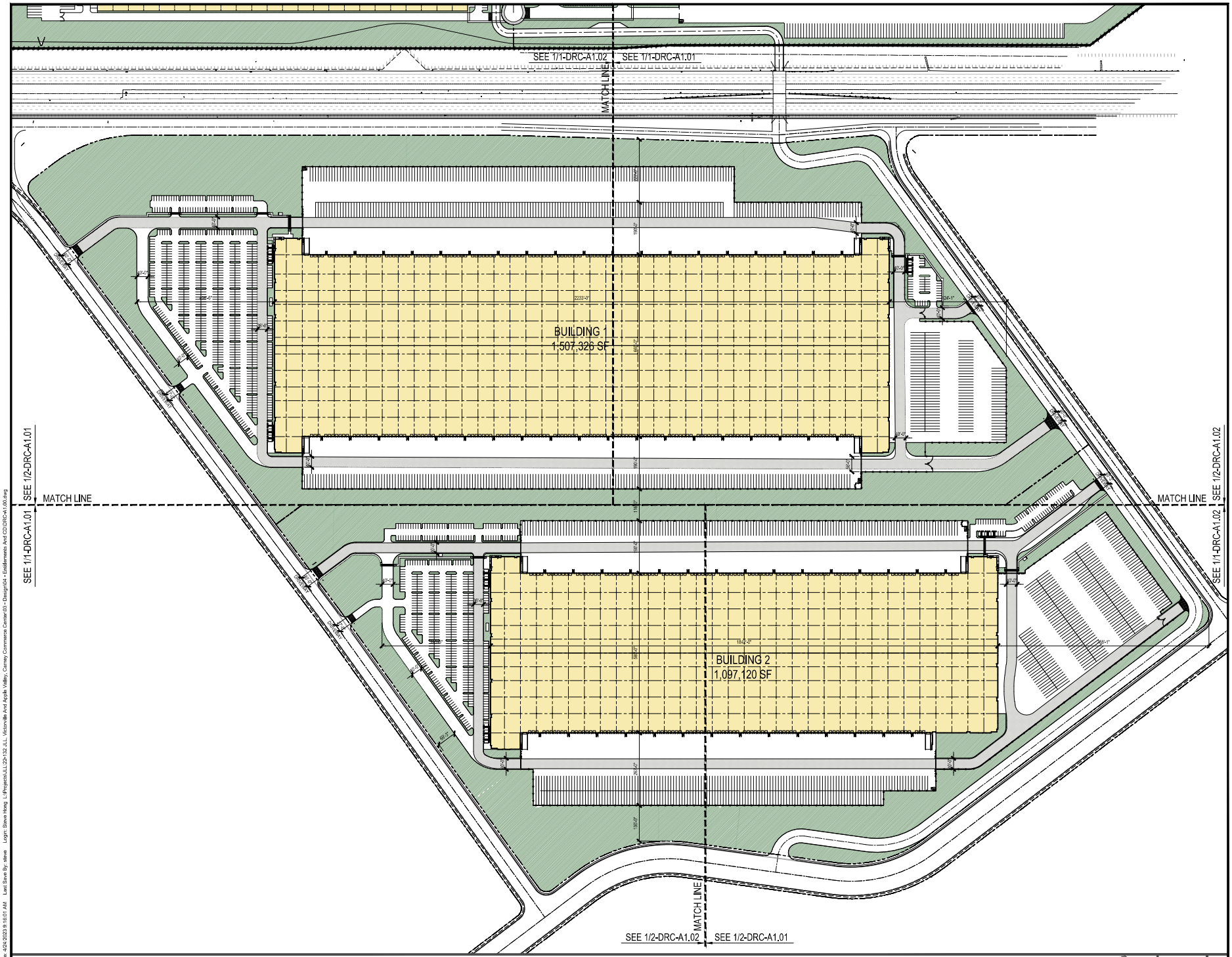
Appendix A
Site Plan



MASTER SITE PLAN

TRUE NORTH

SCALE 1" = 120'-0"

1

LHA

4590 MACARTHUR BLVD, SUITE 500
NEWPORT BEACH CA 92660
PROJECT MANAGER: STEVE HONG
714 - 822 - 1171, STEVE@LHARCHS.COM

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No.	ISSUANCE	DATE

JOB No.
22-132

DRAWN STEVE HONG
CHECKED STEVE HONG

SHEET TITLE
ARCHITECTURAL
MASTER SITE PLAN

SHEET NUMBER
DRC-A1.00

Plot Date: 4/24/2023 9:16:01 AM Last Save By: steve Login: Steve Hong L:\Projects\JLL\22-132 JLL, Victorville And Apple Valley, Carney Commerce Center\03 - Design\04 - Entitlements And CD\DRC-A1.00.dwg

Appendix B

Mojave Basin Area Adjudication Judgement

JUDGMENT AFTER TRIAL

JANUARY 10, 1996

MOJAVE BASIN AREA ADJUDICATION
CITY OF BARSTOW, ET AL V. CITY OF ADELANTO, ET AL
RIVERSIDE COUNTY SUPERIOR COURT CASE NO. 208568

(SPACE BELOW FOR FILING STAMP ONLY)

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SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF RIVERSIDE

CITY OF BARSTOW, et al, Plaintiff, v. CITY OF ADELANTO, et al, Defendant.	CASE NO. 208568 ASSIGNED TO JUDGE KAISER DEPT.4 FOR ALL PURPOSES JUDGMENT AFTER TRIAL
MOJAVE WATER AGENCY, Cross-complainant, v. ANDERSON, RONALD H. et al, Cross-defendants.	

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Exhibit "B" - Tables entitled, "Table B-1: Table Showing Base Annual Production, Base Annual Production Right of Each Producer Within Each Subarea, and Free Production Allowance for Subareas for First Five Years of the Judgment" and "Table B-2: Table Showing Total Water Production for Aquaculture and Recreational Lake Purposes."

Exhibit "C" - Engineering Appendix.

Exhibit "D" - Time Schedules.

Exhibit "E" - List of Producers and Their Designees.

Exhibit "F" - Transfers of Base Annual Production Rights.

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Exhibit "H" - Biological Resource Mitigation.

Exhibit "I" - Map Showing Potential Groundwater Recharge Areas

I. INTRODUCTION

A. The Complaint. The original complaint herein was filed by the City of Barstow and Southern California Water Company (collectively "Plaintiffs") in San Bernardino Superior Court, North Desert District, on May 30, 1990 as Case No. BCV6672, and transferred to Riverside County Superior Court on November 27, 1990. Plaintiffs allege that the cumulative water Production upstream of the City of Barstow Overdrafted the Mojave River system, and request an average Annual flow of 30,000 acre-feet of surface water to the City of Barstow area. The complaint also includes a request for a writ of mandate to require the Mojave Water Agency ("MWA") to act pursuant to its statutory authority to obtain and provide Supplemental Water for use within the Mojave Basin Area.

B. The MWA Cross-Complaint. On July 26, 1991, the MWA filed its first amended cross-complaint in this case. The MWA first amended cross-complaint and its ROE amendments name Producers who collectively claim substantially all rights of water use within the Mojave Basin Area, including Parties downstream of the City of Barstow. The MWA cross-complaint, as currently amended, requests a declaration that the available native water supply to the Mojave Basin Area (not including water imported from the California State Water Project) is inadequate to meet the demands of the combined Parties and requests a determination of the water rights of whatever nature within the MWA boundaries and the Mojave Basin Area. The MWA has named as Parties several hundred Producers within the Basin Area.

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C. The Arc Las Flores Cross-Complaint. On July 3, 1991, Arc Las Flores filed a cross-complaint for declaratory relief seeking a declaration of water rights of certain named cross-defendants and a declaration that the appropriative, overlying and riparian rights of Arc Las Flores be determined to be prior and paramount to any rights of the Plaintiffs and other appropriators.

D. Stipulation and Trial. On October 16, 1991, the Court ordered a litigation standstill. The purpose of the standstill was to give the parties time to negotiate a settlement and develop a solution to the overdraft existing in the Mojave River Basin.

A committee of engineers and attorneys, representing a variety of water users and interests throughout the Mojave River Basin, was created to develop a physical solution to the water shortage problem. The work of the committee resulted in a stipulated interlocutory order and judgment, which was entered by the court on September 23, 1993.

Several non-stipulating parties requested a trial. On April 20, 1994, the Court issued a memorandum setting forth the trial issues. This cause came on regularly for trial on February 6, 1995, and was tried in Department 4 of the above-entitled Court, the Honorable E. Michael Kaiser, Judge, Presiding, without a jury. Oral and documentary evidence was introduced on behalf of the respective parties and the cause was argued and submitted for decision.

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II. DECREE

NOW, THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED:

A. JURISDICTION, PARTIES, DEFINITIONS.

1. Jurisdiction and Parties.

a. Jurisdiction. This Court has jurisdiction to enter Judgment declaring and adjudicating the rights to reasonable and beneficial use of water by the Parties in the Mojave Basin Area pursuant to Article X, Section 2 of the California Constitution. This Judgment constitutes an adjudication of water rights of the Mojave Basin Area pursuant to Section 37 of Chapter 2146 of Statutes of 1959 ("the MWA Act").

b. Parties. All Parties to the MWA cross-complaint are included in this Judgment. The MWA has notified those Persons claiming any right, title or interest to the natural waters within the Mojave Basin Area to make claims. Such notice has been given: 1) in conformity with the notice requirements of Water Code §§ 2500 et seq.; 2) pursuant to Section 37 of the MWA Act; and 3) pursuant to order of this Court. Subsequently, all Producers making claims have been or will be included as Parties. The defaults of certain Parties have been entered, and certain named cross-defendants to the MWA cross-complaint who are not Producers have been dismissed. All named Parties who have not been dismissed have appeared herein or have been given adequate opportunity to appear herein. The Court has jurisdiction of the subject matter of this action and of the Parties hereto.

c. Minimal Producers. There are numerous Minimal Producers in the Basin Area and their number is expected to increase in the future. In order to minimize the cost of

administering this Judgment and to assure that every Person producing water in the Basin Area participates fairly in the Physical Solution, MWA shall:

i. within one Year following entry of this Judgment, prepare a report to the Court: 1) setting forth the identity and verified Base Annual Production of each Minimal Producer in each Subarea of the Basin Area; and 2) recommending a proposed system of Minimal Producer Assessments. The system of Minimal Producer Assessments shall achieve an equitable allocation of the costs of the Physical Solution that are attributable to Production of verified Base Annual Production amounts by Minimal Producers in each Subarea to and among such Minimal Producers. Minimal Producer Assessments need not be the same for existing Minimal Producers as for future Minimal Producers.

ii. within one Year following entry of this Judgment, prepare a report to the Court setting forth a proposed program to be undertaken by MWA, pursuant to its statutory authority, to implement the proposed system of Minimal Producer Assessments. The Court may order MWA to implement the proposed program or, if MWA's statutory authority is inadequate to enable implementation, or if either the proposed program or the proposed system of Minimal Producer Assessments is unacceptable to the Court, the Court may then order MWA either to implement an alternative program or system, or in the alternative, to name all Minimal Producers as Parties to this litigation and to serve them for the purpose of adjudicating their water rights.

Any Minimal Producer whose Annual Production exceeds ten (10) acre-feet in any Year following the date of entry of Judgment shall be made a Party pursuant to Paragraph 12 and shall be subject to Administrative, Replacement Water, Makeup Water and Biological Resources Assessments. Any Minimal Producer who produced during the 1986-1990 period may become a Party pursuant to Paragraph 40 with a Base Annual Production Right based on such Minimal Producer's verified Base Annual Production. To account properly for aggregate Production by Minimal Producers in each Subarea, Table B-1 of Exhibit B shall include an estimated aggregate amount of Base Annual Production by all Minimal Producers in each Subarea. The Base Annual Production of any Minimal Producer who becomes a Party shall be deducted from the aggregate amount and assigned to such Minimal Producer.

2. Physical and Legal Complexity. The physical and legal issues of the case as framed by the complaint and cross-complaints are extremely complex. Production of more than 1,000 Persons producing water in the Basin Area has been ascertained. In excess of 1,000 Persons have been served. The water supply and water rights of the entire Mojave Basin Area and its hydrologic Subareas extending over 4000 square miles have been brought into issue. Most types and natures of water right known to California law are at issue in the case. Engineering studies by the Parties, jointly and severally, leading toward adjudication of these rights and a Physical Solution, have required the expenditure of over two Years' time and hundreds of thousands of dollars.

3. Need for a Declaration of Rights and Obligations and for Physical Solution. A Physical Solution for the Mojave Basin

Area based upon a declaration of water rights and a formula for Intra- and Inter-Subarea allocation of rights and obligations is necessary to implement the mandate of Article X, Section 2 of the California Constitution and California water policy. Such Physical Solution requires the definition of the individual rights of all Producers within the Basin Area in a manner which will equitably allocate the natural water supplies and which will provide for equitable sharing of costs for Supplemental Water. Nontributary supplemental sources of water are or will be available in amounts, which when combined with water conservation, water reclamation, water transfers, and improved conveyance and distribution methods within the Basin Area, will be sufficient in quantity and quality to assure implementation of a Physical Solution. Sufficient information and data are known to formulate a reasonable and just allocation of existing water supplies as between the hydrologic Subareas within the Basin Area and as among the water users within each Subarea. Such Physical Solution will allow the public water supply agencies and individual water users within each hydrologic Subarea to proceed with orderly water resource planning and development. It will be necessary for MWA to construct conveyance facilities to implement the Physical Solution. Absent the construction of conveyance facilities, some Subareas may be deprived of an equitable share of the benefits made possible by the Physical Solution. Accordingly, this Physical Solution mandates the acquisition or construction of conveyance facilities for importation and equitable distribution of Supplemental Water to the respective Subareas. Such construction is dependent on the availability of appropriate financing, and any such financing

assessed to the Parties will be based upon benefit to the Parties in accordance with the MWA Act.

4. Definitions. As used in this judgment, the following terms shall have the meanings herein set forth:

a. Afton - The United States Geological Survey gauging station "Mojave River at Afton, CA."

b. Annual or Year - As used in this Judgment refers to the Annual period beginning October 1 and ending September 30 of the following Year.

c. Aquaculture Water - Water so identified in Exhibit "B". Such water may be used only for fish breeding and rearing. The Annual Consumptive Use of such water in acre-feet is equal to the water surface area, in acres, of the fish rearing facilities multiplied by seven (feet).

d. Assessments - Those Assessments levied and collected pursuant to this judgment including Replacement Water, Makeup Water, Administrative and Biological Resource Assessments.

e. Barstow - The United States Geological Survey Gauging Station "Mojave River at Barstow, CA."

f. Base Annual Production - The verified maximum Year Production, in acre-feet, for each Producer for the five Year Period 1986-1990 as set forth in Table B-1 of Exhibit "B", except where otherwise noted therein. The maximum Year Production for each Producer was verified based on one or more of the following: flow meter readings, electrical power

or diesel usage records or estimated applied water duty. The Base Annual Production for recreational lakes in the Baja Subarea and for Aquaculture shall be equal either to the area of water surface multiplied by seven feet or to verified Production, whichever is less. The five Year period 1986-1990 shall also be the time period for which Base Annual Production for Minimal Producers shall be calculated.

g. Base Annual Production Right - The relative Annual right of each Producer to the Free Production Allowance within a given Subarea, expressed as a percentage of the aggregate of all Producers' Base Annual Production in the Subarea. The percentage for each Producer is calculated by multiplying that Producer's Base Annual Production in a Subarea times one hundred (100) and dividing the result by the aggregate Base Annual Production for all Producers in the Subarea. The percentage shall be rounded off to the nearest one ten-thousandth of one per cent.

h. Base Flow - That portion of the total surface flow measured Annually at Lower Narrows which remains after subtracting Storm Flow.

i. Carry Over Right - The right of a Producer to delay and accumulate the Production of such Producer's share of a Subarea Free Production Allowance until

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and only until the following Year free of any Replacement Water Assessment.

j. Consumption or Consumptive Use - The permanent removal of water from the Mojave Basin Area through evaporation or evapo-transpiration. The Consumptive Use rates resulting from particular types of water use are identified in Paragraph 2 of Exhibit "F".

k. Free Production Allowance - The total amount of water, and any Producer's share thereof, that may be Produced from a Subarea each Year free of any Replacement Obligation.

l. Groundwater - Water beneath the surface of the ground and within the zone of saturation; i.e., below the existing water table, whether or not flowing through known and definite channels.

m. Harper Lake Basin - That portion of the Centro Subarea identified as such on Exhibit "A".

n. Lower Narrows - The United States Geological Survey gauging station "Mojave River near Victorville, CA."

o. Makeup Water - Water needed to satisfy a Minimum Subarea Obligation.

p. Makeup Obligation - The obligation of a Subarea to pay for Makeup Water to satisfy its Subarea Obligation.

q. Minimal Producer - Any Person whose Base Annual Production, as verified by MWA is not greater than

ten (10) acre-feet. A Person designated as a Minimal Producer whose Annual Production exceeds ten (10) acre-feet in any Year following the date of entry of Judgment is no longer a Minimal Producer.

r. Minimum Subarea Obligation - The minimum Annual amount of water a Subarea is obligated to provide to an adjoining downstream Subarea or the Transition Zone or, in the case of the Baja Subarea, the minimum Annual Subsurface Flow at the MWA eastern boundary toward Afton in any Year, as set forth in Exhibit "G".

s. Mojave Basin Area or Basin Area - The area shown on Exhibit "A" that lies within the boundaries of the line labelled "Limits of Adjudicated Area" which generally includes the area tributary to the Mojave River and its tributaries except for such area not included within the Mojave Water Agency's jurisdiction.

t. MWA - Cross complainant Mojave Water Agency.

u. Overdraft - A condition wherein the current total Annual Consumptive Use of water in the Mojave Basin Area or any of its Subareas exceeds the long term average Annual natural water supply to the Basin Area or Subarea.

v. Party (Parties) - Any Person(s) named in this action who has intervened in this case or has

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become subject to this Judgment either through stipulation, default, trial or otherwise.

w. Person(s) - Any natural person, firm, association, organization, joint venture, partnership, business, trust, corporation, or public entity.

x. Produce - To pump or divert water.

y. Producer(s) - A Person, other than a Minimal Producer, who Produces water.

z. Production - Annual amount of water produced, stated in acre-feet of water.

aa. Production Safe Yield - The highest average Annual Amount of water that can be produced from a Subarea: (1) over a sequence of years that is representative of long-term average annual natural water supply to the Subarea net of long-term average annual natural outflow from the Subarea, (2) under given patterns of Production, applied water, return flows and Consumptive Use, and (3) without resulting in a long-term net reduction of groundwater in storage in the Subarea.

bb. Purpose of Use - The broad category of type of water use including but not limited to municipal, irrigation, industrial, aquaculture, and lakes purposes. A change in Purpose of Use includes any reallocation of water among mixed or sequential uses, excluding direct reuse of municipal wastewater.

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cc. Recirculated Water - Water that is Produced but not consumed by the Parties listed in Table B-2 of Exhibit "B" and then returned either to the Mojave River or to the Groundwater basin underlying the place of use.

dd. Replacement Obligation - The obligation of a Producer to pay for Replacement Water for Production from a Subarea in any Year in excess of the sum of such Producer's share of that Year's Free Production Allowance for the Subarea plus any Production pursuant to a Carry Over Right.

ee. Replacement Water - Water purchased by Watermaster or otherwise provided to satisfy a Replacement Obligation.

ff. Responsible Party - The Person designated by a Party as the Person responsible for purposes of filing reports and receiving notices pursuant to the provisions of this Judgment.

gg. Stored Water - Water held in storage pursuant to a Storage Agreement with Watermaster.

hh. Storm Flow - That portion of the total surface flow originating from precipitation and runoff without having first percolated to Groundwater storage in the zone of saturation and passing a particular point of reckoning, as determined annually by the Watermaster.

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ii. Subareas - The five Subareas of the Mojave Basin Area -- Este, Oeste, Alto, Centro and Baja -- as shown on Exhibit "A".

jj. Subarea Obligation - The average Annual amount of water that a Subarea is obligated to provide to an adjoining downstream Subarea or the Transition Zone or, in the case of the Baja Subarea, the average Annual Subsurface Flow toward Afton at the MWA eastern boundary as set forth in Exhibit "G".

kk. Subsurface Flow - Groundwater which flows beneath the earth's surface.

ll. Supplemental Water - Water imported to the Basin Area from outside the Basin Area, water that would otherwise be lost from the Basin Area but which is captured and made available for use in the Basin Area, or any Producer's share of Free Production Allowance that is not Produced and is acquired by Watermaster pursuant to this Judgment.

mm. Transition Zone - The portion of the Alto Subarea, shown on Exhibit "A", that lies generally between the Lower Narrows and the Helendale Fault.

nn. Watermaster - The Person(s) appointed by the Court to administer the provisions of this Judgment.

5. Exhibits. The following exhibits are attached to this Judgment and made a part hereof.

Exhibit "A" - Map entitled, "Map showing Mojave Water Agency, Mojave River, Mojave Basin Area and Hydrologic Subareas and

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Limits of Adjudicated Area Together with Geologic and Other Pertinent Features."

Exhibit "B" - Table entitled, "Table B-1: Table Showing Base Annual Production and Base Annual Production Right of Each Producer Within Each Subarea, and Free Production Allowances for Subareas for First Five Years after entry of the Interlocutory Judgment" and "Table B-2: Table Showing Total Water Production for Aquaculture and Recreational Lake Purposes."

Exhibit "C" - Engineering Appendix.

Exhibit "D" - Time Schedules.

Exhibit "E" - List of Producers and Their Designees.

Exhibit "F" - Transfers of Base Annual Production Rights.

Exhibit "G" - Subarea Obligations.

Exhibit "H" - Biological Resource Mitigation.

Exhibit "I" - Map Showing Potential Groundwater Recharge Areas

B. DECLARATION OF HYDROLOGIC CONDITIONS.

6. Mojave Basin Area as Common Source of Supply. The area shown on Exhibit "A" as the Mojave Basin Area is comprised of five Subareas. The waters derived from the Mojave River and its tributaries constitute a common source of supply of the five Subareas and of the Persons producing therefrom.

7. Existence of Overdraft. In each and every Year, for a period in excess of five (5) years prior to the May 30, 1990 filing date of Plaintiffs' Complaint, the Mojave Basin Area and each of its respective Subareas have been and are in a state of Overdraft, and it is hereby found that there is no water available

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for Production from the Basin Area or any Subarea therein except pursuant to this Judgment.

C. DECLARATION OF RIGHTS AND OBLIGATIONS.

8. Production Rights of the Parties. The Base Annual Production and Base Annual Production Right of each Party are declared as set forth in Table B-1 of Exhibit "B". Certain Parties also have the right to continue to Produce Recirculated Water in the amounts set forth in Table B-2 of Exhibit "B", subject to the following:

a. Aquaculture. Two of the Producers listed in Table B-2 of Exhibit "B", California Department of Fish and Game Mojave River Fish Hatchery (Hatchery) and Jess Ranch Water Company (Jess), Produce Recirculated Water for Aquaculture. The Hatchery and Jess or their successors or assignees shall have the right to continue to Produce up to the amounts listed in Table B-2 of Exhibit "B" as Recirculated Water for Aquaculture on the property where it was used in the Year for which Base Annual Production was verified. Production of such amount of Recirculated water by Jess shall be free of any Replacement Water Assessments, Makeup Water Assessments or Administrative Assessments but shall be subject to Biological Resources Assessments and each Jess well producing Recirculated Water shall be subject to an Annual administrative fee equal to the lowest Annual fee paid to MWA by a Minimal Producer. Neither the Hatchery nor Jess Recirculated Water may be transferred or used for any other purpose or transferred for use on any other property, except as provided in Paragraph 7 of Exhibit "F" for the Hatchery. Any Production of Recirculated Water by Jess in excess of the amount shown in Table B-2 shall be subject to all

Assessments. Production of Recirculated Water by the Hatchery will be subject to the rules set forth in Paragraph 7 of Exhibit "F". All Jess Aquaculture Recirculated Water shall be discharged immediately and directly to the Mojave River.

b. Camp Cady. One Producer listed in Table B-2 of Exhibit "B", California Department of Fish and Game-Camp Cady (Camp Cady), Produces Recirculated Water for Lakes containing Tui Chub, an endangered species of fish. Camp Cady or its successors or assignees shall have the right to continue to Produce up to the amount listed in Table-B-2 of Exhibit "B" as Recirculated Water at Camp Cady. Production of each amount of Recirculated water shall be free of any Assessments. Camp Cady Recirculated Water may not be transferred or used for any other purpose or transferred for use on any other property. Any Production of Recirculated Water by Camp Cady in excess of the amount shown in Table B-2 of Exhibit "B" shall be subject to all Assessments except Biological Resource Assessments. All Camp Cady Recirculated Water shall be allowed to percolate immediately and directly to the Groundwater basin underlying Camp Cady.

c. Recreational Lakes in Baja Subarea. All Producers listed in Table B-2 of Exhibit "B" except the Hatchery, Jess and Camp Cady Produce Recirculated Water for recreational lakes in the Baja Subarea. Such Producers or their successors or assignees shall have the right to continue to Produce up to the amounts identified in Table B-2 of Exhibit "B" as Recirculated Water for use in recreational lakes on the property where it was used in the Year for which Base Annual Production was verified, free of any Replacement Water Assessments, Makeup Water

Assessments, or Administrative Assessments, but such Production shall be subject to any Biological Resource Assessment. Each well producing such Recirculated Water shall be subject to an Annual administrative fee equal to the lowest Annual fee paid by a Minimal Producer. Recirculated Water cannot be transferred or used for any other purpose. All recreational lake Recirculated Water shall be allowed to percolate immediately and directly to the Groundwater basin underlying the recreational lake.

9. MWA Obligations. The Physical Solution is intended to provide for delivery and equitable distribution to the respective Subareas by MWA of the best quality of Supplemental Water reasonably available. MWA shall develop conveyance or other facilities to deliver this Supplemental Water to the areas depicted in Exhibit "I," unless prevented by forces outside its reasonable control such as an inability to secure financing consistent with sound municipal financing practices and standards.

a. Secure Supplemental Water. MWA, separate and apart from its duties as the initial Watermaster designated under this Judgment, shall exercise its authority under Sections 1.5 and 15 of the MWA Act to pursue promptly, continuously and diligently all reasonable sources to secure Supplemental Water as necessary to fully implement the provisions of this Judgment.

b. Supplemental Water Prices. The MWA shall establish fair and equitable prices for Supplemental Water delivered to the Watermaster under this Judgment.

c. Supplemental Water Delivery Plan. Not later than September 30, 1996, MWA shall prepare a report on potential alternative facilities or methods to deliver Supplemental Water to

the areas shown on Exhibit "I." The report shall include, for each alternative, a development time schedule, a summary of cost estimates, an analysis of the relative benefits to Producers in each Subarea and an analysis of alternative methods of financing and cost allocation, including any state or federal sources of funding that may be available.

d. Water Delivery Cost Allocation. The report required by subdivision (c) above shall recommend methods of financing and cost allocation that are based on benefits to be received. MWA's cost allocation plan shall be subject to Court review as provided in subdivision (f) below to verify that costs are allocated fairly and according to benefits to be received. The MWA financing and cost allocation plan may include a mix of revenue sources including the following:

(1) Developer or connection fees to the extent MWA can demonstrate a nexus, as required by law, between the fees and the impact of the development upon the water resources of the Mojave Basin Area and each subarea thereof;

(2) Other methods of financing available to MWA, including but not limited to property based taxes, assessments or standby charges;

(3) Water sales revenues, but only to the extent other sources are not available or appropriate, and in no event shall the water sales price to cover facility

capital costs exceed a rate equal to fifty percent of the variable cost rate charged to MWA under its contract for water delivery from the California State Water Project;

e. Legislative Changes. MWA shall seek promptly to have enacted amendments to the MWA Act (Water Code Appendix, Part 97) that allow MWA to implement any methods of governmental financing available to any public entity in California.

f. Court Review and Determination of Benefit. Not later than September 30, 1996, MWA shall submit its report to the Court in a noticed motion pursuant to Paragraph 36. The report shall set forth MWA's recommendations as to the following: (1) which alternatives should be implemented; (2) methods of cost allocation for the recommended alternatives; (3) financing for the recommended alternatives; and (4) a time schedule to complete the recommended alternatives. The Court may approve or reject the recommendations. The Court may further order the use of alternatives and time schedules or it may order additional studies and resubmittals, as it may deem proper.

10. Priority and Determination of Production Rights. The water rights involved herein are of differing types and commenced at different times. Many of the rights involved are devoted to public uses. The Declaration of Water Rights that is part of the judgment and the Physical Solution decreed herein takes into consideration the competing priorities which have been asserted in addition to the equitable principles applicable to apportionment of water in this situation. The following factors

have been considered in the formulation of each Producer's Base Annual Production Right:

a. The Mojave Basin Area and each of its hydrologic Subareas have continuously for many Years been in a state of system-wide Overdraft;

b. All Producers have contributed to the Overdraft;

c. None of the priorities asserted by any of the Producers is without dispute;

d. Under the complex scheme of California water law, the allocation of water and rights mechanically based upon the asserted priorities would be extremely difficult, if not impossible, and would not result in the most equitable apportionment of water;

e. Such mechanical allocation would, in fact, impose undue hardship on many Parties;

f. There is a need for conserving and making maximum beneficial use of the water resources of the State;

g. The economy of the Mojave Basin Area has to a great extent been established on the basis of the existing Production;

h. The Judgment and Physical Solution take into consideration the unique physical and climatic conditions of the Mojave Basin Area, the Consumptive Use of water in the several sections of the Basin, the character and rate of return flows, the extent of established uses, the availability of storage water, the relative benefits and detriments between upstream areas and downstream areas if a limitation is imposed on one and not the

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other, and the need to protect public interest and public trust concerns.

In consideration of the foregoing factors, and in accordance with the terms and conditions of this Judgment, the Parties are estopped and barred from asserting special priorities or preferences.

11. Exercise of Carry Over Rights. The first water Produced by a Producer during any Year shall be deemed to be an exercise of any Carry Over Right. Such Carry Over Right may be transferred in accordance with Exhibit "F".

12. Production Only Pursuant to Judgment. This Judgment, and the Physical Solution decreed herein, addresses all Production within the Mojave Basin Area. Because of the existence of Overdraft, any Production outside the framework of this Judgment and Physical Solution will contribute to an increased Overdraft, potentially damage the Mojave Basin Area and public interests in the Basin Area, injure the rights of all Parties, and interfere with the Physical Solution. Watermaster shall bring an action or a motion to enjoin any Production that is not pursuant to the terms of this Judgment.

13. Declaration of Subarea Rights and Obligations. In the aggregate, Producers within certain Subareas have rights, as against those in adjoining upstream Subareas, to receive average Annual water supplies and, in any one Year, to receive minimum Annual water supplies equal to the amounts set forth in Exhibit "G", in addition to any Storm Flows. In turn, in the aggregate, Producers within certain Subareas have an obligation to provide to adjoining downstream Subareas such average Annual water supplies in

the amounts and in the manner set forth in Exhibit "G". In any one Year, Producers within certain Subareas have an obligation to provide to adjoining downstream Subareas such minimum Annual water supplies in the amounts and in the manner set forth in Exhibit "G". The Producers in the Baja Subarea have an obligation to provide average and minimum Subsurface Flows toward Afton at the MWA eastern boundary equal to the amounts shown in Exhibit "G". Producers in each of the Subareas have rights in the aggregate, as against each adjoining downstream Subarea or, in the case of the Baja Subarea, as against flows at the MWA eastern boundary toward Afton, to divert, pump, extract, conserve, and use all surface water and Groundwater supplies originating therein or accruing thereto, and so long as the adjoining downstream Subarea Obligations are satisfied under this Judgment and there is compliance with all of its provisions. Watermaster shall maintain a continuing account of the status of each Subarea's compliance with its Subarea Obligation, including any cumulative credits or debits and any requirement for providing Makeup Water. The accounting and determinations relative to Subarea Obligations shall be made in accordance with procedures set forth in Exhibit "G".

III. INJUNCTION

14. Injunction Against Unauthorized Production. Each and every Party, its officers, agents, employees, successors, and assigns, is ENJOINED AND RESTRAINED from Producing water from the Basin Area except pursuant to the provisions of the Physical Solution in this Judgment.

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15. Injunction Re Change in Purpose of Use Without Notice Thereof to Watermaster. Each and every Party, its officers, agents, employees, successors, and assigns, is ENJOINED AND RESTRAINED from changing its Purpose of Use at any time without first notifying Watermaster of the intended change.

16. Injunction Against Unauthorized Recharge. Each and every Party, its officers, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from claiming any right to recapture Water that has been recharged in the Basin Area except pursuant to a Storage Agreement with Watermaster. This provision does not prohibit Parties from importing Supplemental Water into the Basin Area for direct use.

17. Injunction Against Transportation from Mojave Basin Area. Except upon further order of the Court, each and every Party, its officers, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from transporting water hereafter Produced from the Basin Area to areas outside the Basin Area.

18. Injunction Against Diverting Storm Flows. No Party may undertake or cause the construction of any project that will directly reduce the amount of Storm Flow that would otherwise go through the naturally occurring hydrologic regime to a downstream Subarea or that will reduce the surface area over which Storm Flow currently occurs by alteration to the bed of the Mojave River. This paragraph shall not prevent any flood control agency or municipality from taking such emergency action as may be necessary to protect the physical safety of its residents and its structures from flooding. Any such action shall be done in a manner that will minimize any reduction in the quantity of Storm Flows.

IV. CONTINUING JURISDICTION

19. Jurisdiction Reserved. Full jurisdiction, power and authority are retained by and reserved to the Court for purposes of enabling the Court upon the application of any Party, by a motion noticed in accordance with the notice procedures of Paragraph 36 hereof, to make such further or supplemental order or directions as may be necessary or appropriate for interim operation before the Physical Solution is fully operative, or for interpretation, enforcement or carrying out of this Judgement, and to modify, amend or amplify any of the provisions of this Judgment or to add to the provisions thereof consistent with the rights herein decreed; provided, that nothing in this paragraph shall authorize either a reduction of the Base Annual Production Right of any Party, except in accordance with the rules set forth in Exhibit "F", or a reduction of the Base Flow portion of any Subarea Obligation.

Paragraphs 19 (a) and 19 (b), amended December 5, 2002, are at the end of this document.

V. Physical Solution

A. GENERAL

20. Purpose and Objective. The Court hereby declares and decrees that the Physical Solution herein contained: 1) is a fair and equitable basis for satisfaction of all water rights in the Mojave Basin Area; 2) is in furtherance of the mandate of the State Constitution and the water policy of the State of California; and 3) takes into account applicable public trust interests; and therefore adopts and orders the Parties to comply with the Physical Solution. As noted in Paragraph 3 of this Judgment, the declaration of rights and obligations of the Parties and Subareas is a necessary component of this Physical Solution. The purpose of

the Physical Solution is to establish a legal and practical means for making the maximum reasonable beneficial use of the waters of the Basin Area by providing for the long-term conjunctive utilization of all water available thereto to meet the reasonable beneficial use requirements of water users therein.

21. Need for Flexibility. It is essential that this Physical Solution provide maximum flexibility and adaptability in order that the Court may be free to use existing and future technological, social, institutional and economic options in order to maximize reasonable beneficial use of the waters of the Basin Area. To that end, the Court's retained jurisdiction may be utilized where appropriate, to supplement the Physical Solution.

22. General Pattern of Operations. The Producers will be divided into five Subareas for purposes of administration. The Subarea rights and obligations are herein decreed. A fundamental premise of the Physical Solution is that all Parties will be allowed, subject to this Judgment, to Produce sufficient water to meet their reasonable beneficial use requirements. To the extent that Production by a Producer in any Subarea exceeds such Producer's share of the Free Production Allowance of that Subarea, Watermaster will provide Replacement Water to replace such excess Production according to the methods set forth herein. To the extent that any Subarea incurs a Makeup Obligation, Watermaster will provide Supplemental Water to satisfy such Makeup Obligation according to the methods set forth herein. For the initial five (5) full Years after entry of this Judgment (including any interlocutory Judgment), the Free Production Allowance for each Subarea shall be set as the amount of water equal to the following

percentages of the aggregate Base Annual Production for that Subarea:

	Judgment Year	Percentage
1993-1994	First Full Year	100
1994-1995	Second Full Year	95
1995-1996	Third Full Year	90
1996-1997	Fourth Full Year	85
1997-1998	Fifth Full Year	80

The extent of Overdraft now varies between Subareas and the reasonableness of any physical solution as applied to each Producer depends in part upon such Producer's foreseeable needs and the present and future availability of water within the Subarea in which each Producer is located. The Physical Solution described in this Judgment in part generally contemplates (i) initially allowing significant unassessed production on a substantially uniform basis for all Producers and Subareas and (ii) a phasing in of the monetary obligations necessary to obtain Supplemental Water. The above two provisions will affect each Subarea differently, may not be sufficient to ultimately eliminate the condition of Overdraft in each Subarea and could result in increased Overdraft within a Subarea. Any adverse impact to any Subarea caused by the implementation of the provisions shall be the responsibility of the Producers in each such Subarea.

B. ADMINISTRATION.

23. Administration by Watermaster. Watermaster shall administer and enforce the provisions of the Judgment and any subsequent instructions or orders of this Court.

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(a) Standard of Performance. Watermaster shall, in carrying out its duties, powers and responsibilities herein, act in an impartial manner without favor or prejudice to any Subarea, Producer, Party or Purpose of Use.

(b) Removal of Watermaster. Full jurisdiction, power and authority are retained and reserved by the Court for the purpose of enabling the Court on its own motion, or upon application of any Party, and upon notice in accordance with the notice procedures of paragraph 36 hereof, and after hearing thereon, to remove any appointed Watermaster and substitute a new Watermaster in its place. The Court shall find good cause for the removal of Watermaster upon a showing that Watermaster has failed to perform its duties, powers and responsibilities in an impartial manner, or has otherwise failed to act in the manner consistent with the provisions set forth in this Judgment or subsequent order of the Court.

(c) MWA Appointed as Initial Watermaster. The MWA is hereby appointed, until further order of the Court, as Watermaster to administer and enforce the provisions of this Judgment and any subsequent orders of this Court issued in the performance of its continuing jurisdiction. In carrying out this appointment, MWA shall segregate and separately exercise in all respects the Watermaster powers delegated by the Court under this Judgment from MWA's statutory powers. All funds received, held, and disbursed by MWA as Watermaster shall be by way of separate Watermaster accounts, subject to separate accounting and auditing. Meetings and hearings held by the MWA Board of Directors when acting as Watermaster shall be noticed and conducted separately from MWA

meetings. All Watermaster staff and consultant functions shall be separate and distinct from MWA staff and consultant functions; provided, however, that pursuant to duly adopted Watermaster rules, which shall be subject to review according to Paragraph 36 hereof, Watermaster staff and consultant functions may be accomplished by MWA staff and consultants, subject to strict time and cost accounting principles so that Watermaster functions, and the Assessments provided under this Judgment, do not subsidize, and are not subsidized by, MWA functions. Subject to these principles, MWA shall implement practicable cost efficiencies through consolidation of Watermaster and MWA staff and consultant functions.

24. Powers and Duties. Subject to the continuing supervision and control of the Court, Watermaster shall have and may exercise the following express powers, and shall perform the following duties, together with any specific powers, authority and duties granted or imposed elsewhere in this Judgement or hereafter ordered or authorized by the Court in the exercise of its continuing jurisdiction:

a. Rules and Regulations. To adopt any and all appropriate rules and regulations for conduct pursuant to this Judgment after public hearing. Notice of hearing and a copy of the proposed rules and regulations, and any amendments thereof, shall be mailed to all Parties thirty days prior to the date of the hearing thereon.

b. Employment of Experts and Agents. To employ such administrative personnel, engineering, legal, accounting, or other specialty services and consulting assistants as may be deemed appropriate in carrying out the terms of this Judgment.

c. Makeup and Replacement Obligations. To determine the Makeup Obligations for each Subarea and Replacement Obligations for each Producer and each Subarea, pursuant to the terms of the Judgment.

d. Measuring Devices, etc. To adopt rules and regulations regarding determination of amounts of Production and installation of individual water meters. The rules and regulations shall provide for approved devices or methods to measure or estimate Production. Producers who meter Production on the date of entry of this Judgment shall continue to meter Production. Thereafter, Producers who do not meter Production on the effective date of entry of this Judgment may be required by Watermaster rules and regulations to install water meters upon a showing that then employed measurement devices or methods do not accurately determine actual Production. The rules and regulations shall require that within three Years after the date of entry of this Judgment, any Producer who provides piped water for human Consumption to more than five service connections shall have installed an individual water meter on each service connection.

e. Hydrologic Data Collection. To install, operate and maintain such wells, measuring devices and/or meters necessary to monitor stream flow, precipitation and groundwater levels and to obtain such other data as may be necessary to carry out the provisions of this Judgment, including a study of the Basin Area phreatophyte consumptive use.

f. Assessments. To set, levy and collect all Assessments specified herein.

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g. Purchase of and Recharge with Supplemental Water. In accordance with Paragraph 27, to the extent Supplemental Water is available and is reasonably needed for Replacement Water or Makeup Water, to use Replacement Water Assessment proceeds to purchase Replacement Water, and to use Makeup Water Assessment proceeds to purchase Makeup Water and to have such Replacement Water and Makeup Water provided to the appropriate Subarea as soon as practicable. Watermaster may prepurchase Supplemental Water and apply subsequent Assessments towards the costs of such prepurchases.

h. Water Quality. To take all reasonable steps to assist and encourage appropriate regulatory agencies to enforce reasonable water quality regulations affecting the Basin Area, including regulation of solid and liquid waste disposal.

i. Notice List. To maintain a current list of Responsible Parties to receive notice hereunder.

j. Annual Administrative Budget. To prepare a proposed administrative budget for each Year, hold hearings thereon, and adopt an administrative budget according to the time schedule set forth in Exhibit "D". The administrative budget shall set forth budgeted items and Administrative Assessments in sufficient detail to show the allocation of the expense among the Producers. Following the adoption of the budget, expenditures within budgeted items may thereafter be made by Watermaster in the exercise of powers herein granted, as a matter of course.

k. Annual Report to Court.

(1) To file an Annual report with this Court not later than April 1 of each Year beginning April 1 following the

first full Year after entry of Judgment. Prior to filing the Annual report with the Court, Watermaster shall notify all Parties that a draft of the report is available for review and shall provide notice of a hearing to receive comments and recommendations for changes in the report. The public hearing shall be conducted on the same date and at the same place as the hearings required by Paragraphs 3 and 4 of Exhibit "D". The notice of hearing may include such summary of the draft report as Watermaster may deem appropriate. Watermaster shall also distribute the report to the Parties requesting copies.

(2) The Annual report shall include an Annual fiscal report of the preceding Year's operation and shall include details as to operation of each of the Subareas and an audit of all Assessments and expenditures pursuant to this Physical Solution and a review of Watermaster activities pursuant to this Judgment. The Annual report shall include a compilation of at least the following:

Determinations and data required by:

i) Paragraph 24(c) (Makeup and Replacement Obligations)

ii) Paragraph 24(e) (Hydrologic Data Collection)

iii) Paragraph 24(g) (Purchase of and Recharge with Supplemental Water)

iv) Paragraph 24(i) (Notice List)

Rules and regulations adopted pursuant to:

v) Paragraph 24(a) (Rules and Regulations)

vi) Paragraph 24(d) (Measuring Devices, etc.)

vii) Paragraph 24(s) (Storage Agreements)

Reports required by:

viii)Paragraph 24(j) (Annual Administrative Budget)

ix) Paragraph 24(n) (Transfers)

x) Paragraph 24(o) (Free Production Allowance)

xi) Paragraph 24(p) (Production Reports)

xii)Exhibit "D" (Prior Year Report)

xiii)Exhibit "F" (Transfers of Base Annual Production Rights)

xiv) Exhibit "G" (Status of Subarea Obligation)

xv) Exhibit "H" (Biological Resource Mitigation)

l. Investment of Funds. To hold and invest any funds in investments authorized from time to time for public agencies in the State of California.

m. Borrowing. To borrow in anticipation of receipt of Assessment proceeds in an amount not to exceed the Annual amount of Assessments levied but uncollected.

n. Transfers. To prepare on an Annual basis and maintain a report or record of any transfer of Base Annual Production Rights. Such report or record shall be available for inspection by any Party upon reasonable notice to the Watermaster.

o. Free Production Allowance. Not later than the end of the 1997-1998 Water Year, and Annually thereafter, to recommend in the Watermaster Annual Report an adjustment, if needed, to the Free Production Allowance for any Subarea. In making its recommendation, Watermaster shall be guided by the factors set forth in Exhibit "C", including but not limited to an annual calculation of the change of water in storage. The Annual report shall include all assumptions and calculations relied upon in making its recommendations. Following the 1997-1998 Water Year,

or any time thereafter, Watermaster shall obtain prior Court approval for any increase or reduction of any Subarea's Free Production Allowance. In no event shall a reduction in any Year for a Subarea exceed five percent of the aggregate Base Annual Production of that Subarea. In the event Watermaster recommends in its report to the Court that the Free Production Allowance for any Subarea may need to be increased or reduced, the Court shall conduct a hearing, after notice given by Watermaster according to paragraph 36, upon Watermaster's recommendations and may order such changes in Subarea Free Production Allowance. The most recent Subarea Free Production Allowances shall remain in effect until revised according to this Paragraph 24(o).

p. Production Reports. To require each Producer to file with Watermaster, pursuant to procedures and time schedules to be established by Watermaster, a report on a form to be prescribed by Watermaster showing the total Production of such Party for each reporting period rounded off to the nearest tenth of an acre foot, and such additional information and supporting documentation as Watermaster may require.

q. Production Adjustment for Change in Purpose of Use. If Watermaster determines, using the Consumptive Use rates set forth in Exhibit "F", that a new Purpose of Use of any Producer's Production for any Year has resulted in a higher rate of Consumption than the rate applicable to the original Purpose of Use of that Producer's Production in the Year for which Base Annual Production was determined, Watermaster shall use a multiplier (1) to adjust upward such Production for the purpose of determining the Producer's Replacement Water Assessment and, (2) to adjust upward

the Free Production Allowance portion of such Production for the purpose of determining the Producer's Makeup Water Assessment. The multiplier shall be determined by dividing the number of acre feet of Consumption that occurred under the new Purpose of Use by the number of acre feet of Consumption that would have occurred under the original Purpose of Use for the same Production.

r. Reallocation of Base Annual Production Rights. To reallocate annually the Base Annual Production Rights in each Subarea to reflect any permanent transfers of such Rights among Parties.

s. Storage Agreements. To enter into Storage Agreements with any Party in order to accommodate the acquisition of Supplemental Water. Watermaster may not enter into Storage Agreements with non-Parties unless such non-Parties become subject to the provisions of this Judgment and the jurisdiction of the Court. Such Storage Agreements shall by their terms preclude operations which will have a substantial adverse impact on any Producer. If a Party pursuant to a Storage Agreement has provided for predelivery or postdelivery of Replacement Water for the Party's use, Watermaster shall at the Party's request credit such water to the Party's Replacement Obligation. Watermaster shall adopt uniformly applicable rules for Storage Agreements. Watermaster shall calculate additions, extractions and losses of water stored under Storage Agreements and maintain an Annual account of all such water.

t. Subarea Advisory Committee Meetings. To meet on a regular basis and at least semi-annually with the Subarea Advisory Committees to review Watermaster activities pursuant to

this Judgment and to receive advisory recommendations from the Subarea Advisory Committees.

u. Unauthorized Production. To bring such action or motion as is necessary to enjoin unauthorized Production as provided in Paragraph 12 hereinabove.

v. Meetings and Records. To ensure that all meetings and hearings by Watermaster shall be noticed and conducted according to then current requirements of the Ralph M. Brown Act, Government Code Sections 54950, et seq. Watermaster files and records shall be available to any person according to the provisions of the Public Records Act, Government Code §§ 6200 et seq.

w. Data, Estimates and Procedures. To rely on and use the best available records and data to support the implementation of this Judgment. Where actual records of data are not available, Watermaster shall rely on and use sound scientific and engineering estimates. Watermaster may use preliminary records of measurements, and, if revisions are subsequently made, Watermaster may reflect such revisions in subsequent accounting. Exhibit "C" sets forth methods and procedures for determining surface flow components. Watermaster shall use either the same procedures or procedures that will yield results of equal or greater accuracy.

x. Biological Resource Mitigation. To implement the Biological Resource Mitigation measures set forth in Exhibit "H" herein.

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C. ASSESSMENTS

25. Purpose. Watermaster shall levy and collect Assessments from the Parties based upon Production in accordance with the time schedules set forth in Exhibit "D". Watermaster shall levy and collect such Assessments as follows:

a. Administrative Assessments. Administrative Assessments to fund the Administrative Budget adopted by the Watermaster pursuant to Paragraph 24(j) shall be levied uniformly against each acre foot of Production. A Producer who does not Produce in a given Year shall pay an Administrative Assessment in amount equal to the lowest MWA assessment for Minimal Producers for that Year.

b. Replacement Water Assessments. Replacement Water Assessments shall be levied against each Producer on account of such Producer's Production, after any adjustment pursuant to Paragraph 24(q), in excess of such Producer's share of the Free Production Allowance in each Subarea during the prior Year.

c. Makeup Water Assessments. Makeup Water Assessments shall be levied against each Producer in each Subarea on account of each acre-foot of Production therein which does not bear a Replacement Assessment hereunder, after any adjustment pursuant to Paragraph 24(q), to pay all necessary costs of satisfying the Makeup Obligation, if any, of that Subarea.

d. Biological Resource Assessment. To establish and, to the extent needed, to maintain the Biological Resource Trust Fund balance at one million dollars (in 1993 dollars) pursuant to Paragraph 24(x) and Exhibit "H", a Biological Resource Assessment in an amount not to exceed fifty cents (in 1993 dollars)

for each acre-feet of Production shall be levied uniformly against each producer except the California Department of Fish and Game.

e. MWA Assessment of Minimal Producers. The MWA shall identify and assess Minimal Producers through its own administrative procedures, and not acting as Watermaster.

26. Procedure. Each Party hereto is ordered to pay the Assessments herein provided for, which shall be levied and collected in accordance with the procedures and schedules set forth in Exhibit "D". Any Assessment which becomes delinquent, as defined in Paragraph 7 of Exhibit "D", shall bear interest at the then current San Bernardino County property tax delinquency rate Said interest rate shall be applicable to any said delinquent Assessment from the due date thereof until paid. Such delinquent Assessment, together with interest thereon, costs of suit, attorneys fees and reasonable costs of collection, may be collected pursuant to motion giving notice to the delinquent Party only, or Order to Show Cause proceeding, or such other lawful proceeding as may be instituted by the Watermaster; and shall, if provided for in the MWA Act, constitute a lien on the property of the Party as of the same time and in the same manner as does the tax lien securing County property taxes. The Watermaster shall Annually certify a list of all such unpaid delinquent Assessments to the MWA (in accordance with applicable provisions of the MWA Act). The MWA (in accordance with applicable provisions of the MWA Act) shall include the names of those Parties and the amounts of the liens in its list to the County Assessor's Office in the same manner and at the same time as it does its administrative assessments. MWA shall account for receipt of all collections of Assessments collected pursuant to

this Judgment, and shall pay such amounts collected pursuant to this Judgment to the Watermaster. The Watermaster shall also have the ability to enjoin production of those Persons who do not pay Assessments pursuant to this Judgment.

27. Availability of Supplemental Water. All Replacement and Makeup Water Assessments collected by the Watermaster shall be used to acquire Supplemental Water from MWA. Watermaster shall determine when to request Supplemental Water from MWA and shall determine the amount of Supplemental Water to be requested. MWA shall use its best efforts to acquire as much Supplemental Water as possible in a timely manner. If MWA encounters delays in the acquisition of Supplemental Water which, due to cost increases, results in collected assessment proceeds being insufficient to purchase all Supplemental Water for which the Assessments were made, MWA shall purchase as much water as the proceeds will allow when the water becomes available. If available Supplemental Water is insufficient to meet all Makeup and Replacement Water obligations, Watermaster shall allocate the Supplemental Water for delivery to the Subareas on an equitable and practicable basis pursuant to duly adopted Watermaster rules and regulations, giving preference to: First, Transition Zone Replacement Water Obligations as set forth in Exhibit "G"; Second, Makeup Water Obligations; and Third, other Replacement Water Obligations. MWA may acquire Supplemental Water at any time. MWA shall be entitled to enter into a Storage Agreement with Watermaster to store water MWA acquires prior to being paid to do so by Watermaster. Such water, including such water acquired and stored prior to the date of this Judgment or prior to the entry of

a Storage Agreement, may later be used to satisfy MWA's duty under this paragraph.

28. Use of Replacement Water Assessment Proceeds and Makeup Water Assessment Proceeds. The Proceeds of Replacement Water Assessments and any interest accrued thereon shall only be used for the purchase of Replacement Water for that Subarea from which they were collected. In addition, the proceeds of Replacement Water Assessments collected on account of Production in the Transition Zone, except as provided in Exhibit "G", shall only be used for the purchase of Replacement Water for the Transition Zone, and the proceeds of Replacement Water Assessments collected on account of Production in that portion of the Baja Subarea downstream of the Calico-Newberry fault shall only be used for the purchase of Replacement Water for that portion of the Baja Subarea downstream of the Calico-Newberry fault. The proceeds of Makeup Water Assessments and any interest accrued thereon shall only be used for the purchase of Makeup Water to satisfy the Makeup Obligation for which they are collected.

29. MWA Annual Report to the Watermaster. MWA shall Produce and deliver to Watermaster an Annual written report regarding actions of MWA required by the terms of this Judgment. The report shall contain: 1) a summary of the actions taken by MWA in identifying and assessing Minimal Producers, including a report of Assessments made and collected; 2) a summary of other MWA activities in collecting Assessment on behalf of Watermaster; 3) a report of water purchases and water distribution for the previous Year; 4) actions taken to implement its Regional Water Management Plan, including actions relating to conveyance facilities referred

to in this Judgment. The MWA report will be provided to Watermaster not less than 30 days prior to the Annual Watermaster report to the Court required by this Judgment.

D. SUBAREA ADVISORY COMMITTEES.

30. Authorization. The Producers in each of the five Subareas are hereby authorized and directed to cause committees of Producer representatives to be organized and to act as Subarea Advisory Committees.

31. Composition and Election. Each Subarea Advisory Committee shall consist of five (5) Persons who shall be called advisors. In the election of advisors, every Party shall be entitled to one vote for every acre-foot of Base Annual Production for that Party in that particular Subarea. Parties may cumulate their votes and give one candidate a number of votes equal to the number of advisors to be elected multiplied by the number of votes to which the Party is normally entitled, or distribute the Party's votes on the same principle among as many candidates as the Party thinks fit. In any election of advisors, the candidates receiving the highest number of affirmative votes of the Parties are elected. Elections shall be held upon entry of this Judgment and thereafter every third year. In the event a vacancy arises, a temporary advisor shall be appointed by unanimous decision of the other four advisors to continue in office until the next scheduled election. The California Department of Fish and Game shall serve as a permanent ex-officio member of the Alto and Baja Subarea Advisory Committees. Rules and regulations regarding organization, meetings and other activities shall be at the discretion of the individual

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Subarea Advisory Committees, except that all meetings of the committees shall be open to the public.

32. Compensation. The Subarea Advisory Committee members shall serve without compensation.

33. Powers and Functions. The Subarea Advisory Committee for each Subarea shall act in an advisory capacity only and shall have the duty to study, review and make recommendations on all discretionary determinations made or to be made hereunder by Watermaster which may affect that Subarea.

E. TRANSFERABILITY.

34. Assignment, Transfer, etc. of Rights. In order to further the purposes of this Judgment and Physical Solution, any Base Annual Production Right, or any portion thereof, may be sold, assigned, transferred, licensed or leased pursuant to the rules and procedures set forth in Exhibit "F".

F. MISCELLANEOUS PROVISIONS.

35. Water Quality. Nothing in this Judgment shall be interpreted as relieving any Party of its responsibilities to comply with state or federal laws for the protection of water quality or the provisions of any permits, standards, requirements, or orders promulgated thereunder.

36. Review Procedures. Any action, decision, rule or procedure of Watermaster pursuant to this Judgment shall be subject to review by the Court on its own motion or on timely motion by any Party, as follows:

a. Effective Date of Watermaster Action. Any order, decision or action of Watermaster pursuant to this Judgment on noticed specific agenda items shall be deemed to have occurred

on the date of the order, decision or action.

b. Notice of Motion. Any Party, may, by a regularly noticed motion, petition the Court for review of Watermaster's action or decision pursuant to this Judgment. The motion shall be deemed to be filed when a copy, conformed as filed with the Court, has been delivered to Watermaster together with the service fee established by Watermaster sufficient to cover the cost to photocopy and mail the motion to each Party. Watermaster shall prepare copies and mail a copy of the motion to each Party or its designee according to the official service list which shall be maintained by Watermaster according to Paragraph 37. A Party's obligation to serve notice of a motion upon the Parties is deemed to be satisfied by filing the motion as provided herein. Unless ordered by the Court, any such petition shall not operate to stay the effect of any Watermaster action or decision which is challenged.

c. Time for Motion. A motion to review any Watermaster action or decision shall be filed within ninety (90) days after such Watermaster action or decision, except that motions to review Watermaster Assessments hereunder shall be filed within thirty (30) days of mailing of notice of the Assessment.

d. De Novo Nature of Proceeding. Upon filing of a petition to review Watermaster action, the Watermaster shall notify the Parties of a date when the Court will take evidence and hear argument. The Court's review shall be de novo and the Watermaster decision or action shall have no evidentiary weight in such proceeding.

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e. Decision. The decision of the Court in such proceeding shall be an appealable Supplemental Order in this case. When the same is final, it shall be binding upon Watermaster and the Parties.

f. Payment of Assessments. Payment of Assessments levied by Watermaster hereunder shall be made pursuant to the time schedule in Exhibit "D"; notwithstanding any motion for review of Watermaster actions, decisions, rules or procedures, including review of Watermaster Assessments.

37. Designation of Address for Notice and Service. Each Party shall designate the name and address to be used for purposes of all subsequent notices and service herein, either by its endorsement on the Stipulation for Judgment or by a separate designation to be filed within thirty (30) days after Judgment has been entered. Said designation may be changed from time to time by filing a written notice of such change with Watermaster. Any Party desiring to be relieved of receiving notices of Watermaster activity may file a waiver of notice on a form to be provided by Watermaster. Watermaster shall maintain at all times a current list of Parties to whom notices are to be sent and their addresses for purposes of service. Watermaster shall also maintain a full current list of names and addresses of all Parties or their successors, as filed herein. Copies of such lists shall be available to any Person. If no designation is made, a Party's designee shall be deemed to be, in order of priority: i) the Party's attorney of record; ii) if the Party does not have an attorney of record, the Party itself at the address on the Watermaster list.

38. Service of Documents. Delivery to or service upon any Party by Watermaster, by any other Party, or by the Court, of any document required to be served upon or delivered to a Party under or pursuant to the Judgment shall be deemed made if made by Deposit thereof (or by copy thereof) in the mail, first class, postage prepaid, addressed to the designee of the Party and at the address shown in the latest designation filed by that Party.

39. No Abandonment of Rights. It is in the interest of reasonable beneficial use of the Basin Area and its water supply that no Party be encouraged to take and use more water in any Year than is actually required. Failure to Produce all of the water to which a Party is entitled hereunder shall not, in and of itself, be deemed or constitute an abandonment of such Party's right, in whole or in part.

40. Intervention After Judgment. Any person who is not a Party or successor to a Party and who proposes to Produce water from the Basin Area may seek to become a Party to this Judgment through a Stipulation for Intervention entered into with Watermaster. Watermaster may execute said Stipulation on behalf of the other Parties herein but such Stipulation shall not preclude a Party from opposing such Intervention at the time of the Court hearing thereon. Said Stipulation for Intervention must thereupon be filed with the Court, which will consider an order confirming said intervention following thirty (30) days' notice to the Parties. Thereafter, if approved by the Court, such intervenor shall be a Party bound by this Judgment and entitled to the rights and privileges accorded under the Physical Solution herein.

///

41. Recordation of Notice. MWA shall within sixty (60) days following entry of this Judgment record in the Office of the County Recorder of the County of San Bernardino a notice substantially complying with the notice content requirements set forth in Section 2529 of the California Water Code.

42. Judgment Binding on Successors, etc. Subject to specific provisions hereinbefore contained, this Judgment and all provisions thereof are applicable to and binding upon and inure to the benefit of not only the Parties to this action, but as well to their respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys in fact of any such Persons.

43. Costs. No Party stipulating to this Judgment shall recover any costs or attorneys fees in this proceeding from another stipulating Party.

44. Entry of Judgment. The Clerk shall enter this Judgment.

Dated: JAN 10 1996

E. MICHAEL KAISER

E. Michael Kaiser, Judge
Superior Court of the State
of California for the
County of Riverside

EXHIBIT A

MAP OF MOJAVE BASIN AREA

[INDEX MAP AND DETAIL SHEET CONSISTING OF 42 1" = 4,000' SCALE MAPS COVERING THE BASIN AREA; THE MAP IS ON DISPLAY AT THE OFFICE OF THE MOJAVE WATER AGENCY, 22450 HEADQUARTERS, APPLE VALLEY, CA 92307 AND ON FILE WITH THE COURT]

EXHIBIT B

PRODUCTION TABLES

CONTENTS

TABLE B-1: TABLE SHOWING BASE ANNUAL PRODUCTION AND BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN EACH SUBAREA AND FREE PRODUCTION ALLOWANCES FOR EACH SUBAREA FOR THE FIRST FIVE YEARS AFTER ENTRY OF THE INTERLOCUTORY JUDGMENT

TABLE B-2: TABLE SHOWING TOTAL VERIFIED PRODUCTION, BASE ANNUAL PRODUCTION AND RECIRCULATED WATER PRODUCTION FOR AQUACULTURE AND FOR RECREATIONAL LAKES

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
ABSHIRE, DAVID V	24	0.1093	24	22	21	20	19
ANDERSON, ROSS C & BETTY J	34	0.1548	34	32	30	28	27
BAR H MUTUAL WATER COMPANY	53	0.2414	53	50	47	45	42
BELL, CHUCK	494	2.2497	494	469	444	419	395
BURNS, BOBBY J & EVELYN J	1,300	5.9204	1,300	1,235	1,170	1,105	1,040
CASA COLINA FOUNDATION	90	0.4099	90	85	81	76	72
CENTER WATER CO	40	0.1822	40	38	36	34	32
CLUB VIEW PARTNERS	1,276	5.8111	1,276	1,212	1,148	1,084	1,020
CROSS, LAWRENCE E	23	0.1047	23	21	20	19	18
CRYSTAL HILLS WATER COMPANY	194	0.8835	194	184	174	164	155
DAHLQUIST, GEORGE R	594	2.7052	594	564	534	504	475
DELPERDANG, ROBERT H	56	0.2550	56	53	50	47	44
DESERT DAWN MUTUAL WATER COMPANY	15	0.0683	15	14	13	12	12
GARTA, TRINIDAD	512	2.3317	512	486	460	435	409
GAYJIKIAN, SAMUEL & HAZEL	102	0.4645	102	96	91	86	81
GRACETOWN INVESTMENT CO - JETCO PROP FUND	752	3.4247	752	714	676	639	601
GUBLER, HANS	30	0.1366	30	28	27	25	24
HAL-DOR LTD	23	0.1047	23	21	20	19	18
HANDLEY, DON R & MARY ANN	73	0.3325	73	69	65	62	58
HART, MERRILL W	473	2.1541	473	449	425	402	378
HERT, SCOTT	276	1.2569	276	262	248	234	220
HI-GRADE MATERIALS	442	2.0129	442	419	397	375	353
HITCHIN LUCERNE, INC	16	0.0729	16	15	14	13	12
JAMS RANCH	28	0.1275	28	26	25	23	22

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
JUBILEE MUTUAL WATER COMPANY	142	0.6467	142	134	127	120	113
JUNIPER RIVIERA COUNTY WATER DISTRICT	37	0.1685	37	35	33	31	29
LEE, DOO HWAN	78	0.3552	78	74	70	66	62
LOPEZ, BALTAZAR	385	1.7533	385	365	346	327	308
LUA, ANTONIO	348	1.5848	348	330	313	295	278
LUCERNE VALLEY MUTUAL WATER COMPANY	54	0.2459	54	51	48	45	43
LUCERNE VALLEY PARTNERS	1,213	5.5242	1,213	1,152	1,091	1,031	970
LUCERNE VISTA WATER CO	21	0.0956	21	19	18	17	16
MITSUBISHI CEMENT CORPORATION	1,299	5.9158	1,299	1,234	1,169	1,104	1,039
MONACO INVESTMENT COMPANY	70	0.3188	70	66	63	59	56
MOSS, LAWRENCE W & HELEN J	43	0.1958	43	40	38	36	34
PARK, CHANHO	597	2.7188	597	567	537	507	477
PARK, JEONG, IL & HEA JA	96	0.4372	96	91	86	81	76
PEREZ, EVA	247	1.1249	247	234	222	209	197
PETTIGREW, DAN	1,422	6.4760	1,422	1,350	1,279	1,208	1,137
PETTIGREW, HOWARD L	1,500	6.8312	1,500	1,425	1,350	1,275	1,200
PLUESS-STAUFER CALIFORNIA INC	23	0.1047	23	21	20	19	18
REED, MIKE	58	0.2641	58	55	52	49	46
ROGERS, ROY	1,449	6.5990	1,449	1,376	1,304	1,231	1,159
SAN BERNARDINO CO SERVICE AREA 29	21	0.0956	21	19	18	17	16
SEALS, LAWRENCE	113	0.5146	113	107	101	96	90
SON'S RANCH	140	0.6376	140	133	126	119	112
SOUTHERN CALIFORNIA WATER COMPANY	178	0.8106	178	169	160	151	142
SPECIALTY MINERALS, INC	42	0.1913	42	39	37	35	33

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
SPILLMAN, JAMES R & NANCY J	23	0.1047	23	21	20	19	18
STEWART WATER COMPANY	54	0.2459	54	51	48	45	43
STRINGER, W EDWARD	573	2.6095	573	544	515	487	458
THE CUSHENBURY TRUST, C/O SPECIALTY MINERALS, INC	10	0.0455	10	9	9	8	8
TURNER, LOYD & CAROL	77	0.3507	77	73	69	65	61
VISOSKY, JOSEPH F JR	1,120	5.1006	1,120	1,064	1,008	952	896
WEISER, SIDNEY & RAQUEL	90	0.4099	90	85	81	76	72
WILLOW WELLS MUTUAL WATER COMPANY	30	0.1366	30	28	27	25	24

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
MINIMAL PRODUCER POOL	2,000	9.1083	2,000	1,900	1,800	1,700	1,600
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	1,485	6.7629					
ESTE SUBAREA TOTALS =	21,958	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN OBSTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

OBSTE SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT (PERCENT) [2]	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
AEROCHEM, INC	660	5.3645	660	627	594	561	528
BROWN, DOUG & SUE	46	0.3739	46	43	41	39	36
CHAMISAL MUTUAL	96	0.7803	96	91	86	81	76
DAVIS, PAUL	19	0.1544	19	18	17	16	15
DOSSEY, D A	14	0.1138	14	13	12	11	11
MEADOWBROOK DAIRY	2,335	18.9791	2,335	2,218	2,101	1,984	1,868
RESSEGUE, JOHN & BILL	259	2.1052	259	246	233	220	207
SAN BERNARDINO CO SERVICE AREA 70G	110	0.8941	110	104	99	93	88
SAN BERNARDINO CO SERVICE AREA 70L	1,306	10.6153	1,306	1,240	1,175	1,110	1,044
THORESON, ROBERT F & A KATHLEEN	40	0.3251	40	38	36	34	32
TROEGER, RICHARD H	112	0.9103	112	106	100	95	89
VAN DAM BROTHERS	1,860	15.1183	1,860	1,767	1,674	1,581	1,488

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TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND

BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN OBSTE SUBAREA

TOGETHER WITH FREE PRODUCTION ALLOWANCES

FOR FIRST FIVE YEARS OF THE JUDGMENT

OBSTE SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
MINIMAL PRODUCER POOL	1,500	12.1921	1,500	1,425	1,350	1,275	1,200
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	3,946	32.0735					
OBSTE SUBAREA TOTALS =	12,303	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found *to be in error.*

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
ABBOND, EDWARD & GRACE	28	0.0229	28	26	25	23	22
ABBOTT, LEONARD C	284	0.2321	284	269	255	241	227
ADELANTO, CITY OF	1,573	1.2855	1,573	1,494	1,415	1,337	1,258
ADELANTO, CITY OF - GEORGE A F B	3,433	2.8055	3,433	3,261	3,089	2,918	2,746
AGCON, INC	384	0.3138	384	364	345	326	307
APPLE VALLEY COUNTRY CLUB	709	0.5794	709	673	638	602	567
APPLE VALLEY DEVELOPMENT	724	0.5917	724	687	651	615	579
APPLE VALLEY FOOTHILL CO WATER DISTRICT	167	0.1365	167	158	150	141	133
APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT	125	0.1022	125	118	112	106	100
APPLE VALLEY RANCHOS WATER COMPANY	13,022	10.6419	13,022	12,370	11,719	11,068	10,417
APPLE VALLEY RECREATION & PARKS	45	0.0368	45	42	40	38	36
APPLE VALLEY VIEW MUTUAL WATER CO	36	0.0294	36	34	32	30	28
APPLE VALLEY, TOWN OF	298	0.2435	298	283	268	253	238
ARC LAS FLORES	6,331	5.1739	6,331	6,014	5,697	5,381	5,064
BACA, ENRIQUE	74	0.0605	74	70	66	62	59
BALDY MESA WATER DISTRICT	1,495	1.2218	1,495	1,420	1,345	1,270	1,196
BASS, NEWTON T	514	0.4201	514	488	462	436	411
BASTIANON, REMO	77	0.0629	77	73	69	65	61
BASURA, STEVE	25	0.0204	25	23	22	21	20
BEINSCHROTH, A J	90	0.0736	90	85	81	76	72
BOYCE, KENNETH & WILLA	102	0.0834	102	96	91	86	81
BROWN, BOBBY G & VALERIA R	42	0.0343	42	39	37	35	33
BURNS, ULYSSES & ANNIE L	164	0.1340	164	155	147	139	131
CARDOZO, MANUEL & MARIA	909	0.7429	909	863	818	772	727

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
CDFG - MOJAVE NARROWS REGIONAL PARK	2,107	1.7219	2,107	2,001	1,896	1,790	1,685
CDFG - MOJAVE RIVER FISH HATCHERY	20	0.0163	20	19	18	17	16
CLARK, KENNETH R	223	0.1822	223	211	200	189	178
CLEAR VIEW FARMS	501	0.4094	501	475	450	425	400
COPELAND, ET AL (C/O DON W. LITTLE)	175	0.1430	175	166	157	148	140
CRAMER, MARGARET MUIR	280	0.2288	280	266	252	238	224
CUNNINGHAM, WILLIAM	29	0.0237	29	27	26	24	23
DEXTER, CLAIR F	175	0.1430	175	166	157	148	140
DEXTER, J P	515	0.4209	515	489	463	437	412
DIBERNARDO, JOHN	203	0.1659	203	192	182	172	162
DOLCH, ROBERT & JUDY	426	0.3481	426	404	383	362	340
DOMBROWSKI, MICHAEL W & SUSAN M	19	0.0155	19	18	17	16	15
DOWSE, PHILIP	20	0.0163	20	19	18	17	16
EVENSON, EDWIN H & JOYCELAINE	70	0.0572	70	66	63	59	56
FISHER, DOLORES DR	48	0.0392	48	45	43	40	38
FISHER, JEROME	633	0.5173	633	601	569	538	506
FITZWATER, R E	291	0.2378	291	276	261	247	232
GARCIA, SONIA L	288	0.2354	288	273	259	244	230
GOMEZ, CIRIL - LIVING TRUST	330	0.2697	330	313	297	280	264
GREEN ACRES ESTATES	25	0.0204	25	23	22	21	20
GULBRANSON, MERLIN	163	0.1332	163	154	146	138	130
HELENDALE SCHOOL DISTRICT	18	0.0147	18	17	16	15	14
HESPERIA GOLF AND COUNTRY CLUB	678	0.5541	678	644	610	576	542
HESPERIA WATER DISTRICT	12,213	9.9808	12,213	11,602	10,991	10,381	9,770

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TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
HI-GRADE MATERIALS	149	0.1218	149	141	134	126	119
HODGE, STANLEY W	67	0.0548	67	63	60	56	53
HOLWAY, ROBERT	88	0.0719	88	83	79	74	70
HRUBIK, THOMAS A	3,862	3.1561	3,862	3,668	3,475	3,282	3,089
INDUSTRIAL ASPHALT	109	0.0891	109	103	98	92	87
JESS RANCH WATER COMPANY	7,480	6.1129	7,480	7,106	6,732	6,358	5,984
JOHNSON, LARRY & CARLEAN	82	0.0670	82	77	73	69	65
JOHNSON, RONALD	31	0.0253	31	29	27	26	24
JOHNSTON, HARRIET AND LARRY W	127	0.1038	127	120	114	107	101
KEMPER CAMPBELL RANCH	473	0.3865	473	449	425	402	378
LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT	658	0.5377	658	625	592	559	526
LAWSON, ERNEST & BARBARA	15	0.0123	15	14	13	12	12
LENHERT, RONALD & TONI	37	0.0302	37	35	33	31	29
LEWIS HOMES OF CALIFORNIA	1,693	1.3836	1,693	1,608	1,523	1,439	1,354
LONGMAN, JACK	115	0.0940	115	109	103	97	92
LOUNSBURY, J PETER & CAROLYN	208	0.1700	208	197	187	176	166
LOW, ROBERT	399	0.3261	399	379	359	339	319
LUCKEY, MANLEY J	800	0.6538	800	760	720	680	640
LUTH, KEN	27	0.0221	27	25	24	22	21
MARIANA RANCHOS COUNTY WATER DISTRICT	245	0.2002	245	232	220	208	196
MCCALL, REX	44	0.0360	44	41	39	37	35
MCINNIS, *WILLIAM S*	30	0.0245	30	28	27	25	24
MITCHELL, ROBIN & JUDITH	36	0.0294	36	34	32	30	28
MURPHY, BERNARD H	25	0.0204	25	23	22	21	20

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
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TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
MURPHY, BERNARD TRUST	162	0.1324	162	153	145	137	129
MURPHY, KENNETH	42	0.0343	42	39	37	35	33
MUTUAL FUNDING CORP	101	0.0825	101	95	90	85	80
NAVAJO MUTUAL WATER CO	88	0.0719	88	83	79	74	70
NUNN, DONALD & PEARL	66	0.0539	66	62	59	56	52
O'BRYANT, ROBERT C & BARBARA	107	0.0874	107	101	96	90	85
ORMSBY, HARRY G	386	0.3154	386	366	347	328	308
PALISADES RANCH	824	0.6734	824	782	741	700	659
PARKER, DAVID E	37	0.0302	37	35	33	31	29
PEARL, ALICE	147	0.1201	147	139	132	124	117
PEARSON, DERYL B	22	0.0180	22	20	19	18	17
PERRY, THOMAS A	35	0.0286	35	33	31	29	28
PETTIS TRUST	126	0.1030	126	119	113	107	100
PHENIX PROPERTIES LTD	652	0.5328	652	619	586	554	521
PITTMAN, LEROY W	148	0.1209	148	140	133	125	118
POLICH, LEE & DONNA	65	0.0531	65	61	58	55	52
RANCHERITOS MUTUAL WATER CO	169	0.1381	169	160	152	143	135
RIVERSIDE CEMENT CO - ORO GRANDE PLANT	3,452	2.8211	3,452	3,279	3,106	2,934	2,761
ROGERS, ROY (ORO GRANDE RANCH)	115	0.0940	115	109	103	97	92
RUDMAN, ROBERT T	300	0.2452	300	285	270	255	240
RUE RANCH	30	0.0245	30	28	27	25	24
SAN BERNARDINO CO SERVICE AREA 42	465	0.3800	465	441	418	395	372
SAN BERNARDINO CO SERVICE AREA 64	3,822	3.1234	3,822	3,630	3,439	3,248	3,057
SAN BERNARDINO CO SERVICE AREA 70C	2,346	1.9172	2,346	2,228	2,111	1,994	1,876

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TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
SAN BERNARDINO CO SERVICE AREA 70J	1,005	0.8213	1,005	954	904	854	804
SAN BERNARDINO CO SERVICE AREA 70L	355	0.2901	355	337	319	301	284
SAN FILIPPO, JOSEPH & SHELLEY	35	0.0286	35	33	31	29	28
SILVER LAKES ASSOCIATION	3,987	3.2583	3,987	3,787	3,588	3,388	3,189
SOUTHDOWN, INC	1,519	1.2414	1,519	1,443	1,367	1,291	1,215
SOUTHERN CALIFORNIA WATER COMPANY	940	0.7682	940	893	846	799	752
SPRING VALLEY LAKE ASSOCIATION	3,056	2.4974	3,056	2,903	2,750	2,597	2,444
SPRING VALLEY LAKE COUNTRY CLUB	977	0.7984	977	928	879	830	781
STORM, RANDALL	62	0.0507	62	58	55	52	49
SUDMEIER, GLENN W	121	0.0989	121	114	108	102	96
SUMMIT VALLEY RANCH	452	0.3694	452	429	406	384	361
TATRO, RICHARD K & SANDRA A	280	0.2288	280	266	252	238	224
TATUM, JAMES B	829	0.6775	829	787	746	704	663
TAYLOR, ALLEN C / HAYMAKER RANCH	456	0.3727	456	433	410	387	364
THOMAS, S DALE	440	0.3596	440	418	396	374	352
THOMAS, WALTER	36	0.0294	36	34	32	30	28
THOMPSON, JAMES A	418	0.3416	418	397	376	355	334
THOMPSON, RODGER	76	0.0621	76	72	68	64	60
THRASHER, GARY	373	0.3048	373	354	335	317	298
THUNDERBIRD COUNTY WATER DISTRICT	118	0.0964	118	112	106	100	94
TURNER, ROBERT	70	0.0572	70	66	63	59	56
VAIL, JOSEPH B & PAULA E	126	0.1030	126	119	113	107	100
✲ VAN BURGER, CARL	710	0.5802	710	674	639	603	568
VAN LEEUWEN FAMILY TRUST	341	0.2787	341	323	306	289	272

✲ Durston Well, location 06N/04W-18F, APN 468-151-11 - water production right of 357 acre/feet, claimed by Durston/Van Burger/CVB Investments and Industrial Asphalt. Product right to be determined in a subsequent severed proceeding. Jurisdiction reserved.

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
VANNI, MIKE	54	0.0441	54	51	48	45	43
VICTOR VALLEY COMMUNITY COLLEGE DIST	240	0.1961	240	228	216	204	192
VICTOR VALLEY WATER DISTRICT	13,354	10.9133	13,354	12,686	12,018	11,350	10,683
VICTORVILLE, CITY OF	12	0.0098	12	11	10	10	9
VOGLER, ALBERT H	132	0.1079	132	125	118	112	105
WACKEEN, CAESAR	1,635	1.3362	1,635	1,553	1,471	1,389	1,308
WAKULA, JOHN	291	0.2378	291	276	261	247	232
WARD, KEN & BARBARA	65	0.0531	65	61	58	55	52
WEBER, DAVE	80	0.0654	80	76	72	68	64
WEST, CAROLYN & SMITH, RICHARD	24	0.0196	24	22	21	20	19
WEST, HOWARD & SUZY	72	0.0588	72	68	64	61	57
WHITTINGHAM, RICHARD V	15	0.0123	15	14	13	12	12
YEAGER, E L - CONSTRUCTION COMPANY INC	34	0.0278	34	32	30	28	27

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
MINIMAL PRODUCER POOL	4,000	3.2689	4,000	3,800	3,600	3,400	3,200
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	4,967	4.0592					
ALTO SUBAREA TOTALS =	122,365	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THS JUDGMENT

CENTRO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
AGCON, INC	0	0.0000	0	0	0	0	0
AGUAYO, JEANETTE L	212	0.3742	212	201	190	180	169
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	120	0.2118	120	114	108	102	96
AVDEEF, THOMAS	34	0.0600	34	32	30	28	27
AZTEC FARM DEVELOPMENT COMPANY (Now, Virgil Gorman)	220	0.3883	220	209	198	187	176
BARNES, PAY - EXECUTOR OF ESTATE OF WAYNE BARNES	243	0.4289	243	230	218	206	194
BROMMER, MARVIN	361	0.6372	361	342	324	306	288
BURNS, RITA J & PAMELA E	16	0.0282	16	15	14	13	12
CHAFA, LARRY R	96	0.1694	96	91	86	81	76
CHOI, YONG IL & JOUNG AE	38	0.0671	38	36	34	32	30
CHRISTISON, JOEL	75	0.1324	75	71	67	63	60
COOK, KWON W	169	0.2983	169	160	152	143	135
DE VRIES, NEIL	3,800	6.7070	3,800	3,610	3,420	3,230	3,040
DESERT COMMUNITY BANK	156	0.2753	156	148	140	132	124
DURAN, FRANK T	50	0.0883	50	47	45	42	40
GAINES, JACK	117	0.2065	117	111	105	99	93
GESIRIECH, WAYNE	121	0.2136	121	114	108	102	96
GORMAN, VIRGIL	138	0.2436	138	131	124	117	110
GRIEDER, RAYMOND H & DORISANNE	30	0.0530	30	28	27	25	24
GRILL, NICHOLAS P & MILLIE D	21	0.0371	21	19	18	17	16
GROEN, CORNELIS	1,043	1.8409	1,043	990	938	886	834
HANIFY, DBA - WHITE BEAR RANCH	152	0.2683	152	144	136	129	121
HARMSEN, JAMES & RUTH ANN	1,522	2.6863	1,522	1,445	1,369	1,293	1,217
HARPER LAKE COMPANY	1,433	2.5293	1,433	1,361	1,289	1,218	1,146

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
HI DESERT MUTUAL WATER CO	34	0.0600	34	32	30	28	27
HILEMAN, KATHERINE	19	0.0335	19	18	17	16	15
HILL, MELVIN	2,335	4.1213	2,335	2,218	2,101	1,984	1,868
HOY, MIKE	632	1.1155	632	600	568	537	505
JORDAN, RAYMOND	460	0.8119	460	437	414	391	368
JUSTICE, CHRIS	421	0.7431	421	399	378	357	336
KING, GENEVIEVE E	69	0.1218	69	65	62	58	55
LEE, SEPOONG ETAL & WOO POONG	77	0.1359	77	73	69	65	61
LEYERLY, GENEVA	65	0.1147	65	61	58	55	52
LEYERLY, RICHARD	862	1.5214	862	818	775	732	689
LUDINGTON, JAMES E & JO ANN	58	0.1024	58	55	52	49	46
LYON, LOUIS & ERIKA	130	0.2295	130	123	117	110	104
MARTIN, LENDELL	14	0.0247	14	13	12	11	11
MCCOLLUM, CHARLES L	347	0.6125	347	329	312	294	277
MEAD, G C	90	0.1589	90	85	81	76	72
MEYERS, LONNIE	27	0.0477	27	25	24	22	21
MITCHELL, CHARLES A	201	0.3548	201	190	180	170	160
MOFFITT, THOMAS R & EDITH I	62	0.1094	62	58	55	52	49
MOST, MILTON W	9,660	17.0500	9,660	9,177	8,694	8,211	7,728
NELSON, MILDRED L	52	0.0918	52	49	46	44	41
NEWBERRY SPRINGS COMPANY, INC	2,489	4.3931	2,489	2,364	2,240	2,115	1,991
OHAI, REYNOLDS & DOROTHY	137	0.2418	137	130	123	116	109
OROPEZA, JOSE M	190	0.3354	190	180	171	161	152
OSTERKAMP, GEROLD	260	0.4589	260	247	234	221	208

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
OWL ROCK PRODUCTS COMPANY	466	0.8225	466	442	419	396	372
PG & E	1,657	2.9246	1,657	1,574	1,491	1,408	1,325
REDDY, BOMMI V & KARUNA V	24	0.0424	24	22	21	20	19
ROWLAND, JAMES & HELEN	22	0.0388	22	20	19	18	17
RUISCH, DALE W	650	1.1473	650	617	585	552	520
SHIRKEY, ALAN G & MARY E	35	0.0618	35	33	31	29	28
SMITH, ROBERT A	43	0.0759	43	40	38	36	34
SOPPELAND, WAYNE	783	1.3820	783	743	704	665	626
SOUTHERN CALIFORNIA WATER COMPANY	11,309	19.9605	11,309	10,743	10,178	9,612	9,047
SPINK, WALTHALL	44	0.0777	44	41	39	37	35
ST CHARLES, DONALD B	609	1.0749	609	578	548	517	487
SUN 'N SKY COUNTRY CLUB	337	0.5948	337	320	303	286	269
TALLAKSON, WILLIAM V	17	0.0300	17	16	15	14	13
TILLEMA, HAROLD	874	1.5426	874	830	786	742	699
VAN DAM, ELDERT & SUSAN	722	1.2743	722	685	649	613	577
VAN LEEUWEN, JOHN	1,922	3.3923	1,922	1,825	1,729	1,633	1,537
VAN VLIET, HENDRIKA	820	1.4473	820	779	738	697	656
VANHOY, LUTHER C	23	0.0406	23	21	20	19	18
VERNOLA, PAT	3,116	5.4998	3,116	2,960	2,804	2,648	2,492
VISSER, ANNIE	91	0.1606	91	86	81	77	72
YANG, YOUNG MO	371	0.6548	371	352	333	315	296
YKEMA HARMSEN DAIRY	1,000	1.7650	1,000	950	900	850	800

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
MINIMAL PRODUCER POOL	2,000	3.5300	2,000	1,900	1,800	1,700	1,600
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	864	1.5250					
CENTRO SUBAREA TOTALS =	56,657	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
AKE, CHARLES J & MARJORIE M	23	0.0333	23	21	20	19	18
ANGERER, ROBERT J & PEGGY	24	0.0347	24	22	21	20	19
ANTELOPE VALLEY DAIRY	5,430	7.8597	5,430	5,158	4,887	4,615	4,344
ARGUELLES, ALFREDO	1,047	1.5155	1,047	994	942	889	837
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	80	0.1156	80	76	72	68	64
BAGLEY, ROY	20	0.0289	20	19	18	17	16
BALDERRAMA, ALFRED & LINDA	250	0.3619	250	237	225	212	200
BALL, DAVID P	81	0.1172	81	76	72	68	64
BARAK, RICHARD	132	0.1911	132	125	118	112	105
BARBER, JAMES B	167	0.2417	167	158	150	141	133
BARSTOW CALICO K O A	24	0.0347	24	22	21	20	19
BAUR, KARL & RITA	26	0.0376	26	24	23	22	20
BEDINGFIELD, LYNDELL & CHARLENE	56	0.0811	56	53	50	47	44
BENTON, PHILIP G	35	0.0507	35	33	31	29	28
BORGOGNO, STEVEN & LILLIAN B	1,844	2.6691	1,844	1,751	1,659	1,567	1,475
BOWMAN, EDWIN L	31	0.0449	31	29	27	26	24
BROWN, RONALD A	1,080	1.5632	1,080	1,026	972	918	864
BROWY, ORVILLE & LOUISE	33	0.0478	33	31	29	28	26
BRUINS, NICHOLAS	29	0.0420	29	27	26	24	23
CALICO LAKES HOMEOWNERS ASSOCIATION	1,031	1.4923	1,031	979	927	876	824
CALIF DEPT OF TRANSPORTATION	71	0.1028	71	67	63	60	56
CAMPBELL, M A & DIANNE	22	0.0318	22	20	19	18	17
CARTER, JOHN THOMAS	746	1.0798	746	708	671	634	596
CDFG - CAMP CADY	14	0.0203	14	13	12	11	11

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA / PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
CHANG, TIMOTHY & JANE	18	0.0261	18	17	16	15	14
CHASTAIN, W C	100	0.1447	100	95	90	85	80
CHEYENNE LAKE, INC	122	0.1766	122	115	109	103	97
CHIAO MEI DEVELOPMENT	451	0.6528	451	428	405	383	360
CHO BROTHERS RANCH	758	1.0972	758	720	682	644	606
CHUANG, MARSHAL	70	0.1013	70	66	63	59	56
CONNER, WILLIAM H	25	0.0362	25	23	22	21	20
COOL WATER RANCH	76	0.1100	76	72	68	64	60
CRYSTAL LAKES PROPERTY OWNERS ASSOCIATION	447	0.6470	447	424	402	379	357
DAGGETT COMMUNITY SERVICES DISTRICT	235	0.3402	235	223	211	199	188
DALJO CORPORATION	31	0.0449	31	29	27	26	24
DAVIS, RONALD & DONNA	53	0.0767	53	50	47	45	42
DE JONG, ALAN L	1,648	2.3854	1,648	1,565	1,483	1,400	1,318
DENNISON, QUENTIN D	29	0.0420	29	27	26	24	23
DESERT LAKES CORPORATION - (LAKE DOLORES)	483	0.6991	483	458	434	410	386
DOCIMO, DONALD P & PATRICIA J	23	0.0333	23	21	20	19	18
DONALDSON, JERRY & BEVERLY	90	0.1303	90	85	81	76	72
ELLISON, SUSAN	15	0.0217	15	14	13	12	12
EVKHANIAN, JAMES H	110	0.1592	110	104	99	93	88
FAWCETT, EDWARD C	20	0.0289	20	19	18	17	16
FELIX, ALAN E & CAROL L	36	0.0521	36	34	32	30	28
FERRO, DENNIS & NORMA	32	0.0463	32	30	28	27	25
FRIEND, JOSEPH & DEBORAH	60	0.0868	60	57	54	51	48
FUNDAMENTAL CHRISTIAN ENDEAVOR	285	0.4125	285	270	256	242	228

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TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
GARCIA, DANIEL	23	0.0333	23	21	20	19	18
GOLD, HAROLD	249	0.3604	249	236	224	211	199
GRAVES, CHESTER B	32	0.0463	32	30	28	27	25
HAIGH, WHILLDYN & MARGARET	32	0.0463	32	30	28	27	25
HALL, LARRY	23	0.0333	23	21	20	19	18
HARALIK, BESS & ROBERT	27	0.0391	27	25	24	22	21
HARDESTY, LESLIE E & BECKY J	47	0.0680	47	44	42	39	37
HARESON, NICHOLAS & MARY	30	0.0434	30	28	27	25	24
HARTER FARMS	1,083	1.5676	1,083	1,028	974	920	866
HARTER, JOE & SUE	738	1.0682	738	701	664	627	590
HARTLEY, LONNIE	19	0.0275	19	18	17	16	15
HARVEY, FRANK	38	0.0550	38	36	34	32	30
HENDLEY, RICK & BARBARA	48	0.0695	48	45	43	40	38
HIETT, PATRICIA J	16	0.0232	16	15	14	13	12
HILARIDES, FRANK	1,210	1.7514	1,210	1,149	1,089	1,028	968
HOLLISTER, ROBERT H & RUTH M	44	0.0637	44	41	39	37	35
HONG, PAUL B & MAY	95	0.1375	95	90	85	80	76
HORTON'S CHILDREN'S TRUST	106	0.1534	106	100	95	90	84
HORTON, JOHN MD	183	0.2649	183	173	164	155	146
HOSKING, JOHN W & JEAN	94	0.1361	94	89	84	79	75
HUBBARD, ESTER & MIZUNO, ARLEAN	28	0.0405	28	26	25	23	22
HUNT, RALPH M & LILLIAN F	31	0.0449	31	29	27	26	24
HUTCHISON, WILLIAM O	901	1.3042	901	855	810	765	720
HYATT, JAMES & BRENDA	210	0.3040	210	199	189	178	168

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
IRVIN, BERTRAND W	29	0.0420	29	27	26	24	23
J V A AIR INC	54	0.0782	54	51	48	45	43
JACKSON, RAY	20	0.0289	20	19	18	17	16
JOHNSON, JAMES R	247	0.3575	247	234	222	209	197
JUSTICE, CHRIS	6	0.0087	6	5	5	5	4
KAPLAN, ABRAHAM M	76	0.1100	76	72	68	64	60
KASNER, ROBERT	1,001	1.4489	1,001	950	900	850	800
KATCHER, AUGUST M & MARCELINE	23	0.0333	23	21	20	19	18
KEMP, ROBERT & ROSE	32	0.0463	32	30	28	27	25
KIEL, MARY	34	0.0492	34	32	30	28	27
KIM, JOON HO	764	1.1059	764	725	687	649	611
KOSHAREK, JOHN & JOANNE	54	0.0782	54	51	48	45	43
LAKE JODIE PROPERTY OWNERS ASSOCIATION	254	0.3677	254	241	228	215	203
LAKE WAIKIKI	98	0.1419	98	93	88	83	78
LAKE WAINANI OWNERS ASSOCIATION	202	0.2924	202	191	181	171	161
LANGLEY, MICHAEL R	20	0.0289	20	19	18	17	16
LAWRENCE, WILLIAM W	45	0.0651	45	42	40	38	36
LEE, MOON & OKBEA	49	0.0709	49	46	44	41	39
LEE, VIN JANG T	630	0.9119	630	598	567	535	504
LESHIN, CONNIE & SOL	1,416	2.0496	1,416	1,345	1,274	1,203	1,132
LESHIN, SOL	1,997	2.8906	1,997	1,897	1,797	1,697	1,597
LEVINE, DR LESLIE	1,637	2.3695	1,637	1,555	1,473	1,391	1,309
LONG, BALLARD	35	0.0507	35	33	31	29	28
M BIRD CONSTRUCTION	41	0.0593	41	38	36	34	32

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
MAHJOUBI, AFSAR S	63	0.0912	63	59	56	53	50
MALIN, LILY	54	0.0782	54	51	48	45	43
MALONEY, JANICE	36	0.0521	36	34	32	30	28
MARCROFT, JAMES A & JOAN	38	0.0550	38	36	34	32	30
MARSHALL, CHARLES	20	0.0289	20	19	18	17	16
MAYBERRY, DONALD J	41	0.0593	41	38	36	34	32
MILBRAT, IRVING	73	0.1057	73	69	65	62	58
MITCHELL, CHARLOTTE	115	0.1665	115	109	103	97	92
MITCHELL, JAMES L & CHERYL A	155	0.2244	155	147	139	131	124
MOORE, WAYNE G & JULIA H	103	0.1491	103	97	92	87	82
MORRIS, KARL	304	0.4400	304	288	273	258	243
MULLIGAN, ROBERT & INEZ	35	0.0507	35	33	31	29	28
NEWBERRY COMMUNITY SERVICE DIST	23	0.0333	23	21	20	19	18
NU VIEW DEVELOPMENT, INC	2,899	4.1962	2,899	2,754	2,609	2,464	2,319
O P D L INC	109	0.1578	109	103	98	92	87
O'KEEFE, SARAH-LEE & JOKE E	50	0.0724	50	47	45	42	40
P & H ENGINEERING & DEV CORP	667	0.9654	667	633	600	566	533
PARKER, GEORGE R	144	0.2084	144	136	129	122	115
PATHFINDER INVESTORS	472	0.6832	472	448	424	401	377
PAYAN, PAUL	32	0.0463	32	30	28	27	25
PERKO, BERT K	132	0.1911	132	125	118	112	105
PITTS, JOE	30	0.0434	30	28	27	25	24
POHL, ANDREAS & CATHLYN	17	0.0246	17	16	15	14	13
POLAND, JOHN R & SANDRA M	92	0.1332	92	87	82	78	73

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
PRICE, ALAN E	37	0.0536	37	35	33	31	29
PRICE, DONALD	42	0.0608	42	39	37	35	33
PUCKHABER, WILLIAM F TRUST	63	0.0912	63	59	56	53	50
PURCIO, THOMAS F & PATRICIA A	80	0.1158	80	76	72	68	64
RANDOLPH, JOAN E	24	0.0347	24	22	21	20	19
REEVES, RICHARD	230	0.3329	230	218	207	195	184
RICE, DANIEL & MARY	121	0.1751	121	114	108	102	96
RICE, HENRY C & DIANA	24	0.0347	24	22	21	20	19
RIEGER, WALTER M	62	0.0897	62	58	55	52	49
RIKUO CORPORATION	1,517	2.1958	1,517	1,441	1,365	1,289	1,213
ROSSI, JAMES L & NAOMI I	614	0.8887	614	583	552	521	491
ROTEX CONSTRUCTION COMPANY	2,529	3.6606	2,529	2,402	2,276	2,149	2,023
SAN BERNARDINO COUNTY BARSTOW - DAGGETT AIRPORT	168	0.2432	168	159	151	142	134
SANTUCCI, ANTONIO & WILSA	30	0.0434	30	28	27	25	24
SCOGGINS, JERRY	105	0.1520	105	99	94	89	84
SHEPPARD, THOMAS & GLORIA	217	0.3141	217	206	195	184	173
SHORT, CHARLES & MARGARET	54	0.0782	54	51	48	45	43
SHORT, JEFF	30	0.0434	30	28	27	25	24
SILVER VALLEY RANCH, INC	109	0.1578	109	103	98	92	87
SMITH, WILLIAM E	19	0.0275	19	18	17	16	15
SNYDER, KRYL K & ROUTH, RICHARD J	64	0.0926	64	60	57	54	51
SOUTHERN CALIFORNIA EDISON CO - AGRICULTURE	5,858	8.4792	5,858	5,565	5,272	4,979	4,686
SOUTHERN CALIFORNIA EDISON CO - INDUSTRIAL	4,565	6.6076	4,565	4,336	4,108	3,880	3,652
SOUTHERN CALIFORNIA GAS COMPANY	98	0.1419	98	93	88	83	78

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
ST ANTONY COPTIC ORTHODOX MONASTERY	130	0.1882	130	123	117	110	104
STEWART, STANLEY & PATRICIA	27	0.0391	27	25	24	22	21
SUGA, TAKEAKI	154	0.2229	154	146	138	130	123
SUNDOWN LAKES, INC	168	0.2432	168	159	151	142	134
SWARTZ, ROBERT & IRENE	50	0.0724	50	47	45	42	40
TAPIR, RAYMOND & MURIEL	18	0.0261	18	17	16	15	14
TAYLOR, TOM	503	0.7281	503	477	452	427	402
THAYER, SHARON	58	0.0840	58	55	52	49	46
THE 160 NEWBERRY RANCH CALIFORNIA, LTD	1,033	1.4952	1,033	981	929	878	826
TRIPLE H PARTNERSHIP	993	1.4373	993	943	893	844	794
UNION PACIFIC RAILROAD COMPANY	249	0.3604	249	236	224	211	199
VAN BASTELAAR, ALPHONSE	78	0.1129	78	74	70	66	62
VAN DIEST, CORNELIUS	934	1.3519	934	887	840	793	747
VAN LEEUWEN, JOHN	1,084	1.5690	1,084	1,029	975	921	867
VANDER DUSSEN, AGNES	1,792	2.5938	1,792	1,702	1,612	1,523	1,433
VAUGHT, ROBERT E & KAREN M	43	0.0622	43	40	38	36	34
VERNOLA, PAT	1,310	1.8962	1,310	1,244	1,179	1,113	1,048
WARD, ERNEST & LAURA	38	0.0550	38	36	34	32	30
WARD, RONNY H	130	0.1882	130	123	117	110	104
WEBER, F R & JUNELL	96	0.1390	96	91	86	81	76
WEBSTER, THOMAS M & PATRICIA J	24	0.0347	24	22	21	20	19
WEIDKNECHT, ARTHUR J & PEGGY A	79	0.1143	79	75	71	67	63
WESTERN HORIZON ASSOCIATES INC	1,188	1.7196	1,188	1,128	1,069	1,009	950
WESTERN ROCK PRODUCTS	31	0.0449	31	29	27	26	24

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EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
WET SET, INC	129	0.1867	129	122	116	109	103
WITTE, E DANIEL	27	0.0391	27	25	24	22	21
WLSR INC	133	0.1925	133	126	119	113	106
WORSEY, REVAE	29	0.0420	29	27	26	24	23
YARD, BETTY	26	0.0376	26	24	23	22	20
YERMO WATER COMPANY	453	0.6557	453	430	407	385	362
YOUNG, KEITH O - (DESERT TURF)	312	0.4516	312	296	280	265	249
MINIMAL PRODUCER POOL	3,500	5.0661	3,500	3,325	3,150	2,975	2,800
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	320	0.4632					
BAJA SUBAREA TOTALS =	69,087	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
ALTO SUBAREA

PRODUCER	TOTAL WATER [1] PRODUCTION	BASE ANNUAL [2] PRODUCTION	RECIRCULATED [3] WATER
	(ACRE-FEET)		
CDFG - MOJAVE RIVER FISH HATCHERY	10,678	20	10,658
JESS RANCH WATER COMPANY	18,625	7,480	11,145
ALTO SUBAREA TOTALS =	29,303	7,500	21,803

Total Water Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records; James C. Hanson site inspection; land use estimates from 1989 aerial photography; responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production as shown on Table B-1.

3 Amount shown is the difference between the Total Water Production and the Base Annual Production.

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
BAJA SUBAREA

PRODUCER	TOTAL WATER [1] PRODUCTION	BASE ANNUAL [2] PRODUCTION	RECIRCULATED [3] WATER
	(ACRE-FEET)		
BROWY, ORVILLE & LOUISE	210	33	177
CALICO LAKES HOMEOWNERS ASSOCIATION	2,513	1,031	1,482
CDFG - CAMP CADY	102	14	88
CHEYENNE LAKE, INC	638	122	516
CRYSTAL LAKES PROPERTY OWNERS ASSOCIATION	6,575	447	6,128
DESERT LAKES CORPORATION - (LAKE DOLORES)	928	483	445
FUNDAMENTAL CHRISTIAN ENDEAVOR	440	285	155
HORTON'S CHILDREN'S TRUST	1,291	106	1,185
HORTON, JOHN MD	672	183	489
KIEL, MARY	188	34	154
LAKE JODIE PROPERTY OWNERS ASSOCIATION	2,805	254	2,551
LAKE WAIKIKI	400	98	302
LAKE WAINANI OWNERS ASSOCIATION	1,420	202	1,218
LEE, MOON & OKBEA	171	49	122
O F D L INC	434	109	325
RICE, DANIEL & MARY	614	121	493
SCOGGINS, JERRY	922	105	817
SILVER VALLEY RANCH, INC	455	109	346
SMITH, WILLIAM E	153	19	134
SUNDOWN LAKES, INC	1,109	168	941
TAPIE, RAYMOND & MURIEL	108	18	90
THAYER, SHARON	159	58	101
WET SET, INC	441	129	312
WLSR INC	678	133	545

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
BAJA SUBAREA

PRODUCER	TOTAL WATER [1] PRODUCTION	BASE ANNUAL [2] PRODUCTION	RECIRCULATED [3] WATER
	(ACRE-FEET)		
BAJA SUBAREA TOTALS =	23,426	4,310	19,116

1 Total Water Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records; James C. Hanson site inspection; land use estimates from 1989 aerial photography; responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production as shown on Table B-1.

3 Amount shown is the difference between the Total Water Production and the Base Annual Production.

EXHIBIT C

ENGINEERING APPENDIX

CONTENTS

A. ADJUSTMENT OF FREE PRODUCTION ALLOWANCES

B. DETERMINATION OF SURFACE FLOW COMPONENTS

TABLE C-1: MOJAVE BASIN AREA ADJUDICATION SUBAREA HYDROLOGICAL INVENTORY BASED ON LONG-TERM AVERAGE NATURAL WATER SUPPLY AND OUTFLOW AND CURRENT YEAR IMPORTS AND CONSUMPTIVE USE

EXHIBIT C

ENGINEERING APPENDIX

The purpose of this Engineering Appendix is to establish the basis for measurements, calculations and determinations required in the operation of the Physical Solution.

A. Adjustment of Free Production Allowances. In the preparation of the report required by Paragraph 24 (o) of this Judgment, the Watermaster shall take into account all available pertinent hydrologic data and estimates, including at least the factors, or changes in the factors, shown in the attached Table C-1, "MOJAVE BASIN AREA ADJUDICATION SUBAREA HYDROLOGICAL INVENTORY BASED ON LONG-TERM AVERAGE NATURAL WATER SUPPLY AND OUTFLOW AND CURRENT YEAR IMPORTS AND CONSUMPTIVE USE," and changes in storage as determined by well levels, the factors listed in Paragraph 2(a) of Exhibit "H", and other pertinent data. The numbers for each of the factors for each Subarea shown in Table C-1 are Sample Numbers only, and are not intended to be used in determining actual water supply, Consumptive Use and outflow, or Free Production Allowance of the Subareas.

B. Determination of Surface Flow Components. The procedures used to determine the historical surface flow components of the Mojave River at various locations are summarized below.

1. Determination of Surface Flow Components at Lower Narrows. Since the records available for the discharge of the Mojave River at Lower Narrows only provide data on the total amount of surface flow and since Storm Flow occurs during and following periods of rainfall, it was necessary to determine what portion of

total measured surface flow at Lower Narrows was Storm Flow and what portion was Base Flow.

The Parties in reaching the physical solution provided for in the Judgment, used certain procedures to separate the Storm Flow and Base Flow components of the total measured surface flow at Lower Narrows. Hydrographs of the mean daily discharge at Lower Narrows were plotted for the Year under consideration together with corresponding rainfall data obtained from the National Oceanic and Atmospheric Administration (NOAA) for Lake Arrowhead. Hydrographs were also plotted for the combined flow of West Fork Mojave River and Deep Creek which together with the Lake Arrowhead precipitation data served as a guide for interpreting those periods during which Storm Flow was likely to have occurred at Lower Narrows.

Other factors considered included:

* Occurrences of Storm Flow at Barstow and Afton Canyon,
* Precipitation at Victorville and Barstow,
* Consideration of the time of Year and temperature, &
* Shape of hydrographs for Years having similar Base Flow characteristics.

Based on interpretation of all of the foregoing information, the flows occurring on those days during which Storm Flow most likely occurred were "scalped" by projecting an estimated Base Flow Curve through the Storm Flow Period. The Base Flow component of the total monthly flow was then determined as follows:

a. For those periods during which there was obviously no Storm Flow, the entire recorded mean daily flows were assumed to be Base Flow.

b. For the remaining Storm Flow periods, the Base Flow component was taken as the area under the Base Flow Curve, except that for those days within the Storm Flow period when the actual mean daily discharge is less than the amount indicated by the Base Flow Scalping Curves, then the actual recorded amount is used.

2. Determination of Surface Flow Components at Waterman Fault. The total amount of surface flow passing the Waterman Fault (under current riverbed conditions) is considered to be Storm Flow and can be estimated from the Storm Flow passing the USGS gauging station Mojave River at Barstow. The following table was developed to provide a method for estimating flow at Waterman Fault:

Storm Flow At Barstow Gage[1] (Acre-Feet)	Estimated Surface Flow at Waterman Fault (Acre-Feet)
2,000	0
10,000	6,200
20,000	14,300
30,000	22,600
40,000	31,400
50,000	40,500
60,000	49,200
70,000	58,400
80,000	67,800
90,000	76,800
100.000	85,400

[1]From Recorded Flow at USGS Gaging Station Mojave River at Barstow. Relationship is based on single storm events. More than one storm event separated by more than five day of zero flow will be considered as separate storms.

3. Determination of Surface Flow Components at Afton. Records available for the discharge of the Mojave River at Afton, California, provide data on the total mount of surface flow and since storm runoff occurs during and immediately following a major storm event in the watershed area tributary to the Baja Basin below Barstow or in the event of large Storm Flows at Barstow which reach Afton, it was necessary to determine what portion of the total measured surface flow at Afton is Storm Flow and what portion of Base Flow.

The Parties, in reaching the physical solution provided for in the Judgment, used certain procedures to separate the Storm Flow and Base Flow components of the total measured surface flow at Afton. Hydrographs of the mean daily discharge at Afton were plotted for the water Year under consideration. In the absence of Storm Flow, the Base Flow curve at Afton was generally a relatively constant amount. Storm Flows were evidenced by sharp spikes or abrupt departures from the antecedent Base Flow and a fairly rapid return to pre-storm Base Flow Condition. The hydrograph of flows at Barstow served as a guide for identifying those periods during which Storm Flow was likely to have occurred at Afton.

Based on interpretation of all of the foregoing information, the flows occurring on those days during which Storm Flow most likely occurred were "scalped" by projecting an estimated Base Flow Curve through the Storm Flow Period. The Base Flow component of the total monthly flow was then determined as follows:

a. For those periods during which there is obviously no Storm Flow, the entire recorded mean daily flows were assumed to be Base Flow.

b. For the remaining Storm Flow periods, the Base Flow component was taken as the area under the Base Flow Curve except that for those days within the Storm Flow period when the actual mean daily discharge was less than the amount indicated by the Base Flow Scalping Curves, then the actual recorded amount was used.

4. Engineers' Work Papers. These procedures are reflected in the Work Papers of the Engineers, copies of which are filed with the Watermaster.

TABLE C-1
Mojave Basin Area Adjudication
Subarea Hydrological Inventory Based On
Long-Term Average Natural Water Supply and Outflow
and Current Year Imports and Consumptive Use
(All Amounts in Acre-Feet)

	Este	Oeste	Alto	Centro	Baja	Basin Totals
WATER SUPPLY						
Surface Water Inflow						
Gaged	0	0	65,000	0 [1]	0 [2]	65,000 [3]
Ungaged	1,700	1,500	3,000	37,300	14,300	6,500 [4]
Subsurface Inflow	0	0	1,000	2,000	1,200	0
Deep Percolation of Precipitation	0	0	3,500	0	100	3,600
Imports						
Lake Arrowhead CSD	0	0	1,500	0	0	1,500
Big Bear ARWWA	2,000	0	0	0	0	2,000
TOTAL	3,700	1,500	74,000	39,300	15,600	78,600
CONSUMPTIVE USE AND OUTFLOW						
Surface Water Outflow						
Gaged	0	0	0	0	8,200 [5]	8,200
Ungaged	0	0	37,300 [1]	14,000 [5]	0	0
Subsurface Outflow	200	800	2,000	1,200	0	0
Consumptive Use						
Agriculture	6,800	2,900	16,300	20,300	30,200	76,500
Urban	1,900	1,200	36,300	9,500	9,700	58,600
Phreatophytes	0	0	5,100	900	1,500	7,500 [6]
Exports	0	0	0	0	0	0
TOTAL	8,900	4,900	97,000	45,900	49,600	150,800
Surplus / (Deficit)	(5,200)	(3,400)	(23,000)	(6,600)	(34,000)	(72,200)
Total Estimated Production (Current Year) [7]	15,700	7,600	98,900	46,500	54,300	223,000
PRODUCTION SAFE YIELD (Current Year) [7]	10,500	4,200	75,900	39,900	20,300	150,800

SAMPLE CALCULATIONS

[1] Estimated from reported flows at USGS gaging station, Mojave River at Victorville Narrows.

[2] Includes 14,000 acre-feet of Mojave River surface flow across the Waterman Fault estimated from reported flows at USGS gaging station, Mojave River at Barstow, and 300 acre-feet of local surface inflow from Kane Wash.

[3] Represents the sum of Este (1,700 af), Oeste (1,500 af), Alto (3,000 af) and Baja (300 af from Kane Wash).

[4] Inter subarea subsurface flows do not accrue to the total basin water supply.

[5] Estimated from reported flows at USGS gaging station, Mojave River at Barstow.

[6] Estimated by Bookman-Edmonston.

[7] For purposes of this Table, the current year is 1990.

EXHIBIT D

TIME SCHEDULES

EXHIBIT D

TIME SCHEDULES

1. Prior Year Report. Annually not later than February 1 Watermaster shall provide to each Party a report covering the prior Year and setting forth at least the following:

a. Each Producer's Replacement Water Assessment, including any surcharges, based on rates applicable during the prior Year.

b. Each Producer's Makeup Water Assessment, based on rates applicable during the prior water Year.

2. MWA Supplemental Water Rates. Annually, not later than December 1, MWA shall set the rates per acre foot to be charged for Supplemental Water for the following Year, and shall project the rates for the following two Years.

3. Budget and Assessment Rates. Annually, not later than February 1, Watermaster shall provide to all Parties its proposal for its Administrative Budget, Administrative Assessment Rates, Replacement Water Rates, and Makeup Water Rates for the next ensuing Year and its rate projections for the next two (2) years. No later than March 1 of each Year, the Watermaster shall hold a public hearing to receive comments from Parties as to its proposal. Not later than April 1 of each Year, Watermaster shall adopt its final Budget and assessment rates for the next ensuing Year, and shall notify all Parties of its final Budget and Assessments rates within fifteen (15) days of adoption.

4. Free Production Allowance Adjustment. In any Year that Watermaster prepares a report pursuant to Paragraph 24 (o) of this Judgment that includes a recommendation for an adjustment of a Free

Production Allowance, Watermaster shall notify all Parties as to its recommendation not later than February 1, shall hold a public hearing thereon not later than March 1, and shall submit any such recommendation, which may be revised pursuant to the public hearing, to the Court not later than April 1.

5. Payment of Administrative Assessments and Biological Resource Assessments. Each Producer shall submit quarterly along with the Production report required by Paragraph 24 (p) an Administrative Assessment payment in an amount equal to the current Year Administrative Assessment Rate multiplied times the acre-feet of water Produced during the quarter and a Biological Resource Assessment payment in an amount equal to the current Year Biological Resource Assessment Rate multiplied times the acre-feet of water Produced during the quarter.

6. Payment of Replacement Water Assessments and Makeup Water Assessments. Replacement Water Assessments and Makeup Water Assessments for the prior Year shall be due and payable on July 1.

7. Delinquency of Assessments. Any assessment payable pursuant to this Judgment shall be deemed delinquent: i) if paid in Person, if not paid within five (5) days of the date due; ii) if paid by electronic funds transfer, if not paid within three (3) banking days of the date due; or iii) if paid by any other means, if not paid within ten (10) days of the date due. "Payment" shall occur when good and sufficient funds have been received by the Watermaster. Any assessment shall also be deemed delinquent in the event that any attempted payment is by funds that are not good and sufficient.

EXHIBIT E

LIST OF PRODUCERS AND THEIR DESIGNEES

EXHIBIT E

PRODUCER	DESIGNEE
ABBOND, EDWARD & GRACE	Same
ABBOTT, LEONARD C	Therese E. Parker, Esq.
ABSHIRE, DAVID V	Same
ADELANTO, CITY OF	Michael B. Jackson, Esq.
ADELANTO, CITY OF/GEORGE AFB	
AEROCHEM, INC	James Heiser, Esq.
AGCON, INC	Robert E. Hove
AGCON, INC.	Robert E. Hove
AGUAYO, JEANETTE L.	Same
AKE, CHARLES J & MARJORIE M	Same
ANDERSON, ROSS C & BETTY J	Same
ANGERER, ROBERT J & PEGGY	Same
ANTELOPE VALLEY DAIRY	Dick Van Dam
APPLE VALLEY COUNTRY CLUB	Terry Caldwell, Esq.
APPLE VALLEY DEVELOPMENT	Same
APPLE VALLEY FOOTHILL CO WATER	Doreen Ryssel
APPLE VALLEY HEIGHTS CO. WATER	Elizabeth Hanna, Esq.
APPLE VALLEY RANCHOS WATER	Fredric Fudacz, Esq.
APPLE VALLEY REC. & PARKS	Elizabeth Hanna, Esq.
APPLE VALLEY VIEW MUTUAL WATER CO.	Joseph Saltmeris, Esq.
APPLE VALLEY, TOWN OF	Sandra Dunn, Esq.
ARC LAS FLORES	William De Wolfe, Esq.
ARGUELLES, ALFREDO	Therese Parker, Esq.
ATCHISON, TOPEKA, SANTA FE	Curtis Ballantyne, Esq.
ATCHISON, TOPEKA, SANTA FE	Curtis Ballantyne, Esq.
AVDEEF, THOMAS & LUCILLE	Same
AZTEC FARM DEVELOPMENT CO	Al Jackson
BACA, ENRIQUE	Same
BAGLEY, ROY	Same
BALDERRAMA, ALFRED & LINDA	Same
BALDY MESA WATER DISTRICT	William Smillie

PRODUCER	DESIGNEE
BALL, DAVID P	Same
BAR H MUTUAL WATER COMPANY	Paul Nelson, President
BARAK, RICHARD	Therese Parker, Esq.
BARBER, JAMES B	Same
BARNES, FAY	Kirtland Mahlum, Esq.
BARSTOW CALICO K O A	Robert L. Moore
BASS, NEWTON T	Barbara Davisson, Business Manager
BASTIANON, REMO	Same
BASURA, STEVE	Same
BAUR, KARL & RITA	Same
BEDINGFIELD, LYNDELL&CHARLENE	Same
BEINSCHROTH, A J	Same
BELL, CHUCK	Therese Parker, Esq.
BENTON, PHILIP G	Same
BORGOGNO, STEVEN & LILLIAN	Same
BOWMAN, EDWIN L	Same
BOYCE, KENNETH & WILLA	Same
BROMMER, MARVIN	Same
BROWN, BOBBY G & VALERIA R	Same
BROWN, DOUG & SUE	Same
BROWN, RONALD A	Same
BROWY, ORVILLE & LOUISE	Same
BRUINS, NICHOLAS	Same
BURNS, BOBBY J & EVELYN J	Therese Parker, Esq.
BURNS, RITA J & PAMELA E	Same
BURNS, ANNIE L	Same
CALICO LAKES HOMEOWNERS	Billy Wyckoff
CALIF DEPT OF TRANSPORTATION	Alexander De Vorkin, Esq.
CAMPBELL, M A & DIANNE	Same
CARDOZO, MANUEL & MARIA	Robert Dougherty, Esq.
CARTER, JOHN THOMAS	Therese Parker, Esq.
CASA COLINA FOUNDATION	Charles E. Schwartz
CDFG - CAMP CADY	Marilyn Levin, Esq.

PRODUCER	DESIGNEE
CDFG - MOJAVE NARROWS REG.	Marilyn Levin, Esq.
CDFG - MOJAVE RIVER FISH	Marilyn Levin, Esq.
CENTER WATER CO	Morgan Daniels
CHAFA, LARRY R	Same
CHAMISAL MUTUAL	Earl D. McCool
CHANG, TIMOTHY & JANE	Same
CHASTAIN, W C	Same
CHEYENNE LAKE, INC	Michael Hayes
CHIAO MEI DEVELOPMENT	Maple Sia
CHO BROTHERS RANCH	Chung Cho Gong
CHOI, YONG IL & JOUNG AE	Same
CHRISTISON, JOEL	Same
CHUANG, MARSHAL	Therese Parker, Esq.
CLARK, KENNETH R	Same
CLEAR VIEW FARMS	Terry Caldwell, Esq.
CLUB VIEW PARTNERS	Manoucher Sarbaz
CONNER, WILLIAM H	Same
COOK, KWON W	Same
COOL WATER RANCH	Paul Henderson, Esq.
COPELAND, ETAL	Don W. Little
CRAMER, MARGARET MUIR	Terry Caldwell, Esq.
CROSS, LAWRENCE E & SHARON I	Same
CRYSTAL HILLS WATER COMPANY	Same
CRYSTAL LAKES PROPERTY OWNERS	Russell Khouri
CUNNINGHAM, WILLIAM	Same
DAGGETT COMMUNITY SERVICES	Lawrence Alf, CSD Chairman
DAHLQUIST, GEORGE R	Therese Parker, Esq.
DALJO CORPORATION	George Rubsch
DAVIS, Paul	Same
DAVIS, RONALD & DONNA	Same
DEJONG, ALAN L	Therese Parker, Esq.
DELPERDANG, ROBERT H	Same
DENNISON, QUENTIN c/o Clegg, Frizell & Joke	Same

PRODUCER	DESIGNEE
DESERT DAWN MUTUAL WATER COMPANY	Same
DESERT LAKES CORPORATION - (LAKE DOLORES)	Terry Christianson
DESERT COMMUNITY BANK	Same
DEVRIES, NEIL	Robert Dougherty, Esq.
DEXTER, CLAIR F	Same
DEXTER, J P	Same
DIBERNARDO, JOHN	Same
DOCIMO, DONALD P & PATRICIA J	Terry Caldwell, Esq.
DOLCH, ROBERT & JUDY	Same
DOMBROWSKI, MICHAEL W & SUSAN M	Same
DONALDSON, JERRY & BEVERLY	Same
DOSSEY, D A	Same
DOWSE, PHILIP	Same
DURAN, FRANK T	Therese Parker, Esq.
ELLISON, SUSAN	Same
EVENSON, EDWIN H & JOYCELAINE	Same
EVKHANIAN, JAMES H & PHYLLIA	Same
FAWCETT, EDWARD C	Same
FELIX, ALAN E & CAROL L	Same
FERRO, DENNIS & NORMA	Same
FISHER, DR DOLORES	Same
FISHER, JEROME	Same
FITZWATER, R E	Robert Dougherty, Esq.
FRIEND, JOSEPH & DEBORAH	Same
FUNDAMENTAL CHRISTIAN ENDEAVOR	Betty Brock
GAETA, TRINIDAD C/O BLUE BEAD FARMS	Therese Parker, Esq.
GAINES, JACK & MARY	Same
GARCIA, DANIEL	Same
GARCIA, SONIA L	Same
GAYJIKIAN, SAMUEL & HAZEL	Same
GESIRIECH, WAYNE	Therese Parker, Esq.
GILBERT, HERBERT & BERNICE	Same
GOLD, HAROLD	Therese Parker, Esq.

PRODUCER	DESIGNEE
GOMEZ, CIRIL - LIVING TRUST	Therese Parker, Esq.
GORMAN, VIRGIL	Robert Dougherty, Esq.
GRACETOWN INVESTMENT CO - JETCO PROP FUND	Same
GRAVES, CHESTER B	Same
GREEN ACRES ESTATES	Susan Zutavern
GRIEDER, RAYMOND H & DORISANNE	Same
GRILL, NICHOLAS P & MILLIE D	Therese Parker, Esq.
GROEN, CORNELIUS	Robert Dougherty, Esq.
GUBLER, HANS	Same
GULBRANSON, MERLIN	Therese Parker, Esq.
HAIGH, WHILLDYN & MARGARET	Same
HAL-DOR LTD	Russ Jones, Owner
HALL, LARRY	Same
HANDLEY, DON R & MARY ANN	Same
HANIFY, DBA - WHITE BEAR RANCH	Same
HARALIK, BESS & ROBERT	Same
HARDESTY, LESLIE E & BECKY J	Same
HARESON, NICHOLAS & MARY	Same
HARPER LAKE CO;UC OPERATING/HARPER DRY LAKE	David J. Cooper, Esq.
HART, MERRILL W	Same
HARTER FARMS	Richard Slivikin, Esq.
HARTER, JOE & SUE	Richard Slivikin, Esq.
HARTLEY, LONNIE	Same
HARVEY, FRANK	Same
HELENDALE SCHOOL DISTRICT	Patricia Bristol
HENDLEY, RICK & BARBARA	Same
HERT, SCOTT	Therese Parker, Esq.
HESPERIA GOLF AND COUNTRY CLUB	Michael Davis, Esq.
HESPERIA WATER DISTRICT	James Markman, Esq.
HI DESERT MUTUAL WATER CO	Stanley Derryberry
HI-GRADE MATERIALS	Robert E. Hove
HI-GRADE MATERIALS CO.	Robert E. Hove
HIETT, HARRY L & PATRICIA J	Same

PRODUCER	DESIGNEE
HILARIDES, FRANK	Same
HILEMAN, KATHERINE	Same
HILL, MELVIN	Therese Parker, Esq.
HITCHIN LUCERNE, INC	Same
HODGE, STANLEY W	Same
HOLLISTER, ROBERT H & RUTH M	Same
HOLWAY, ROBERT	Same
HONG, PAUL B & MAY	Same
HORTON'S CHILDREN'S TRUST	John W. Horton, M.D.
HORTON, JOHN MD	Same
HOSKING, JOHN W & JEAN	Same
HOY, MIKE	Therese Parker, Esq.
HRUBIK, THOMAS A	Dan McKinney, Esq.
HUBBARD, ESTER & MIZUNO, ARLEAN	Same
HUNT, RALPH M & LILLIAN F	Same
HUTCHISON, WILLIAM O	Same
HYATT, JAMES & BRENDA	Same
INDUSTRIAL ASPHALT	Martha Guy, Esq.
IRVIN, BERTRAND W	Same
JACKSON, RAY	Same
JAMS RANCH	Melvin Finklestein
JESS RANCH WATER COMPANY	Calvin House, Esq.
JOHNSON, JAMES R	Same
JOHNSON, LARRY & CARLEAN	Same
JOHNSON, RONALD	Same
JOHNSTON, HARRIET AND LARRY W	Same
JORDAN, RAYMOND	Same
JUBILEE MUTUAL WATER COMPANY	Ray Clark
JUNIPER RIVIERA COUNTY WATER DISTRICT	William Smillie
JUSTICE, CHRIS	Same
JUSTICE, CHRIS	Same
J V A AIR INC	Jim Anders
KAPLAN, ABRAHAM M	Same

PRODUCER	DESIGNEE
KASNER, ROBERT	Same
KATCHER, AUGUST M & MARCELINE	Same
KEMP, ROBERT & ROSE	Same
KEMPER CAMPBELL RANCH	Steve Abbott
KIEL, MARY	Same
KIM, JOON HO	Same
KING, GENEVIEVE E	Same
KOSHAREK, JOHN & JOANN	Same
LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT	Steve Abbott, Esq.
LAKE JODIE PROPERTY OWNERS ASSOCIATION	Same
LAKE WAIKIKI	Virginia Cahill, Esq.
LAKE WAINANI OWNERS ASSOCIATION	Same
LANGLEY, MICHAEL R & SHARON	Same
LAWRENCE, WILLIAM W	Same
LAWSON, ERNEST & BARBARA	Same
LEE, DOO HWAN	Same
LEE, MOON & OKBEA	Same
LEE, SEPOONG ETAL & WOO POONG	Same
LEE PHD, VIN JANG T C/O ARCHIBEK, ERIC&SANDI	Same
LENHERT, RONALD & TONI	Same
LESHIN, CONNIE & SOL	Same
LESHIN, SOL	Same
LEVINE, DR LESLIE	Therese Parker, Esq.
LEWIS HOMES OF CALIFORNIA	Kenneth P. Corhan, Esq.
LEYERLY, GENEVA	Robert Dougherty, Esq.
LEYERLY, RICHARD	Robert Dougherty, Esq.
LINT, GORDON	Same
LONG, BALLARD	Same
LONGMAN, JACK	Same
LOPEZ, BALTAZAR	Same
LOUNSBURY, J PETER & CAROLYN	Therese Parker, Esq.
LOW, ROBERT	Same
LUA, ANTONIO	Same

PRODUCER	DESIGNEE
LUCERNE VALLEY MUTUAL WATER COMPANY	Alice Feese
LUCERNE VALLEY PARTNERS	Manoucher Sarbaz
LUCERNE VISTA WATER CO	Thomas Stavros, Director
LUCKEY, MANLEY J	Terry Caldwell, Esq.
LUDINGTON, JAMES E & JO ANN	Same
LUTH, KEN	Therese Parker, Esq.
LYON, LOUIS & ERIKA	Same
MAHJOUBI, AFSAR S	Same
MALIN, LILY	Same
MALONEY, JANICE	Same
MARCROFT, JAMES A & JOAN	Same
MARIANA RANCHOS COUNTY WATER DISTRICT	Gary Shelton
MARSHALL, CHARLES	Same
MARTIN, LENDELL	Same
MAYBERRY, DONALD J & SANDRA D	Same
M BIRD CONSTRUCTION	Same
MCCALL, REX	Same
MCCOLLUM, CHARLES L	Same
MCINNIS, WILLIAM S	Same
MEAD, G C	Therese Parker, Esq.
MEADOWBROOK DAIRY	Same
MEYERS, LONNIE	Same
MILBRAT, IRVING & DIXIE	Same
MITCHELL, CHARLES A	Same
MITCHELL, CHARLOTTE	Same
MITCHELL, JAMES L & CHERYL A	Same
MITCHELL, ROBIN & JUDITH	Same
MITSUBISHI CEMENT CORPORATION	Michael Davis, Esq.
MOFFITT, THOMAS R & EDITH I	Same
MONACO INVESTMENT COMPANY	Manoucher Sarbaz
MOORE, WAYNE G & JULIA H	Same
MORRIS, JULIA V	Same
MOSS, LAWRENCE W & HELEN J	Same

PRODUCER	DESIGNEE
MOST, MILTON W	Therese Parker, Esq.
MULLIGAN, ROBERT & INEZ	Same
MURPHY, BERNARD H	Same
MURPHY, BERNARD TRUST	Same
MURPHY, KENNETH	Same
MUTUAL FUNDING CORP	Ron Yee-Dong, President
NAVAJO MUTUAL WATER CO	James Hanson
NELSON, MILDRED L	Same
NEWBERRY COMMUNITY SERVICE DIST	Vicki Morris
NEWBERRY SPRINGS COMPANY	Ed Dygert, Esq.
NUNN, DONALD & PEARL	Paul Henderson, Esq.
NU VIEW DEVELOPMENT, INC	Richard Slivkin, Esq.
O'BRYANT, ROBERT C & BARBARA	Same
O F D L INC	Virginia Cahill, Esq.
OHAI, REYNOLDS & DOROTHY	Same
O'KEEFE, SARAH-LEE & JOKE E	Same
ORMSBY, HARRY G	Same
OROPEZA, JOSE M	Same
OSTERKAMP, GEROLD	Robert Dougherty, Esq.
OWL ROCK PRODUCTS COMPANY	Vince Dommarito, Area Manager
P & H ENGINEERING & DEV CORP	Same
PALISADES RANCH	Robert Dougherty, Esq.
PARK, CHANHO	Same
PARK, HEA JA & JEONG IL	Same
PARKER, DAVID E	Same
PARKER, GEORGE R	Therese Parker, Esq.
PATHFINDER INVESTORS	Same
PAYAN, PAUL	Same
PEARL, ALICE	Same
BORUFF, PAUL & LINDA; PEARSON, DERYL B	Same
PEREZ, EVA	Therese Parker, Esq.
PERKO, BERT K	Same
PERRY, THOMAS A	Same

PRODUCER	DESIGNEE
PETTIGREW, DAN	Therese Parker, Esq.
PETTIGREW, HOWARD L	Therese Parker, Esq.
PETTIS FAMILY TRUST	Therese Parker, Esq.
P G & E	Robert Rickett, Esq.
PHENIX PROPERTIES LTD	Elizabeth Taylor, Manager
PITTMAN, LEROY W	Same
PITTS, JOE & STELLA	Same
PLUESS-STAUFER CALIFORNIA INC	David Aladjem, Esq.
POHL, ANDREAS & CATHLYN	Same
POLAND, JOHN R & SANDRA M	Same
POLICH, LEE & DONNA	Same
PRICE, ALAN E	Same
PRICE, DONALD & RUTH	Same
PUCKHABER TRUST, WILLIAM F	Same
PURCIO, THOMAS F & PATRICIA A	Same
RANCHERITOS MUTUAL WATER CO	Same
RANDOLPH, JOAN E	Therese Parker, Esq.
REDDY, BOMMI V & KARUNA V	Same
REED, MIKE	Same
REEVES, RICHARD	Same
RESSEQUE, JOHN & BILL	Same
RICE, DANIEL & MARY	Same
RICE, HENRY C & DIANA	Same
RIEGER, WALTER M	Same
RIKUO CORPORATION	Joseph Deering, Jr., Esq.
RIVERSIDE CEMENT CO - ORO GRANDE PLANT	Warren P. Felger, Esq.
ROGERS, ROY	Terry Caldwell, Esq.
ROGERS, ROY (ORO GRANDE RANCH)	Terry Caldwell, Esq.
ROSSI, JAMES L & NAOMI I	Same
ROTEX CONSTRUCTION COMPANY	Yong Cho
ROWLAND, JAMES & HELEN	Same
RUDMAN, ROBERT T	Terry Caldwell, Esq.
RUE RANCH	Joe Zack Feltz, President

PRODUCER	DESIGNEE
RUISCH, DALE W	Same
SAN BERNARDINO CSA #29	William Smillie
SAN BERNARDINO CSA #42	William Smillie
SAN BERNARDINO CSA #64	William Smillie
SAN BERNARDINO CSA #70C	William Smillie
SAN BERNARDINO CSA #70G	William Smillie
SAN BERNARDINO CSA #70J	William Smillie
SAN BERNARDINO CSA #70L	William Smillie
SAN BERNARDINO CO. BARSTOW-DAGGETT AIRPORT	William Smillie
SAN FILIPPO, JOSEPH & SHELLEY	Same
SANTUCCI, ANTONIO & WILSA	Same
SAN BERNARDINO CSA #70L	William Smillie
SCOGGINS, JERRY	Same
SEALS, LAWRENCE	Same
SHEPPARD, THOMAS & GLORIA	Same
SHIRKEY, ALAN G & MARY E	Same
SHORT, CHARLES & MARGARET	Therese Parker, Esq.
SHORT, JEFF	Same
SILVER LAKES ASSOCIATION	Michael Davis, Esq.
SILVER VALLEY RANCH, INC	Richard A. Ruben, Esq.
SMITH, ROBERT A	Therese Parker, Esq.
SMITH, WILLIAM E	Same
SNYDER, KRYL K & ROUTH, RICHARD J	Terry Caldwell, Esq.
SON'S RANCH	Therese Parker, Esq.
SOPPELAND, WAYNE	Terry Caldwell, Esq.
SOUTHERN CALIFORNIA EDISON CO - AGRICULTURE	Douglas Ditonto, Esq.
SOUTHERN CALIFORNIA EDISON CO - INDUSTRIAL	Douglas Ditonto, Esq.
SOUTHERN CALIFORNIA GAS COMPANY	Jane Goichman, Esq.
SOUTHERN CALIFORNIA WATER CO	Arthur Kidman, Esq.
SOUTHDOWN, INC.	Steve Abbott, Esq.
SOUTHERN CALIFORNIA WATER CO	Arthur Kidman, Esq.
SOUTHERN CALIFORNIA WATER CO	Arthur Kidman, Esq.
SPECIALTY MINERALS, INC	Michael Davis

PRODUCER	DESIGNEE
SPILLMAN, JAMES R & NANCY J	Same
SPINK, WALTHALL	Same
SPRING VALLEY LAKE ASSOCIATION	Thomas Bunn, III, Esq.
SPRING VALLEY LAKE COUNTRY CLUB	Richard Opper, Esq.
ST ANTHONY COPTIC ORTHODOX MONASTERY	Mike Stiller, Esq/Karas (Bishop)
DONALD B ST CHARLES, ATTY AT LAW	Same
STEWART WATER COMPANY	Isidro Baca
STEWART, STANLEY & PATRICIA	Therese Parker, Esq.
STORM, RANDALL	Same
STRINGER, W EDWARD	Therese Parker, Esq.
SUDMEIER, GLENN W	Same
SUGA, TAKEAKI	Same
SUMMIT VALLEY RANCH	Michael Davis, Esq.
SUNDOWN LAKES, INC	Thomas Hargraves
SUN & SKY COUNTRY CLUB	Everett Hughes
SWARTZ, ROBERT & IRENE	Same
TALLAKSON, WILLIAM V & ELIZABETH A	Same
TAPIE, RAYMOND & MURIEL	Same
TATUM, JAMES B	Same
TATRO, RICHARD K. & SANDRA A.	Same
TAYLOR, ALLEN C / HAYMAKER RANCH	Same
TAYLOR, TOM	Therese Parker, Esq.
THAYER, SHARON	Same
THE 160 NEWBERRY RANCH CALIFORNIA, LTD	Therese Parker, Esq.
THE CUSHENBURY TRUST, C/O SPECIALTY MINERALS	Michael Davis, Esq.
THOMAS FARMS	Therese Parker, Esq.
THOMAS, WALTER	Same
THOMPSON, JAMES A	Therese Parker, Esq.
THOMPSON, RODGER	Same
THORESON, ROBERT F & A KATHLEEN	Same
THRASHER, GARY	Same
THUNDERBIRD COUNTY WATER DISTRICT	Peter Taylor, General Manager
TILLEMA, HAROLD	Same

PRODUCER	DESIGNEE
TRIPLE H PARTNERSHIP	Ronald A. Van Blarcom, Esq.
TROEGER FAMILY TRUST, RICHARD H	Rollin N. Rauschl, Esq.
TURNER, LOYD & CAROL	Same
TURNER, ROBERT	Same
UNION PACIFIC RAILROAD COMPANY	Jim Barclay
VAIL, JOSEPH B & PAULA E	Same
VAN BASTELAAR, ALPHONSE	Same
VAN DAM BROTHERS	Same
VAN DAM, ELDERT & SUSAN	Same
VAN DIEST, CORNELIUS	Therese Parker, Esq.
VAN LEEUWEN FAMILY TRUST	Therese Parker, Esq.
VAN LEEUWEN, JOHN	Robert Dougherty, Esq.
VAN VLIET, HENDRIKA	Robert Dougherty, Esq.
VANDER DUSSEN, ED	Steve Tyler, Esq.
VANHOY, LUTHER C & ROBERTA L	Same
VANNI, MIKE	Tom O'Donnell
VAN BURGER, CARL c\o CVB INVESTMENT	Same
VAUGHT, ROBERT E. & KAREN M.	Same
VERNOLA, PAT	Robert Dougherty, Esq.
VERNOLA, PAT	Robert Dougherty, Esq.
VICTOR VALLEY COMMUNITY COLLEGE DIST	W. W. Miller, Esq.
VICTOR VALLEY WATER DISTRICT	Thomas McGuire, Esq.
VICTORVILLE, CITY OF	Thomas McGuire, Esq.
VISOSKY JR, JOSEPH F	Same
VISSER, ANNIE	Same
VOGLER, ALBERT H	Therese Parker, Esq.
WACKEEN, CAESAR	Jack W. Evarone, Esq.
WAKULA, JOHN & HELEN	Same
WARD, KEN & BARBARA	Same
WARD, RONNY H	Same
WEBER, DAVE	Same
WEBER, F R & JUNELL	Same
WEBSTER, THOMAS M & PATRICIA J	Same

PRODUCER	DESIGNEE
WEIDKNECHT, ARTHUR J & PEGGY A	Same
WEISER, SIDNEY & RAQUEL	Same
WEST, CAROLYN & SMITH, RICHARD	Same
WEST, HOWARD & SUZY	Same
WESTERN HORIZON ASSOCIATES INC	Ernest Leff, Esq.
WESTERN ROCK PRODUCTS	Kathleen Daprato
WET SET, INC	Thomas Ferruzzo, Esq.
WHITTINGHAM, RICHARD V	Same
WILLOW WELLS MUTUAL WATER COMPANY	Richard A. Joh
WITTE, E DANIEL & MARCIA	Same
WLSR INC	Steve Winfield
WOO, CHEN C/O ASTER DUCK CO	Same
WORSEY, JOSEPH A & REVAE	Same
YANG, YOUNG MO	Same
YARD, WILLIAM & BETTY	Same
YEAGER, E L - CONSTRUCTION COMPANY INC	Roger Luebs, Esq.
YERMO WATER COMPANY	Donald Walker
YKEMA HARMSEN DAIRY	Therese Parker. Esq.
YKEMA TRUST	Therese Parker, Esq.
YOUNG, KEITH O - (DESERT TURF)	Therese Parker, Esq.

EXHIBIT F

TRANSFERS OF BASE ANNUAL PRODUCTION RIGHTS.

EXHIBIT F

TRANSFERS OF BASE ANNUAL PRODUCTION RIGHTS

1. Transferability. Any Base Annual Production Right, including any Carryover Right (Right) or any portion thereof may be sold, assigned, transferred, licensed or leased subject to the rules set forth in this Exhibit "F".

2. Consumptive Use Adjustments. A transferred Right shall be adjusted so as not to cause an increased Consumptive Use of water. For either inter Subarea or intra Subarea transfers, if the transferee's Consumptive Use of water Produced under the transferred Right would be at a higher rate than that of transferor, the transferred Right shall be reduced by Watermaster to a level that equalizes the Consumptive Use to that of transferor. Any such adjustments by Watermaster shall be made using the following Consumptive Use rates. If a transfer would cause the same or a decreased Consumptive Use, no adjustment shall be made.

Type of Water Use	Consumptive Use Rate
Municipal	50%
Irrigation	50%
Industrial	case by case
Lakes or Aquaculture	surface acres x 7 ft.

For mixed or sequential uses of water excluding direct reuse of municipal wastewater, the total acre-feet of Consumptive Use shall be the sum of Consumptive Uses for each use.

3. Notice to Watermaster. No transfer shall become operable until the Parties to the transfer have jointly notified Watermaster of the terms and conditions of the transfer, the price to be paid by the transferee, the name of the Responsible Party and the name of the Person who will pay any applicable Assessments. Intra-Subarea transfers shall not require Watermaster authorization after giving notice. No inter-Subarea transfer shall become operable until authorized by Watermaster after giving notice. Watermaster shall authorize such transfers in the order of the date of notice, provided that funds are available as set forth in Paragraph 4 of this Exhibit "F".

4. Inter Subarea Transfers of Rights. A Party's Right in a (Source) Subarea may be transferred (by lease only) to a Party in another (Use) Subarea provided that in any Year the resulting unconsumed water in the Source Subarea due to all such transfers shall not be greater than the Replacement Water requirement of the Source Subarea in the preceding Year. Watermaster shall replace the resulting Consumptive Use in the Use Subarea that is attributable to the transfer, utilizing Replacement Water Assessments from the Source Subarea.

5. Transfers to Meet Replacement Water or Makeup Water Obligations. Watermaster may use Assessment proceeds to purchase or lease Rights in a Subarea in order to obtain water to meet an Obligation. The water so obtained shall be equal to the Consumptive Use portion of the transferred and unproduced Rights. No such purchases of leases of Rights in the Harper Lake Basin may be used to satisfy Obligations in other parts of the Centro Subarea.

6. Inter Subarea Transfers of Water. Water Produced in one (source) Subarea and exported to another Subarea for use or disposal shall bear a Replacement Water Obligation equal to the sum of the Production in excess of the Producer's share of the Free Production Allowance in the source Subarea plus the amount of water exported that would normally have been returned to the source Subarea. Such exported water shall be credited to the appropriate Subarea Obligation unless it has been purchased or leased as Replacement Water pursuant to a transfer agreement.

7. Verde Ranch Producers. Together the Spring Valley Lake Country Club ("the Country Club"), the Spring Valley Lake Association ("the Association"), the California Department of Fish and Game (DFG) Mojave Narrows Regional Park ("the Park") the Kemper Campbell Ranch ("the Ranch") comprise a group herein called the Verde Ranch Producers. Each Verde Ranch Producer has the ability physically both to Produce Groundwater and to Produce water that originated as tailwater flowing from the DFG Mojave River Fish Hatchery. DFG Producer Groundwater to supply the Hatchery, and Hatchery tailwater can be discharged in part or entirely to the Mojave River or in part or entirely to a lined channel that conveys tailwater to points where the Verde Ranch Producers can Produce it. The present flow regimen is as follows: Hatchery Production flows through the Hatchery and is then discharged to the River and/or the lined channel. Water discharged to the lined channel flows to a Country Club lake. The Country Club Produces Groundwater that is discharged to the Country Club lake. The Country Club property is irrigated by pumping from the Country Club lake. Water overflowing from the Country Club lake flows through a lined channel and

through other Country Club lakes, and finally is discharged to Spring Valley Lake. The Association Produces Groundwater that is discharged to Spring Valley Lake. Water overflowing from Spring Valley Lake flows to lakes in the Park. The Park Produces Groundwater that is discharged to the lakes in the Park. The Park also Produces Groundwater that is used directly for irrigation of the Park. The Park is also irrigated by pumping from the lakes in the Park. Water overflowing from the lakes in the Park is discharged to the Mojave River. Some water from the lakes in the Park also flows to a lake on the Ranch. The Ranch also Produces Groundwater. The Ranch is irrigated from the lake on the Ranch. No water flows on the surface from the Ranch property to the Mojave River.

In order to continue the present arrangements among the Hatchery and the Verde Ranch Producers while assuring that they participate fairly in the Physical Solution the following rules shall apply:

a. Total Production by the Country Club will be calculated as the sum of Country Club Groundwater Production plus inflow of Hatchery tailwater minus outflow to Spring Valley Lake. The Country Club shall monitor and report to Watermaster the amounts of such Groundwater Production, inflow and outflow.

b. Total Production by the Association will be calculated as the sum of Association Groundwater Production plus inflow from the Country Club minus outflow to the Park. The Association shall monitor and report to Watermaster the amounts of such Groundwater Production, inflow and outflow.

c. Total Production by the Park will be calculated as the sum of Park Groundwater Production plus inflow from the Association minus outflow to the Ranch minus outflow to the Mojave River. The Park shall monitor and report to Watermaster as to such Groundwater Production, inflow and outflows.

d. Total Production by the Ranch will be calculated as the sum of Ranch Groundwater Production plus inflow from the Park. The Ranch shall monitor and report to Watermaster the amounts of such Groundwater Production and inflow.

e. Hatchery Production up to 10,678 acre-feet per Year will be permitted free of any Assessments against the Hatchery. The Hatchery shall monitor and report to Watermaster its Groundwater Production and the amounts of tailwater discharged to the River and to the artificial channel. In any Year the Hatchery may Produce more than 10,678 acre-feet free of any Assessments against the Hatchery, provided such Production in excess of 10,678 acre-feet is reported as Groundwater Production by one or more of the Verde Ranch Producers in the same Year pursuant to operating agreements by and between the Hatchery and such Producer(s) filed with the Watermaster. The operating agreement shall specify the responsibility for payment of assessments. In the operating agreement, the Verde Ranch Producers may elect to have assessments be based on the aggregate Production of the Verde Ranch Producers, and may freely transfer Base Annual Production Rights internally, provided that the aggregate consumptive use of the Verde Ranch Producers shall not be increased. In the absence of such operating agreements, or if the operating agreements do not otherwise allocate responsibility for payment of Assessments, the Hatchery

shall be liable for Administrative, Replacement Water and Biological Resource Assessments on the amount of water Produced by the Hatchery in excess of 10,678 acre-feet in any Year. In the event that Verde Ranch Producer who is allocated responsibility for payment of Assessments pursuant to an operating agreement is delinquent in making any such payment, the Hatchery shall not be liable therefor.

f. In any Year, if the total discharge to the River from the Hatchery and the Verde Ranch Producers exceeds the Groundwater Production by the Hatchery, such excess discharge shall be subject to Administrative, Replacement Water and, except for the Park, Biological Resource Assessments. Such Assessments shall be levied against individual Verde Ranch Producers in proportion to the extent that outflow from each Producer exceeds inflow to that Producer.

g. The Hatchery and the Verde Ranch Producers shall install all stage recorders, meters or other measuring devices necessary to determine inflows, outflows and Production that they are responsible for monitoring and reporting to Watermaster. Such stage recorders, meters or other measuring devices shall be installed, calibrated and operated in manner satisfactory to Watermaster.

h. Any change in the flow regimen described above will be subject to the same general rules set forth in this Paragraph 7. Any such change shall be reported to Watermaster in advance.

8. Harper Lake Basin. No Producer in the Harper Lake Basin may transfer any Base Annual Production Right or any portion thereof to Producers outside of Harper Lake Basin except by

physically conveying the water in compliance with the rules set forth in this Exhibit "F".

EXHIBIT G

SUBAREA OBLIGATIONS

EXHIBIT G

SUBAREA OBLIGATIONS

1. Subarea Obligations. Producers in the respective Subareas shall have the obligation to provide the following average Annual and minimum Annual Subsurface Flows and/or Base Flows per Year:

a. Este Subarea Producers--200 acre-feet per Year of Subsurface Flow to the Alto Subarea, except that in any Year the Subsurface Flow obligation shall be not be less than 160 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 200 acre-feet.

b. Oeste Subarea Producers--800 acre-feet per Year of Subsurface Flow to the Alto Subarea, except that in any Year the Subsurface Flow obligation shall be not less than 640 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 800 acre-feet.

c. Centro Subarea Producers--1200 acre-feet per Year of Subsurface Flow to the Baja Subarea, except that in any Year the Subsurface Flow Obligation shall be not less than 960 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 1200 acre-feet.

d. Baja Subarea Producers--400 acre-feet per Year of Subsurface Flow toward Afton across the MWA eastern boundary, except that in any Year the Subsurface Flow Obligation shall not be less than 320 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 400 acre-feet.

e. Alto Subarea Producers--an average Annual combined Subsurface Flow and Base Flow of 23,000 acre-feet per Year to the Transition Zone. For the purposes of Paragraph 6 of this Exhibit G, the Subsurface Flow component shall be deemed to be 2,000 acre-feet per Year. In any Year Alto Subarea Producers shall have an obligation to provide to the Transition Zone a minimum combined Subsurface Flow and Base Flow as follows:

i. If the accounting pursuant to Paragraph 5, below, reflects a net cumulative credit at the beginning of the Year, the combined minimum flow obligation shall be 18,400 acre-feet minus any net cumulative credit, but shall be not less than 15,000 acre-feet.

ii. If the accounting pursuant to Paragraph 5, below, does not reflect a net cumulative credit at the beginning of the Year, the combined minimum flow obligation shall be 18,400 acre-feet plus one-third of any net cumulative debit plus any additional amount of water required to reduce the net cumulative debit to 23,000 acre-feet.

2. Obligation for Transition Zone Replacement Water.

a. Until the Court approves Groundwater levels to be established and maintained pursuant to Subparagraph 2b of this Exhibit, Watermaster shall provide Replacement Water in the Transition Zone equal to Production in the Transition Zone that is in excess of the Transition Zone Producers' share of the Alto Subarea Free Production Allowance for that Year. All such Replacement Water shall be provided as soon as practicable during the next ensuing Year.

b. As soon as is practicable, the MWA shall establish key wells to be used to monitor Groundwater levels in the Transition Zone and, subject to approval by the Court, Watermaster shall establish minimum water levels to be maintained in the key wells.

c. After water level elevations have been established pursuant to Subparagraph 2b of this Exhibit, Watermaster shall provide Replacement Water in the Transition Zone as necessary to maintain the minimum water levels. Water purchased with Replacement Water Assessments paid by Producers in the Transition Zone in excess of the quantity of water needed to maintain said water levels shall be provided elsewhere in the Alto Subarea.

3. Other Water. "Other Water" that may be credited to a Subarea Obligation may include water conveyed and discharged across a boundary or Free Production Allowance water that is not Produced. Water other than Base Flow, Subsurface Flow or Storm Flow that is conveyed and discharged across a boundary between Subareas other than pursuant to a transfer agreement, shall be credited or debited, as appropriate, to the pertinent Subarea Obligation during the Year in which it is so conveyed and discharged. Any portion of the Subarea's Free Production Allowance that is allowed to remain unproduced in a Subarea pursuant to transfer agreements in order to satisfy a Subarea Obligation shall be credited to the pertinent Subarea Obligation in accordance with the terms of the transfer agreements.

4. Makeup Water. Assessments for Makeup Water shall be paid in accordance with the time schedule set forth in Exhibit D.

Makeup Water shall be credited to the Subarea Obligation at the end of the Year in which the Makeup Water Assessment is paid.

5. Accounting. Watermaster shall Annually not later than February 1 cause to be prepared a report of the status of each Subarea Obligation as of the end of the prior Year. The report shall set forth at least the following information for each Subarea Obligation:

a. The cumulative total of the average Annual Subarea Obligations since the Judgment was entered as of the beginning of the prior Year;

b. The cumulative total of all water credited to the Subarea Obligation since the Judgment was entered as of the beginning of the prior Year;

c. The net cumulative credit or debit [the difference between (a) and (b)] as of the beginning of the prior Year;

d. The amounts of water credited to the Subarea Obligation during the prior Year including, as appropriate, Base Flow, Subsurface Flow, Other Water and Makeup Water;

e. The cumulative total of the average Annual Subarea Obligations as of the end of the prior Year;

f. The cumulative total of all water credited to the Subarea Obligation as of the end of the prior Year;

g. The net cumulative credit or debit as of the end of the prior Year;

h. Any Makeup Water Obligation;

i. The Minimum Subarea Obligation for the current Year.

6. Subsurface Flow Assumptions. Some Subarea Obligations are expressed as average Annual or minimum Annual Subsurface Flow.

In all cases the Subsurface Flow obligations have been established initially at amounts equal to the estimated historical average Subsurface Flow across Subarea boundaries. Not later than two Years following entry of this Judgment MWA shall begin to install monitoring wells to be used to obtain data to enable improved estimates of Subsurface Flow at each Subarea boundary where there is a Subsurface Flow obligation and to develop methodology for future determinations of actual Subsurface Flow. Not later than ten years following entry of this Judgment Watermaster shall prepare a report setting forth the results of the monitoring program and the future methodology. Following opportunity for review of Watermaster's report by all Parties, Watermaster shall prepare a recommendation to the Court as to the likely accuracy of the estimated historical Subsurface Flows and any revision of Subarea Obligations that may be indicated. Pending Watermaster's report to the Court, Subsurface Flows shall be assumed to be equal to the Subsurface Flow obligations for purposed of accounting for compliance therewith.

7. Example Calculation. Table G-1 sets forth an example of Subarea Obligation accounting procedures using hypothetical flows.

TABLE G-1

HYPOTHETICAL EXAMPLE

ACCOUNTING FOR COMPLIANCE WITH SUBAREA OBLIGATIONS

OBLIGATION OF SUBAREA A TO SUBAREA B

AVERAGE ANNUAL: 23,000 AFA (21,000 AFA BASEFLOW + 2,000 AFA SUBSURFACE FLOW)

MINIMUM ANNUAL: 18,400 AFA + 1/3 OF ANY NET CUMULATIVE DEBIT; OR 18,400 AFA - ANY NET CUMULATIVE CREDIT, BUT NOT LESS THAN 15,000 AFA

	YEAR 1 AF	YEAR 2 AF	YEAR 3 AF	YEAR 4 AF	YEAR 5 AF	YEAR 6 AF	YEAR 7 AF	YEAR 8 AF	YEAR 9 AF	YEAR 10 AF
STATUS AT BEGINNING OF YEAR										
CUMULATIVE OBLIGATION	0	23,000	46,000	69,000	92,000	115,000	138,000	161,000	184,000	207,000
CUMULATIVE FLOW	0	17,000	32,600	50,800	69,067	87,067	107,111	139,978	168,378	198,978
NET CUMULATIVE CREDIT (DEBIT)	0	(6,000)	(13,400)	(18,200)	(22,933)	(27,933)	(30,889)	(21,022)	(15,622)	(8,022)
FLOW DURING THE YEAR (HYPOTHETICAL)										
BASE FLOW	8,000	5,000	4,000	4,000	2,000	2,000	15,000	18,000	20,000	23,000
SUBSURFACE FLOW	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
OTHER WATER	7,000	7,200	7,400	7,600	7800	8,000	8,200	8,400	8,600	8800
MAKEUP WATER PURCHASED	0	1,400	4,800	4,667	6,200	8,044	7,667	0	0	0
TOTAL FLOW	17,000	15,600	18,200	18,267	18,000	20,044	32,867	28,400	30,600	33,800
MINIMUM OBLIGATION DURING THE YEAR	18,400	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074
MAKEUP OBLIGATION INCURRED	1,400	4,800	4,667	6,200	8,044	7,667	0	0	0	0
STATUS AT END OF YEAR										
CUMULATIVE OBLIGATION	23,000	46,000	69,000	92,000	115,000	138,000	161,000	184,000	207,000	230,000
CUMULATIVE FLOW	17,000	32,600	50,800	69,067	87,067	107,111	139,978	168,378	198,978	232,778
NET CUMULATIVE CREDIT (DEBIT)	(6,000)	(13,400)	(18,200)	(22,933)	(27,933)	(30,889)	(21,022)	(15,622)	(8,022)	2,778
FOLLOWING YEAR MINIMUM OBLIGATION										
18,400 + 1/3 OF NET CUM. DEBIT	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074	0
ADDITIONAL TO REDUCE DEBIT TO 23,000	0	0	0	0	0	0	0	0	0	0
18,400 - CUM. CREDIT, BUT NLT 15,000	0	0	0	0	0	0	0	0	0	15,622
MINIMUM OBLIGATION	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074	15,622

EXHIBIT H

BIOLOGICAL RESOURCE MITIGATION

EXHIBIT H

BIOLOGICAL RESOURCE MITIGATION

1. Protection of and Description of Existing Riparian Habitat. In arriving at a Physical Solution, the Parties have taken into consideration the water needs of the public trust resources of the Mojave Basin Area, including but not limited to, those species listed in Table H-1 within each of the areas as shown on Figure H-1 and the riparian habitat areas shown on Figure H-1 and described generally as follows:

a. The area which extends, south to north, in the Alto Subarea, from the intersection of the north line of Section 36, Township 5 North, Range 4 West with the Mojave River channel to the United States Geological Survey gauging station at the Lower Narrows;

b. The Lower Narrows to the Helendale Fault (Transition Zone);

c. The Harvard/Eastern Baja Subarea reach of the Mojave River that extends west to east, from Harvard Road to the Iron Ranch/Iron Mountain area (0.5 miles east of the west line of Section 20, Township 10 North, Range 4 East).

2. Protection Pursuant to Physical Solution. The following aspects of the Physical Solution must be implemented to seek to achieve the water table standards set forth in Table H-2 which were proposed by DFG as being necessary to maintain and converse the riparian resources in the areas shown on Figure H-1, including the species listed in Table H-1:

a. Pursuant to Paragraph 24(o) of the Judgment, the Watermaster in recommending an adjustment in Free Production

Allowance, shall compare the Free Production Allowance with the estimated Production Safe Yield. In the event the Free Production Allowance exceeds the estimated Production Safe Yield by five percent or more, Watermaster shall recommend a reduction of the Free Production Allowance equal to a full five percent of the aggregate Subarea Base Annual Production. In considering whether to increase or decrease the Free Production Allowance in a Subarea, Watermaster shall, among other factors, take into consideration for the areas shown on Figure H-1 the Consumptive Use of water by riparian habitat, the protection of public trust resources, including the species listed in Table H-1 and the riparian habitat areas shown on Figure H-1, and whether an increase would be detrimental to the protection of public trust resources.

b. If, pursuant to Paragraph 27, Watermaster buys or leases Free Production Allowance in the Baja Subarea below the Calico-Newberry Fault to satisfy the need for Replacement Water, priority shall be given to purchases or leases that will result in reducing Production in or near the area described in Subparagraph 1(c) of this Exhibit.

c. Pursuant to Paragraph 2 of Exhibit "G", Watermaster shall purchase Replacement Water to maintain Groundwater levels in the Transition Zone.

3. <u>Additional Protection Pursuant to Trust Fund Established by Watermaster Using the Proceeds of Biological Resource Assessments</u>.

a. Watermaster shall establish a Biological Resources Trust Fund account for the benefit of the riparian habitat areas shown on Figure H-1 and the species listed on Table H-1. To

establish and maintain the Trust Fund Watermaster shall levy against each acre-foot of Production within the Basin Area, other than Production by the California Department of Fish and Game (DFG), a Biological Resource Assessment of fifty cents ($0.50) (1993 dollars) to be collected at the same time and in the same manner as the Administrative Assessment, except that no Biological Resources Assessment shall be levied whenever the Trust Fund account balance exceeds $1,000,000 (1993 dollars).

b. Watermaster shall make funds held in the Biological Resources Trust Fund available to DFG only in the event that Groundwater levels are not maintained as set forth in Table H-2. Watermaster shall take action to acknowledge any proposed expenditure from the Biological Resources Trust Fund by DFG. Such Watermaster action shall be subject to the review procedures set forth in Paragraph 36 of the Judgment, provided that any motion made pursuant thereto and any Court disapproval of such Watermaster action and proposed DFG expenditure may be based only: 1) on the ground that the Groundwater levels set forth in Table H-2 are being maintained; and/or 2) the ground that the proposed expenditure is not for any of the purposes set forth in Subparagraphs 3.b.(i), (ii), or (iii) below in this Exhibit. The Biological Resources Trust Fund may be used only for the following purposes and only in the three areas identified on Figure H-1:

i. not to exceed $100,000 for the preparation by DFG of a DFG habitat water supply management plan, which plan shall include the water needs of the species listed in Table H-1 and the riparian habitat areas shown on Figure H-1.

ii. the purchase or lease by DFG of Supplemental Water or the lease or purchase of DFG of Base Annual Production Rights to be used to meet riparian habitat water needs of the species listed in Table H-1 and the riparian habitat areas shown on Figure H-1.

iii. the construction, repair and replacement of wells or other facilities identified in the plan prepared pursuant to Subparagraph (i), above, and/or any other measures necessary to implement the plan.

DFG shall not prepare or make any expenditure from the trust fund for the payment of administrative overhead or staff of DFG.

4. DFG agrees that absent substantial changed circumstances, DFG shall not seek to modify the provisions of this Judgment in any way to add to or change the above-stated measures to protect the referenced species or habitat. Nothing stated in this Judgment or in this Exhibit "H" is intended nor shall be deemed to relieve any Party hereto from any obligation or obligations not specifically referenced in this Exhibit H. Nothing in this Judgment or in this Exhibit H is intended or shall be construed to be a waiver by the State or any of its departments or agencies, including DFG, of its rights and obligations under the common law, the public trust doctrine, the constitution, statutes and regulations to preserve, protect or enhance the natural resources of the State including rare, threatened or endangered species or species of concern.

TABLE H-1

LIST OF SPECIES

	ALTO			CENTRO		BAJA		
SPECIES	Forks Dam to Upper Narrows	Upper Narrows to Lower Narrows	Lower Narrows to Helendale	Helendale to Hodge	Hodge to Barstow	Barstow to Harvard Road	Harvard Road to Mannix Wash	Afton Canyon
Purple Monkeyflower	6							
Mohave Monkeyflower	6		6	6	6	6		
Mohave Tarweed	5							
Desert Cymopterus	6							
Barstow Woolly Sunflower					6	6		
Victorville Shoulderband	6	6						
Mohave Tui Chub							1, 3	
California Red-legged Frog	6	6	6	6				
Southwestern Pond Turtle	6		6	6		6	6	6
Desert Tortoise	2, 4		2, 4	2, 4	2, 4	2, 4		
San Diego horned Lizard	6							
Cooper's Hawk	8	8						
Ferruginous Hawk	8	8						
Swainson's Hawk	4	4						
Bald Eagle	1, 3	1,3						
Merlin	6, 8	6, 8						
Prairie Falcon	6, 8	6, 8	6, 8	6, 8	6, 8	6, 8		
Western Yellow-billed Cuckoo	3, 7			3, 7	3, 7			
Southwestern Willow Flycatcher	8							
Brown-crested Flycatcher		8						
Vermillion Flycatcher	8					8	8	8
Le Conte's Thrasher	8							
Least Bell's Vireo	1, 3							1, 3

TABLE H-1

LIST OF SPECIES
(CONT'D)

SPECIES	ALTO			CENTRO		BAJA		
	Forks Dam to Upper Narrows	Upper Narrows to Lower Narrows	Lower Narrows to Helendale	Helendale to Hodge	Hodge to Barstow	Barstow to Harvard Road	Harvard Road to Mannix Wash	Afton Canyon
Yellow Warbler	9							
Yellow-breasted Chat	8	8			8	8		
Summer Tanager	8	8						8
Pale Big Earred Bat	8							
Mohave Ground Squirrel	4, 6		4, 6	4, 6				
Mohave Vole			6	6				
Nelson's Bighorn Sheep					10	10		10
TOTAL NUMBER OF SPECIES = 30 TOTAL NUMBER OF SPECIES IN EACH AREA:	25	11	7	8	7	8	3	5

1 = Federally Endangered
2 = Federally Threatened
3 = State Endangered
4 = State Threatened
5 = Federal Category: 1
6 = Federal Category: 2
7 = Federal Category: 3b
8 = State: Special Concern
9 = State: Sensitive
10 = State: Fully Protected

TABLE H-2

RIPARIAN HABITAT MONITORING WELL WATER LEVEL CRITERIA

ZONE	WELL NUMBER	MAXIMUM DEPTH BELOW GROUND
Victorville/Alto	H1-1	Seven (7) Feet
Victorville/Alto	H1-2	Seven (7) Feet
Lower Narrows/Transition	H2-1	Ten (10) Feet
Harvard/Eastern Baja Riparian Forest Habitat	H3-1	Seven (7) Feet
Harvard/Eastern Baja Surface Water Habitat	H3-2	Plus One (1) Foot (1705 Ft msl)*

* Surface Water Habitat water surface elevation of 1705 ft. msl is approximate pending ground elevation survey.

FIGURE H-1: VICTORVILLE – ALTO RIPARIAN ZONE

LEGEND

H1-2 Water Table Monitoring well

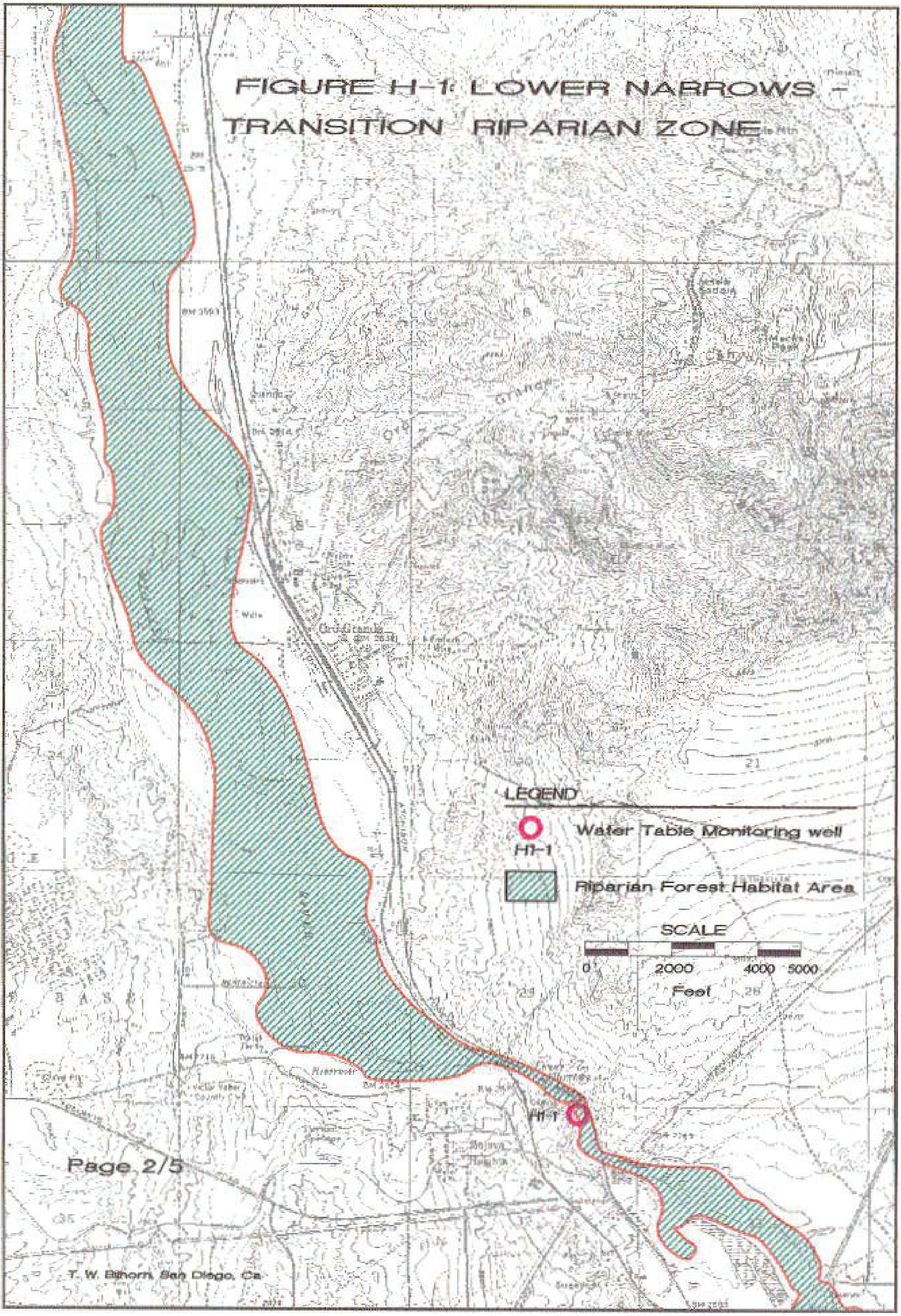
Riparian Forest Habitat Area

SCALE

0 2000 4000 5000

Feet

FIGURE H-1: LOWER NARROWS – TRANSITION RIPARIAN ZONE



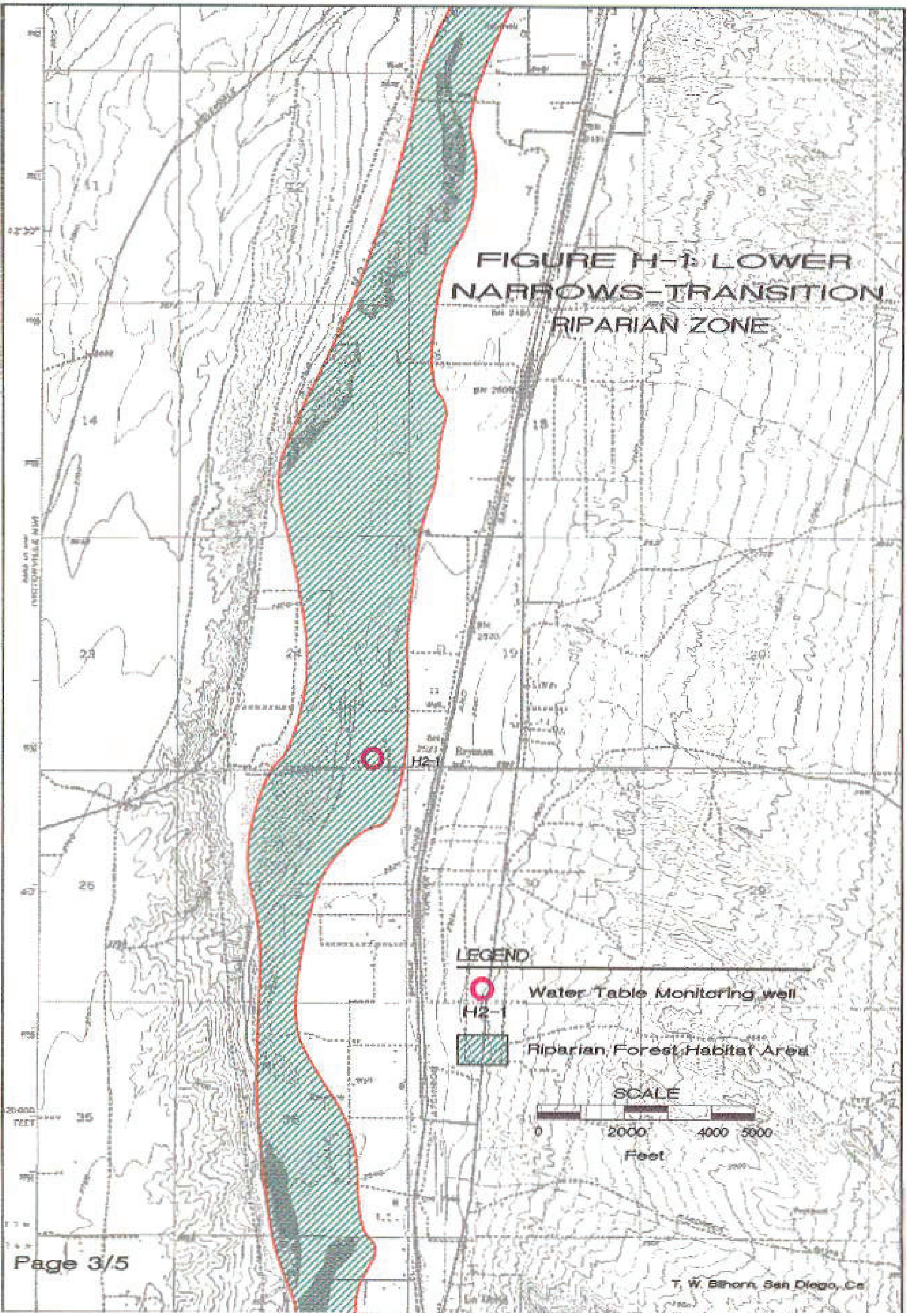


FIGURE H-1: LOWER NARROWS-TRANSITION RIPARIAN ZONE
H2-1
LEGEND
Water Table Monitoring well
H2-1
Riparian Forest Habitat Area
SCALE
0
2000
4000
5000
Feet
T. W. Bithorn, San Diego, Ca

FIGURE H: TRANSITION
RIPARIAN ZONE

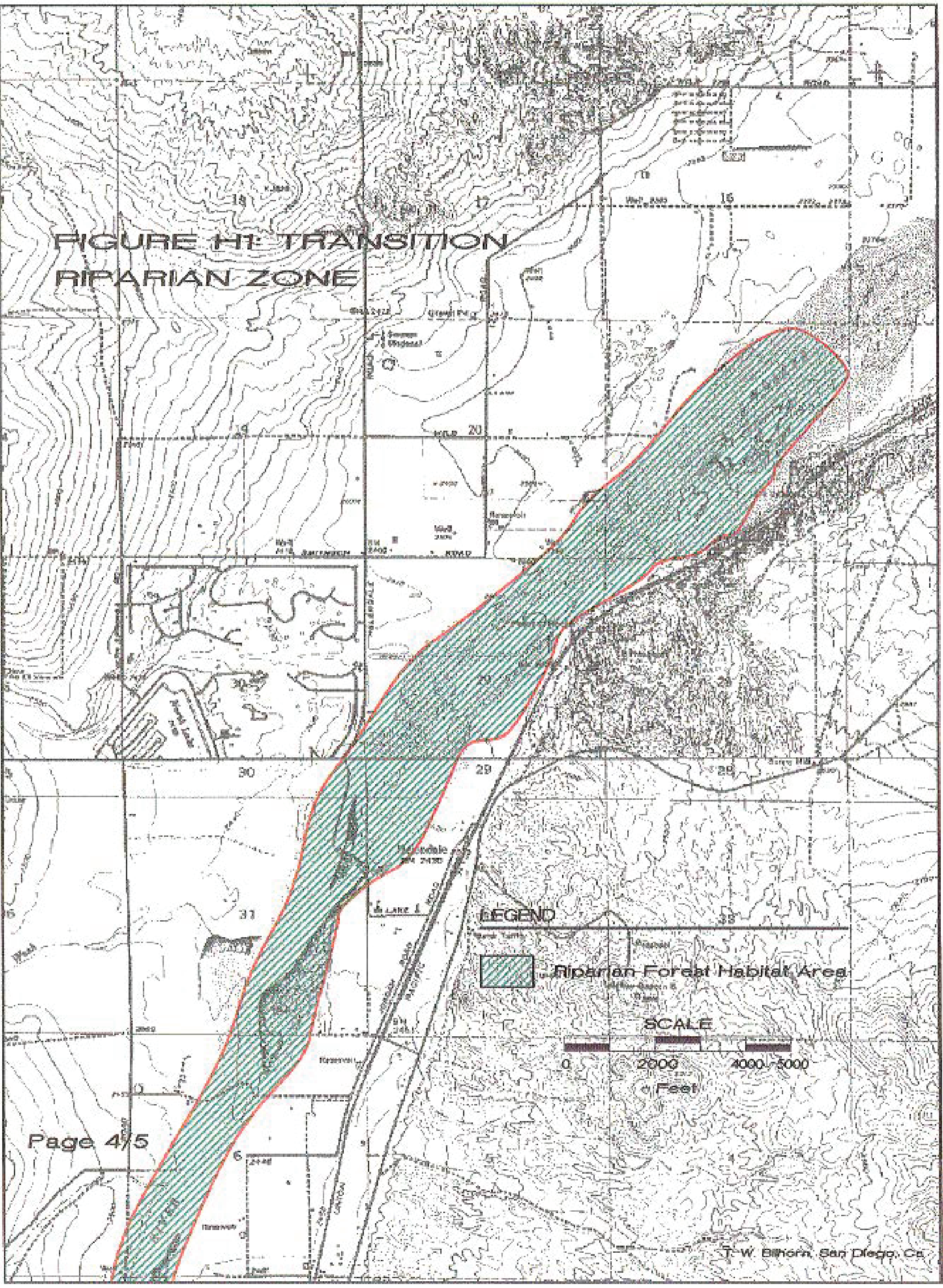


FIGURE H-1: HARVARD/EASTERN BAJA RIPARIAN ZONE

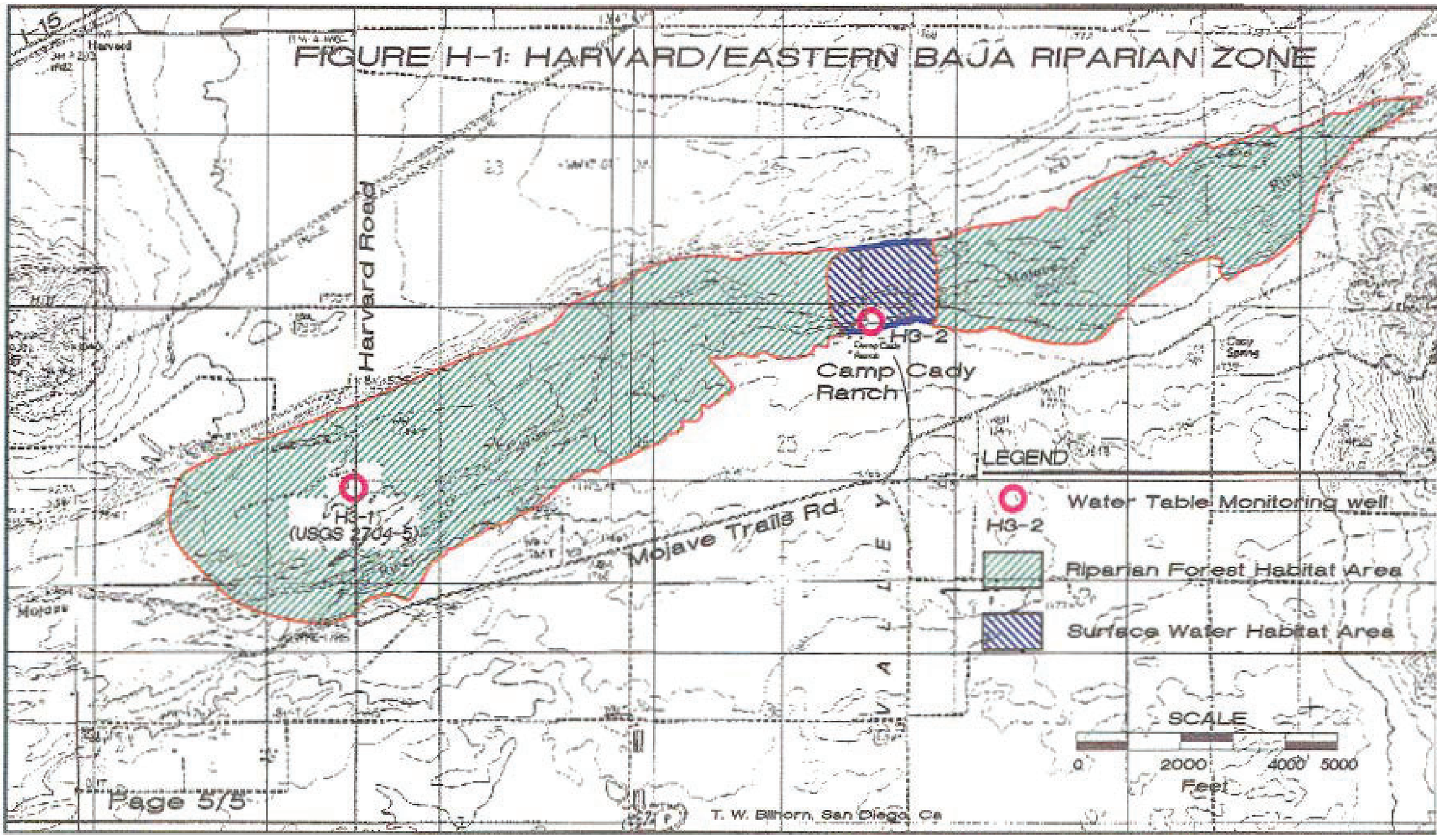
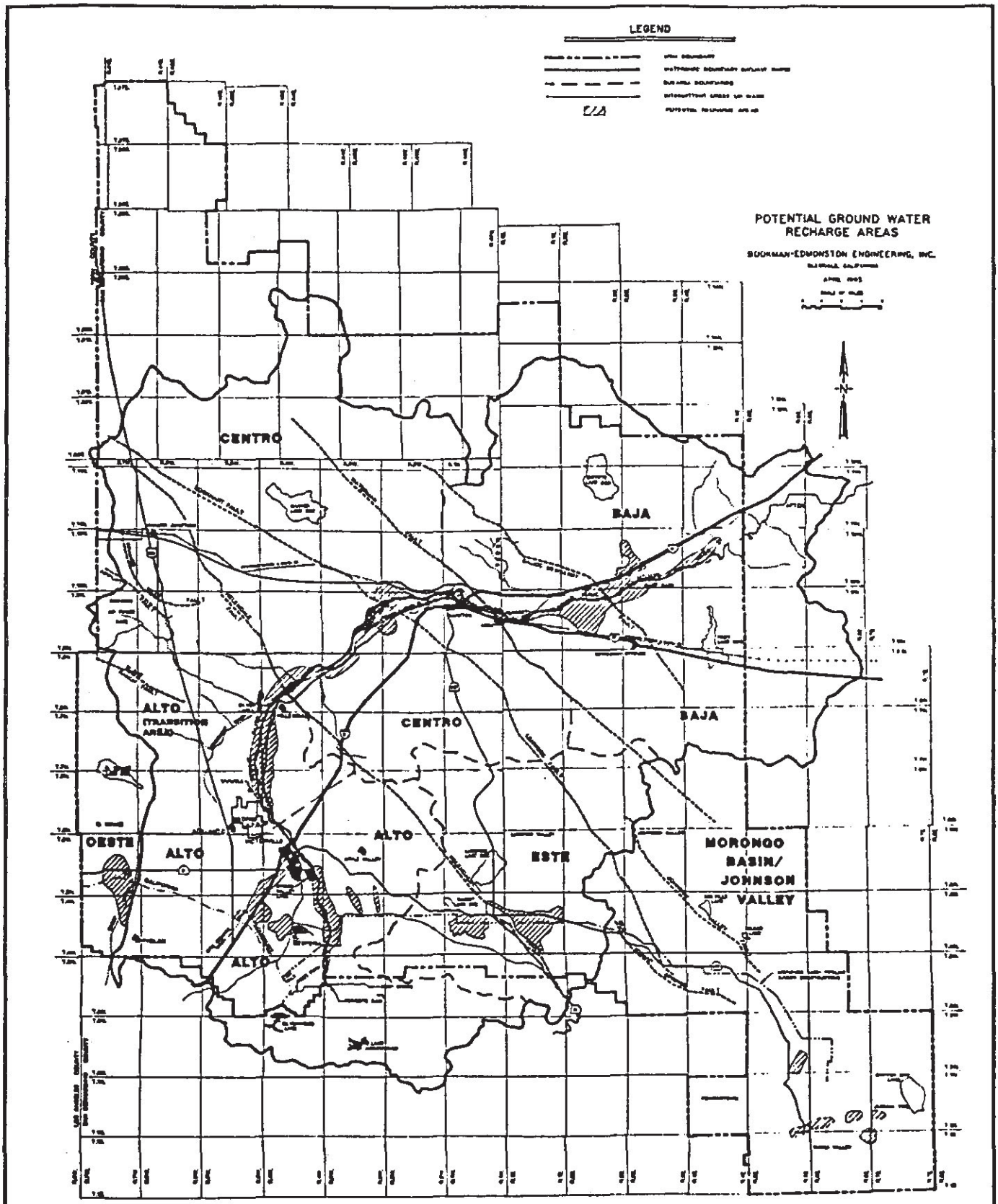


EXHIBIT I

MAP SHOWING POTENTIAL GROUNDWATER RECHARGE AREAS



MOJAVE WATER AGENCY

REGIONAL WATER MANAGEMENT PLAN

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Attorneys for Defendant\Cross-Complainant,
MOJAVE WATER AGENCY

FILED
SUPERIOR/MUNICIPAL COURT
OF RIVERSIDE COUNTY
DEC 05 2002

COPY

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF RIVERSIDE

CITY OF BARSTOW, et al

Plaintiff,

v.

CITY OF ADELANTO, et al

Defendant.

AND RELATED CROSS ACTIONS

CASE NO.: **208568**

AMENDMENT TO JUDGMENT AFTER TRIAL ENTERED JANUARY 10, 1996; and ORDER THEREON

Assigned for All Purposes to:
Judge E. Michael Kaiser

The Judgment After Trial, filed and entered January 10, 1996, in the above-captioned matter, is hereby amended by inserting the following paragraphs 19(a) and 19(b) immediately following Paragraph 19 on page 24.

Paragraph 19(a):

Pursuant to the direction of the California Supreme Court and the Court of Appeal, as set forth in the Stipulation for Settlement entered in the Court of Appeal on August 6, 2002, Neil DeVries, Virgil Gorman, Richard Leyerly, Geneva Leyerly, Jerry Osterkamp, David and Elizabeth Daily, Richard (deceased) and Elaine Fitzwater, Robert T. and Barbara T. Older and Steve Older, collectively referred to as the "Cardozo Appellants" are, except as provided in this paragraph, excluded from this Judgment and they are not bound by any of the provisions of this Judgment. As overlying owners, the Cardozo Appellants have the

right to pump water from the ground underneath their respective lands for their current and prospective reasonable and beneficial need for water on their respective properties

Therefore, the parties who stipulated to this Judgment are hereby enjoined and restrained from interfering with the Cardozo Appellants' ability to exercise their overlying water rights for their current and prospective reasonable and beneficial need for water on their respective properties.

If parties who stipulated to the Judgment are in full compliance with the Judgment, there shall be a rebuttable presumption that the Cardozo Appellants' water rights are not being interfered with.

Each individual Cardozo Appellant shall have the right at any time, by written election filed with the Court and served on the Mojave Water Agency to become a stipulating party to the Judgment. If such an election is made, that party shall be accorded Base Annual Production shown on Table B-1 of Exhibit "B", subject to any rampdown then or thereafter in effect, but shall have no liability with respect to any assessments which were made, or which could have been made, before the date of the election.

The provisions of this paragraph are binding upon and inure to the benefit of not only the Cardozo Appellants, but as well as to the respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys-in-fact of any of the Cardozo Appellants.

Paragraph 19(b):

Jess Ranch Water Company has stipulated to the Judgment of January 10, 1996, as set forth in the Stipulation and Intervention and Entry of Judgment filed in the Riverside County Superior Court on August 23, 2002.

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ORDER

It is so ordered.

E. MICHAEL KAISER

Dated: DEC 05 2002

E. Michael Kaiser
Judge of the Superior Court

RECEIVED
BRUNICK, BATTERSBY,
McELHANEY & BECKETT
AUG 0 8 2002

Court of Appeal

FOURTH DISTRICT, DIVISION TWO
3389 TWELFTH STREET
RIVERSIDE, CALIFORNIA 92501

CHAMBERS OF
JAMES D. WARD
ASSOCIATE JUSTICE

(909) 248-0325

August 7, 2002

William J. Brunick, Esq.
Brunick, Battersby, McElhaney & Beckett
P. O. Box 6425
San Bernardino, CA 92412

Re: Mojave Water/Jess Ranch/Cordozo/E029791

Dear Mr. Brunick:

Enclosed is the original Cordozo stipulation for settlement; the order on which I have signed and forward to you herewith for disposition.

My thanks to you for all your efforts in bringing this case to a satisfactory conclusion.

James D. Ward

Enclosure

COURT OF APPEAL, FOURTH DISTRICT

DIVISION TWO

STATE OF CALIFORNIA

CITY OF BARSTOW, et al. Plaintiffs and Respondents, v. MOJAVE WATER AGENCY, et al. Defendants, Cross-Complainants, and Respondents, JESS RANCH WATER COMPANY, Cross-Defendant and Appellant.	E017881 and E018923 (Superior Court No. 208568)
MOJAVE WATER AGENCY, et al., Cross-Complainants and Respondents, v. MANUAL CARDOZO, et al., Cross-Defendants and Appellants.	E018223 and E018681

STIPULATION FOR SETTLEMENT PROVIDING FOR AMENDMENT OF JUDGMENT IN TRIAL COURT AND ORDER THEREON

The undersigned parties, each of whom stipulated to the Judgment in the trial Court, hereinafter the "Stipulating Parties" on the one hand, and Niel Devries, Virgil Gorman, Richard Leyerly, Geneva Leyerly, Jerry Osterkamp, David and Elizabeth Daily, Richard (Deceased) and Elaine Fitzwater, Robert T. and Barbara T. Older and Steve Older, collectively referred to as the "Cardozo Appellants" on the other hand, by and through their respective attorneys, do stipulate and agree as follows:

RECITALS

Whereas the Cardozo Appellants are among the Cross-Defendants in the case known as *City of Barstow, et al. vs. City of Adelanto, et al.*, Case No. 208568, Superior Court of California, County of Riverside (the "Action"); and

Whereas the Cardozo Appellants did not stipulate to the Judgment in the Action, and;

Whereas a "Judgment after Trial" in the Action was filed on January 10, 1999, and;

Whereas the Cardozo Appellants appealed from the Judgment, and;

Whereas on August 21, 2000, the Supreme Court of California affirmed the earlier judgment of the Court of Appeal and in so doing stated at pages 31 and 32 of its Opinion:

"Respondents also argue that overlying pumpers in an overdrafted basin should be required to file an Action to adjudicate groundwater rights at the first indication of substantial growth in the area. However, overlying pumpers are not

under an affirmative duty to adjudicate their groundwater rights, because they retain them by pumping. (*City of San Fernando, supra,* 14 Cal.3d at p. 293, fn.100; *Hi-Desert County Water Dist., supra,* 23 Cal.App.4th at pp. 1731-1732.)

"As overlying owners, the Cardozo appellants have the right to pump water from the ground underneath their respective lands for use on their lands. The overlying right is correlative and is therefore defined in relation to other overlying water rights holders in the basin. In the event of a water supply shortage, overlying users have priority over appropriative users. (*City of Pasadena, supra,* 33 Cal.2d at p. 926.) The Court of Appeal properly recognized that the Cardozo Appellants retained their overlying rights by pumping, and that no claim of prescription had been asserted to reduce those retained overlying rights."

And further, at page 30 of the Opinion, stated:

"The Court of Appeal directed the trial court to exclude the Cardozo appellants from the judgment and to grant them injunctive relief protecting their overlying water rights to the current and prospective reasonable and beneficial need for water on their respective properties."

Whereas on February 28, 2001, the Court of Appeal issued a second Opinion in the Action, this one not to be published, in which the Court stated at page 8:

"The Cardozo appellants are to be excluded from the stipulated judgment, they are not bound by any provisions of the stipulated judgment, and any payments made

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by them under the assessment provisions of the stipulated judgment are to be ordered refunded to them.

"Although it is clear that the Cardozo appellants are not included in the stipulated judgment, an issue is raised as to their water rights. The Cardozo appellants cite the disposition ordered in our superseded opinion: "[T]he trial court is directed to enter its order . . . , based on the evidence previously submitted, [which grants] the Cardozo Appellants injunctive relief to protect their riparian and overlying water rights to the current and prospective reasonable and beneficial need for water on their respective parties. (*Tehachapi-Cummings County Water Dist. V. Armstrong) [1975] 49 Cal.App.3d 992, 1001.)"* Since this portion of the disposition was affirmed by the Supreme Court, it stands, and should be followed by the trial court on remand."

And further at page 13, the Court states:

"As the only party (other than Jess Ranch) that proved any water rights at trial, the Cardozo appellants are entitled to full protection of those rights. As we said in our previous disposition, the Cardozo appellants are entitled to "injunctive relief to protect their riparian and overlying water rights to the current and prospective reasonable and beneficial need for water on their respective properties. (*Tehachapi-Cummings County Water Dist. v. Armstrong, supra,* 49 Cal.App.3d 992, 1001.)" (Fn. omitted.) Since that portion of our judgment was affirmed, the trial court should follow this mandate on remand.", and;

Whereas, on remand, the Action was reassigned to the Honorable J. Michael Kaiser, Judge of the Superior Court; and

Whereas, following that assignment, the Cardozo Appellants filed a peremptory challenge against Judge Kaiser under *Code of Civil Procedure* §170.6; and

Whereas the peremptory challenge was denied; and

Whereas the Cardozo Appellants filed a Petition for Writ of Mandate in the Court of Appeal, Fourth Appellate District, Division Two where it is now pending; and

Whereas the Action has been referred to the Court of Appeals Settlement Conference program in the course of which the parties have participated in extensive settlement discussions under the guidance of the Honorable James D. Ward, Associate Justice of this Court, and

Whereas the parties have now arrived at a settlement which they believe is in the best interest of the parties hereto as well as the majority of other parties in the Mojave River Basin.

NOW THEREFORE, the parties hereto stipulate and agree as follows:

1. The Stipulating Parties shall deposit in Covington & Crowe LLP's client trust account, in such amounts as they shall among themselves determine, the total sum of $500,000.00 to be distributed to the Cardozo Appellants as hereinafter provided.

2. Said sum of $500,000.00 shall be divided among the Cardozo Appellants in such proportions as they shall determine.

3. Covington & Crowe LLP shall distribute said sum of $500,000.00 to the Cardozo Appellants upon Justice Ward approving this Stipulation for Settlement.

4. Upon distribution of said sum of $500,000.00, to the Cardozo Appellants, they shall cause their pending Petition for Writ of Mandate regarding the disqualification of Judge Kaiser to be dismissed.

5. The judgment after trial, filed January 10, 1996, shall be amended, paragraph 19(a) thereto to read as follows:

Special Provisions for the "Cardozo Appellants"

Pursuant to the direction of the California Supreme Court and the Court of Appeal, Niel DeVries, Virgil Gorman, Richard Leyerly, Geneva Leyerly, Jerry Osterkamp, David and Elizabeth Daily, Richard (Deceased) and Elaine Fitzwater, Robert T. and Barbara T. Older and Steve Older, collectively referred to as the "Cardozo Appellants" are, except as provided in this paragraph, excluded from this Judgment and they are not bound by any of the provisions of this judgment. As overlying owners, the Cardozo Appellants have the right to pump water from the ground underneath their respective lands for their current and prospective reasonable and beneficial need for water on their respective properties.

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Therefore, the parties who stipulated to this Judgment are hereby enjoined and restrained from interfering with the Cardozo Appellants' ability to exercise their overlying water rights for their current and prospective reasonable and beneficial need for water on their respective properties.

If parties who stipulated to the Judgment are in full compliance with the Judgment, there shall be a rebuttable presumption that the Cardozo Appellants' water rights are not being interfered with.

Each individual Cardozo Appellant shall have the right at any time, by written election filed with the Court and served on the Mojave Water Agency to become a stipulating party to the Judgment. If such an election is made, that party shall be accorded that Base Annual Production shown on Table B-1 of Exhibit "B", subject to any rampdown then or thereafter in effect, but shall have no liability with respect to any assessments which were made, or which could have been made, before the date of the election.

The provisions of this paragraph are binding upon and inure to the benefit of not only the Cardozo Appellants, but as well to the respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys-in-fact of any of the Cardozo Appellants.

6. This Stipulation for Settlement may be executed in counterparts. Each counterpart shall be deemed to be an original. All counterparts shall constitute but a single Stipulation for Settlement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement this 19th day of July, 2002.

STIPULATING PARTIES

State of California

Victor Valley Water District

Southern California Water Company

Hesperia Water District

Apple Valley Ranchos

Mojave Water Agency

Silver Lakes Association

Cemex

Mitsubishi Cement

CARDOZO APPELLANTS
By
COVINGTON & CROWE, LLP

Robert E. Dougherty
Attorneys for Cross-Defendants and Appellants Niel Devries, Virgil Gorman, Richard Leyerly, Geneva Leyerly, Jerry Osterkamp, David and Elizabeth Daily, Richard (Deceased) and Elaine Fitzwater, Robert T. and Barbara T. Older and Steve Older

ORDER

The foregoing "STIPULATION FOR SETTLEMENT . . ." is hereby approved. Pursuant to the stipulation:

1. The Stipulating Parties shall immediately deposit in the client trust account of Covington & Crowe, LLP, in such amounts as they shall among themselves determine, the total sum of $500,000.00 to be distributed among the Cardozo Appellants as they shall among themselves determine.

2. Upon the deposit of the $500,000.00 in the trust account, Covington & Crowe, LLP, on behalf of the Cardozo Appellants shall serve and file with the clerk of this court a request to dismiss the petition for writ of mandate filed in case No. E029791, entitled Neil Devries et al. v. Riverside County Superior Court (Mojave Water Agency et al.), thereby permitting the Hon. E. Michael Kaiser, Judge of the Riverside County Superior Court, to complete the superior court proceedings in the underlying case pursuant to the parties' stipulations.

3. Upon the filing of the order dismissing the petition in case No. E029791, a judgment shall be prepared incorporating the provisions of paragraph 19(a) as set forth in the "STIPULATION FOR SETTLEMENT . . . ." If it approves the judgment, the Riverside Superior Court shall execute and enter the judgment.

Dated: 8/6/02

Hon. James D. Ward
Associate Justice, Court of Appeal
Fourth District, Division Two

Appendix I1
Field Noise Data

FORMS DUDEK FIELD DATA REPORT

Field Noise Measurement Data

Record: 1685	
Project Name	*Inland Empire North Logistics Apple Valley Project*
Observer(s)	
Date	*2023-08-10*

Meteorological Conditions	
Temp (F)	*77*
Humidity % (R.H.)	*53*
Wind	*Light*
Wind Speed (MPH)	*7*
Wind Direction	*North East*
Sky	*Overcast*

Instrument and Calibrator Information	
Instrument Name List	*(ENC) Rion NL-52*
Instrument Name	*(ENC) Rion NL-52*
Instrument Name Lookup Key	*(ENC) Rion NL-52*
Manufacturer	*Rion*
Model	*NL-52*
Serial Number	*553896*
Calibrator Name	*(ENC) LD CAL150*

Calibrator Name	*(ENC) LD CAL150*
Calibrator Name Lookup Key	*(ENC) LD CAL150*
Calibrator Manufacturer	*Larson Davis*
Calibrator Model	*LD CAL150*
Calibrator Serial #	*5152*
Pre-Test (dBA SPL)	*94.1*
Windscreen	*Yes*
Weighting?	*A-WTD*
Slow/Fast?	*Slow*

Monitoring	
Record #	*1*
Site ID	*0968*
Site Location Lat/Long	*34.564648, -117.286368*
Begin (Time)	*11:19:00*
End (Time)	*11:36:00*
Leq	*55.4*
Lmax	*78.4*
Lmin	*43.4*
Other Lx?	*L90, L50, L10*
L90	*46.2*
L50	*49.2*
L10	*52.9*

Other Lx (Specify Metric)	*L*
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds*
Other Noise Sources Additional Description	*Lmax caused by bus going by*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Description / Photos

Site Photos

Photo



Comments / Description	*Facing east*

Site Photos

Photo	
Comments / Description	*Facing south*

Site Photos

Photo	
Comments / Description	*Facing west*

Site Photos

Photo	
Comments / Description	*Facing. North*

Monitoring	
Record #	*2*
Site ID	*0969*
Site Location Lat/Long	*34.552466, -117.272372*

Begin (Time)	*11:48:00*
End (Time)	*12:03:00*
Leq	*42.3*
Lmax	*60.3*
Lmin	*35.7*
Other Lx?	*L90, L50, L10*
L90	*37.5*
L50	*39.9*
L10	*45.6*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Traffic*
Other Noise Sources Additional Description	*Distant train*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Description / Photos

Site Photos

Photo	
Comments / Description	*Facing north*

Site Photos

Photo	
Comments / Description	*Facing south*

Site Photos

Photo	
Comments / Description	*Facing west*

Appendix I2
Construction Noise Modeling Data

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per FTA = 80
allowable hours over which Leq is to be averaged FTA = 8

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Temporary Barrier Insertion Loss (dB)*	*Additional Noise Reduction*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	ILbarr (dB)	Notes
Site Preparation	dozer	3	40	82		4000	0.0		35.2	8	480	36	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	tractor	4	40	84		4000	0.0		37.2	8	480	39	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
									Total for Site Preparation Phase:			**40.9**													
Grading	Excavator	2	40	81		4000	0.0		34.2	8	480	33	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	grader	1	40	85		4000	0.0		38.2	8	480	34	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	dozer	1	40	82		4000	0.0		35.2	8	480	31	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	scraper	2	40	84		4000	0.0		37.2	8	480	36	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	tractor	2	40	84		4000	0.0		37.2	8	480	36	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
									Total for Grading Phase:			**41.6**													
Building Construction	Crane	1	16	81		4000	0.0		34.2	7	420	26	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	man lift	3	20	75		4000	0.0		28.2	8	480	26	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	Generator	1	50	72		4000	0.0		25.2	8	480	22	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	Tractor	3	40	84		4000	0.0		37.2	8	480	38	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	Welder / Torch	1	40	73		4000	0.0		26.2	7	420	22	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
									Total for Building Construction Phase:			**38.7**													
Paving	Paver	2	50	77		4000	0.0		30.2	8	480	30	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	Roller	2	20	85		4000	0.0		33.2	8	480	29	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
	All Other Equipment > 5 HP	2	50	85		4000	0.0		38.2	8	480	38	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
									Total for Paving Phase:			**39.3**													
Architectural Coating	Compressor (air)	4	40	78		4000	0.0		31.2	8	360	32	5	5	0	10	3990	4000	11.2	3990.0	4000.0	0.00	0.1	0.0	
									Total for Architectural Coating Phase:			**32.0**													

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per San Diego County (36.409) = 75
allowable hours over which Leq is to be averaged (example: 8 per SD County 36.409) = 8

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Temporary Barrier Insertion Loss (dB)*	*Additional Noise Reduction*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq	Source Elevation (ft)	Receiver Elevation (ft)	Barrier Height (ft)	Source to Barr. ("A") Horiz. (ft)	Rcvr. to Barr. ("B") Horiz. (ft)	Source to Rcvr. ("C") Horiz. (ft)	"A" (ft)	"B" (ft)	"C" (ft)	Path Length Diff. "P" (ft)	Abarr (dB)	ILbarr (dB)	Notes
Site Preparation	dozer	3	40	82		5000	0.0		32.2	8	480	33	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	tractor	4	40	84		5000	0.0		34.2	8	480	36	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
									Total for Site Preparation Phase:			**38.0**													
Grading	Excavator	2	40	81		5000	0.0		31.2	8	480	30	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	grader	1	40	85		5000	0.0		35.2	8	480	31	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	dozer	1	40	82		5000	0.0		32.2	8	480	28	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	scraper	2	40	84		5000	0.0		34.2	8	480	33	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	tractor	2	40	84		5000	0.0		34.2	8	480	33	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
									Total for Grading Phase:			**38.6**													
Building Construction	Crane	1	16	81		5000	0.0		31.2	7	420	23	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	man lift	3	20	75		5000	0.0		25.2	8	480	23	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	Generator	1	50	72		5000	0.0		22.5	8	480	19	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	Tractor	3	40	84		5000	0.0		34.2	8	480	35	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	Welder / Torch	1	40	73		5000	0.0		23.2	7	420	19	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
									Total for Building Construction Phase:			**35.7**													
Paving	Paver	2	50	77		5000	0.0		27.2	8	480	27	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	Roller	2	20	85		5000	0.0		30.2	8	480	26	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
	All Other Equipment > 5 HP	2	50	85		5000	0.0		35.2	8	480	35	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
									Total for Paving Phase:			**36.3**													
Architectural Coating	Compressor (air)	4	40	78		5000	0.0		28.2	8	360	29	5	5	0	10	4990	5000	11.2	4990.0	5000.0	0.00	0.1	0.0	
									Total for Architectural Coating Phase:			**29.0**													

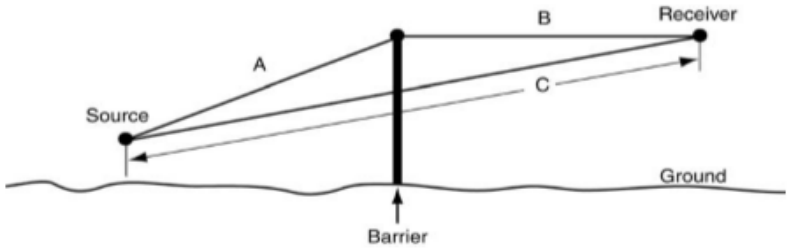
Equipment Description	Impact Device?	Acoustical Use Factor (%)	Lesser of or available Lmax	Spec. 721 Lmax	Measured L_{max} @50ft (dBA, slow)
All Other Equipment > 5 HP	No	50	85	85	-- N/A --
Auger Drill Rig	No	20	84	85	84
Backhoe	No	40	78	80	78
Bar Bender	No	20	80	80	-- N/A --
Blasting	Yes	-- N/A --	94	94	-- N/A --
Boring Jack Power Unit	No	50	80	80	83
Chain Saw	No	20	84	85	84
Clam Shovel (dropping)	Yes	20	87	93	87
Compactor (ground)	No	20	80	80	83
Compressor (air)	No	40	78	80	78
Concrete Batch Plant	No	15	83	83	-- N/A --
Concrete Mixer Truck	No	40	79	85	79
Concrete Pump Truck	No	20	81	82	81
Concrete Saw	No	20	90	90	90
Crane	No	16	81	85	81
Dozer	No	40	82	85	82
Drill Rig Truck	No	20	79	84	79
Drum Mixer	No	50	80	80	80
Dump Truck	No	40	76	84	76
Excavator	No	40	81	85	81
Flat Bed Truck	No	40	74	84	74
Front End Loader	No	40	79	80	79
Generator	No	50	72	72	81
Generator (<25KVA, VMS signs)	No	50	70	70	73
Gradall	No	40	83	85	83
Grader	No	40	85	85	-- N/A --
Grapple (on backhoe)	No	40	85	85	87
Horizontal Boring Hydr. Jack	No	25	80	80	82
Hydra Break Ram	Yes	10	90	90	-- N/A --
Impact Pile Driver	Yes	20	95	95	101
Jackhammer	Yes	20	85	85	89
Man Lift	No	20	75	85	75
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	90
Pavement Scarafier	No	20	85	85	90
Paver	No	50	77	85	77
Pickup Truck	No	40	55	55	75
Pneumatic Tools	No	50	85	85	85
Pumps	No	50	77	77	81
Refrigerator Unit	No	100	73	82	73
Rivit Buster/chipping gun	Yes	20	79	85	79
Rock Drill	No	20	81	85	81
Roller	No	20	80	85	80
Sand Blasting (Single Nozzle)	No	20	85	85	96
Scraper	No	40	84	85	84
Shears (on backhoe)	No	40	85	85	96
Slurry Plant	No	100	78	78	78
Slurry Trenching Machine	No	50	80	82	80
Soil Mix Drill Rig	No	50	80	80	-- N/A --
Tractor	No	40	84	84	-- N/A --
Vacuum Excavator (Vac-truck)	No	40	85	85	85
Vacuum Street Sweeper	No	10	80	80	82
Ventilation Fan	No	100	79	85	79
Vibrating Hopper	No	50	85	85	87
Vibratory Concrete Mixer	No	20	80	80	80
Vibratory Pile Driver	No	20	95	95	101
Warning Horn	No	5	83	85	83
Welder / Torch	No	40	73	73	74

$Source_{elev}$	5.0	A_{horiz}	24.0	A	25.0
$Receiver_{elev}$	10.0	B_{horiz}	38.0	B	38.1
C	62.2	C_{horiz}	62.0		
P	0.85				
$Barrier_{elev}$	12				
Abarr	12.3				

The above calculations, refering to inputs from the figure at right, helps a user estimate what barrier attenuation (Abarr) to expect (i.e., up to 15 per formula to right) based upon source height (above grade), barrier height, and receiver height, and the horizontal distances between the source and receiver to the barrier. The FTA-based formula in the grid_barr_IL_X worksheets use these path length (P) and Abarr values to determine the barrier's insertion loss for each barrier element with respect to the ID'd source-to-receptor path it occludes.

Barrier Parameter P

P= A+B-C



For all other barriers, and for protrusion of terrain above the line of sight:	$A_{barrier} = \min\left\{15 or\left[20\times\log\left(\frac{2.51\sqrt{P}}{\tanh\left[4.46\sqrt{P}\right]}\right)+5\right]\right\}$
Barrier Insertion Loss	$IL_{barrier} = \max\left\{0 or\left[A_{barrier} - 10(G_{NB} - G_B)\log\left(\frac{D}{50}\right)\right]\right\}$

D = closest distance between the receiver and the source, in feet
P = path length difference, in feet (see figure below)
G_{NB} = Ground factor G computed *without barrier* (see Figure 6-5)
G_B = Ground factor G computed *with barrier* (see Figure 6-5)

† The term "tanh(variable)" stands for hyperbolic tangent, available on many scientific calculators. If "tanh" is not available, then compute E = exp(variable), and set tanh(variable) = (E - 1/E) / (E + 1/E), where exp(variable) is the "exponential" function, also written as e^x on calculator keypads.

Sources: Transit Noise & Vibration Impact Assessment (FTA 2006)

05/09/21, MCS: This model now considers effect of up to two barriers ("nearest" and "farthest" w.r.t. the receiver) so that "B" is still distance between Receiver and the nearest barrier, while "A" may be distance from Source to top edge of the farthest barrier. In such a situation, the path length difference calculation will include the horizontal distance between the two barriers. If it's a single barrier, this difference equals zero. If there are more than two intervening barriers, only the nearest and farthest will be considered. Hence, good practice should avoid more than two barriers, especially if "middle" barriers are much taller than the nearest or farthest.

Appendix I3
Traffic Noise Modeling Data

Dudek 30 October 2023
CB TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Apple Valley
RUN: Existing

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road	40.0	point1	1	6,257,481.0	2,523,962.0	0.00				Average	
		point2	2	6,257,105.5	2,523,818.8	0.00				Average	
		point3	3	6,256,792.5	2,523,496.5	0.00				Average	
		point4	4	6,255,764.5	2,522,918.0	0.00				Average	
		point5	5	6,255,005.0	2,522,492.2	0.00				Average	
		point6	6	6,254,545.0	2,522,136.5	0.00				Average	
		point7	7	6,254,317.0	2,521,574.0	0.00				Average	
		point8	8	6,253,949.5	2,520,891.8	0.00				Average	
		point9	9	6,253,420.5	2,520,301.0	0.00				Average	
		point10	10	6,252,916.0	2,519,997.5	0.00				Average	
		point11	11	6,252,455.5	2,519,764.0	0.00				Average	
		point12	12	6,252,146.5	2,519,415.8	0.00				Average	
		point13	13	6,251,673.5	2,519,032.0	0.00				Average	
		point14	14	6,251,230.5	2,518,620.8	0.00				Average	
		point15	15	6,250,939.5	2,518,099.8	0.00				Average	
		point16	16	6,250,719.5	2,517,801.5	0.00				Average	
		point17	17	6,250,133.5	2,517,277.2	0.00				Average	
		point18	18	6,249,483.5	2,516,677.5	0.00				Average	
		point19	19	6,248,950.5	2,515,881.2	0.00				Average	
		point20	20	6,248,396.0	2,515,265.8	0.00				Average	
		point21	21	6,247,970.5	2,514,915.5	0.00					
i15 south	80.0	point22	22	6,257,598.0	2,523,919.8	0.00				Average	
		point23	23	6,257,230.0	2,523,393.8	0.00				Average	
		point24	24	6,256,748.5	2,522,714.2	0.00				Average	
		point25	25	6,256,216.5	2,522,017.0	0.00				Average	

		point26	26	6,255,420.0	2,520,962.0	0.00				Average	
		point27	27	6,254,814.5	2,520,200.5	0.00				Average	
		point28	28	6,254,293.5	2,519,509.0	0.00				Average	
		point29	29	6,253,832.0	2,518,862.0	0.00				Average	
		point30	30	6,253,220.5	2,518,073.0	0.00				Average	
		point31	31	6,252,722.0	2,517,410.0	0.00				Average	
		point32	32	6,252,051.0	2,516,526.0	0.00				Average	
		point33	33	6,251,513.5	2,515,828.0	0.00				Average	
		point34	34	6,251,021.5	2,515,189.0	0.00				Average	
		point35	35	6,250,744.0	2,514,825.5	0.00				Average	
		point36	36	6,250,304.5	2,514,249.0	0.00				Average	
		point37	37	6,249,990.0	2,513,810.8	0.00				Average	
		point38	38	6,249,634.5	2,513,182.0	0.00					
i15 north	80.0	point39	39	6,249,706.5	2,513,142.8	0.00				Average	
		point40	40	6,249,836.0	2,513,407.8	0.00				Average	
		point41	41	6,249,932.0	2,513,590.2	0.00				Average	
		point42	42	6,250,038.5	2,513,781.8	0.00				Average	
		point43	43	6,250,229.0	2,514,033.5	0.00				Average	
		point44	44	6,250,491.5	2,514,376.0	0.00				Average	
		point45	45	6,250,767.0	2,514,763.2	0.00				Average	
		point46	46	6,251,098.5	2,515,177.0	0.00				Average	
		point47	47	6,251,387.5	2,515,559.2	0.00				Average	
		point48	48	6,251,762.0	2,516,064.0	0.00				Average	
		point49	49	6,252,112.0	2,516,496.2	0.00				Average	
		point50	50	6,252,558.5	2,517,075.5	0.00				Average	
		point51	51	6,252,840.0	2,517,439.5	0.00				Average	
		point52	52	6,253,309.0	2,518,059.2	0.00				Average	
		point53	53	6,253,573.0	2,518,404.8	0.00				Average	
		point54	54	6,253,789.0	2,518,698.5	0.00				Average	
		point55	55	6,254,101.0	2,519,101.8	0.00				Average	
		point56	56	6,254,422.0	2,519,511.8	0.00				Average	
		point57	57	6,254,695.5	2,519,855.2	0.00				Average	
		point58	58	6,254,934.0	2,520,165.8	0.00				Average	
		point59	59	6,255,094.5	2,520,379.5	0.00				Average	
		point60	60	6,255,342.0	2,520,712.2	0.00				Average	
		point61	61	6,255,567.5	2,521,001.2	0.00				Average	
		point62	62	6,255,841.5	2,521,334.2	0.00				Average	
		point63	63	6,256,175.5	2,521,808.5	0.00				Average	
		point64	64	6,256,382.0	2,522,065.2	0.00				Average	

		point65	65	6,256,553.0	2,522,306.8	0.00				Average	
		point66	66	6,256,809.0	2,522,634.5	0.00				Average	
		point67	67	6,257,053.0	2,522,942.2	0.00				Average	
		point68	68	6,257,359.5	2,523,411.2	0.00				Average	
		point69	69	6,257,714.0	2,523,922.0	0.00					
Falchion	40.0	point70	70	6,252,801.5	2,517,142.8	0.00				Average	
		point71	71	6,254,965.5	2,517,145.8	0.00					
Outer Hwy	30.0	point79	79	6,258,300.0	2,524,073.5	0.00				Average	
		point80	80	6,258,284.5	2,523,773.5	0.00				Average	
		point81	81	6,258,259.0	2,523,681.2	0.00				Average	
		point82	82	6,258,167.0	2,523,581.8	0.00				Average	
		point83	83	6,258,014.0	2,523,521.2	0.00				Average	
		point84	84	6,257,770.5	2,523,494.5	0.00				Average	
		point85	85	6,257,572.5	2,523,435.8	0.00				Average	
		point86	86	6,257,426.5	2,523,324.8	0.00				Average	
		point87	87	6,256,569.0	2,522,203.2	0.00				Average	
		point88	88	6,255,697.5	2,521,074.0	0.00				Average	
		point89	89	6,255,033.5	2,520,195.2	0.00				Average	
		point90	90	6,254,892.0	2,519,836.5	0.00				Average	
		point91	91	6,254,741.5	2,519,450.2	0.00				Average	
		point92	92	6,254,599.5	2,519,263.8	0.00				Average	
		point93	93	6,254,372.0	2,519,094.8	0.00				Average	
		point94	94	6,253,963.5	2,518,794.2	0.00				Average	
		point95	95	6,253,403.5	2,518,075.5	0.00				Average	
		point96	96	6,252,693.0	2,517,142.2	0.00					
Apple Valley Road-2	40.0	point108	108	6,254,965.5	2,517,145.8	0.00				Average	
		point72	72	6,254,915.5	2,514,881.0	0.00				Average	
		point73	73	6,254,910.5	2,513,743.0	0.00				Average	
		point74	74	6,254,763.5	2,513,046.5	0.00				Average	
		point75	75	6,254,119.0	2,512,661.8	0.00				Average	
		point76	76	6,253,634.0	2,512,264.2	0.00				Average	
		point77	77	6,253,594.5	2,511,367.5	0.00				Average	
		point78	78	6,253,473.5	2,509,976.8	0.00					
Outer Hwy-2	30.0	point109	109	6,252,693.0	2,517,142.2	0.00				Average	
		point97	97	6,251,964.5	2,516,170.8	0.00				Average	
		point98	98	6,251,455.0	2,515,526.0	0.00				Average	
		point99	99	6,251,138.5	2,515,111.2	0.00				Average	
		point100	100	6,250,857.0	2,514,782.2	0.00				Average	
		point101	101	6,250,346.0	2,514,100.5	0.00				Average	

		point102	102	6,249,952.5	2,513,518.2	0.00				Average	
		point103	103	6,249,751.0	2,513,115.2	0.00				Average	
		point104	104	6,249,539.5	2,512,627.2	0.00				Average	
		point105	105	6,249,334.5	2,512,139.5	0.00				Average	
		point106	106	6,249,283.5	2,511,857.5	0.00				Average	
		point107	107	6,249,198.5	2,511,453.8	0.00					

Dudek **30 October 2023**
CB **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Apple Valley**
RUN: **Existing**

Roadway	Points		Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
Name	Name	No.	V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road	point1	1	0	0	0	0	0	0	0	0	0	0
	point2	2	0	0	0	0	0	0	0	0	0	0
	point3	3	0	0	0	0	0	0	0	0	0	0
	point4	4	0	0	0	0	0	0	0	0	0	0
	point5	5	0	0	0	0	0	0	0	0	0	0
	point6	6	0	0	0	0	0	0	0	0	0	0
	point7	7	0	0	0	0	0	0	0	0	0	0
	point8	8	0	0	0	0	0	0	0	0	0	0
	point9	9	0	0	0	0	0	0	0	0	0	0
	point10	10	0	0	0	0	0	0	0	0	0	0
	point11	11	0	0	0	0	0	0	0	0	0	0
	point12	12	0	0	0	0	0	0	0	0	0	0
	point13	13	0	0	0	0	0	0	0	0	0	0
	point14	14	0	0	0	0	0	0	0	0	0	0
	point15	15	0	0	0	0	0	0	0	0	0	0
	point16	16	0	0	0	0	0	0	0	0	0	0
	point17	17	0	0	0	0	0	0	0	0	0	0
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21										
i15 south	point22	22	2328	65	48	65	24	65	0	0	0	0
	point23	23	2328	65	48	65	24	65	0	0	0	0

	point24	24	2328	65	48	65	24	65	0	0	0	0
	point25	25	2328	65	48	65	24	65	0	0	0	0
	point26	26	2328	65	48	65	24	65	0	0	0	0
	point27	27	2328	65	48	65	24	65	0	0	0	0
	point28	28	2328	65	48	65	24	65	0	0	0	0
	point29	29	2328	65	48	65	24	65	0	0	0	0
	point30	30	2328	65	48	65	24	65	0	0	0	0
	point31	31	2328	65	48	65	24	65	0	0	0	0
	point32	32	2328	65	48	65	24	65	0	0	0	0
	point33	33	2328	65	48	65	24	65	0	0	0	0
	point34	34	2328	65	48	65	24	65	0	0	0	0
	point35	35	2328	65	48	65	24	65	0	0	0	0
	point36	36	2328	65	48	65	24	65	0	0	0	0
	point37	37	2328	65	48	65	24	65	0	0	0	0
	point38	38										
i15 north	point39	39	2328	65	48	65	24	65	0	0	0	0
	point40	40	2328	65	48	65	24	65	0	0	0	0
	point41	41	2328	65	48	65	24	65	0	0	0	0
	point42	42	2328	65	48	65	24	65	0	0	0	0
	point43	43	2328	65	48	65	24	65	0	0	0	0
	point44	44	2328	65	48	65	24	65	0	0	0	0
	point45	45	2328	65	48	65	24	65	0	0	0	0
	point46	46	2328	65	48	65	24	65	0	0	0	0
	point47	47	2328	65	48	65	24	65	0	0	0	0
	point48	48	2328	65	48	65	24	65	0	0	0	0
	point49	49	2328	65	48	65	24	65	0	0	0	0
	point50	50	2328	65	48	65	24	65	0	0	0	0
	point51	51	2328	65	48	65	24	65	0	0	0	0
	point52	52	2328	65	48	65	24	65	0	0	0	0
	point53	53	2328	65	48	65	24	65	0	0	0	0
	point54	54	2328	65	48	65	24	65	0	0	0	0
	point55	55	2328	65	48	65	24	65	0	0	0	0
	point56	56	2328	65	48	65	24	65	0	0	0	0
	point57	57	2328	65	48	65	24	65	0	0	0	0
	point58	58	2328	65	48	65	24	65	0	0	0	0
	point59	59	2328	65	48	65	24	65	0	0	0	0

	point60	60	2328	65	48	65	24	65	0	0	0	0
	point61	61	2328	65	48	65	24	65	0	0	0	0
	point62	62	2328	65	48	65	24	65	0	0	0	0
	point63	63	2328	65	48	65	24	65	0	0	0	0
	point64	64	2328	65	48	65	24	65	0	0	0	0
	point65	65	2328	65	48	65	24	65	0	0	0	0
	point66	66	2328	65	48	65	24	65	0	0	0	0
	point67	67	2328	65	48	65	24	65	0	0	0	0
	point68	68	2328	65	48	65	24	65	0	0	0	0
	point69	69										
Falchion	point70	70	41	35	0	0	0	0	0	0	0	0
	point71	71										
Outer Hwy	point79	79	72	50	0	0	0	0	0	0	0	0
	point80	80	72	50	0	0	0	0	0	0	0	0
	point81	81	72	50	0	0	0	0	0	0	0	0
	point82	82	72	50	0	0	0	0	0	0	0	0
	point83	83	72	50	0	0	0	0	0	0	0	0
	point84	84	72	50	0	0	0	0	0	0	0	0
	point85	85	72	50	0	0	0	0	0	0	0	0
	point86	86	72	50	0	0	0	0	0	0	0	0
	point87	87	72	50	0	0	0	0	0	0	0	0
	point88	88	72	50	0	0	0	0	0	0	0	0
	point89	89	72	50	0	0	0	0	0	0	0	0
	point90	90	72	50	0	0	0	0	0	0	0	0
	point91	91	72	50	0	0	0	0	0	0	0	0
	point92	92	72	50	0	0	0	0	0	0	0	0
	point93	93	72	50	0	0	0	0	0	0	0	0
	point94	94	72	50	0	0	0	0	0	0	0	0
	point95	95	72	50	0	0	0	0	0	0	0	0
	point96	96										
Apple Valley Road-2	point108	108	0	0	0	0	0	0	0	0	0	0
	point72	72	0	0	0	0	0	0	0	0	0	0
	point73	73	0	0	0	0	0	0	0	0	0	0
	point74	74	0	0	0	0	0	0	0	0	0	0
	point75	75	0	0	0	0	0	0	0	0	0	0
	point76	76	0	0	0	0	0	0	0	0	0	0

	point77	77	0	0	0	0	0	0	0	0	0	0
	point78	78										
Outer Hwy-2	point109	109	91	50	0	0	0	0	0	0	0	0
	point97	97	91	50	0	0	0	0	0	0	0	0
	point98	98	91	50	0	0	0	0	0	0	0	0
	point99	99	91	50	0	0	0	0	0	0	0	0
	point100	100	91	50	0	0	0	0	0	0	0	0
	point101	101	91	50	0	0	0	0	0	0	0	0
	point102	102	91	50	0	0	0	0	0	0	0	0
	point103	103	91	50	0	0	0	0	0	0	0	0
	point104	104	91	50	0	0	0	0	0	0	0	0
	point105	105	91	50	0	0	0	0	0	0	0	0
	point106	106	91	50	0	0	0	0	0	0	0	0
	point107	107										

Dudek
CB

30 October 2023
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Apple Valley
RUN: Existing

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	6,249,589.5	2,514,645.8	0.00	4.92	55.40	66	10.0	8.0	Y
ST2	2	1	6,253,770.5	2,510,079.5	0.00	4.92	42.30	66	10.0	8.0	Y

Dudek
CB
30 October 2023
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Apple Valley
RUN: Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	55.4	55.6	66	0.2	10	----	55.6	0.0	8	-8.0
ST2	2	1	42.3	37.3	66	-5.0	10	----	37.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 30 October 2023
CB TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Apple Valley
RUN: Existing + Project

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road	40.0	point1	1	6,257,481.0	2,523,962.0	0.00				Average	
		point2	2	6,257,105.5	2,523,818.8	0.00				Average	
		point3	3	6,256,792.5	2,523,496.5	0.00				Average	
		point4	4	6,255,764.5	2,522,918.0	0.00				Average	
		point5	5	6,255,005.0	2,522,492.2	0.00				Average	
		point6	6	6,254,545.0	2,522,136.5	0.00				Average	
		point7	7	6,254,317.0	2,521,574.0	0.00				Average	
		point8	8	6,253,949.5	2,520,891.8	0.00				Average	
		point9	9	6,253,420.5	2,520,301.0	0.00				Average	
		point10	10	6,252,916.0	2,519,997.5	0.00				Average	
		point11	11	6,252,455.5	2,519,764.0	0.00				Average	
		point12	12	6,252,146.5	2,519,415.8	0.00				Average	
		point13	13	6,251,673.5	2,519,032.0	0.00				Average	
		point14	14	6,251,230.5	2,518,620.8	0.00				Average	
		point15	15	6,250,939.5	2,518,099.8	0.00				Average	
		point16	16	6,250,719.5	2,517,801.5	0.00				Average	
		point17	17	6,250,133.5	2,517,277.2	0.00				Average	
		point18	18	6,249,483.5	2,516,677.5	0.00				Average	
		point19	19	6,248,950.5	2,515,881.2	0.00				Average	
		point20	20	6,248,396.0	2,515,265.8	0.00				Average	
		point21	21	6,247,970.5	2,514,915.5	0.00					
i15 south	80.0	point22	22	6,257,598.0	2,523,919.8	0.00				Average	
		point23	23	6,257,230.0	2,523,393.8	0.00				Average	
		point24	24	6,256,748.5	2,522,714.2	0.00				Average	
		point25	25	6,256,216.5	2,522,017.0	0.00				Average	

		point26	26	6,255,420.0	2,520,962.0	0.00				Average	
		point27	27	6,254,814.5	2,520,200.5	0.00				Average	
		point28	28	6,254,293.5	2,519,509.0	0.00				Average	
		point29	29	6,253,832.0	2,518,862.0	0.00				Average	
		point30	30	6,253,220.5	2,518,073.0	0.00				Average	
		point31	31	6,252,722.0	2,517,410.0	0.00				Average	
		point32	32	6,252,051.0	2,516,526.0	0.00				Average	
		point33	33	6,251,513.5	2,515,828.0	0.00				Average	
		point34	34	6,251,021.5	2,515,189.0	0.00				Average	
		point35	35	6,250,744.0	2,514,825.5	0.00				Average	
		point36	36	6,250,304.5	2,514,249.0	0.00				Average	
		point37	37	6,249,990.0	2,513,810.8	0.00				Average	
		point38	38	6,249,634.5	2,513,182.0	0.00					
i15 north	80.0	point39	39	6,249,706.5	2,513,142.8	0.00				Average	
		point40	40	6,249,836.0	2,513,407.8	0.00				Average	
		point41	41	6,249,932.0	2,513,590.2	0.00				Average	
		point42	42	6,250,038.5	2,513,781.8	0.00				Average	
		point43	43	6,250,229.0	2,514,033.5	0.00				Average	
		point44	44	6,250,491.5	2,514,376.0	0.00				Average	
		point45	45	6,250,767.0	2,514,763.2	0.00				Average	
		point46	46	6,251,098.5	2,515,177.0	0.00				Average	
		point47	47	6,251,387.5	2,515,559.2	0.00				Average	
		point48	48	6,251,762.0	2,516,064.0	0.00				Average	
		point49	49	6,252,112.0	2,516,496.2	0.00				Average	
		point50	50	6,252,558.5	2,517,075.5	0.00				Average	
		point51	51	6,252,840.0	2,517,439.5	0.00				Average	
		point52	52	6,253,309.0	2,518,059.2	0.00				Average	
		point53	53	6,253,573.0	2,518,404.8	0.00				Average	
		point54	54	6,253,789.0	2,518,698.5	0.00				Average	
		point55	55	6,254,101.0	2,519,101.8	0.00				Average	
		point56	56	6,254,422.0	2,519,511.8	0.00				Average	
		point57	57	6,254,695.5	2,519,855.2	0.00				Average	
		point58	58	6,254,934.0	2,520,165.8	0.00				Average	
		point59	59	6,255,094.5	2,520,379.5	0.00				Average	
		point60	60	6,255,342.0	2,520,712.2	0.00				Average	
		point61	61	6,255,567.5	2,521,001.2	0.00				Average	
		point62	62	6,255,841.5	2,521,334.2	0.00				Average	
		point63	63	6,256,175.5	2,521,808.5	0.00				Average	
		point64	64	6,256,382.0	2,522,065.2	0.00				Average	

		point65	65	6,256,553.0	2,522,306.8	0.00				Average	
		point66	66	6,256,809.0	2,522,634.5	0.00				Average	
		point67	67	6,257,053.0	2,522,942.2	0.00				Average	
		point68	68	6,257,359.5	2,523,411.2	0.00				Average	
		point69	69	6,257,714.0	2,523,922.0	0.00					
Falchion	40.0	point70	70	6,252,801.5	2,517,142.8	0.00				Average	
		point71	71	6,254,965.5	2,517,145.8	0.00					
Outer Hwy	30.0	point79	79	6,258,300.0	2,524,073.5	0.00				Average	
		point80	80	6,258,284.5	2,523,773.5	0.00				Average	
		point81	81	6,258,259.0	2,523,681.2	0.00				Average	
		point82	82	6,258,167.0	2,523,581.8	0.00				Average	
		point83	83	6,258,014.0	2,523,521.2	0.00				Average	
		point84	84	6,257,770.5	2,523,494.5	0.00				Average	
		point85	85	6,257,572.5	2,523,435.8	0.00				Average	
		point86	86	6,257,426.5	2,523,324.8	0.00				Average	
		point87	87	6,256,569.0	2,522,203.2	0.00				Average	
		point88	88	6,255,697.5	2,521,074.0	0.00				Average	
		point89	89	6,255,033.5	2,520,195.2	0.00				Average	
		point90	90	6,254,892.0	2,519,836.5	0.00				Average	
		point91	91	6,254,741.5	2,519,450.2	0.00				Average	
		point92	92	6,254,599.5	2,519,263.8	0.00				Average	
		point93	93	6,254,372.0	2,519,094.8	0.00				Average	
		point94	94	6,253,963.5	2,518,794.2	0.00				Average	
		point95	95	6,253,403.5	2,518,075.5	0.00				Average	
		point96	96	6,252,693.0	2,517,142.2	0.00					
Apple Valley Road-2	40.0	point108	108	6,254,965.5	2,517,145.8	0.00				Average	
		point72	72	6,254,915.5	2,514,881.0	0.00				Average	
		point73	73	6,254,910.5	2,513,743.0	0.00				Average	
		point74	74	6,254,763.5	2,513,046.5	0.00				Average	
		point75	75	6,254,119.0	2,512,661.8	0.00				Average	
		point76	76	6,253,634.0	2,512,264.2	0.00				Average	
		point77	77	6,253,594.5	2,511,367.5	0.00				Average	
		point78	78	6,253,473.5	2,509,976.8	0.00					
Outer Hwy-2	30.0	point109	109	6,252,693.0	2,517,142.2	0.00				Average	
		point97	97	6,251,964.5	2,516,170.8	0.00				Average	
		point98	98	6,251,455.0	2,515,526.0	0.00				Average	
		point99	99	6,251,138.5	2,515,111.2	0.00				Average	
		point100	100	6,250,857.0	2,514,782.2	0.00				Average	
		point101	101	6,250,346.0	2,514,100.5	0.00				Average	

		point102	102	6,249,952.5	2,513,518.2	0.00				Average	
		point103	103	6,249,751.0	2,513,115.2	0.00				Average	
		point104	104	6,249,539.5	2,512,627.2	0.00				Average	
		point105	105	6,249,334.5	2,512,139.5	0.00				Average	
		point106	106	6,249,283.5	2,511,857.5	0.00				Average	
		point107	107	6,249,198.5	2,511,453.8	0.00					

Dudek **30 October 2023**
CB **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Apple Valley**
RUN: **Existing + Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road	point1	1	0	0	0	0	0	0	0	0	0	0
	point2	2	0	0	0	0	0	0	0	0	0	0
	point3	3	0	0	0	0	0	0	0	0	0	0
	point4	4	0	0	0	0	0	0	0	0	0	0
	point5	5	0	0	0	0	0	0	0	0	0	0
	point6	6	0	0	0	0	0	0	0	0	0	0
	point7	7	0	0	0	0	0	0	0	0	0	0
	point8	8	0	0	0	0	0	0	0	0	0	0
	point9	9	0	0	0	0	0	0	0	0	0	0
	point10	10	0	0	0	0	0	0	0	0	0	0
	point11	11	0	0	0	0	0	0	0	0	0	0
	point12	12	0	0	0	0	0	0	0	0	0	0
	point13	13	0	0	0	0	0	0	0	0	0	0
	point14	14	0	0	0	0	0	0	0	0	0	0
	point15	15	0	0	0	0	0	0	0	0	0	0
	point16	16	0	0	0	0	0	0	0	0	0	0
	point17	17	0	0	0	0	0	0	0	0	0	0
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21										
i15 south	point22	22	2328	65	48	65	24	65	0	0	0	0
	point23	23	2328	65	48	65	24	65	0	0	0	0

	point24	24	2328	65	48	65	24	65	0	0	0	0
	point25	25	2328	65	48	65	24	65	0	0	0	0
	point26	26	2328	65	48	65	24	65	0	0	0	0
	point27	27	2328	65	48	65	24	65	0	0	0	0
	point28	28	2328	65	48	65	24	65	0	0	0	0
	point29	29	2328	65	48	65	24	65	0	0	0	0
	point30	30	2328	65	48	65	24	65	0	0	0	0
	point31	31	2328	65	48	65	24	65	0	0	0	0
	point32	32	2328	65	48	65	24	65	0	0	0	0
	point33	33	2328	65	48	65	24	65	0	0	0	0
	point34	34	2328	65	48	65	24	65	0	0	0	0
	point35	35	2328	65	48	65	24	65	0	0	0	0
	point36	36	2328	65	48	65	24	65	0	0	0	0
	point37	37	2328	65	48	65	24	65	0	0	0	0
	point38	38										
i15 north	point39	39	2328	65	48	65	24	65	0	0	0	0
	point40	40	2328	65	48	65	24	65	0	0	0	0
	point41	41	2328	65	48	65	24	65	0	0	0	0
	point42	42	2328	65	48	65	24	65	0	0	0	0
	point43	43	2328	65	48	65	24	65	0	0	0	0
	point44	44	2328	65	48	65	24	65	0	0	0	0
	point45	45	2328	65	48	65	24	65	0	0	0	0
	point46	46	2328	65	48	65	24	65	0	0	0	0
	point47	47	2328	65	48	65	24	65	0	0	0	0
	point48	48	2328	65	48	65	24	65	0	0	0	0
	point49	49	2328	65	48	65	24	65	0	0	0	0
	point50	50	2328	65	48	65	24	65	0	0	0	0
	point51	51	2328	65	48	65	24	65	0	0	0	0
	point52	52	2328	65	48	65	24	65	0	0	0	0
	point53	53	2328	65	48	65	24	65	0	0	0	0
	point54	54	2328	65	48	65	24	65	0	0	0	0
	point55	55	2328	65	48	65	24	65	0	0	0	0
	point56	56	2328	65	48	65	24	65	0	0	0	0
	point57	57	2328	65	48	65	24	65	0	0	0	0
	point58	58	2328	65	48	65	24	65	0	0	0	0
	point59	59	2328	65	48	65	24	65	0	0	0	0

	point60	60	2328	65	48	65	24	65	0	0	0	0
	point61	61	2328	65	48	65	24	65	0	0	0	0
	point62	62	2328	65	48	65	24	65	0	0	0	0
	point63	63	2328	65	48	65	24	65	0	0	0	0
	point64	64	2328	65	48	65	24	65	0	0	0	0
	point65	65	2328	65	48	65	24	65	0	0	0	0
	point66	66	2328	65	48	65	24	65	0	0	0	0
	point67	67	2328	65	48	65	24	65	0	0	0	0
	point68	68	2328	65	48	65	24	65	0	0	0	0
	point69	69										
Falchion	point70	70	565	35	0	0	0	0	0	0	0	0
	point71	71										
Outer Hwy	point79	79	323	50	0	0	0	0	0	0	0	0
	point80	80	323	50	0	0	0	0	0	0	0	0
	point81	81	323	50	0	0	0	0	0	0	0	0
	point82	82	323	50	0	0	0	0	0	0	0	0
	point83	83	323	50	0	0	0	0	0	0	0	0
	point84	84	323	50	0	0	0	0	0	0	0	0
	point85	85	323	50	0	0	0	0	0	0	0	0
	point86	86	323	50	0	0	0	0	0	0	0	0
	point87	87	323	50	0	0	0	0	0	0	0	0
	point88	88	323	50	0	0	0	0	0	0	0	0
	point89	89	323	50	0	0	0	0	0	0	0	0
	point90	90	323	50	0	0	0	0	0	0	0	0
	point91	91	323	50	0	0	0	0	0	0	0	0
	point92	92	323	50	0	0	0	0	0	0	0	0
	point93	93	323	50	0	0	0	0	0	0	0	0
	point94	94	323	50	0	0	0	0	0	0	0	0
	point95	95	323	50	0	0	0	0	0	0	0	0
	point96	96										
Apple Valley Road-2	point108	108	0	0	0	0	0	0	0	0	0	0
	point72	72	0	0	0	0	0	0	0	0	0	0
	point73	73	0	0	0	0	0	0	0	0	0	0
	point74	74	0	0	0	0	0	0	0	0	0	0
	point75	75	0	0	0	0	0	0	0	0	0	0
	point76	76	0	0	0	0	0	0	0	0	0	0

	point77	77	0	0	0	0	0	0	0	0	0	0
	point78	78										
Outer Hwy-2	point109	109	666	50	0	0	0	0	0	0	0	0
	point97	97	666	50	0	0	0	0	0	0	0	0
	point98	98	666	50	0	0	0	0	0	0	0	0
	point99	99	666	50	0	0	0	0	0	0	0	0
	point100	100	666	50	0	0	0	0	0	0	0	0
	point101	101	666	50	0	0	0	0	0	0	0	0
	point102	102	666	50	0	0	0	0	0	0	0	0
	point103	103	666	50	0	0	0	0	0	0	0	0
	point104	104	666	50	0	0	0	0	0	0	0	0
	point105	105	666	50	0	0	0	0	0	0	0	0
	point106	106	666	50	0	0	0	0	0	0	0	0
	point107	107										

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30 October 2023
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INPUT: RECEIVERS
PROJECT/CONTRACT: Apple Valley
RUN: Existing + Project

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	6,249,589.5	2,514,645.8	0.00	4.92	55.40	66	10.0	8.0	Y
ST2	2	1	6,253,770.5	2,510,079.5	0.00	4.92	42.30	66	10.0	8.0	Y

Dudek
CB
30 October 2023
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Apple Valley
RUN: Existing + Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	With Barrier Noise Reduction Calculated	With Barrier Noise Reduction Goal	With Barrier Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	55.4	56.1	66	0.7	10	----	56.1	0.0	8	-8.0
ST2	2	1	42.3	37.7	66	-4.6	10	----	37.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 30 October 2023
CB TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Apple Valley
RUN: Future

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road	40.0	point1	1	6,257,481.0	2,523,962.0	0.00				Average	
		point2	2	6,257,105.5	2,523,818.8	0.00				Average	
		point3	3	6,256,792.5	2,523,496.5	0.00				Average	
		point4	4	6,255,764.5	2,522,918.0	0.00				Average	
		point5	5	6,255,005.0	2,522,492.2	0.00				Average	
		point6	6	6,254,545.0	2,522,136.5	0.00				Average	
		point7	7	6,254,317.0	2,521,574.0	0.00				Average	
		point8	8	6,253,949.5	2,520,891.8	0.00				Average	
		point9	9	6,253,420.5	2,520,301.0	0.00				Average	
		point10	10	6,252,916.0	2,519,997.5	0.00				Average	
		point11	11	6,252,455.5	2,519,764.0	0.00				Average	
		point12	12	6,252,146.5	2,519,415.8	0.00				Average	
		point13	13	6,251,673.5	2,519,032.0	0.00				Average	
		point14	14	6,251,230.5	2,518,620.8	0.00				Average	
		point15	15	6,250,939.5	2,518,099.8	0.00				Average	
		point16	16	6,250,719.5	2,517,801.5	0.00				Average	
		point17	17	6,250,133.5	2,517,277.2	0.00				Average	
		point18	18	6,249,483.5	2,516,677.5	0.00				Average	
		point19	19	6,248,950.5	2,515,881.2	0.00				Average	
		point20	20	6,248,396.0	2,515,265.8	0.00				Average	
		point21	21	6,247,970.5	2,514,915.5	0.00					
i15 south	80.0	point22	22	6,257,598.0	2,523,919.8	0.00				Average	
		point23	23	6,257,230.0	2,523,393.8	0.00				Average	
		point24	24	6,256,748.5	2,522,714.2	0.00				Average	
		point25	25	6,256,216.5	2,522,017.0	0.00				Average	

		point26	26	6,255,420.0	2,520,962.0	0.00				Average	
		point27	27	6,254,814.5	2,520,200.5	0.00				Average	
		point28	28	6,254,293.5	2,519,509.0	0.00				Average	
		point29	29	6,253,832.0	2,518,862.0	0.00				Average	
		point30	30	6,253,220.5	2,518,073.0	0.00				Average	
		point31	31	6,252,722.0	2,517,410.0	0.00				Average	
		point32	32	6,252,051.0	2,516,526.0	0.00				Average	
		point33	33	6,251,513.5	2,515,828.0	0.00				Average	
		point34	34	6,251,021.5	2,515,189.0	0.00				Average	
		point35	35	6,250,744.0	2,514,825.5	0.00				Average	
		point36	36	6,250,304.5	2,514,249.0	0.00				Average	
		point37	37	6,249,990.0	2,513,810.8	0.00				Average	
		point38	38	6,249,634.5	2,513,182.0	0.00					
i15 north	80.0	point39	39	6,249,706.5	2,513,142.8	0.00				Average	
		point40	40	6,249,836.0	2,513,407.8	0.00				Average	
		point41	41	6,249,932.0	2,513,590.2	0.00				Average	
		point42	42	6,250,038.5	2,513,781.8	0.00				Average	
		point43	43	6,250,229.0	2,514,033.5	0.00				Average	
		point44	44	6,250,491.5	2,514,376.0	0.00				Average	
		point45	45	6,250,767.0	2,514,763.2	0.00				Average	
		point46	46	6,251,098.5	2,515,177.0	0.00				Average	
		point47	47	6,251,387.5	2,515,559.2	0.00				Average	
		point48	48	6,251,762.0	2,516,064.0	0.00				Average	
		point49	49	6,252,112.0	2,516,496.2	0.00				Average	
		point50	50	6,252,558.5	2,517,075.5	0.00				Average	
		point51	51	6,252,840.0	2,517,439.5	0.00				Average	
		point52	52	6,253,309.0	2,518,059.2	0.00				Average	
		point53	53	6,253,573.0	2,518,404.8	0.00				Average	
		point54	54	6,253,789.0	2,518,698.5	0.00				Average	
		point55	55	6,254,101.0	2,519,101.8	0.00				Average	
		point56	56	6,254,422.0	2,519,511.8	0.00				Average	
		point57	57	6,254,695.5	2,519,855.2	0.00				Average	
		point58	58	6,254,934.0	2,520,165.8	0.00				Average	
		point59	59	6,255,094.5	2,520,379.5	0.00				Average	
		point60	60	6,255,342.0	2,520,712.2	0.00				Average	
		point61	61	6,255,567.5	2,521,001.2	0.00				Average	
		point62	62	6,255,841.5	2,521,334.2	0.00				Average	
		point63	63	6,256,175.5	2,521,808.5	0.00				Average	
		point64	64	6,256,382.0	2,522,065.2	0.00				Average	

		point65	65	6,256,553.0	2,522,306.8	0.00				Average	
		point66	66	6,256,809.0	2,522,634.5	0.00				Average	
		point67	67	6,257,053.0	2,522,942.2	0.00				Average	
		point68	68	6,257,359.5	2,523,411.2	0.00				Average	
		point69	69	6,257,714.0	2,523,922.0	0.00					
Falchion	40.0	point70	70	6,252,801.5	2,517,142.8	0.00				Average	
		point71	71	6,254,965.5	2,517,145.8	0.00					
Outer Hwy	30.0	point79	79	6,258,300.0	2,524,073.5	0.00				Average	
		point80	80	6,258,284.5	2,523,773.5	0.00				Average	
		point81	81	6,258,259.0	2,523,681.2	0.00				Average	
		point82	82	6,258,167.0	2,523,581.8	0.00				Average	
		point83	83	6,258,014.0	2,523,521.2	0.00				Average	
		point84	84	6,257,770.5	2,523,494.5	0.00				Average	
		point85	85	6,257,572.5	2,523,435.8	0.00				Average	
		point86	86	6,257,426.5	2,523,324.8	0.00				Average	
		point87	87	6,256,569.0	2,522,203.2	0.00				Average	
		point88	88	6,255,697.5	2,521,074.0	0.00				Average	
		point89	89	6,255,033.5	2,520,195.2	0.00				Average	
		point90	90	6,254,892.0	2,519,836.5	0.00				Average	
		point91	91	6,254,741.5	2,519,450.2	0.00				Average	
		point92	92	6,254,599.5	2,519,263.8	0.00				Average	
		point93	93	6,254,372.0	2,519,094.8	0.00				Average	
		point94	94	6,253,963.5	2,518,794.2	0.00				Average	
		point95	95	6,253,403.5	2,518,075.5	0.00				Average	
		point96	96	6,252,693.0	2,517,142.2	0.00					
Apple Valley Road-2	40.0	point108	108	6,254,965.5	2,517,145.8	0.00				Average	
		point72	72	6,254,915.5	2,514,881.0	0.00				Average	
		point73	73	6,254,910.5	2,513,743.0	0.00				Average	
		point74	74	6,254,763.5	2,513,046.5	0.00				Average	
		point75	75	6,254,119.0	2,512,661.8	0.00				Average	
		point76	76	6,253,634.0	2,512,264.2	0.00				Average	
		point77	77	6,253,594.5	2,511,367.5	0.00				Average	
		point78	78	6,253,473.5	2,509,976.8	0.00					
Outer Hwy-2	30.0	point109	109	6,252,693.0	2,517,142.2	0.00				Average	
		point97	97	6,251,964.5	2,516,170.8	0.00				Average	
		point98	98	6,251,455.0	2,515,526.0	0.00				Average	
		point99	99	6,251,138.5	2,515,111.2	0.00				Average	
		point100	100	6,250,857.0	2,514,782.2	0.00				Average	
		point101	101	6,250,346.0	2,514,100.5	0.00				Average	

		point102	102	6,249,952.5	2,513,518.2	0.00				Average	
		point103	103	6,249,751.0	2,513,115.2	0.00				Average	
		point104	104	6,249,539.5	2,512,627.2	0.00				Average	
		point105	105	6,249,334.5	2,512,139.5	0.00				Average	
		point106	106	6,249,283.5	2,511,857.5	0.00				Average	
		point107	107	6,249,198.5	2,511,453.8	0.00					

Dudek **30 October 2023**
CB **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Apple Valley**
RUN: **Future**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road	point1	1	0	0	0	0	0	0	0	0	0	0
	point2	2	0	0	0	0	0	0	0	0	0	0
	point3	3	0	0	0	0	0	0	0	0	0	0
	point4	4	0	0	0	0	0	0	0	0	0	0
	point5	5	0	0	0	0	0	0	0	0	0	0
	point6	6	0	0	0	0	0	0	0	0	0	0
	point7	7	0	0	0	0	0	0	0	0	0	0
	point8	8	0	0	0	0	0	0	0	0	0	0
	point9	9	0	0	0	0	0	0	0	0	0	0
	point10	10	0	0	0	0	0	0	0	0	0	0
	point11	11	0	0	0	0	0	0	0	0	0	0
	point12	12	0	0	0	0	0	0	0	0	0	0
	point13	13	0	0	0	0	0	0	0	0	0	0
	point14	14	0	0	0	0	0	0	0	0	0	0
	point15	15	0	0	0	0	0	0	0	0	0	0
	point16	16	0	0	0	0	0	0	0	0	0	0
	point17	17	0	0	0	0	0	0	0	0	0	0
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21										
i15 south	point22	22	2328	65	48	65	24	65	0	0	0	0
	point23	23	2328	65	48	65	24	65	0	0	0	0

	point24	24	2328	65	48	65	24	65	0	0	0	0
	point25	25	2328	65	48	65	24	65	0	0	0	0
	point26	26	2328	65	48	65	24	65	0	0	0	0
	point27	27	2328	65	48	65	24	65	0	0	0	0
	point28	28	2328	65	48	65	24	65	0	0	0	0
	point29	29	2328	65	48	65	24	65	0	0	0	0
	point30	30	2328	65	48	65	24	65	0	0	0	0
	point31	31	2328	65	48	65	24	65	0	0	0	0
	point32	32	2328	65	48	65	24	65	0	0	0	0
	point33	33	2328	65	48	65	24	65	0	0	0	0
	point34	34	2328	65	48	65	24	65	0	0	0	0
	point35	35	2328	65	48	65	24	65	0	0	0	0
	point36	36	2328	65	48	65	24	65	0	0	0	0
	point37	37	2328	65	48	65	24	65	0	0	0	0
	point38	38										
i15 north	point39	39	2328	65	48	65	24	65	0	0	0	0
	point40	40	2328	65	48	65	24	65	0	0	0	0
	point41	41	2328	65	48	65	24	65	0	0	0	0
	point42	42	2328	65	48	65	24	65	0	0	0	0
	point43	43	2328	65	48	65	24	65	0	0	0	0
	point44	44	2328	65	48	65	24	65	0	0	0	0
	point45	45	2328	65	48	65	24	65	0	0	0	0
	point46	46	2328	65	48	65	24	65	0	0	0	0
	point47	47	2328	65	48	65	24	65	0	0	0	0
	point48	48	2328	65	48	65	24	65	0	0	0	0
	point49	49	2328	65	48	65	24	65	0	0	0	0
	point50	50	2328	65	48	65	24	65	0	0	0	0
	point51	51	2328	65	48	65	24	65	0	0	0	0
	point52	52	2328	65	48	65	24	65	0	0	0	0
	point53	53	2328	65	48	65	24	65	0	0	0	0
	point54	54	2328	65	48	65	24	65	0	0	0	0
	point55	55	2328	65	48	65	24	65	0	0	0	0
	point56	56	2328	65	48	65	24	65	0	0	0	0
	point57	57	2328	65	48	65	24	65	0	0	0	0
	point58	58	2328	65	48	65	24	65	0	0	0	0
	point59	59	2328	65	48	65	24	65	0	0	0	0

	point60	60	2328	65	48	65	24	65	0	0	0	0
	point61	61	2328	65	48	65	24	65	0	0	0	0
	point62	62	2328	65	48	65	24	65	0	0	0	0
	point63	63	2328	65	48	65	24	65	0	0	0	0
	point64	64	2328	65	48	65	24	65	0	0	0	0
	point65	65	2328	65	48	65	24	65	0	0	0	0
	point66	66	2328	65	48	65	24	65	0	0	0	0
	point67	67	2328	65	48	65	24	65	0	0	0	0
	point68	68	2328	65	48	65	24	65	0	0	0	0
	point69	69										
Falchion	point70	70	223	35	0	0	0	0	0	0	0	0
	point71	71										
Outer Hwy	point79	79	132	50	0	0	0	0	0	0	0	0
	point80	80	132	50	0	0	0	0	0	0	0	0
	point81	81	132	50	0	0	0	0	0	0	0	0
	point82	82	132	50	0	0	0	0	0	0	0	0
	point83	83	132	50	0	0	0	0	0	0	0	0
	point84	84	132	50	0	0	0	0	0	0	0	0
	point85	85	132	50	0	0	0	0	0	0	0	0
	point86	86	132	50	0	0	0	0	0	0	0	0
	point87	87	132	50	0	0	0	0	0	0	0	0
	point88	88	132	50	0	0	0	0	0	0	0	0
	point89	89	132	50	0	0	0	0	0	0	0	0
	point90	90	132	50	0	0	0	0	0	0	0	0
	point91	91	132	50	0	0	0	0	0	0	0	0
	point92	92	132	50	0	0	0	0	0	0	0	0
	point93	93	132	50	0	0	0	0	0	0	0	0
	point94	94	132	50	0	0	0	0	0	0	0	0
	point95	95	132	50	0	0	0	0	0	0	0	0
	point96	96										
Apple Valley Road-2	point108	108	0	0	0	0	0	0	0	0	0	0
	point72	72	0	0	0	0	0	0	0	0	0	0
	point73	73	0	0	0	0	0	0	0	0	0	0
	point74	74	0	0	0	0	0	0	0	0	0	0
	point75	75	0	0	0	0	0	0	0	0	0	0
	point76	76	0	0	0	0	0	0	0	0	0	0

	point77	77	0	0	0	0	0	0	0	0	0	0
	point78	78										
Outer Hwy-2	point109	109	239	50	0	0	0	0	0	0	0	0
	point97	97	239	50	0	0	0	0	0	0	0	0
	point98	98	239	50	0	0	0	0	0	0	0	0
	point99	0	239	50	0	0	0	0	0	0	0	0
	point100	100	239	50	0	0	0	0	0	0	0	0
	point101	101	239	50	0	0	0	0	0	0	0	0
	point102	102	239	50	0	0	0	0	0	0	0	0
	point103	103	239	50	0	0	0	0	0	0	0	0
	point104	104	239	50	0	0	0	0	0	0	0	0
	point105	105	239	50	0	0	0	0	0	0	0	0
	point106	106	239	50	0	0	0	0	0	0	0	0
	point107	107										

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30 October 2023
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Apple Valley
RUN: Future

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	6,249,589.5	2,514,645.8	0.00	4.92	55.40	66	10.0	8.0	Y
ST2	2	1	6,253,770.5	2,510,079.5	0.00	4.92	42.30	66	10.0	8.0	Y

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30 October 2023
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Apple Valley
RUN: Future
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	55.4	55.8	66	0.4	10	----	55.8	0.0	8	-8.0
ST2	2	1	42.3	37.4	66	-4.9	10	----	37.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 30 October 2023
CB TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Apple Valley
RUN: Future + Project

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Stoddard Wells Road	40.0	point1	1	6,257,481.0	2,523,962.0	0.00				Average	
		point2	2	6,257,105.5	2,523,818.8	0.00				Average	
		point3	3	6,256,792.5	2,523,496.5	0.00				Average	
		point4	4	6,255,764.5	2,522,918.0	0.00				Average	
		point5	5	6,255,005.0	2,522,492.2	0.00				Average	
		point6	6	6,254,545.0	2,522,136.5	0.00				Average	
		point7	7	6,254,317.0	2,521,574.0	0.00				Average	
		point8	8	6,253,949.5	2,520,891.8	0.00				Average	
		point9	9	6,253,420.5	2,520,301.0	0.00				Average	
		point10	10	6,252,916.0	2,519,997.5	0.00				Average	
		point11	11	6,252,455.5	2,519,764.0	0.00				Average	
		point12	12	6,252,146.5	2,519,415.8	0.00				Average	
		point13	13	6,251,673.5	2,519,032.0	0.00				Average	
		point14	14	6,251,230.5	2,518,620.8	0.00				Average	
		point15	15	6,250,939.5	2,518,099.8	0.00				Average	
		point16	16	6,250,719.5	2,517,801.5	0.00				Average	
		point17	17	6,250,133.5	2,517,277.2	0.00				Average	
		point18	18	6,249,483.5	2,516,677.5	0.00				Average	
		point19	19	6,248,950.5	2,515,881.2	0.00				Average	
		point20	20	6,248,396.0	2,515,265.8	0.00				Average	
		point21	21	6,247,970.5	2,514,915.5	0.00					
i15 south	80.0	point22	22	6,257,598.0	2,523,919.8	0.00				Average	
		point23	23	6,257,230.0	2,523,393.8	0.00				Average	
		point24	24	6,256,748.5	2,522,714.2	0.00				Average	
		point25	25	6,256,216.5	2,522,017.0	0.00				Average	

		point26	26	6,255,420.0	2,520,962.0	0.00				Average	
		point27	27	6,254,814.5	2,520,200.5	0.00				Average	
		point28	28	6,254,293.5	2,519,509.0	0.00				Average	
		point29	29	6,253,832.0	2,518,862.0	0.00				Average	
		point30	30	6,253,220.5	2,518,073.0	0.00				Average	
		point31	31	6,252,722.0	2,517,410.0	0.00				Average	
		point32	32	6,252,051.0	2,516,526.0	0.00				Average	
		point33	33	6,251,513.5	2,515,828.0	0.00				Average	
		point34	34	6,251,021.5	2,515,189.0	0.00				Average	
		point35	35	6,250,744.0	2,514,825.5	0.00				Average	
		point36	36	6,250,304.5	2,514,249.0	0.00				Average	
		point37	37	6,249,990.0	2,513,810.8	0.00				Average	
		point38	38	6,249,634.5	2,513,182.0	0.00					
i15 north	80.0	point39	39	6,249,706.5	2,513,142.8	0.00				Average	
		point40	40	6,249,836.0	2,513,407.8	0.00				Average	
		point41	41	6,249,932.0	2,513,590.2	0.00				Average	
		point42	42	6,250,038.5	2,513,781.8	0.00				Average	
		point43	43	6,250,229.0	2,514,033.5	0.00				Average	
		point44	44	6,250,491.5	2,514,376.0	0.00				Average	
		point45	45	6,250,767.0	2,514,763.2	0.00				Average	
		point46	46	6,251,098.5	2,515,177.0	0.00				Average	
		point47	47	6,251,387.5	2,515,559.2	0.00				Average	
		point48	48	6,251,762.0	2,516,064.0	0.00				Average	
		point49	49	6,252,112.0	2,516,496.2	0.00				Average	
		point50	50	6,252,558.5	2,517,075.5	0.00				Average	
		point51	51	6,252,840.0	2,517,439.5	0.00				Average	
		point52	52	6,253,309.0	2,518,059.2	0.00				Average	
		point53	53	6,253,573.0	2,518,404.8	0.00				Average	
		point54	54	6,253,789.0	2,518,698.5	0.00				Average	
		point55	55	6,254,101.0	2,519,101.8	0.00				Average	
		point56	56	6,254,422.0	2,519,511.8	0.00				Average	
		point57	57	6,254,695.5	2,519,855.2	0.00				Average	
		point58	58	6,254,934.0	2,520,165.8	0.00				Average	
		point59	59	6,255,094.5	2,520,379.5	0.00				Average	
		point60	60	6,255,342.0	2,520,712.2	0.00				Average	
		point61	61	6,255,567.5	2,521,001.2	0.00				Average	
		point62	62	6,255,841.5	2,521,334.2	0.00				Average	
		point63	63	6,256,175.5	2,521,808.5	0.00				Average	
		point64	64	6,256,382.0	2,522,065.2	0.00				Average	

		point65	65	6,256,553.0	2,522,306.8	0.00				Average	
		point66	66	6,256,809.0	2,522,634.5	0.00				Average	
		point67	67	6,257,053.0	2,522,942.2	0.00				Average	
		point68	68	6,257,359.5	2,523,411.2	0.00				Average	
		point69	69	6,257,714.0	2,523,922.0	0.00					
Falchion	40.0	point70	70	6,252,801.5	2,517,142.8	0.00				Average	
		point71	71	6,254,965.5	2,517,145.8	0.00					
Outer Hwy	30.0	point79	79	6,258,300.0	2,524,073.5	0.00				Average	
		point80	80	6,258,284.5	2,523,773.5	0.00				Average	
		point81	81	6,258,259.0	2,523,681.2	0.00				Average	
		point82	82	6,258,167.0	2,523,581.8	0.00				Average	
		point83	83	6,258,014.0	2,523,521.2	0.00				Average	
		point84	84	6,257,770.5	2,523,494.5	0.00				Average	
		point85	85	6,257,572.5	2,523,435.8	0.00				Average	
		point86	86	6,257,426.5	2,523,324.8	0.00				Average	
		point87	87	6,256,569.0	2,522,203.2	0.00				Average	
		point88	88	6,255,697.5	2,521,074.0	0.00				Average	
		point89	89	6,255,033.5	2,520,195.2	0.00				Average	
		point90	90	6,254,892.0	2,519,836.5	0.00				Average	
		point91	91	6,254,741.5	2,519,450.2	0.00				Average	
		point92	92	6,254,599.5	2,519,263.8	0.00				Average	
		point93	93	6,254,372.0	2,519,094.8	0.00				Average	
		point94	94	6,253,963.5	2,518,794.2	0.00				Average	
		point95	95	6,253,403.5	2,518,075.5	0.00				Average	
		point96	96	6,252,693.0	2,517,142.2	0.00					
Apple Valley Road-2	40.0	point108	108	6,254,965.5	2,517,145.8	0.00				Average	
		point72	72	6,254,915.5	2,514,881.0	0.00				Average	
		point73	73	6,254,910.5	2,513,743.0	0.00				Average	
		point74	74	6,254,763.5	2,513,046.5	0.00				Average	
		point75	75	6,254,119.0	2,512,661.8	0.00				Average	
		point76	76	6,253,634.0	2,512,264.2	0.00				Average	
		point77	77	6,253,594.5	2,511,367.5	0.00				Average	
		point78	78	6,253,473.5	2,509,976.8	0.00					
Outer Hwy-2	30.0	point109	109	6,252,693.0	2,517,142.2	0.00				Average	
		point97	97	6,251,964.5	2,516,170.8	0.00				Average	
		point98	98	6,251,455.0	2,515,526.0	0.00				Average	
		point99	99	6,251,138.5	2,515,111.2	0.00				Average	
		point100	100	6,250,857.0	2,514,782.2	0.00				Average	
		point101	101	6,250,346.0	2,514,100.5	0.00				Average	

		point102	102	6,249,952.5	2,513,518.2	0.00				Average	
		point103	103	6,249,751.0	2,513,115.2	0.00				Average	
		point104	104	6,249,539.5	2,512,627.2	0.00				Average	
		point105	105	6,249,334.5	2,512,139.5	0.00				Average	
		point106	106	6,249,283.5	2,511,857.5	0.00				Average	
		point107	107	6,249,198.5	2,511,453.8	0.00					

Dudek **30 October 2023**
CB **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Apple Valley**
RUN: **Future + Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Stoddard Wells Road	point1	1	0	0	0	0	0	0	0	0	0	0
	point2	2	0	0	0	0	0	0	0	0	0	0
	point3	3	0	0	0	0	0	0	0	0	0	0
	point4	4	0	0	0	0	0	0	0	0	0	0
	point5	5	0	0	0	0	0	0	0	0	0	0
	point6	6	0	0	0	0	0	0	0	0	0	0
	point7	7	0	0	0	0	0	0	0	0	0	0
	point8	8	0	0	0	0	0	0	0	0	0	0
	point9	9	0	0	0	0	0	0	0	0	0	0
	point10	10	0	0	0	0	0	0	0	0	0	0
	point11	11	0	0	0	0	0	0	0	0	0	0
	point12	12	0	0	0	0	0	0	0	0	0	0
	point13	13	0	0	0	0	0	0	0	0	0	0
	point14	14	0	0	0	0	0	0	0	0	0	0
	point15	15	0	0	0	0	0	0	0	0	0	0
	point16	16	0	0	0	0	0	0	0	0	0	0
	point17	17	0	0	0	0	0	0	0	0	0	0
	point18	18	0	0	0	0	0	0	0	0	0	0
	point19	19	0	0	0	0	0	0	0	0	0	0
	point20	20	0	0	0	0	0	0	0	0	0	0
	point21	21										
i15 south	point22	22	2328	65	48	65	24	65	0	0	0	0
	point23	23	2328	65	48	65	24	65	0	0	0	0

	point24	24	2328	65	48	65	24	65	0	0	0	0
	point25	25	2328	65	48	65	24	65	0	0	0	0
	point26	26	2328	65	48	65	24	65	0	0	0	0
	point27	27	2328	65	48	65	24	65	0	0	0	0
	point28	28	2328	65	48	65	24	65	0	0	0	0
	point29	29	2328	65	48	65	24	65	0	0	0	0
	point30	30	2328	65	48	65	24	65	0	0	0	0
	point31	31	2328	65	48	65	24	65	0	0	0	0
	point32	32	2328	65	48	65	24	65	0	0	0	0
	point33	33	2328	65	48	65	24	65	0	0	0	0
	point34	34	2328	65	48	65	24	65	0	0	0	0
	point35	35	2328	65	48	65	24	65	0	0	0	0
	point36	36	2328	65	48	65	24	65	0	0	0	0
	point37	37	2328	65	48	65	24	65	0	0	0	0
	point38	38										
i15 north	point39	39	2328	65	48	65	24	65	0	0	0	0
	point40	40	2328	65	48	65	24	65	0	0	0	0
	point41	41	2328	65	48	65	24	65	0	0	0	0
	point42	42	2328	65	48	65	24	65	0	0	0	0
	point43	43	2328	65	48	65	24	65	0	0	0	0
	point44	44	2328	65	48	65	24	65	0	0	0	0
	point45	45	2328	65	48	65	24	65	0	0	0	0
	point46	46	2328	65	48	65	24	65	0	0	0	0
	point47	47	2328	65	48	65	24	65	0	0	0	0
	point48	48	2328	65	48	65	24	65	0	0	0	0
	point49	49	2328	65	48	65	24	65	0	0	0	0
	point50	50	2328	65	48	65	24	65	0	0	0	0
	point51	51	2328	65	48	65	24	65	0	0	0	0
	point52	52	2328	65	48	65	24	65	0	0	0	0
	point53	53	2328	65	48	65	24	65	0	0	0	0
	point54	54	2328	65	48	65	24	65	0	0	0	0
	point55	55	2328	65	48	65	24	65	0	0	0	0
	point56	56	2328	65	48	65	24	65	0	0	0	0
	point57	57	2328	65	48	65	24	65	0	0	0	0
	point58	58	2328	65	48	65	24	65	0	0	0	0
	point59	59	2328	65	48	65	24	65	0	0	0	0

	point60	60	2328	65	48	65	24	65	0	0	0	0
	point61	61	2328	65	48	65	24	65	0	0	0	0
	point62	62	2328	65	48	65	24	65	0	0	0	0
	point63	63	2328	65	48	65	24	65	0	0	0	0
	point64	64	2328	65	48	65	24	65	0	0	0	0
	point65	65	2328	65	48	65	24	65	0	0	0	0
	point66	66	2328	65	48	65	24	65	0	0	0	0
	point67	67	2328	65	48	65	24	65	0	0	0	0
	point68	68	2328	65	48	65	24	65	0	0	0	0
	point69	69										
Falchion	point70	70	747	35	0	0	0	0	0	0	0	0
	point71	71										
Outer Hwy	point79	79	383	50	0	0	0	0	0	0	0	0
	point80	80	383	50	0	0	0	0	0	0	0	0
	point81	81	383	50	0	0	0	0	0	0	0	0
	point82	82	383	50	0	0	0	0	0	0	0	0
	point83	83	383	50	0	0	0	0	0	0	0	0
	point84	84	383	50	0	0	0	0	0	0	0	0
	point85	85	383	50	0	0	0	0	0	0	0	0
	point86	86	383	50	0	0	0	0	0	0	0	0
	point87	87	383	50	0	0	0	0	0	0	0	0
	point88	88	383	50	0	0	0	0	0	0	0	0
	point89	89	383	50	0	0	0	0	0	0	0	0
	point90	90	383	50	0	0	0	0	0	0	0	0
	point91	91	383	50	0	0	0	0	0	0	0	0
	point92	92	383	50	0	0	0	0	0	0	0	0
	point93	93	383	50	0	0	0	0	0	0	0	0
	point94	94	383	50	0	0	0	0	0	0	0	0
	point95	95	383	50	0	0	0	0	0	0	0	0
	point96	96										
Apple Valley Road-2	point108	108	0	0	0	0	0	0	0	0	0	0
	point72	72	0	0	0	0	0	0	0	0	0	0
	point73	73	0	0	0	0	0	0	0	0	0	0
	point74	74	0	0	0	0	0	0	0	0	0	0
	point75	75	0	0	0	0	0	0	0	0	0	0
	point76	76	0	0	0	0	0	0	0	0	0	0

	point77	77	0	0	0	0	0	0	0	0	0	0
	point78	78										
Outer Hwy-2	point109	109	814	50	0	0	0	0	0	0	0	0
	point97	97	814	50	0	0	0	0	0	0	0	0
	point98	98	814	50	0	0	0	0	0	0	0	0
	point99	99	814	50	0	0	0	0	0	0	0	0
	point100	100	814	50	0	0	0	0	0	0	0	0
	point101	101	814	50	0	0	0	0	0	0	0	0
	point102	102	814	50	0	0	0	0	0	0	0	0
	point103	103	814	50	0	0	0	0	0	0	0	0
	point104	104	814	50	0	0	0	0	0	0	0	0
	point105	105	814	50	0	0	0	0	0	0	0	0
	point106	106	814	50	0	0	0	0	0	0	0	0
	point107	107										

Dudek 30 October 2023
CB TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Apple Valley
RUN: Future + Project

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	6,249,589.5	2,514,645.8	0.00	4.92	55.40	66	10.0	8.0	Y
ST2	2	1	6,253,770.5	2,510,079.5	0.00	4.92	42.30	66	10.0	8.0	Y

Dudek
CB
30 October 2023
TNM 2.5
Calculated with TNM 2.5

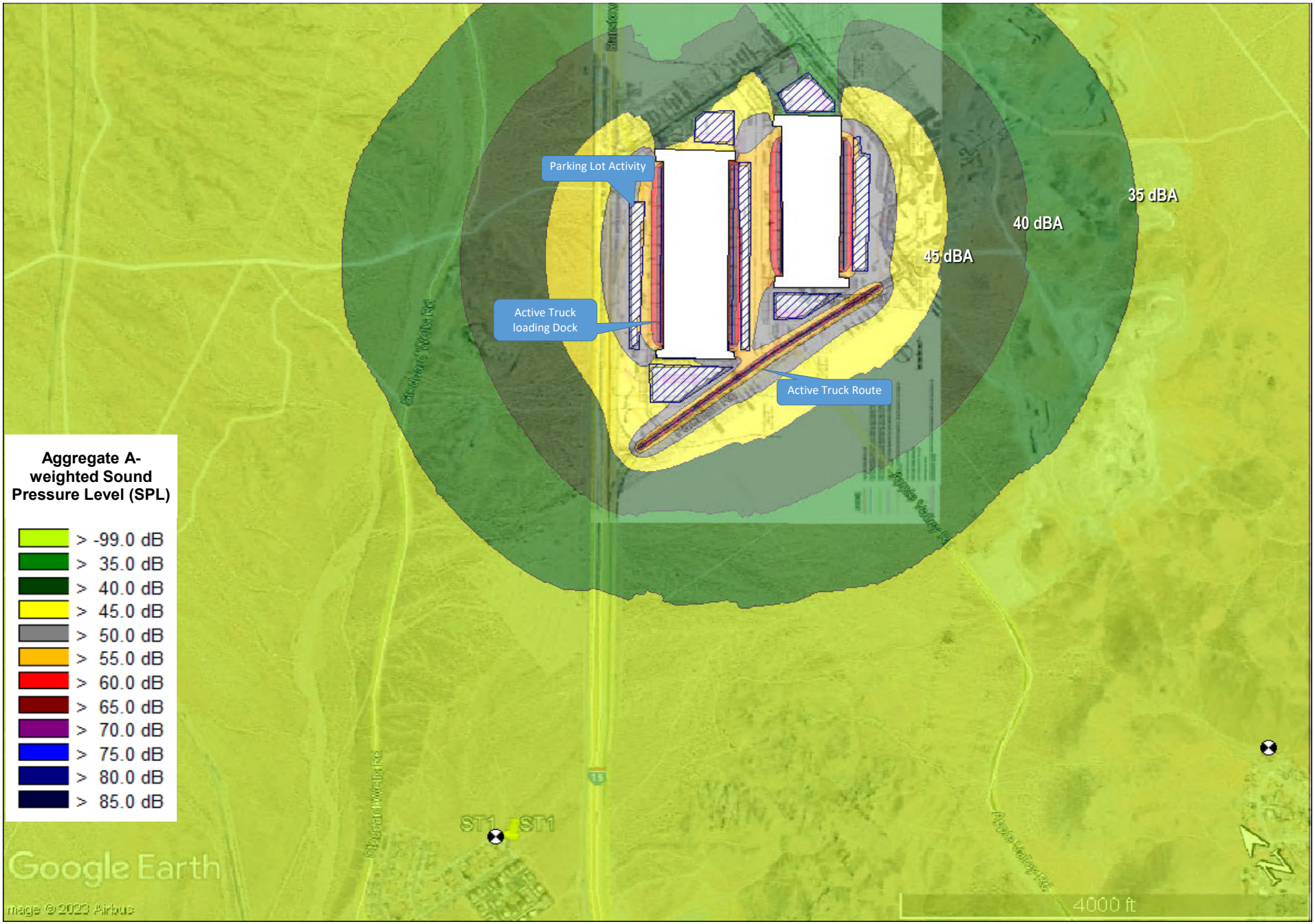
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Apple Valley
RUN: Future + Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	55.4	56.3	66	0.9	10	----	56.3	0.0	8	-8.0
ST2	2	1	42.3	37.7	66	-4.6	10	----	37.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Appendix I4
On-Site Noise Modeling Data



SOURCES: Ware Malcomb 2022; Dudek 2022

DUDEK

0 853.5 1707 Feet

Appendix H-4

Aggregate Project Operations Noise Prediction Results

Inland Empire North Logistics Apple Valley Project (Dudek No. 14802)

Appendix J
Transportation Impact Analysis

FOCUSED TRAFFIC IMPACT ANALYSIS

LOS ANGELES
201 S. Figueroa St, Suite 240
Los Angeles, CA 90012
213.337.3680
Fax :213.337.3679

ONTARIO
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Suite 250
Ontario, CA 91764
909.481.5750
Fax:909.481.5757

SAN DIEGO
3530 Camino Del Rio North, Suite
105 San Diego, CA 92108
619.400.0600
Fax: 619.400.0599

SANTA CLARITA
25152 Springfield Ct, Suite 350
Santa Clarita, CA 91355
661.284.7400
Fax 661.284.7401

TEMECULA
41951 Remington Ave, Suite 220
Temecula, CA 92590
951.294.9300
Fax: 951.294-9301

TUSTIN
17782 17th St, Suite 200
Tustin, CA 92780
714.665.4500
Fax: 714.665.4501

VICTORVILLE
18484 Outer Highway 18 North,
Suite 225
Apple Valley, CA, 92307
760.524.9100
Fax 760.524.9101

www.deainc

INLAND EMPIRE NORTH LOGISTICS CENTER

APN: 0472-231-08

TOWN OF APPLE VALLEY, CALIFORNIA

Prepared by:

DAVID EVANS AND ASSOCIATES INC.

FINAL REPORT
April 2, 2024

DAVID EVANS
AND ASSOCIATES INC.

April 2, 2024 Job No. FGFW0000-0001

Herb Krumsick
FGFW IV, LLC, LLC

c/o Jessica Haughton
Synergy Consulting
410 Patti Ann Woods Drive
Henderson, NV 89002

RE: FINAL FOCUSED TRAFFIC IMPACT ANALYSIS FOR THE PROPOSED INLAND EMPIRE NORTH LOGISTICS CENTER LOCATED AT THE NEC OF FALCHION ROAD AND OUTER HIGHWAY 15 IN THE TOWN OF APPLE VALLEY, CA (APN: 0472-231-08)

Dear Ms. Haughton,

David Evans and Associates, Inc. is pleased to submit this Final Traffic Impact Analysis report for your proposed warehouse development in Apple Valley. The proposed project consists of approximately 2,604,446 square feet of warehouse buildings located on approximately 172-acres in the Town of Apple Valley, California.

This report was prepared in accordance with San Bernardino County's Traffic Impact Study Guidelines for level of service (LOS) assessment published in July 2019, and the Town's adopted Resolution No. 2021-08 (May 2021) establishing thresholds of significance for a development's project-generated vehicle miles traveled (VMT) and the development's overall effect of VMT on the town's circulation system.

A VMT analysis was prepared to identify potentially significant transportation impacts for environmental clearance under the California Environmental Quality Act (CEQA). The VMT analysis findings and conclusions are summarized in the Executive Summary of this report and the full VMT analysis report is included in the appendix.

We are pleased to have been of assistance to you in processing and obtaining approval for the project. If you have any questions or comments, please feel free to contact me at 909-912-7304.

Respectfully submitted,

DAVID EVANS AND ASSOCIATES, INC.

James M. Daisa, P.E.
Senior Project Manager / Associate



DAVID EVANS AND ASSOCIATES INC.

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DAVID EVANS AND ASSOCIATES INC.

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1 EXECUTIVE SUMMARY

This executive summary presents the findings and recommendations of this study.

1.1 Project Description

The proposed project consists of two speculative warehouse buildings. Building 1 is the westernmost building on the site and is proposed to be a 1,507,326 square foot warehouse building located on approximately 96-acres. Building 2 is proposed to be a 1,097,120 square foot warehouse located on approximately 76-acres. The floor area of each building includes 10,000 square feet of office space on the first floor and the mezzanine level (2nd floor). The project is located at the northeast corner of Falchion Road and Outer Highway 15.

The site is bounded to the north by unimproved Norco Street and undeveloped land; to the south by Falchion Road and undeveloped land; to the west by Outer Highway 15 and I-15 freeway; and to the east by unimproved Apple Valley Road and undeveloped land. The site is located about 3.5-miles west of the North Apple Valley Industrial Specific Plan's (NAVISP) western boundary and, therefore, it is not within the Plan area or subject to its policies and development standards.

Building 1 includes 103 loading docks on each side of the building and 692 trailer parking spaces / container storage within a secured yard. Building 1 provides 826 automobile parking spaces distributed between the north and south ends of the building. Building 2 includes 118 loading docks on both sides of the building, and 663 trailer parking spaces within a secured yard 590 automobile parking spaces.

1.2 Proposed Project Access

The proposed project's access is described below. Access to the site is proposed driveways on Norco Street, Falchion Road, and Apple Valley Road, as shown in **Figure ES-1**. The proposed circulation and access plan to the two buildings on the site are described below:

1.2.1 Norco Street Driveways

The proposed circulation and access plan includes four gated driveways on Norco Street (labeled as driveways A though D). Prior to the gates, access to parking lots is permitted for employees and visitors, but access to the loading docks and container storage areas to each side of both buildings is gated. The driveways on Norco Street are spaced about 520 feet (A to B), 280 feet (B to C), and 530 feet (C to D).

1.2.2 Falchion Road Driveways

Access to the site from Falchion Road is via four driveways (labeled as driveways E though H) providing unrestricted access to the parking lots on the south side of each building, and gated access to the loading docks and container storage areas. The Falchion Road intersections are spaced about 620 feet (E to F), 830 feet (F to G), and 200 feet (G to H).

1.2.3 Apple Valley Road Driveway

One driveway (labeled as driveway I) is provided on Apple Valley Road about 900 feet north of the Apple Valley Road / Falchion Road intersection for access to Building 2.

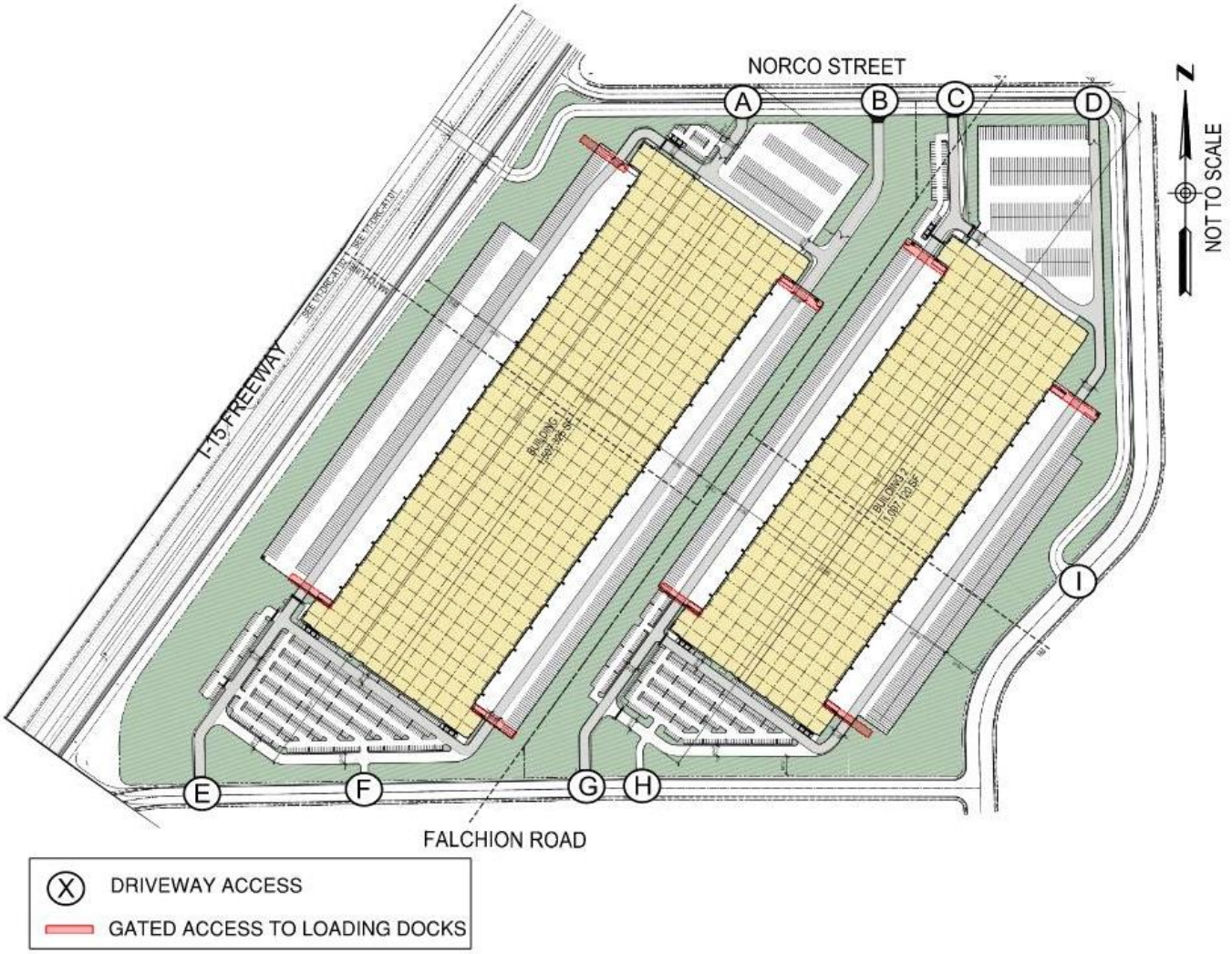

Figure ES-1: Project Driveway Locations

1.3 General Plan Amendment

The project proposes changes to the Town's circulation system that will require an amendment to the Town's Streets and Roads Plan in the circulation element of the general plan. The modifications to the circulation system include the street realignments and street reclassifications illustrated in **Figure ES-2**.

The primary amendment is the abandonment of the current right of way alignment of Apple Valley Road and realignment of the right of way from Saugus Road to Falchion Road following the eastern boundary of the project's property.

A reclassification amendment proposes to change Norco Street from a major road to a collector street west of the realigned Apple Valley Road.

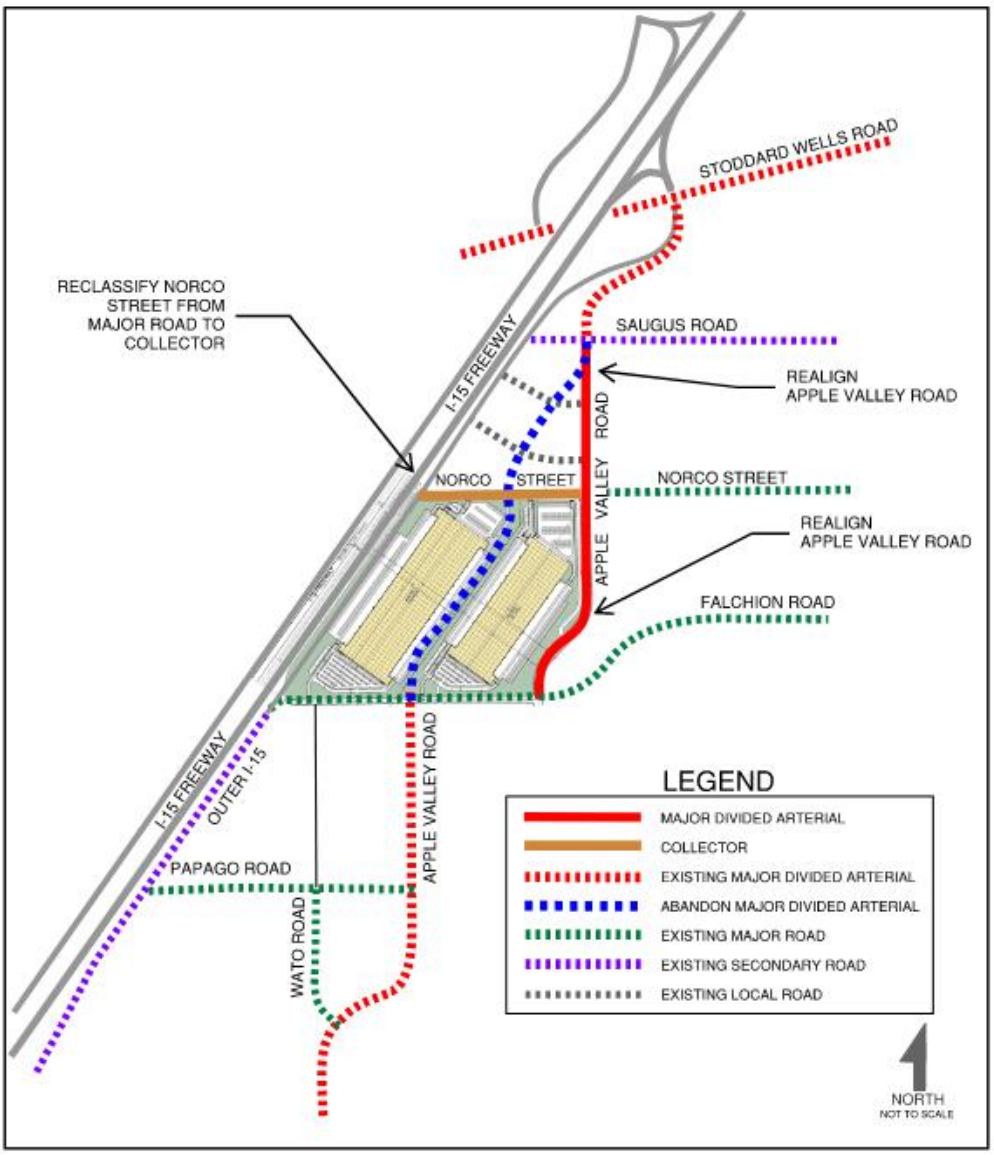

Figure ES-2: Proposed Amendments to the Town's General Plan Streets and Roads Plan

1.4 Town of Apple Valley and Caltrans Intersection Level of Service Policies

The Town of Apple Valley's General Plan policy (Policy 1.A, Program 1.A.4) on level of service is to maintain a level of service (LOS) D in the AM and PM peak hours on all its roadways. This level of service policy applies to local Apple Valley roadways, roads of regional importance as part of the county's Congestion Management Program (CMP) network, and state highways.

The Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) states "Caltrans endeavors to maintain a target level of service at the transition between LOS "C" and LOS "D" on State highway facilities. However, Caltrans acknowledges that this may not always be feasible, so their practice is to allow level of service thresholds equal to the threshold of the jurisdiction where the facility is located but preferably no greater than a 45 second average delay per vehicle in the peak hour (mid LOS D). For this study, the town's LOS D is assumed to be the minimum level of service criteria for the study intersections.

1.5 Level of Service Comparison With and Without the Proposed Project

1.5.1 Determination of Level of Service Deficiencies

Table 1-1 compares the weekday AM and PM peak hour Background Conditions and Project Conditions LOS at the study intersections. Background Conditions represent the project's opening year of 2024 and includes growth in ambient traffic from regional and local development equaling 3.5 percent annually.

In this scenario, the addition of project traffic causes intersection LOS deficiencies (from LOS D or better to LOS E or F) at the following five study intersections: Stoddard Wells Rd / Outer Highway 15, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / Quarry Rd, and Quarry Rd / I-15 SB Ramps.

Table 1-1: Comparison of Background Conditions and Project Conditions LOS

Intersection	Control Type	Background Conditions				Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Stoddard Wells Rd / Outer Highway 15	SSSC	26.5	D	26.5	D	253.5	F	68.5	F
2. Outer Highway 15 / I-15 NB Ramps	SSSC	10.4	B	10.8	B	23.8	C	20.0	C
3. W Frontage Rd / I-15 SB On Ramp	SSSC	5.0	A	5.0	A	5.0	A	5.0	A
4. Stoddard Wells Rd / W Frontage Rd	SSSC	21.5	C	19.1	C	267.6	F	103.7	F
5. Stoddard Wells Rd / I-15 SB Off Ramp	SSSC	10.7	B	11.3	B	13.5	B	12.2	B
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	SSSC	1663.7	F	2354.9	F	5745.2	F	[1]	
7. Stoddard Wells Rd / Quarry Rd	SSSC	35.1	E	21.4	C	100.9	F	27.0	D
8. Quarry Rd / I-15 SB Ramps	SSSC	14.5	B	21.0	C	20.5	C	35.1	E
9. Falchion Rd / Apple Valley Rd	AWSC	6.9	A	7.1	A	7.2	A	7.1	A
10. Falchion Rd / Outer Hwy 15	SSSC	8.8	A	9.0	A	18.5	C	34.2	D
11. Outer Highway 15/ Norco St	SSSC	8.6	A	8.9	A	12.3	B	13.8	B
12. Outer Highway 15/ Quarry Rd	SSSC	8.9	A	9.0	A	10.4	B	10.5	B
13. Norco Street / Project Driveway #1	SSSC	Not Applicable				10.2	B	11.2	B
14. Falchion Road / Project Driveway #2	SSSC	Not Applicable				12.2	B	14.4	B

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service
[1] Computation not defined due to volume exceeding capacity.

Table 1-2 compares the weekday AM and PM peak hour Future Year 2040 and Future Year 2040 Plus Project LOS at the study intersections. Future Year 2040 Conditions represent a long-range forecast for addressing the cumulative impacts of regional growth in traffic as determined through traffic forecasts from the San Bernardino Countywide Traffic Analysis Model (SBTAM). It should be noted that the peak hour factor utilized in the Future Year 2040 Conditions and Future Year 2040 Plus Project Conditions capacity analysis is set to 0.95 for all intersections.

In this scenario, the combination of ambient traffic and the addition of project traffic through the year 2040 causes intersection LOS deficiencies (from LOS D or better to LOS E or F) at the following six study intersections: Stoddard Wells Rd / Outer Highway 15, Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / Quarry Rd, and Quarry Rd / I-15 SB Ramps.

The addition of project traffic in this scenario exacerbates the intersection LOS deficiencies at the same intersections impacted by the addition of project traffic to Background Conditions with the additions of Outer Highway 15 / I-15 NB Ramps.

Table 1-2: Comparison of Future 2040 and Future 2040 Plus Project LOS

Intersection	Control Type	Future Conditions				Future + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Stoddard Wells Rd / Outer Highway 15	SSSC	64.8	F	82.5	F	761.5	F	465.8	F
2. Outer Highway 15 / I-15 NB Ramps	SSSC	13.9	B	15.6	C	54.3	F	42.9	E
3. W Frontage Rd / I-15 SB On Ramp	SSSC	5.0	A	5.0	A	5.0	A	5.0	A
4. Stoddard Wells Rd / W Frontage Rd	SSSC	230.6	F	188.3	F	984.2	F	683.8	F
5. Stoddard Wells Rd / I-15 SB Off Ramp	SSSC	14.2	B	17.3	C	22.1	C	21.0	C
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	SSSC	1941.5	F	4896.0	F	4753.3	F	[1]	
7. Stoddard Wells Rd / Quarry Rd	SSSC	41.1	E	28.1	D	116.0	F	38.2	E
8. Quarry Rd / I-15 SB Ramps	SSSC	16.2	C	23.1	C	24.0	C	35.4	E
9. Falchion Rd / Apple Valley Rd	AWSC	7.5	A	7.6	A	7.7	A	7.7	A
10. Falchion Rd / Outer Hwy 15	SSSC	9.1	A	9.9	A	15.1	C	25.5	D
11. Outer Highway 15/ Norco St	SSSC	8.6	A	9.0	A	11.1	B	12.1	B
12. Outer Highway 15/ Quarry Rd	SSSC	8.9	A	9.2	A	10.1	B	10.4	B
13. Norco Street / Project Driveway #1	SSSC	N/A				9.7	A	10.3	B
14. Falchion Road / Project Driveway #2	SSSC	N/A				11.0	B	10.1	B

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service
[1] Computation not defined due to volume exceeding capacity.

1.6 Recommended Measures to Improve Level of Service at Deficient Intersections

Table 1-3 summarizes the recommended near-term project-specific and long-range cumulative intersection improvements required to improve deficient intersection levels of service to conform with the town's general plan policy of maintaining a minimum LOS D during peak hours. The near-term project-specific improvements described in the table are based on Project Conditions (Year 2024) Scenario. The long-range cumulative measures are based on the Future Year 2040 Plus Project Conditions.

Figure ES- 3 illustrates the near-term project-specific intersection improvements required to improve deficient intersection levels of service in the Project Conditions (Year 2024) scenario. **Figure ES-** 4 illustrates the long-range cumulative intersection improvements required to improve deficiencies in the Future 2040 Plus Project Conditions Scenario.

Table 1-3: Recommended Project-Specific and Cumulative Improvements to Mitigate LOS Deficiencies

Intersection	Project-Specific Improvements (See **Figure ES- 3**)	Cumulative Long-Term Improvements (See **Figure ES- 4)**
1. Stoddard Wells Rd / Outer Highway 15	**Convert intersection to all-way stop control** □ Maintain the current lane configuration at each approach □ install stop sign control at the north and south legs.	**Install a traffic signal** □ Maintain the same lane configuration at each approach
2. Outer Highway 15 / I-15 NB Ramps	**Not Applicable**	**Install a traffic signal** □ Maintain the current lane configuration at each approach
4. Stoddard Wells Rd / W Frontage Rd	**Convert intersection to all-way stop control** □ Maintain the current lane configuration at each approach □ install stop sign control at the north and south legs.	**Install a traffic signal** □ Maintain the current lane configuration at each approach
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	**Install a traffic signal** [1] Widen the eastbound, westbound, northbound, and southbound approaches to accommodate turn lanes. Reconfigure intersection: □ Eastbound approach: widen and configure Stoddard Wells Road to add left turn lane from Stoddard Wells Road to I-15 NB on-ramp and maintain the existing lane as a shared through-right lane. Provide eastbound left turn protected phasing. □ Westbound approach: widen and configure Stoddard Wells Road to add left turn lane from Stoddard Wells Road to Outer Highway 15 (250 feet long + a 120-foot transition), and a second through lane, maintain the existing lane as a through-right turn lane. Provide westbound left turn protected phasing. □ Northbound approach: widen and configure Outer Highway 15 to add left turn lane from Outer Highway 15 to Stoddard Wells Road (250 feet long + a 120-foot transition) and retain existing lane as a shared through-right lane. Provide northbound left turn protected-permissive phasing. □ Southbound approach: widen and configure the I-15 southbound off-ramp to add a left turn lane (250-feet long + 120-foot transition) and maintain the existing lane as a shared through-right lane. Provide southbound left turn protected-permissive phasing.	**retain the <u>project specific proposed improvements</u>**

[1] The improvements identified for the intersection of Stoddard Wells Rd / Outer Hwy 15 S / I-15 NB Ramps are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in **Appendix D.**

Table 1-3: Recommended Project-Specific and Cumulative Improvements to Mitigate LOS Deficiencies – Continued-

Intersection	Project-Specific Improvements (See **Figure ES- 3**)	Cumulative Long-Term Improvements (See **Figure ES- 4)**
7. Stoddard Wells Rd / Quarry Rd	**Install a traffic signal [2]** Widen the eastbound, westbound, and southbound approaches to accommodate turn lanes. Reconfigure intersection: □ Eastbound approach: widen and configure Stoddard Wells Road to add left turn lane from Stoddard Wells Road to Quarry Rd (250 feet long + a 120-foot transition) and maintain the existing lane as a through lane. Provide eastbound left turn protected phasing. □ Westbound approach: widen and configure Stoddard Wells Road to add a right turn lane from Stoddard Wells Road to Quarry Rd with a receiving lane and maintain the existing lane as a through lane. □ Southbound approach: widen and configure Quarry Rd to add a right turn lane (250-feet long + 120-foot transition) and maintain the existing lane as a left lane. Provide southbound left turn protected phasing.	**retain the <u>project specific proposed improvements</u>**
8. Quarry Rd / I-15 SB Ramps	**Maintain the side street stop control** Widen the northbound approaches to accommodate turn lanes. Northbound approach: widen and configure Quarry Rd to add a right turn lane from Quarry Rd to 1-15 SB On-ramp.	**retain the <u>project specific proposed improvements</u>**
10. Falchion Rd / Outer Hwy 15	**Convert intersection to all-way stop control** □ Maintain the current lane configuration at each approach □ install stop sign control at the north and south legs.	**retain the <u>project specific proposed improvements</u>**

□2□The widening o□the segment o□Stoddard Wells Rd □etween □uarry Road to I-15 NB Ramps/Outer I-15 are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated Novem□er 2022, □y Dudek. Excerpt o□the report is provided in **Appendix D.**

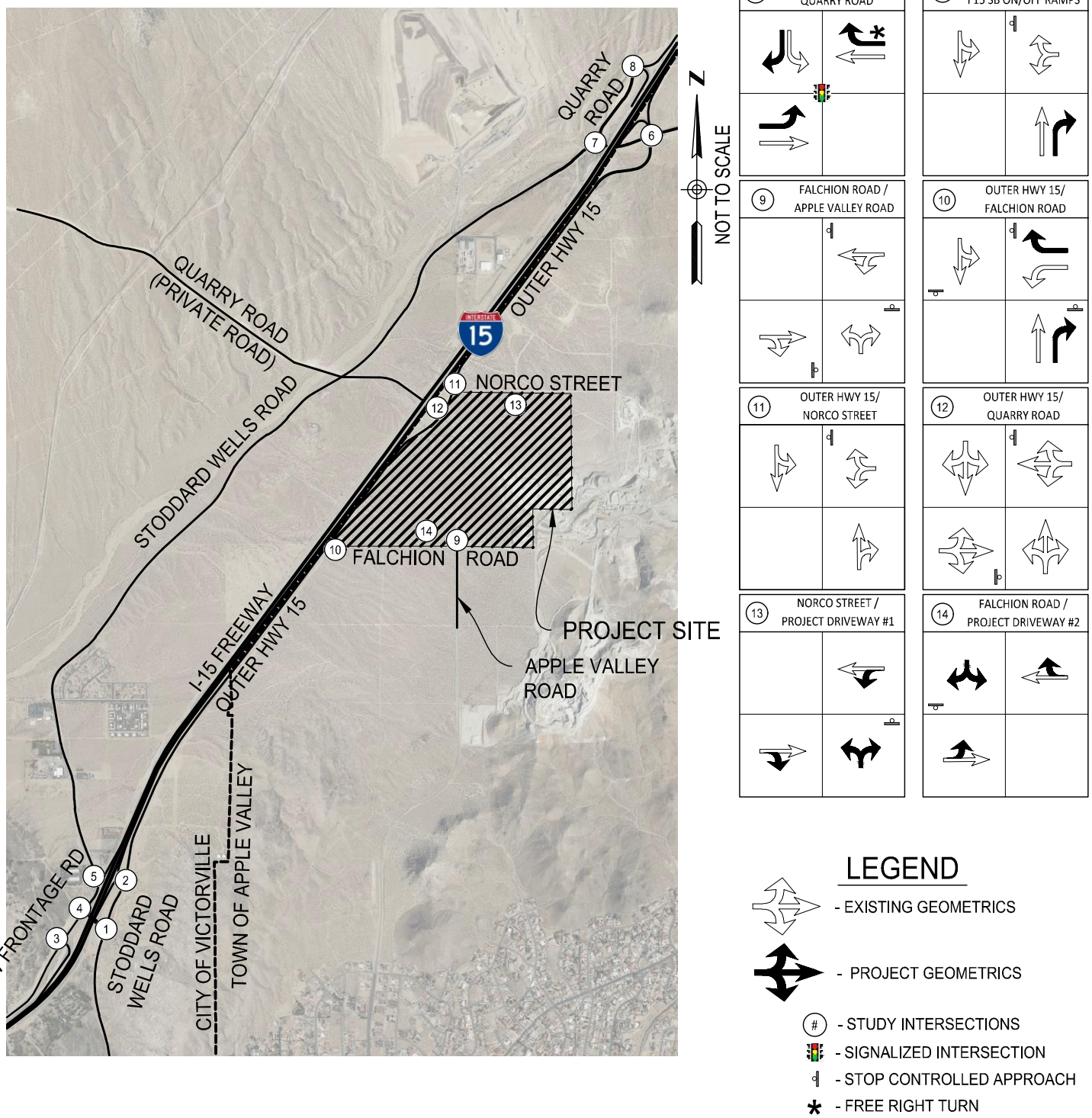

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FIGURE ES-3: PROJECT INTERSECTION GEOMETRICS
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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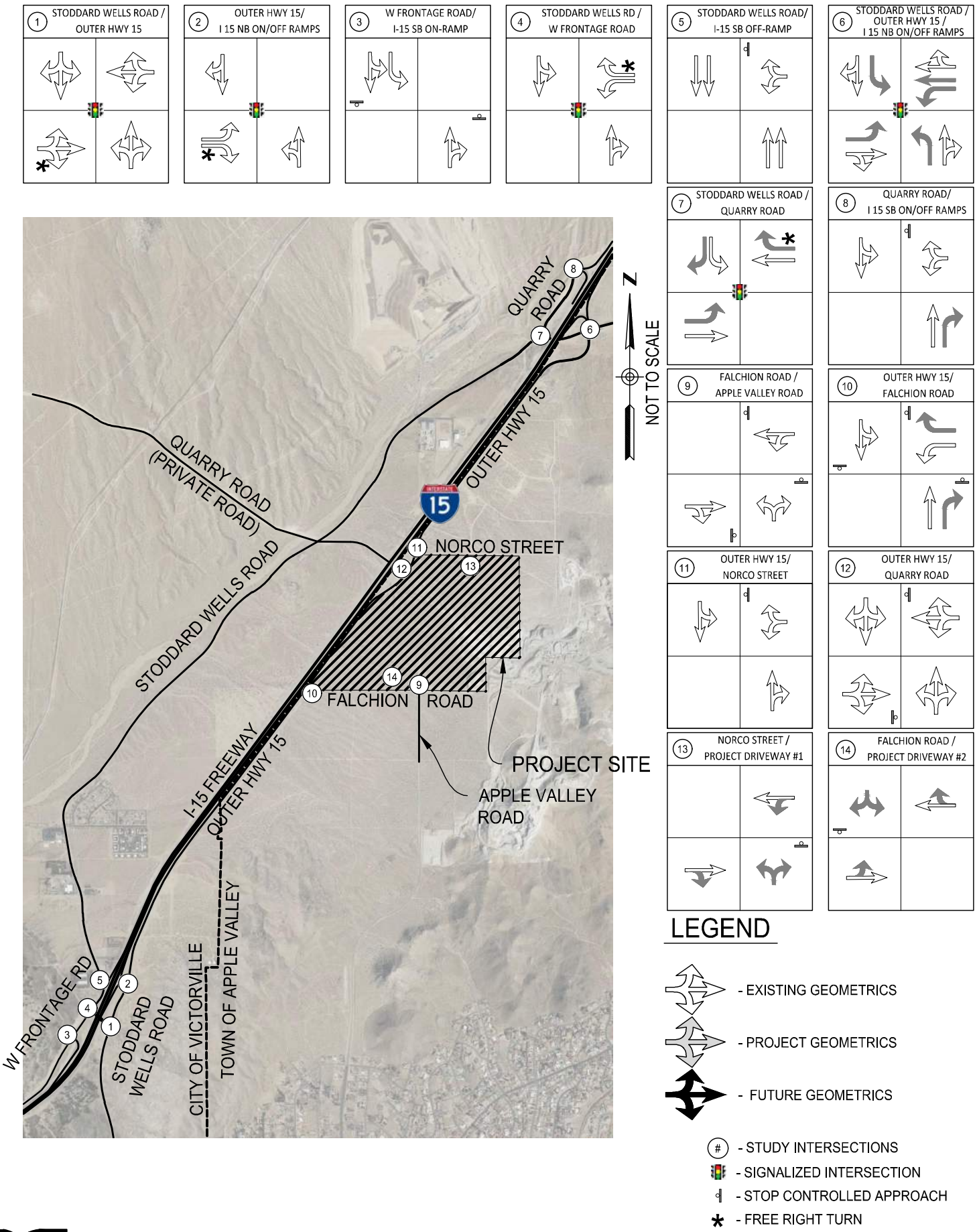

DAVID EVANS AND ASSOCIATES INC.

FIGURE ES-4: FUTURE YEAR WITH PROJECT INTERSECTION GEOMETRICS
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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1.7 Project Fair-Share Contribution to Level of Service Deficiency Improvements

Table 1-4 shows the proposed project's percent contribution to the total growth in entering traffic volumes, otherwise known as the fair-share calculation. The formula for calculating the percentages in the table is:

$$\text{Percent of Total} = \frac{\text{(Total Project Trips)}}{\text{((Total Non-Project Forecasted Trips + Total Project Trips) - Existing Trips)}} \text{ X } 100\%$$

Table 1-4: Project's Percent Contribution (Fair Share) to Deficient Intersections by Year and Peak Hour

Intersection	Near-Term % (Year 2024)		Long-Term % (Year 2040)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1. Stoddard Wells Rd / Outer Highway 15	90.5%	92.3%	34.8%	36.4%
2. Outer Highway 15 / I-15 NB Ramps	Not Applicable		64.8%	66.8%
4. Stoddard Wells Rd / W Frontage Rd	89.8%	88.3%	32.8%	31.1%
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	31.2%	20.9%	21.3%	13.3%
7. Stoddard Wells Rd / Quarry Rd	30.7%	25.9%	23.3%	16.4%
8. Quarry Rd / I-15 SB Ramps	32.2%	27.1%	24.8%	17.3%
Notes: Project traffic used in calculating the fair-share percentage is based on Passenger Car Equivalents (PCEs).				

1.8 Project Fair-Share Fee Contribution to Level of Service Deficiency Improvements

The fair share percentages calculated in **Chapter 1.7** are used to determine the Fair Share Fee for each intersection and by forecast year.

The Fair Share Fee provided in **Table 1-5** represent the estimated cost associated with the near-term project-specific improvements described in **Table 1-3** and are based on background + project scenario traffic.

Table 1-5: Project's Percent Contribution (Fair Share) to Deficient Intersections for Near-Term (Year 2024)

Intersection	Cost ($)	Fair Share %	Fair Share Fee
1. Stoddard Wells Rd / Outer Highway 15	$50,000	92.3%	$46,167
4. Stoddard Wells Rd / W Frontage Rd	$50,000	89.8%	$44,877
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	$1,400,000	31.2%	$436,348
7. Stoddard Wells Rd / Quarry Rd	$800,000	30.7%	$245,560
8. Quarry Rd / I-15 SB Ramps	$200,000	32.2%	$64,372
Notes: Project traffic used in calculating the fair-share percentage is based on Passenger Car Equivalents (PCEs).			

The Fair Share Fee provided in **Table 1-6** represent the estimated cost associated with the long-range cumulative measures described in **Table 1-3** and are based on the future 2040 + project conditions traffic.

Table 1-6: Project's Percent Contribution (Fair Share) to Deficient Intersections for Long-Term (Year 2040)

Intersection	Cost ($)	Fair Share %	Fair Share Fee
1. Stoddard Wells Rd / Outer Highway 15	$500,000	36.4%	$181,756
2. Outer Highway 15 / I-15 NB Ramps	$500,000	66.8%	$334,025
4. Stoddard Wells Rd / W Frontage Rd	$500,000	32.8%	$163,922
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	$1,400,000	21.3%	$297,605
7. Stoddard Wells Rd / Quarry Rd	$800,000	23.3%	$186,237
8. Quarry Rd / I-15 SB Ramps	$200,000	24.8%	$49,533
10. Falchion Rd / Outer Hwy 15	$500,000	36.4%	$181,756
Notes: Project traffic used in calculating the fair-share percentage is based on Passenger Car Equivalents (PCEs).			

1.9 Level of Service With Recommended Improvements

This section presents the level of service at deficient intersections before and after implementation of the recommended mitigation measures summarized in **Table 1-3**. The near-term Project Conditions Scenarios in the following tables present the mitigated levels of service for project-specific improvements—improvements for which the project is solely responsible.

The improved level of service under the long-term Future Year 2040 Plus Project Conditions Scenarios reflect cumulative conditions for which all development is responsible for its fair-share of the cost of the improvements. The last columns in the series of tables in this section present the change in delay (the measurement used to establish LOS). The top row shows the increase in delay caused by the proposed project's traffic added to the without project scenario. The bottom row shows the reduction in delay after implementation of the mitigation measure.

Because most of the study intersections are side-street stop-controlled intersections, for which level of service is defined as the LOS of the worst stop-controlled movement, the method of calculating average delay at saturated intersections produces exponentially high delays. Calculated delays in the thousands of seconds are not at all realistic but, suffice it say, the method is making a clear statement that side-street stop as a form of traffic control at high volume intersections will fail.

1.9.1 Stoddard Wells Road / I-15 Northbound Ramps

The five existing side-street stop-controlled intersections of Stoddard Wells Rd / Outer Highway 15, Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, and Stoddard Wells Rd / Quarry Rd experience failure in Project Conditions. **Table 1-7** shows the intersection level of service with the near-term project-specific intersection improvements required to improve deficient intersection levels of service in the Project Conditions scenario illustrated in **Figure ES- 3**. The proposed mitigation improves the LOS deficiency, to a LOS D or better.

Table 1-7: Improved Level of Service Under Project Conditions

Intersection	Control Type	Background Conditions				Project Conditions				Change in Delay (Seconds)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1. Stoddard Wells Rd / Outer Highway 15	SSSC	26.5	D	26.5	D	253.5	F	68.5	F	227.0	42.0
with Improvements: convert to AWSC	AWSC	Not Applicable				17.2	C	27.6	D	-9.3	1.1
4. Stoddard Wells Rd / W Frontage Rd	SSSC	21.5	C	19.1	C	267.6	F	103.7	F	246.1	84.6
with Improvements: convert to AWSC	AWSC	Not Applicable				19.9	C	19.8	C	-1.6	0.7
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps [2]	SSSC	1663.7	F	2354.9	F	5745.2	F	[1]		4081.5	
with Improvements: install traffic signal and provide turn lanes	TS	Not Applicable				32.3	C	37.8	D	-1631.4	-2317.1
7. Stoddard Wells Rd / Quarry Rd [3]	SSSC	35.1	E	21.4	C	100.9	F	27.0	D	65.8	5.6
with Improvements: install traffic signal and provide turn lanes	TS	Not Applicable				23.1	C	22.4	C	-12.0	1.0
8. Quarry Rd / I-15 SB Ramps	SSSC	14.5	B	21	C	20.5	C	35.1	E	6.0	14.1
with Improvements: provide NBR		Not Applicable				11.6	B	10.3	B	-2.9	-10.7
10. Falchion Rd / Outer Hwy 15	SSSC	8.8	A	9.0	A	18.5	C	34.2	D	9.7	25.2
with Improvements: convert to AWSC and provide turn lanes	AWSC	Not Applicable				11.7	B	18.2	C	2.9	9.2

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service
[1] Computation not defined due to volume exceeding capacity.
[2] The improvements identified for the intersection of Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in **Appendix D.**
[3] The widening of the segment of Stoddard Wells Rd between Quarry Road to I-15 NB Ramps/Outer I-15 are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in Appendix D.

The five existing side-street stop-controlled intersections of Stoddard Wells Rd / Outer Highway 15, Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, and Stoddard Wells Rd / Quarry Rd experience failure in Future Year 2040 Plus Project Conditions.

Table 1-8 shows the intersection level of service under Future Year 2040 Plus Project Conditions with the recommended long-term improvement to install a traffic signal. The recommended traffic signal improves the future 2040 LOS deficiency, to a LOS D or better.

Table 1-8: Improved Level of Service Under Future 2040 + Project Conditions

Intersection	Control Type	Future Conditions				Future + Project				Change in Delay (Seconds)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1. Stoddard Wells Rd / Outer Highway 15	SSSC	64.8	F	82.5	F	761.5	F	465.8	F	696.7	383.3
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				13.2	B	7.6	A	-51.6	-74.9
2. Outer Highway 15 / I-15 NB Ramps	SSSC	13.9	B	15.6	C	54.3	F	42.9	E	40.4	27.3
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				13.4	B	10.2	B	-0.5	-5.4
4. Stoddard Wells Rd / W Frontage Rd	SSSC	230.6	F	188.3	F	984.2	F	683.8	F	753.6	495.5
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				26.0	C	26.1	C	-204.6	-162.2
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps [2]	SSSC	1941.5	F	4896.0	F	4753.3	F	**[1]**		2811.8	
with Cumulative improvements: convert to traffic signal, modify turn lanes	TS	Not Applicable				38.9	D	37.4	D	-1902.6	-4858.6
7. Stoddard Wells Rd / Quarry Rd [3]	SSSC	41.1	E	28.1	D	116.0	F	38.2	E	74.9	10.1
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				22.8	C	25.5	C	-18.3	-2.6
8. Quarry Rd / I-15 SB Ramps	SSSC	16.2	C	23.1	C	24.0	C	35.4	E	7.8	12.3
with Improvements: provide NBR		Not Applicable				11.6	B	10.6	B	-4.6	-12.5
10. Falchion Rd / Outer Hwy 15	SSSC	9.1	A	9.9	A	15.1	C	25.5	D	6	15.6
with Project Improvements: convert to AWSC, provide turn lanes	AWSC	Not Applicable				10.4	B	14.9	B	1.3	5.0

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service.
[1] Computation not defined due to volume exceeding capacity
[2] The improvements identified for the intersection of Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in **Appendix D.**
[3] The widening of the segment of Stoddard Wells Rd between Quarry Road to I-15 NB Ramps/Outer I-15 are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in Appendix D.

1.10 Traffic Signal Warrant Analysis

Stop-controlled intersections operating with a LOS deficiency in any project-related scenario are subject to a warrant analysis to determine the need for a traffic signal. Satisfying a warrant or multiple warrants for a traffic signal does not automatically require the installation of a signal. Warrants are tools used in conjunction with engineering assessment and judgement regarding improving safety and operating conditions at stop-controlled intersections.

Table 1-9 summarizes the findings of the signal warrant analyses conducted for each deficient intersection under each project-related scenario.

Under Project Conditions Scenario and Future plus Project Conditions Scenario the intersections of Stoddard Wells Rd / Outer Highway 15, Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / Quarry Rd, and Falchion Rd / Outer Highway 15 Satisfy Warrant 3 (Peak Hour).

Table 1-9: Summary of Traffic Signal Warrant Analyses of Deficient Intersections

Deficient Intersection	Scenarios Satisfying Warrant 3 (Peak Hour) at Deficient Intersections [a]	
	Project Conditions	Future + Project Conditions
1. Stoddard Wells Rd / Outer Highway 15	YES	YES
2. Outer Highway 15 / I-15 NB Ramps	YES	YES
4. Stoddard Wells Rd / W Frontage Rd	YES	YES
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	YES	YES
7. Stoddard Wells Rd / Quarry Rd	YES	YES
10. Falchion Rd / Outer Hwy 15	YES	YES

Notes:
[a] The California Manual on Uniform Traffic Control Devices (CA MUTCD) provides procedures and standards for evaluating the need for installation of a traffic signal at a stop-controlled intersection. Of the nine warrants included in the MUTCD, warrant 3 (based on peak hour traffic volumes) is frequently used in planning and impact studies because it is standard practice to evaluate peak hour operating conditions using traffic forecasts. The other warrants generally require data that cannot be accurately forecasted.
The MUTCD emphasizes that satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic signal and a traffic signal should not be installed unless an engineering study indicates that installing a traffic signal will improve the overall safety and/or operation of the intersection. Warrant 3 worksheets for the deficient intersections presented in the table can be found in the **Appendix F**.

1.11 Project-Specific Frontage and Access Improvements

This study recommends the following site frontage and access improvements typically required in the town's Conditions of Approval:

1. **Construct access and site frontage improvements on Falchion Road:**
   a. Construct Falchion Rd[3] from Outer Highway 15 to Apple Valley Rd.
   b. Construct and improve the project's frontage with Falchion Rd from Outer Highway 15 to Apple Valley Rd.
      - The project will be required to dedicate land and construct the 52-foot half-width of a major road section including the project's driveways. Until the southern half of Falchion Road is constructed by others the two travel lanes constructed with the half-width section can provide for two-way traffic.
2. **Construct access and site frontage improvements on Norco Street:**
   a. Construct Norco St[4] from Outer Highway 15 to Apple Valley Rd.
   b. Construct and improve the project's frontage with Norco St between Outer Highway 15 to Apple Valley Rd.
      - The project will be required to construct the 52-foot half-width of a secondary road section including the proposed driveways accessing the project from Norco St.
3. **Construct access and site frontage improvements on Outer Hwy 15:**
   a. Construct and improve the project's frontage with Outer Highway 15 between Falchion Rd and Norco St
      - The project will be required to dedicate land and construct the 44-foot half-width of a secondary road section including the project's driveways.

[3] Falchion Rd is designated as a Major Road in the General Plan with a 104-foot right of way to accommodate a four-lane traveled way with a 12-foot median, shoulder, bike lanes, or street parking, and a 12-foot parkway / sidewalk on both side of the street

[4] Norco St is designated as a Major Road in the General Plan with a 104-foot right of way to accommodate a four-lane traveled way with a 12-foot median, shoulder, bike lanes, or street parking, and a 12-foot parkway / sidewalk on both side of the street

4. Construct site frontage improvements on Apple Valley Road:

a. Construct and improve the project's frontage with Apple Valley Road.

- The project will be required to dedicate land and construct the 64 foot half-width of Apple Valley Rd's major divided arterial designation.
- The project should construct the section of Apple Valley Rd fronting project owned property between Falchion Rd and Norco St as a minimum two-way two-lane (one in each direction) roadway to close this gap.

1.12 Vehicle Miles of Travel (VMT) Analysis

The VMT analysis screening assessment included in the approved December 9, 2022, scoping agreement concluded that the Inland Empire North Logistics Center project was required to prepare a detailed analysis of project-generated VMT and its effect on VMT town-wide as part of the project's environmental clearance under CEQA.

The VMT analysis was prepared in accordance with the Town's adopted Resolution No. 2021-08 (Adopting Thresholds of Significance for Vehicle Miles Traveled (VMT) Under the California Environmental Quality Act (CEQA)) which states that a development project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

1. The baseline project generated VMT per service population (population plus employees) exceeds the Town of Apple Valley General Plan Buildout VMT per service population, or
2. The cumulative (2040) project generated VMT per service population exceeds the Town of Apple Valley General Plan Buildout VMT per service population.

In addition to project-generated VMT, the Town adopted significance thresholds for a project's effect on VMT in Apple Valley. The resolution states that a project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

3. The baseline link-level boundary Town-wide VMT per service population increases under the plus project condition compared to the no project condition, or
4. The cumulative link-level boundary Town-wide VMT per service population increases under the plus project condition compared to the no project condition.

The term "link-level boundary Town-wide" refers to all vehicle miles of travel on all roadways with the town limits of Apple Valley. The following describes the key findings and the conclusions of the VMT analysis. The full report is in **Appendix H.**

A. Project-Generated VMT Analysis

The SBTAM model was used to estimate project-generated VMT for both baseline (2016) and horizon year (2040) scenarios. The SBTAM socioeconomic database for each scenario were updated with the project land use to calculate project VMT. The databases were also used to obtain the town's population and employment to estimate service population.

Table 1-10 on the following page present the outcome of the project-generated VMT analyses for the baseline and horizon year scenarios. As shown in **Table 1-10**, in both the baseline and horizon year scenarios, the VMT/service population metric for the Inland Empire North Logistics Center project is less than the Town of Apple Valley's general plan buildout significance threshold.

The outcome of the second analysis, the project's effect on town-wide VMT, is presented in **Table 1-11.** The SBTAM model was used to estimate the VMT on all roadways within the town's limits for the baseline and 2040 scenarios with and without the project. Using the resulting town-wide VMT, the metric indicating a significant impact (VMT/Service population) at a town-wide scale was calculated.

Table 1-11 shows that the VMT/Service population metric under the "with project" conditions compared to the metric under the "without project" conditions in both scenarios does not increase and does not satisfy the town's significance threshold described above.

Table 1-10: Project-Generated VMT Analysis

Metric	2016 Baseline Conditions		2040 Conditions	
	Inland Empire North Logistics Center (project)	Town of Apple Valley General Plan Buildout (Threshold) [a]	Inland Empire North Logistics Center (project)	Town of Apple Valley General Plan Buildout (Threshold) [a]
Population	0		0	
Employment [b]	1,234		1,234	
Service Population	1,234		1,234	
OD VMT [c]	27,883		26,419	
OD VMT per service population	22.6	33.2	21.4	33.2

Notes:
[a] Source: SBCTA VMT Screening Tool: https://www.gosbcta.com/vmtscreening
[b] Source: SCAG Employment Density Study Summary Report, October 31, 2001 (using 2,111 square feet per employee).
[c] The project's Origin/Destination (OD) VMT derived from the San Bernardino Traffic Analysis Model (SBTAM)
Source of analysis: General Technologies and Solutions (GTS)

Table 1-11: Project Effect on Roadway VMT within Town of Apple Valley

Metric	2016 Baseline		2040 Conditions	
	With Project	Without Project	With Project	Without Project
Roadway VMT [a]	855,591	847,823	1,367,429	1,362,981
Service population [b]	92,347	91,113	128,040	126,806
VMT per service population	9.3	9.3	10.7	10.7

Notes:
[a] Roadway VMT = sum of all vehicle miles travel on all streets within the town limits of Apple Valley
[b] Service population = sum of residents and employees in Apple Valley in the scenario being analyzed. Source: 2016 and 2040 land use summaries from the San Bernardino Traffic Analysis Model (SBTAM)
Source of analysis: General Technologies and Solutions (GTS)

B. Conclusions of the VMT Analyses

The VMT analysis conducted to identify potentially significant project-generated VMT impacts under CEQA concludes that the proposed project generates a VMT / Service population less than the VMT / Service population representing buildout of Apple Valley's general plan and, therefore, does not cause a significant impact based on the town's adopted significance thresholds for project-generated VMT.

Another VMT analysis conducted to identify potentially significant impacts of the project's "effects on town-wide VMT" under CEQA concludes that the VMT / service population metric for the baseline and horizon year scenarios "with the project" do not increase the metric over the "without project" scenarios. Therefore, the proposed Inland Empire North Logistics Center project does not cause a significant impact based on the town's adopted significance thresholds for the project's effect on town-wide VMT.

2 INTRODUCTION

This report identifies the traffic impacts and presents recommendations for access and traffic mitigation for the proposed Inland Empire North Logistics Center project in the Town of Apple Valley, California. The proposed project consists of two speculative warehouse buildings. Building 1 is proposed to be a 1,507,326 square foot warehouse building located on approximately 96-acres. Building 2 is proposed to be a 1,097,120 square foot warehouse located on approximately 76-acres. **Figure 1** illustrates the vicinity map, and **Figure 2** illustrates the proposed project site plan.

The intent of this report is to evaluate potentially significant traffic impacts caused by the proposed development in accordance with the Town of Apple Valley and San Bernardino County traffic impact analysis requirements under the following scenarios:

2.1 Analysis Scenarios

The scenarios analyzed in this study are consistent with the requirements of San Bernardino County's Transportation Impact Study Guidelines (July 2019). The analysis scenarios are as follows:

- Existing Conditions
- Background Conditions (Year 2024)
- Project Conditions (Year 2024)
- Future Year 2040 Conditions
- Future Year 2040 + Project Conditions

2.2 Scenario Definitions

Existing Conditions. This scenario represents existing transportation conditions at the time this report was prepared. Data includes traffic counts collected in June 2022, November 2022, and March 2023. This scenario is used as the baseline condition to identify existing deficiencies and establish context.

Background Conditions (Year 2024). This scenario represents conditions at the time the project is anticipated to be fully constructed and occupied (known as buildout year 2024) but without traffic generated by the project. This scenario is comprised of an ambient growth, a general rate of growth in traffic from overall regional growth (assumed to be 2% annually for this study) and other area development projects as provided by the Town of Apple Valley Planning Department.

Project Conditions (Year 2024). This scenario adds the project's estimated traffic generation at buildout (2024) to the Background Conditions scenario described above. Impacts identified in this near-term scenario are considered "cumulative" impacts—impacts that the project contributes to, but does not solely cause, and may be responsible for a fair-share of the cost to implement any improvement measures.

Future Conditions (Year 2040). This scenario reflects regional growth in traffic up to the year 2040. Growth in traffic is from forecasts from the San Bernardino County Transportation Analysis Model (SBTAM). Intersection turn movements were derived from post processing forecasted approach volumes and balancing the turn movement volumes for each study intersection.

Future Plus Project Conditions (Year 2040). This scenario adds the project's estimated traffic generation to the future condition's scenario described above. Impacts identified in this scenario are considered "cumulative" impacts—impacts that the project contributes to, but does not solely cause, and may be responsible for a fair-share of the cost to implement any improvement measures.



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FIGURE 1: VICINITY MAP
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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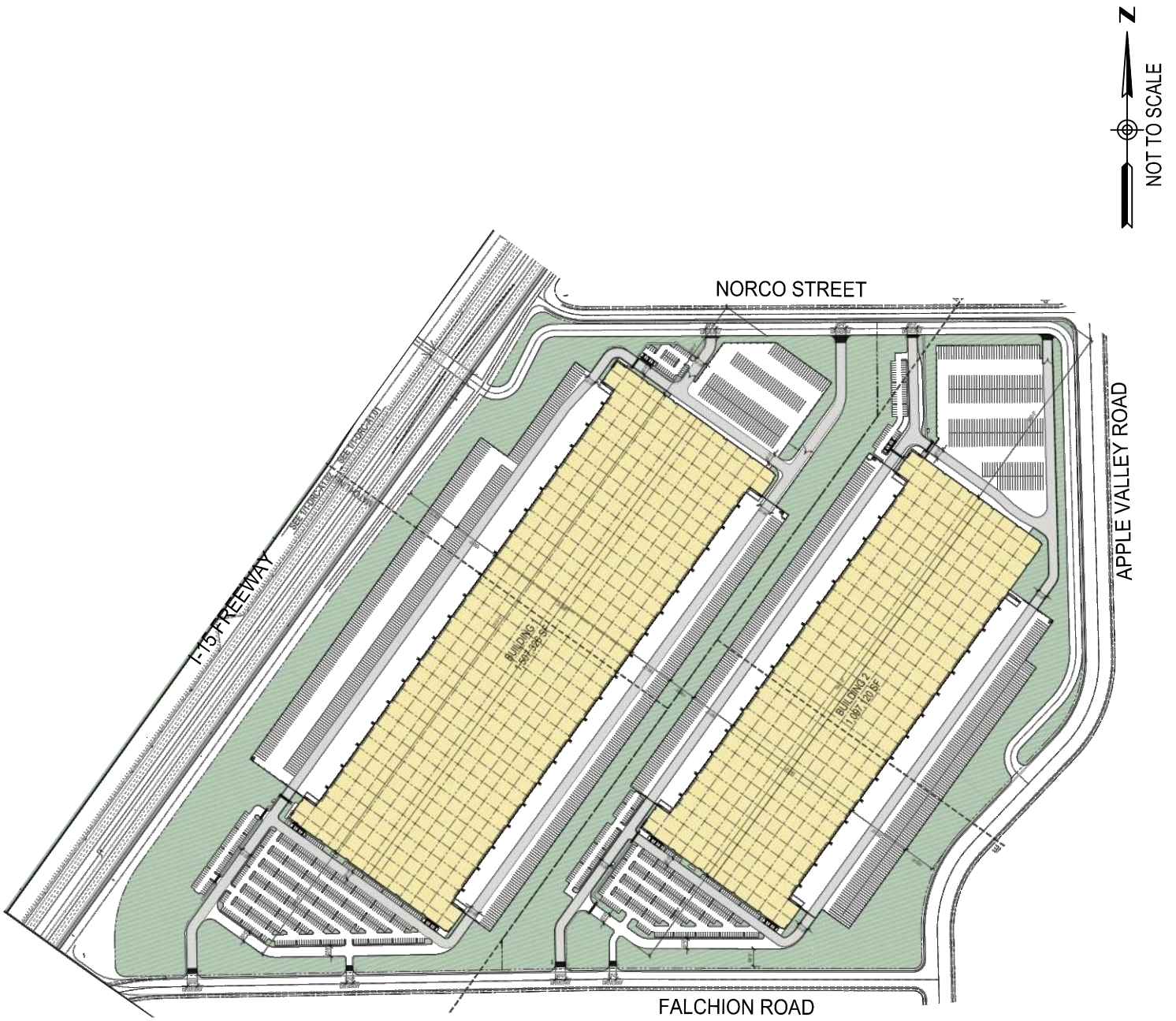

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FIGURE 2: PROJECT SITE PLAN
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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3 EXISTING CONDITIONS

3.1 Town of Apple Valley and Caltrans Intersection Level of Service Policies

The Town of Apple Valley's General Plan policy (Policy 1.A, Program 1.A.4) on level of service is to maintain a level of service (LOS) D in the AM and PM peak hours on all its roadways. This level of service policy applies to local Apple Valley roadways, roads of regional importance as part of the county's Congestion Management Program (CMP) network, and state highways.

The Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) states "Caltrans endeavors to maintain a target level of service at the transition between LOS "C" and LOS "D" on State highway facilities. However, Caltrans acknowledges that this may not always be feasible, so their practice is to allow level of service thresholds equal to the threshold of the jurisdiction where the facility is located but preferably no greater than a 45 second average delay per vehicle in the peak hour (mid LOS D). For this study, the town's LOS D is assumed to be the minimum level of service criteria for the study intersections.

3.2 Study Intersections

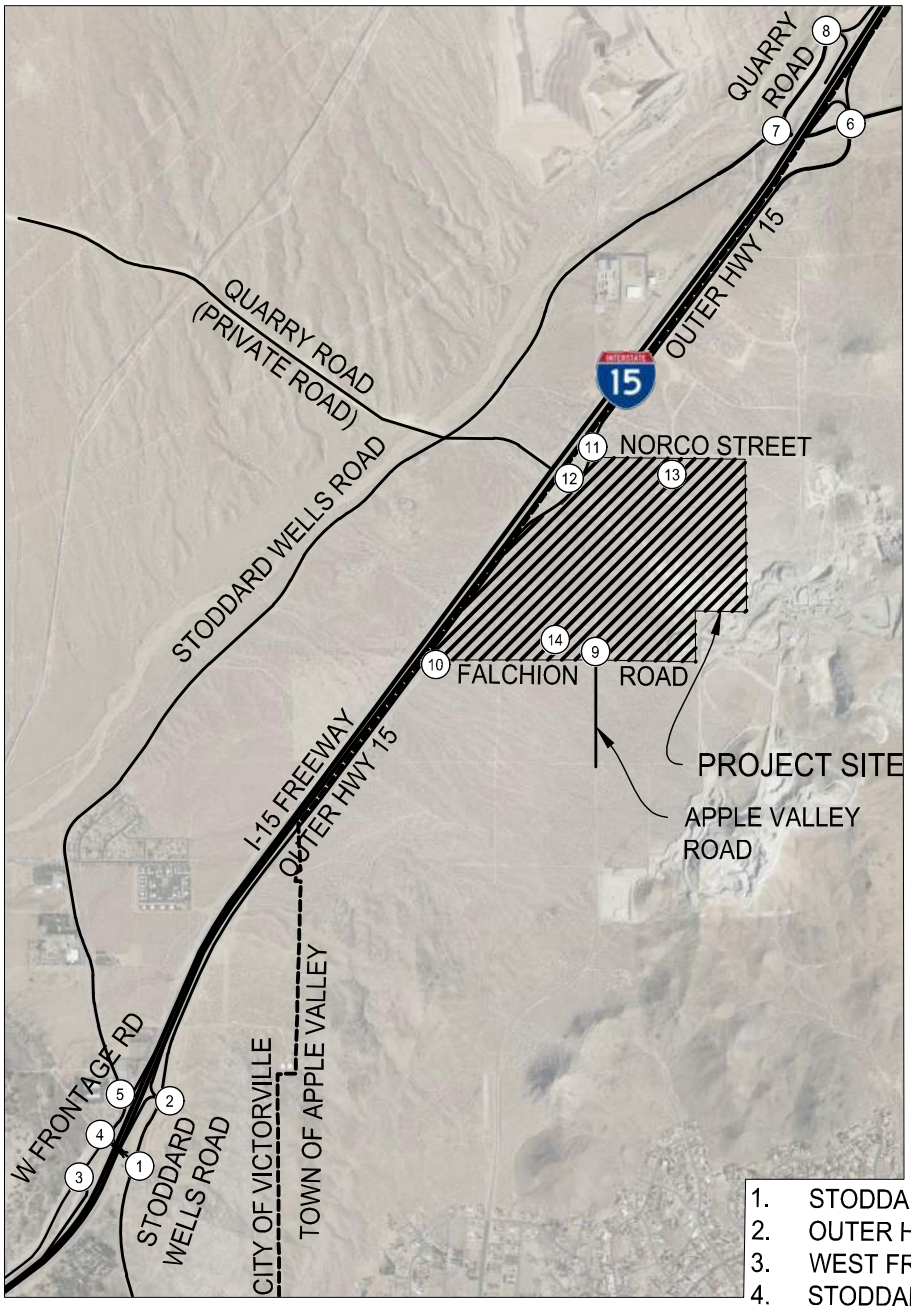
This focused traffic study evaluates key intersections on routes expected to be used by project traffic to access the site. **Figure 3** and the list below identifies the intersections analyzed in this study.

1. Stoddard Wells Rd / Outer Highway 15
2. Outer Highway 15 / I-15 NB On/Off-Ramps
3. West Frontage Rd / I-15 SB On-Ramp
4. Stoddard Wells Rd / West Frontage Rd
5. Stoddard Wells Rd / I-15 SB Off-Ramp
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps
7. Stoddard Wells Rd / Quarry Rd
8. Quarry Rd / I-15 SB On/Off-Ramps
9. Falchion Rd / Apple Valley Rd
10. Falchion Rd / Outer Hwy 15
11. Outer Highway 15/ Norco St
12. Outer Highway 15/ Quarry Rd
13. Norco St / Project Driveway #1
14. Falchion Road / Project Driveway #2

All the study intersections are currently side-street stop controlled, or all-way stop-controlled. Driveway #1 on Norco Street and Driveway #2 on Falchion Road are representative of a series of driveways on both streets serving automobiles accessing parking lots or trucks accessing the gated loading areas. The representative driveways are used in this scoping memorandum to distribute automobile and truck traffic to off-site intersections. The traffic analysis will include a micro-distribution of automobiles and trucks to their respective driveways.

3.3 Existing Traffic Volumes

Turn movement counts were conducted in collected in June 2022, November 2022, and March 2023 by Newport Traffic Studies, an independent traffic data collection company. These counts were collected during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods. The existing turn movement counts are included in **Appendix B** of this study. **Figure 4** illustrates the existing peak hour traffic volumes in the study area.



1. STODDARD WELLS RD / OUTER HIGHWAY 15
2. OUTER HIGHWAY 15 / I-15 NB ON/OFF-RAMPS
3. WEST FRONTAGE RD / I-15 SB ON-RAMP
4. STODDARD WELLS RD / WEST FRONTAGE RD
5. STODDARD WELLS RD / I-15 SB OFF-RAMP
6. STODDARD WELLS RD / OUTER HIGHWAY 15 / I-15 NB RAMPS
7. STODDARD WELLS RD / QUARRY RD
8. QUARRY RD / I-15 SB ON/OFF-RAMPS
9. FALCHION RD / APPLE VALLEY RD
10. FALCHION RD / OUTER HWY 15
11. OUTER HWY 15 / NORCO ST
12. OUTER HWY 15 / QUARRY RD
13. NORCO ST / PROJECT DRIVEWAY #1
14. FALCHION ROAD / PROJECT DRIVEWAY #2

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FIGURE 3: STUDY INTERSECTIONS
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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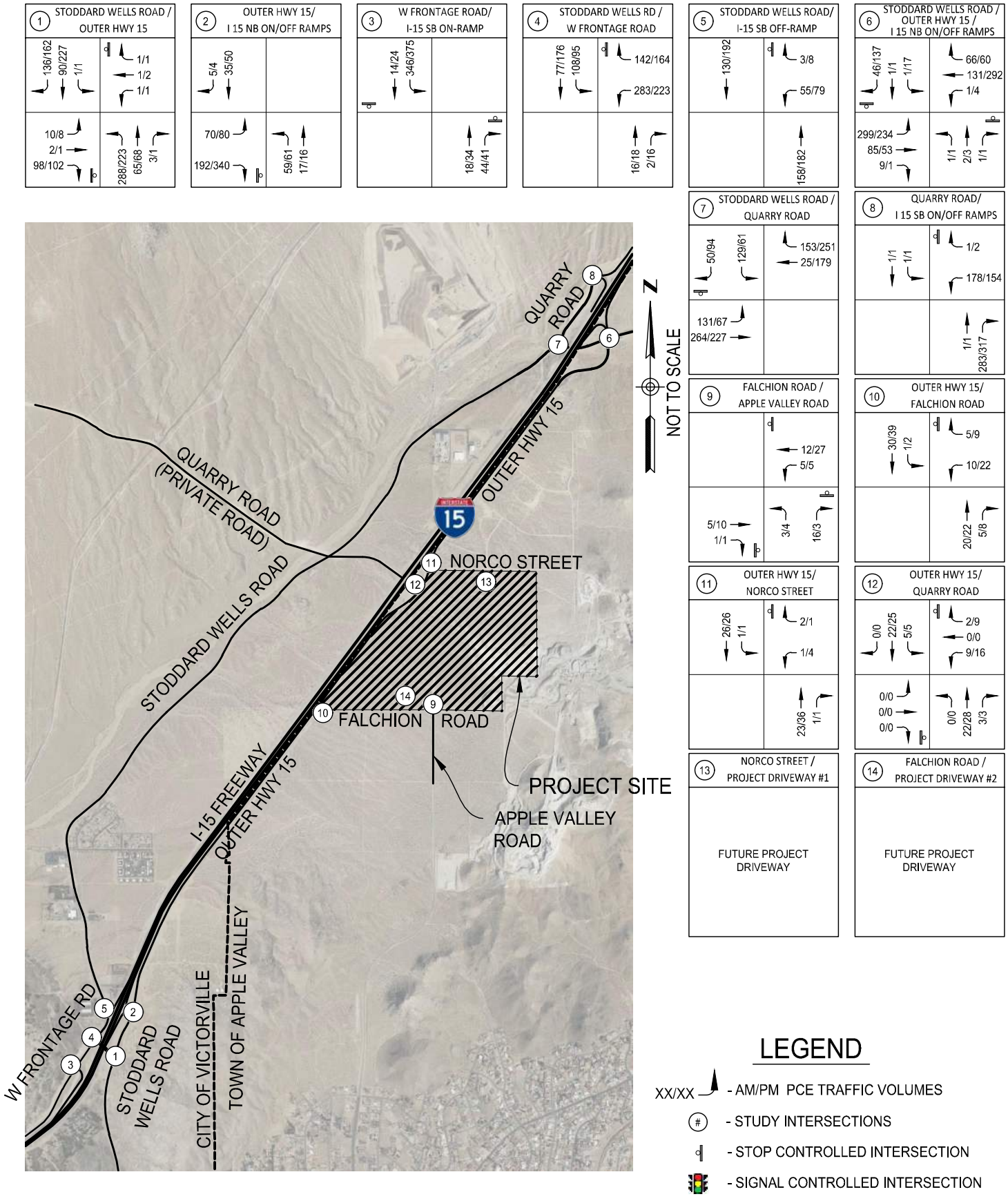

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FIGURE 4: EXISTING PCE TRAFFIC VOLUMES
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APPLE VALLEY, CALIFORNIA

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3.4 Intersection Capacity Analysis Methodology

In this study, intersection level of service (LOS) was determined using Synchro software[5] which implements the methodologies in Chapter 19 and Chapter 20 of the Highway Capacity Manual, 6th Edition (HCM 6)[6] and conforms to the procedures and assumptions in the county's Traffic Impact Analysis Guidelines. The intersection analyses use existing intersection geometrics and existing traffic volumes in determining AM and PM peak hour intersection level of service.

Table 3-1 provides LOS thresholds for both two-way stop-controlled (TWSC) and all-way stop-controlled intersections which is determined by the computed or measured control delay. Unsignalized intersections have lower delay criteria than signalized intersections because stop-control is associated with more uncertainty for users, as delays are less predictable than they are at signals, which reduces the user's tolerance for delay.

The level of service at TWSC intersections is measured as the control delay for the worst stop-controlled movement at the intersection regardless of the movement's traffic volume.

The level of service at AWSC intersections is also measured as the control delay, but it applies to the entire intersection not individual movements.

Table 3-1: Level of Service Criteria for Two-Way and All-Way Stop Controlled (TWSC & AWSC) Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio [a]	
	≤1.0	>1.0
0 - 10	A	F
> 10 -15	B	F
> 15 - 25	C	F
> 25 - 35	D	F
> 35 - 50	E	F
> 50	F	F

Note:
The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for the uncontrolled major-Street approaches or for the intersection as a whole.
[a] For approaches and intersectionwide assessment, LOS is defined solely by control delay.
Source: Highway Capacity Manual 6th Edition, Exhibit 20-2.

3.5 Existing Traffic Analysis

Existing intersection geometrics and existing AM and PM peak hour traffic counts are used in analyzing existing intersection capacity. **Table 3-2** and **Appendix E** provide the results of the analysis. **Figure 5** illustrates the existing intersection geometrics utilized in the capacity analysis.

As presented in **Table 3-2**, under Existing Conditions, all study intersections currently operate at LOS C or better in both peak hours.

[5] Trafficware Ltd, version 10.

[6] Transportation Research Board, Washington D.C., 2010.

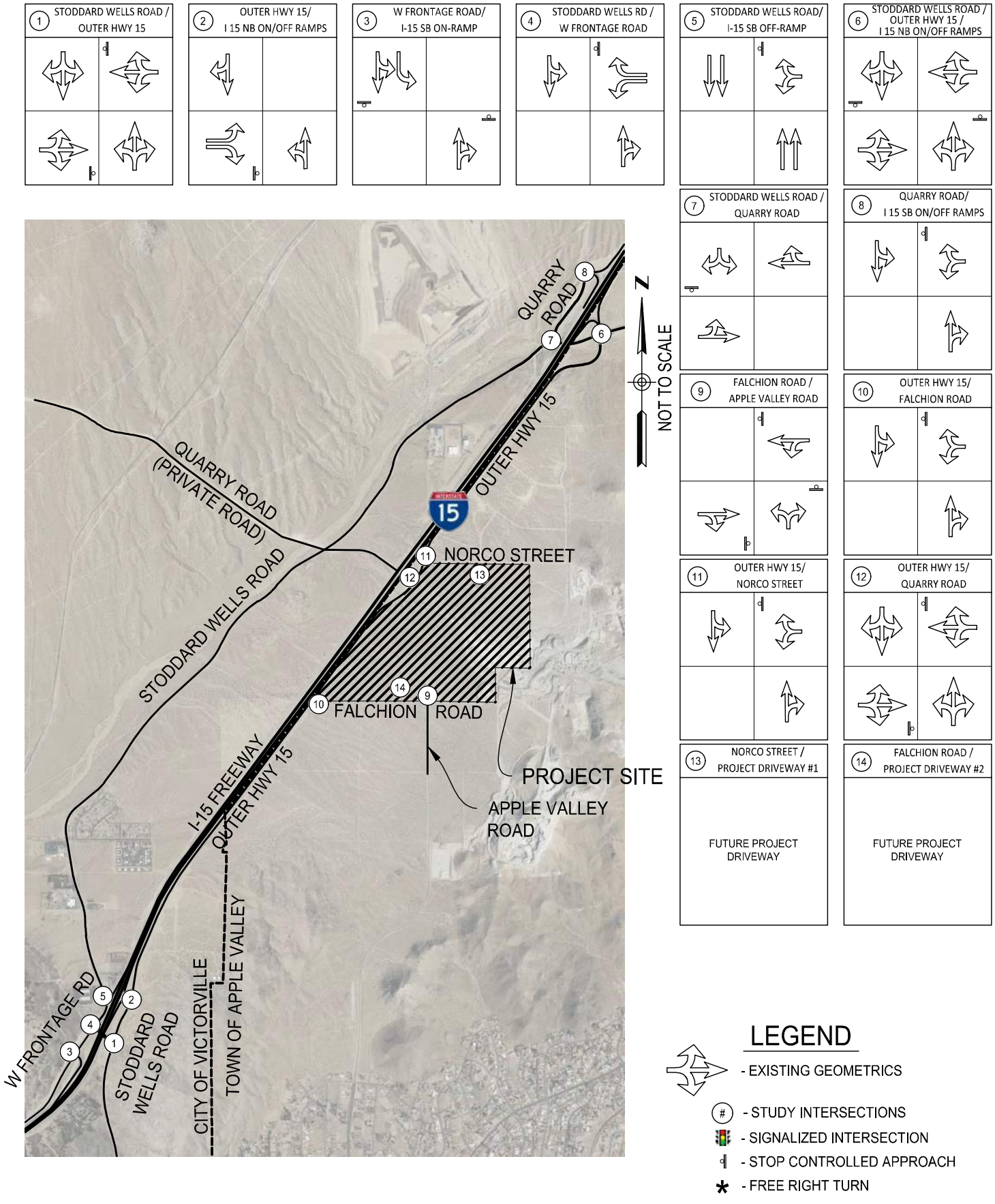

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FIGURE 5: EXISTING INTERSECTION GEOMETRICS
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APPLE VALLEY, CALIFORNIA

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Table 3-2: Intersection Level of Service for Existing (2023) Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Stoddard Wells Rd / Outer Highway 15	SSSC	24.9	C	24.8	C
2. Outer Highway 15 / I-15 NB Ramps	SSSC	10.3	B	10.7	B
3. W Frontage Rd / I-15 SB On Ramp	SSSC	5.0	A	5.0	A
4. Stoddard Wells Rd / W Frontage Rd	SSSC	19.8	C	17.9	C
5. Stoddard Wells Rd / I-15 SB Off Ramp	SSSC	10.6	B	11.1	B
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	SSSC	20.5	C	23.0	C
7. Stoddard Wells Rd / Quarry Rd	SSSC	16.6	C	12.8	B
8. Quarry Rd / I-15 SB Ramps	SSSC	10.7	B	11.3	B
9. Falchion Rd / Apple Valley Rd	AWSC	6.8	A	7.1	A
10. Falchion Rd / Outer Hwy 15	SSSC	8.8	A	9.0	A
11. Outer Highway 15/ Norco St	SSSC	8.6	A	8.9	A
12. Outer Highway 15/ Quarry Rd	SSSC	8.9	A	9.0	A
13. Norco Street / Project Driveway #1	SSSC	Not Applicable			
14. Falchion Road / Project Driveway #2	SSSC	Not Applicable			

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service

4 BACKGROUND CONDITIONS

This scenario evaluates impacts due to ambient growth in traffic and traffic generated by other area development projects affecting the study area up to the year 2024 when project construction is expected to be completed. A general rate of growth in traffic from overall regional growth is assumed to be 2% annually for this study.

The other area development projects included in the study were provided by the Town of Apple Valley Planning Department. The Other Area Approved Developments Excerpts are provided in **Appendix D**.

4.1 Background Conditions Traffic Analysis

The Background Conditions intersection level of service analysis uses existing intersection geometrics and the traffic volumes shown in is provided in **Figure 6. Table 4-1** and **Appendix E** provides the results of the analysis.

Table 4-1: Intersection Level of Service for Background Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Stoddard Wells Rd / Outer Highway 15	SSSC	26.5	D	26.5	D
2. Outer Highway 15 / I-15 NB Ramps	SSSC	10.4	B	10.8	B
3. W Frontage Rd / I-15 SB On Ramp	SSSC	5.0	A	5.0	A
4. Stoddard Wells Rd / W Frontage Rd	SSSC	21.5	C	19.1	C
5. Stoddard Wells Rd / I-15 SB Off Ramp	SSSC	10.7	B	11.3	B
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	SSSC	1663.7	F	2354.9	F
7. Stoddard Wells Rd / Quarry Rd	SSSC	35.1	E	21.4	C
8. Quarry Rd / I-15 SB Ramps [1]	SSSC	14.5	B	21.0	C
9. Falchion Rd / Apple Valley Rd	AWSC	6.9	A	7.1	A
10. Falchion Rd / Outer Hwy 15	SSSC	8.8	A	9.0	A
11. Outer Highway 15/ Norco St	SSSC	8.6	A	8.9	A
12. Outer Highway 15/ Quarry Rd	SSSC	8.9	A	9.0	A
13. Norco Street / Project Driveway #1	SSSC	Not Applicable			
14. Falchion Road / Project Driveway #2	SSSC	Not Applicable			

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service

As presented in **Table 4-1***,* under Background Conditions, most of the study intersections are anticipated to operate at a LOS D or better in both peak hours. The intersections of Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps and Stoddard Wells Rd / Quarry Rd are anticipated to operate at an LOS F with the addition of ambient growth and project trips from the other area development projects.

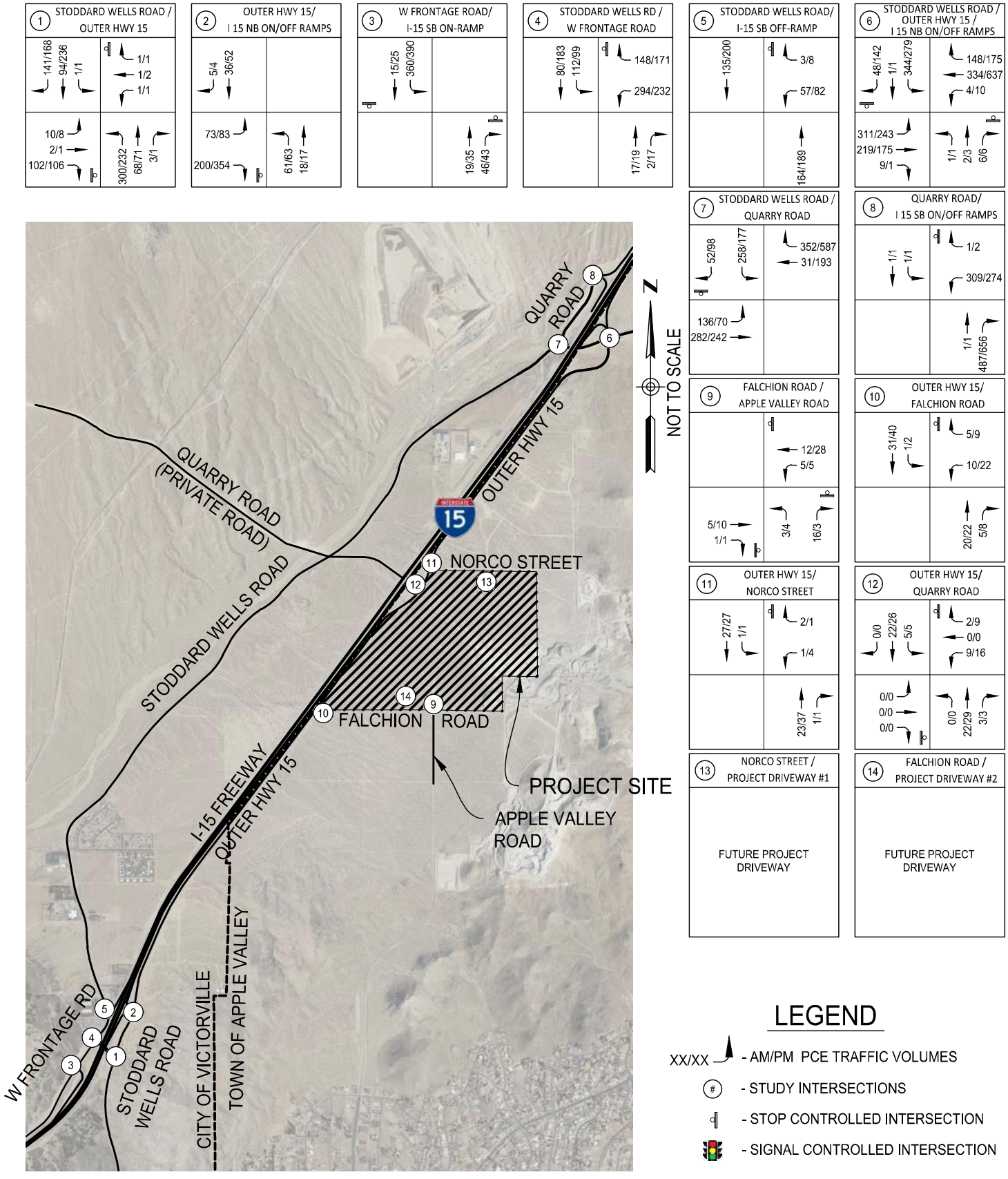

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FIGURE 6: BACKGROUND PCE TRAFFIC VOLUMES
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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5 PROJECT CONDITIONS

This scenario adds the project's estimated traffic generation at buildout (year 2024) to the Background Conditions scenario described in **Chapter 4**. Level of service impacts identified in this scenario are considered "cumulative" impacts—impacts that the project contributes to, but does not solely cause, and may be responsible for a fair-share of the cost to implement any mitigation measures.

5.1 Project Description and Trip Generation

The proposed project is a speculative warehouse where the tenant(s) and function as a potential short term storage facility, distribution center, fulfillment center, etc. is unknown. While the impact analysis needs to reflect a reasonable spectrum of tenant types, there is a risk when estimating trip generation of over or under-estimating traffic. The 11th Edition of the Institute of Transportation Engineers' Trip Generation manual contains data for the most common types of warehouse operations with a wide range of rates. **Table 5-1** summarizes the trip generation rates for warehouse facilities in the current edition of ITE's Trip Generation.

Table 5-1: Trip Generation Rates for ITE Land Use Categories of Warehousing

Warehouse Type	ITE Land Use Code	Average Trip Generation Rates for Warehouse Types (Trips Per KSF) (Source: ITE Trip Generation 11th Edition)		
		Average Daily Traffic	AM Peak Hour of Adjacent Street Traffic	PM Peak Hour of Adjacent Street Traffic
		Total (In + Out)	Total (In + Out)	Total (In + Out)
High-Cube Transload and Short-Term Storage Warehouse	154	1.54	0.08	0.10
High-Cube Cold Storage Warehouse	157	2.12	0.11	0.12
High-Cube Fulfillment Center Warehouse - Non-Sort	155	1.81	0.15	0.16
General Warehouse	150	1.71	0.17	0.18
High-Cube Parcel Hub Warehouse	156	4.63	0.70	0.64
High-Cube Fulfillment Center Warehouse - Sort	155	6.44	0.87	1.20
Average of All Warehouse Types		3.04	0.35	0.40
Average Without High-Cube Sort Fulfillment Center		2.36	0.24	0.24

To help select a trip generation rate for the proposed project representative of the range of potential owners/tenants, **Table 5-1** includes the average of the rates for all warehouse types in the ITE Trip Generation manual and the average of the rates for all warehouse types except High-Cube Fulfillment Sort Facility—the most intensive type of warehouse which is not expected for the proposed project. The secondary average rate (excluding High-Cube Fulfillment Sort Facility) represents two thirds the ITE warehouse types and covers a broad range of tenant types and operations.

Table 5-2 summarizes the estimated trip generation of the proposed project for an average weekday, and weekday AM (7-9 AM) and PM (4-6 PM) peak hours, based on the secondary average rates identified in **Table 5-1**. The proposed Inland Empire North Logistics Center would generate about 6,146 vehicle trips per day and 625 vehicle trips in both the AM and PM peak hour. Queuing behind the gates will be estimated using industry standard methods based on typical

It is standard practice to convert vehicle trips to passenger car equivalents (PCEs) for intersection capacity analysis. This conversion reflects the effects of large vehicles on intersection operations both from the physical space a truck occupies but also from their effect on the intersection's saturation flow rate due to the slower acceleration of trucks.

When converted to PCEs, the Inland Empire North Logistics Center generates about 8,637 daily PCEs, and 878 PCEs in both the AM and PM peak hour.

Table 5-2: Inland Empire North Logistics Center Project Trip Generation

Land Use	Gross Floor Area (KSF)	Daily	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			In	Out	Total	In	Out	Total
Warehouse (Rates are the Average of ITE Land Use Categories 150, 154, 156, and 157) Total floor area of Buildings 1 and 2	2,604.45	Vehicle Trip Generation Rates (Trips Per 1,000 Square Feet of Gross Floor Area)						
		2.36	0.18	0.06	0.24	0.07	0.17	0.24
		Total Vehicle Trip Generation						
		6,146	481	144	625	175	450	625
	Mode Share	Project Trip Generation by Vehicle Type						
Passenger Cars (Percent of Total)	74.21%	4,561	357	107	464	130	334	464
2-Axle Trucks (Percent of Total)	4.55%	280	22	7	28	8	20	28
3-Axle Trucks (Percent of Total)	4.18%	257	20	6	26	7	19	26
4-Axle Trucks (Percent of Total)	17.04%	1047	82	24	107	30	77	107
	PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
Passenger Cars)	1.0	4,561	357	107	464	130	334	464
2-Axle Trucks	1.5	419	33	10	43	12	31	43
3-Axle Trucks	2.0	514	40	12	52	15	38	52
4 + Axle Trucks	3.0	3142	246	73	320	89	230	320
Total Passenger Car Equivalents (PCE)		**8,637**	**676**	**202**	**878**	**246**	**632**	**878**

Notes:
[1] Trip generation rates are the average of the rates of each ITE warehouse type except the High-Cube Fulfillment Sort Center Warehouse, which is the most intense use like an Amazon Fulfillment Center which sorts individual packages for delivery to end users. This type of use is not anticipated for the Inland Empire North Logistics Center See Table 1.
KSF = Thousands of Square Feet.
AM / PM Peak Hour of Adjacent Street Traffic = Trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods.
Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition).

Source of passenger car / truck mode share (percentage of total): South Coast Air Quality Management District High Cube Warehouse Trip Generation Study (2016). Based on data from eight high cube warehouses in the Inland Empire over 1,000,000 square feet in size. The average warehouse building size is 1,364,496 square feet.
Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions

5.2 Project Trip Distribution and Assignment

Project traffic is distributed by direction separately for automobiles (employees) and trucks. The automobile distribution is based on where the warehouse employees are likely to reside or perform other activities (e.g., concentration of residential neighborhoods and commercial centers). The truck distribution is based on the most direct routes to major roadways and highways trucks are likely to use to access the project and depart for delivery of freight. Project trips are assigned to the area streets that provide the most direct route to the destinations.

Figure 7 shows the distribution of project-generated automobile to roadways as a percentage by direction and route. **Figure 8** shows the distribution of project-generated truck trips to roadways as a percentage by direction and route. Truck traffic volumes have been converted into passenger car equivalents (PCEs) as required in the San Bernardino County guidelines for intersection capacity analysis. **Figure 9** shows the total project PCE trips.

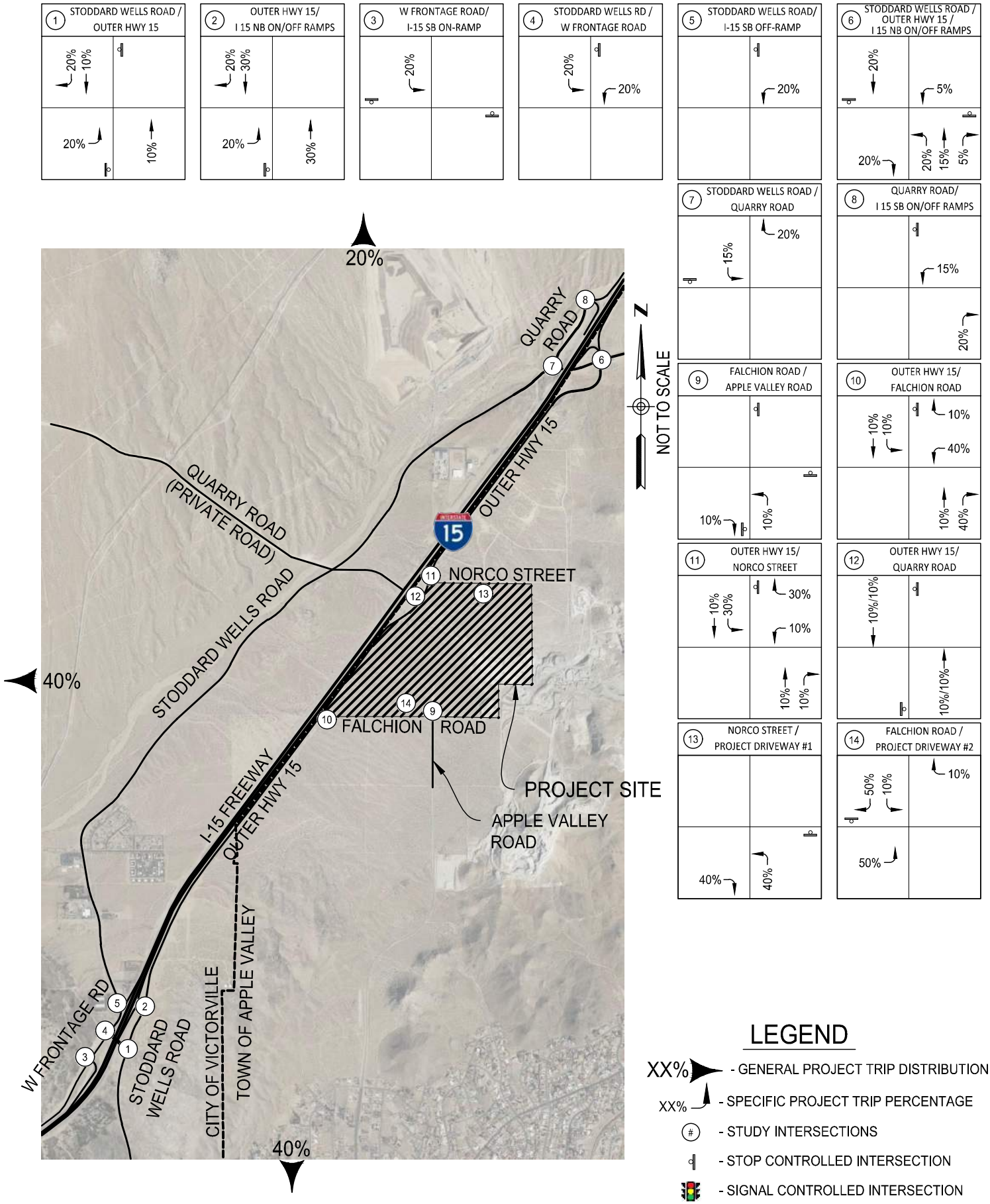

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FIGURE 7: PROJECT AUTOMOBILE TRIP DISTRIBUTION
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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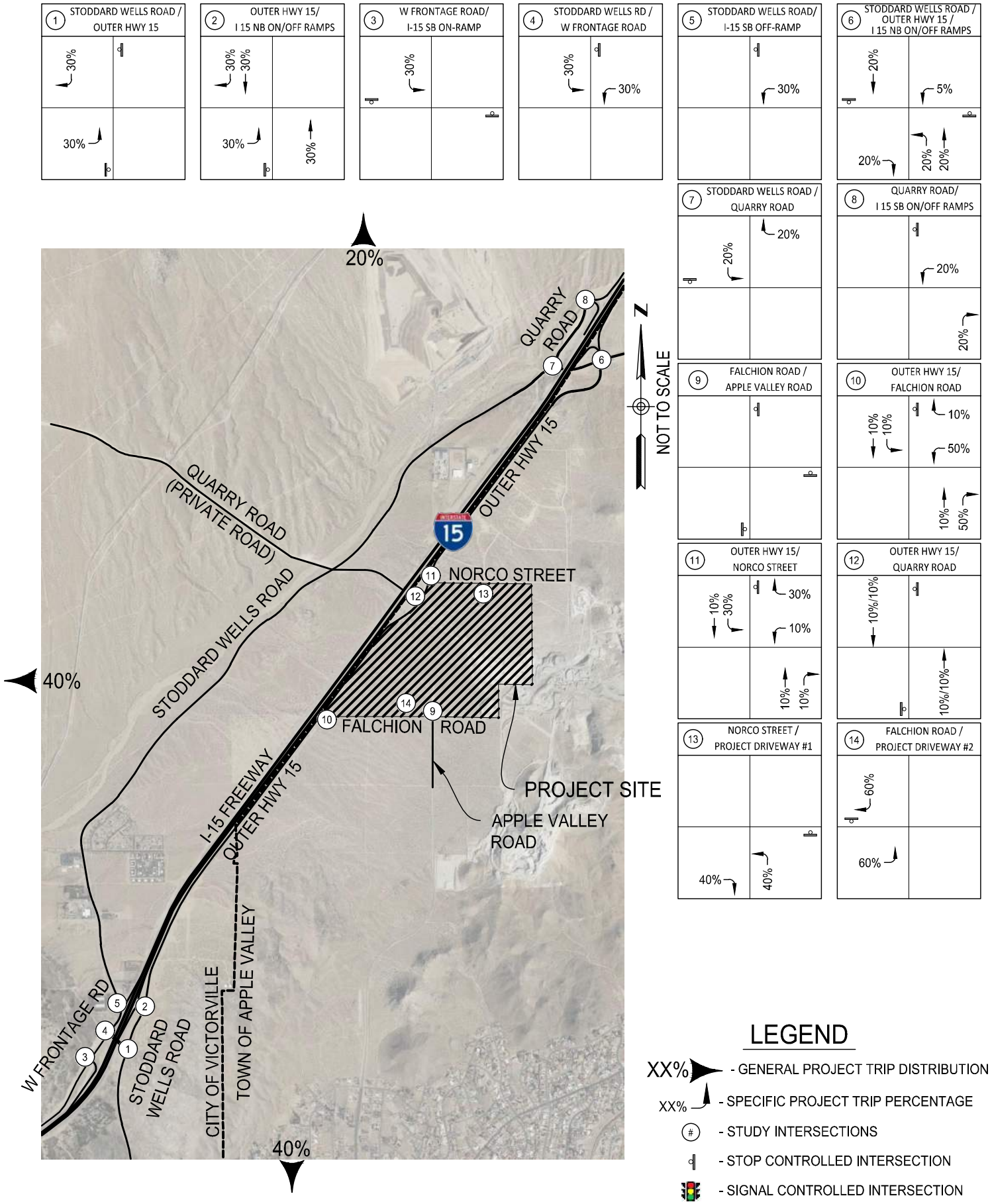

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FIGURE 8: PROJECT TRUCK TRIP DISTRIBUTION
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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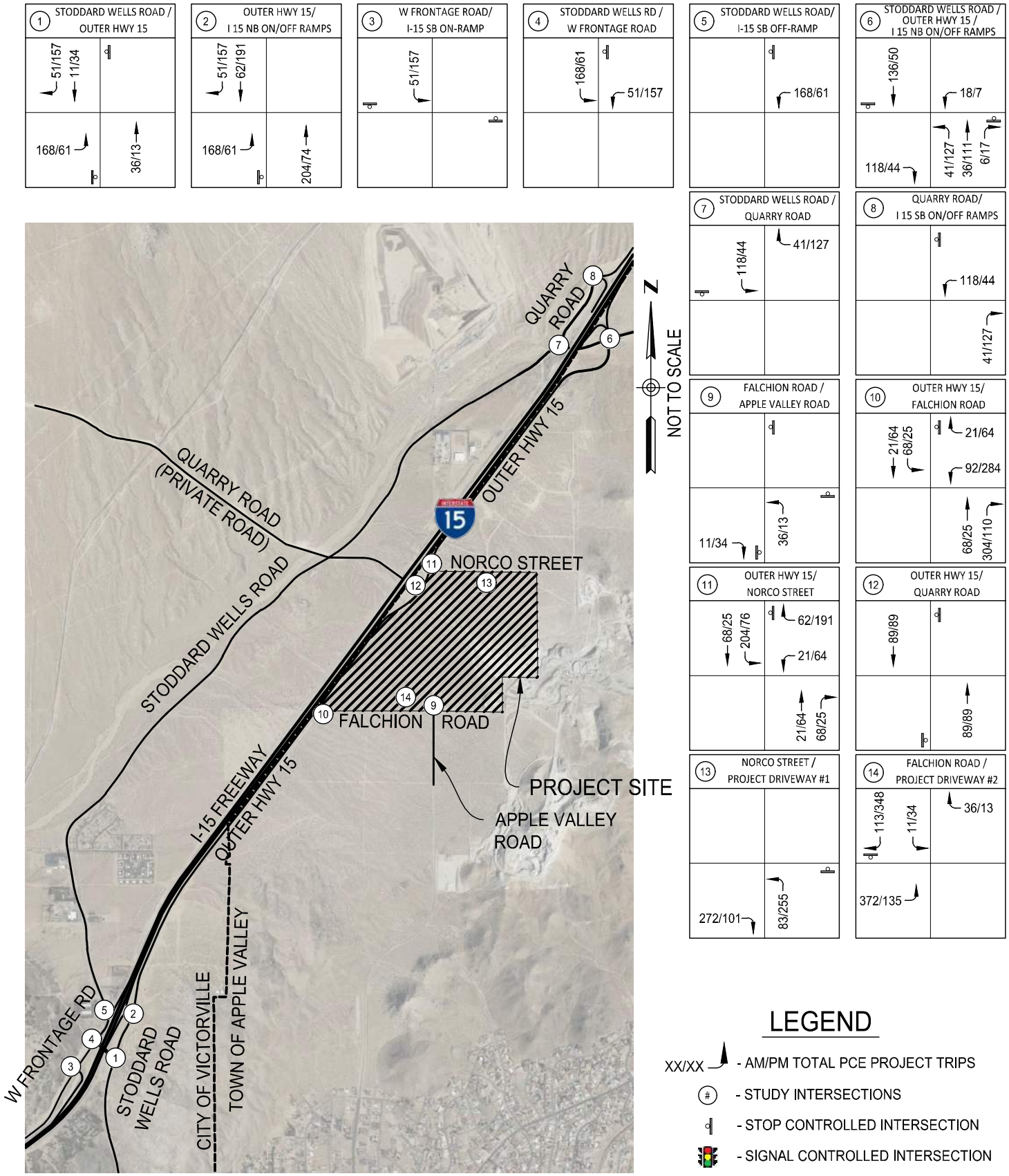

TOTAL PROJECT PCE TRIPS

AM PEAK HOUR TRIPS - 676 IN / 202 OUT
PM PEAK HOUR TRIPS - 246 IN / 632 OUT

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FIGURE 9: TOTAL PROJECT PCE TRIPS
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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5.3 Project Conditions Traffic Analysis

Table 5-3 compares intersection level of service of Background and Project Conditions. The Project Conditions traffic volumes shown in **Figure 10**. The capacity analysis worksheets are in **Appendix E.**

Table 5-3: Comparison of Background and Project Conditions LOS

Intersection	Control Type	Background Conditions				Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Stoddard Wells Rd / Outer Highway 15	SSSC	26.5	D	26.5	D	253.5	F	68.5	F
2. Outer Highway 15 / I-15 NB Ramps	SSSC	10.4	B	10.8	B	23.8	C	20.0	C
3. W Frontage Rd / I-15 SB On Ramp	SSSC	5.0	A	5.0	A	5.0	A	5.0	A
4. Stoddard Wells Rd / W Frontage Rd	SSSC	21.5	C	19.1	C	267.6	F	103.7	F
5. Stoddard Wells Rd / I-15 SB Off Ramp	SSSC	10.7	B	11.3	B	13.5	B	12.2	B
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	SSSC	1663.7	F	2354.9	F	5745.2	F	**[1]**	
7. Stoddard Wells Rd / Quarry Rd	SSSC	35.1	E	21.4	C	100.9	F	27.0	D
8. Quarry Rd / I-15 SB Ramps	SSSC	14.5	B	21.0	C	20.5	C	35.1	E
9. Falchion Rd / Apple Valley Rd	AWSC	6.9	A	7.1	A	7.2	A	7.1	A
10. Falchion Rd / Outer Hwy 15	SSSC	8.8	A	9.0	A	18.5	C	34.2	D
11. Outer Highway 15/ Norco St	SSSC	8.6	A	8.9	A	12.3	B	13.8	B
12. Outer Highway 15/ Quarry Rd	SSSC	8.9	A	9.0	A	10.4	B	10.5	B
13. Norco Street / Project Driveway #1	SSSC	N/A				10.2	B	11.2	B
14. Falchion Road / Project Driveway #2	SSSC	N/A				12.2	B	14.4	B

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service
[1] Computation not defined due to volume exceeding capacity.

As presented in **Table 5-3**, under Project Conditions, the combination of ambient traffic, project trips from other area approved development, and the addition of project traffic through the year 2024 causes intersection LOS deficiencies (from LOS D or better to LOS E or F) at five study intersections. The five study intersections are as follows: Stoddard Wells Rd / Outer Highway 15, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / Quarry Rd, and 8. Quarry Rd / I-15 SB Ramps.

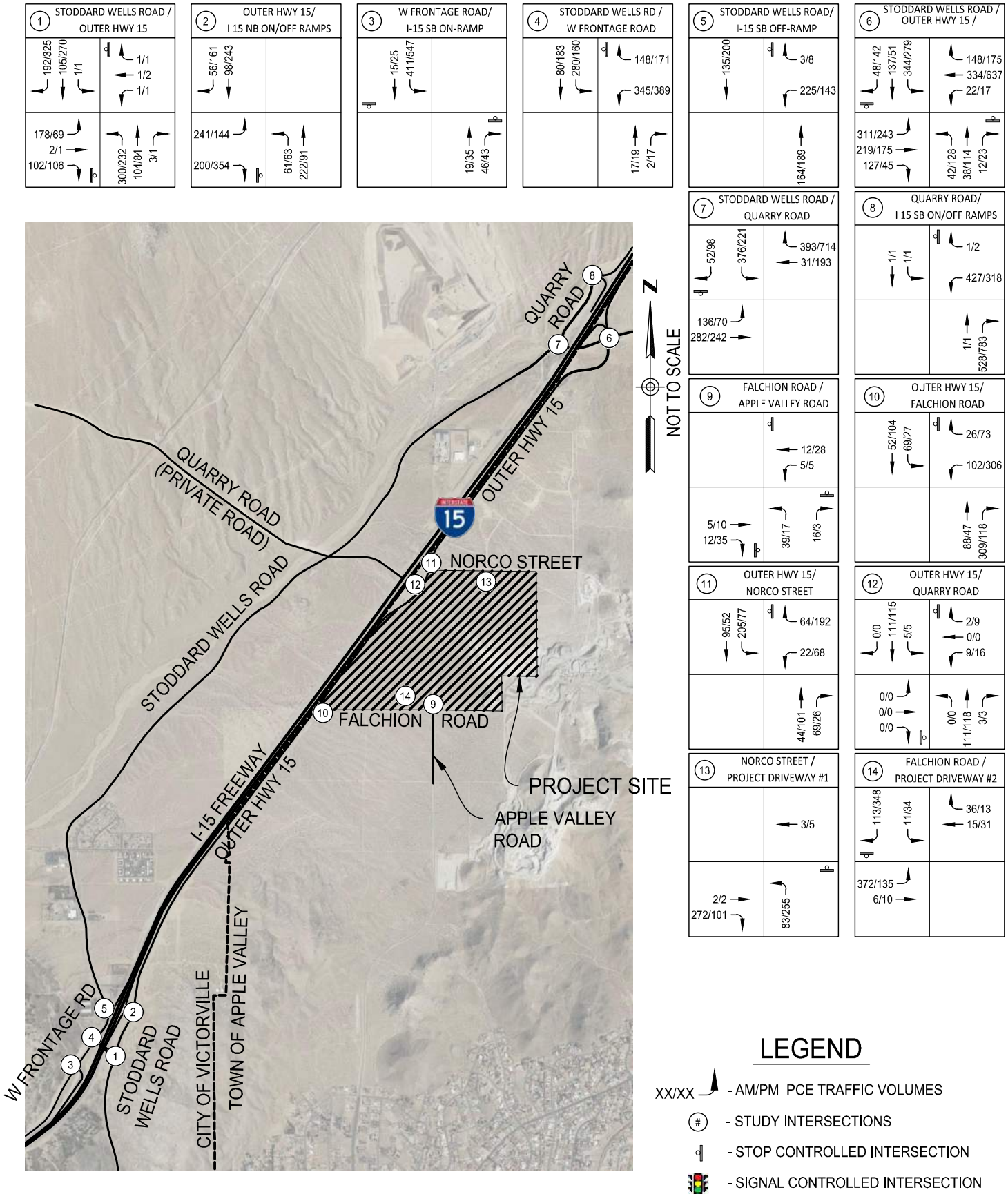

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FIGURE 10: PROJECT PCE TRAFFIC VOLUMES
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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5.3.1 Level of Service With Recommended Improvements

The five existing side-street stop-controlled intersections of Stoddard Wells Rd / Outer Highway 15, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / Quarry Rd, and 8. Quarry Rd / I-15 SB Ramps experience failure in Background Plus Project Conditions.

Improvements to the intersection of Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps and the widening of the segment of Stoddard Wells Rd between Quarry Road to I-15 NB Ramps/Outer I-15 were identified in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in **Appendix D.**

Table 5-4 provides the capacity analysis utilizing the near-term project-specific intersection improvements are outlined in **Chapter 1.6** and illustrated in **Figure 11.** The proposed mitigation improves the LOS deficiency, to a LOS D or better.

Table 5-4: Improved Level of Service Under Project Conditions

Intersection	Control Type	Background Conditions				Project Conditions				Change in Delay (Seconds)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1. Stoddard Wells Rd / Outer Highway 15	SSSC	26.5	D	26.5	D	253.5	F	68.5	F	227.0	42.0
with Improvements: convert to AWSC	AWSC	Not Applicable				17.2	C	27.6	D	-9.3	1.1
4. Stoddard Wells Rd / W Frontage Rd	SSSC	21.5	C	19.1	C	267.6	F	103.7	F	246.1	84.6
with Improvements: convert to AWSC	AWSC	Not Applicable				19.9	C	19.8	C	-1.6	0.7
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps [2]	SSSC	1663.7	F	2354.9	F	5745.2	F	[1]		4081.5	
with Improvements: install traffic signal and provide turn lanes	TS	Not Applicable				32.3	C	37.8	D	-1631.4	-2317.1
7. Stoddard Wells Rd / Quarry Rd [3]	SSSC	35.1	E	21.4	C	100.9	F	27.0	D	65.8	5.6
with Improvements: install traffic signal and provide turn lanes	TS	Not Applicable				23.1	C	22.4	C	-12.0	1.0
8. Quarry Rd / I-15 SB Ramps	SSSC	14.5	B	21	C	20.5	C	35.1	E	6.0	14.1
with Improvements: provide NBR		Not Applicable				11.6	B	10.3	B	-2.9	-10.7
10. Falchion Rd / Outer Hwy 15	SSSC	8.8	A	9.0	A	18.5	C	34.2	D	9.7	25.2
with Improvements: convert to AWSC and provide turn lanes	AWSC	Not Applicable				11.7	B	18.2	C	2.9	9.2

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service
[1] Computation not defined due to volume exceeding capacity.
[2] The improvements identified for the intersection of Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in **Appendix D.**
[3] The widening of the segment of Stoddard Wells Rd between Quarry Road to I-15 NB Ramps/Outer I-15 are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in Appendix D.

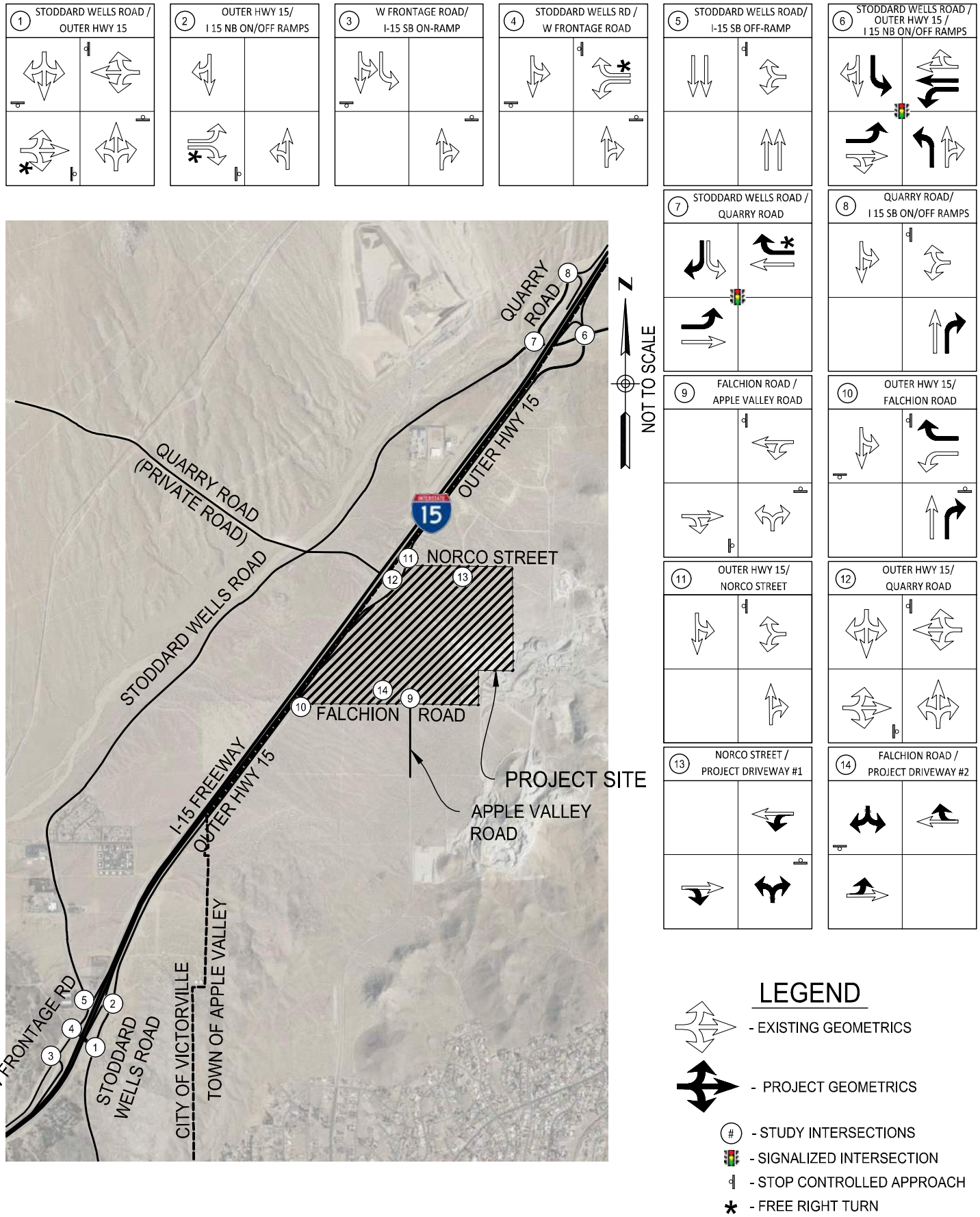

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FIGURE 11: PROJECT INTERSECTION GEOMETRICS
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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6 FUTURE YEAR 2040 CONDITIONS

The Future Year 2040 Conditions scenario reflects regional growth in traffic up to the year 2040. Growth in traffic is from forecasts from the San Bernardino County Transportation Analysis Model (SBTAM). Intersection turn movements were derived from post processing forecasted approach volumes and balancing the turn movement volumes for each study intersection. The SBTAM traffic model plots are provided in **Appendix C**. As requested by the Town of Apple Valley Staff the Other Area Approved Developments Trips (described in Chapter 4) were added to the balanced post processed forecast volumes to produce the Future Year 2040 Conditions traffic volumes provided in **Figure 12.** The Other Area Approved Developments Excerpts are provided in **Appendix D**.

6.1 Future Conditions Traffic Analysis

The Future Year 2040 Conditions intersection capacity analysis uses existing intersection geometrics and the traffic volumes provided in **Figure 12**. **Table 6-1** and **Appendix E** provide the results of the analysis.

Table 6-1: Intersection Level of Service for Future Year 2040 Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Stoddard Wells Road / Outer Highway 15	SSSC	64.8	F	82.5	F
2. Outer Highway 15 / I-15 NB On/Off Ramps	SSSC	13.9	B	15.6	C
3. W Frontage Road / I-15 SB On Ramp	SSSC	5.0	A	5.0	A
4. Stoddard Wells Road / W Frontage Road	SSSC	230.6	F	188.3	F
5. Stoddard Wells Road / I-15 SB Off Ramp	SSSC	14.2	B	17.3	C
6. Stoddard Wells Road / Outer Highway 15 / I-15 NB On/Off Ramps	SSSC	1941.5	F	4896.0	F
7. Stoddard Wells Road / Quarry Road	SSSC	41.1	E	28.1	D
8. Quarry Road / I-15 SB On/Off Ramps	SSSC	16.2	C	23.1	C
9. Falchion Road / Apple Valley Road	AWSC	7.5	A	7.6	A
10. Falchion Road / Outer Hwy 15	SSSC	9.1	A	9.9	A
11. Outer Highway 15/ Norco Street	SSSC	8.6	A	9.0	A
12. Outer Highway 15/ Quarry Road	SSSC	8.9	A	9.2	A
D1. Norco Street / Project Driveway #1	SSSC	Not Applicable			
D2. Falchion Road / Project Driveway #2	SSSC	Not Applicable			

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service

As presented in **Table 6-1***,* under Future Year 2040 Conditions, four existing intersections are projected to operate at deficient levels of service even without the proposed project.

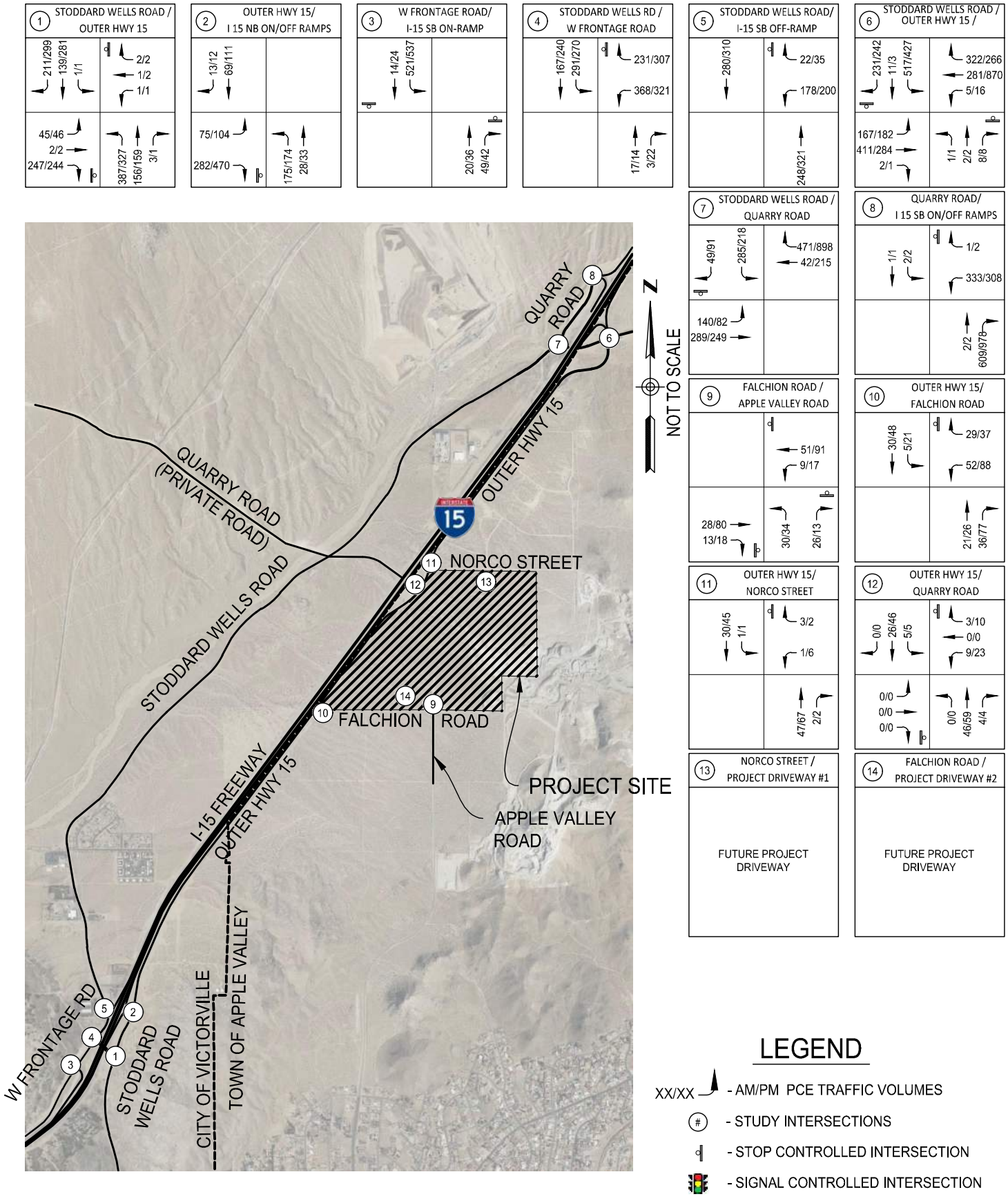

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FIGURE 12: FUTURE YEAR PCE TRAFFIC VOLUMES
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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7 FUTURE 2040 PLUS PROJECT CONDITIONS

The Future Plus Project Conditions scenario adds the project's estimated traffic generation to the Future Year 2040 Condition's scenario described in Chapter 6. As described in the previous section, the forecasted Future Year 2040 Conditions intersection turn movement volumes were derived from a combination of post processing forecasted approach volumes from the SBTAM model and the project trips generated by Other Area Approved Developments for each study intersection. The SBTAM traffic model plots are provided in **Appendix C**. The **Appendix E.** Level of service impacts identified in this scenario are considered "cumulative" impacts—impacts that the project contributes to, but does not solely cause, and may be responsible for a fair-share of the cost to implement any mitigation measures.

7.1 Future Plus Project Traffic Analysis

The intersection level of service analysis for Future Plus Project Conditions uses existing intersection geometrics and the traffic volumes shown in is provided in **Figure 13**. **Table 7-1** and **Appendix E** provide the results of the analysis.

Table 7-1: Comparison of Future 2040 and Future 2040 Plus Project LOS

Intersection	Control Type	Background Conditions				Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Stoddard Wells Rd / Outer Highway 15	SSSC	64.8	F	82.5	F	761.5	F	465.8	F
2. Outer Highway 15 / I-15 NB Ramps	SSSC	13.9	B	15.6	C	54.3	F	42.9	E
3. W Frontage Rd / I-15 SB On Ramp	SSSC	5.0	A	5.0	A	5.0	A	5.0	A
4. Stoddard Wells Rd / W Frontage Rd	SSSC	230.6	F	188.3	F	984.2	F	683.8	F
5. Stoddard Wells Rd / I-15 SB Off Ramp	SSSC	14.2	B	17.3	C	22.1	C	21.0	C
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	SSSC	1941.5	F	4896.0	F	4753.3	F	[1]	
7. Stoddard Wells Rd / Quarry Rd	SSSC	41.1	E	28.1	D	116.0	F	38.2	E
8. Quarry Rd / I-15 SB Ramps	SSSC	16.2	C	23.1	C	24.0	C	35.4	E
9. Falchion Rd / Apple Valley Rd	AWSC	7.5	A	7.6	A	7.7	A	7.7	A
10. Falchion Rd / Outer Hwy 15	SSSC	9.1	A	9.9	A	15.1	C	25.5	D
11. Outer Highway 15/ Norco St	SSSC	8.6	A	9.0	A	11.1	B	12.1	B
12. Outer Highway 15/ Quarry Rd	SSSC	8.9	A	9.2	A	10.1	B	10.4	B
13. Norco Street / Project Driveway #1	SSSC	Not Applicable				9.7	A	10.3	B
14. Falchion Road / Project Driveway #2	SSSC	Not Applicable				11.0	B	10.1	B

Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service
[1] Computation not defined due to volume exceeding capacity.

As presented in **Table 7-1**, the combination of ambient traffic and the addition of project traffic through the year 2040 causes intersection LOS deficiencies (from LOS D or better to LOS E or F) at the following six study intersections: Stoddard Wells Rd / Outer Highway 15, Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / Quarry Rd, and Quarry Rd / I-15 SB Ramps.

The addition of project traffic in this scenario exacerbates the intersection LOS deficiencies at the same intersections impacted by the addition of project traffic to Background Conditions with the additions of Outer Highway 15 / I-15 NB Ramps.

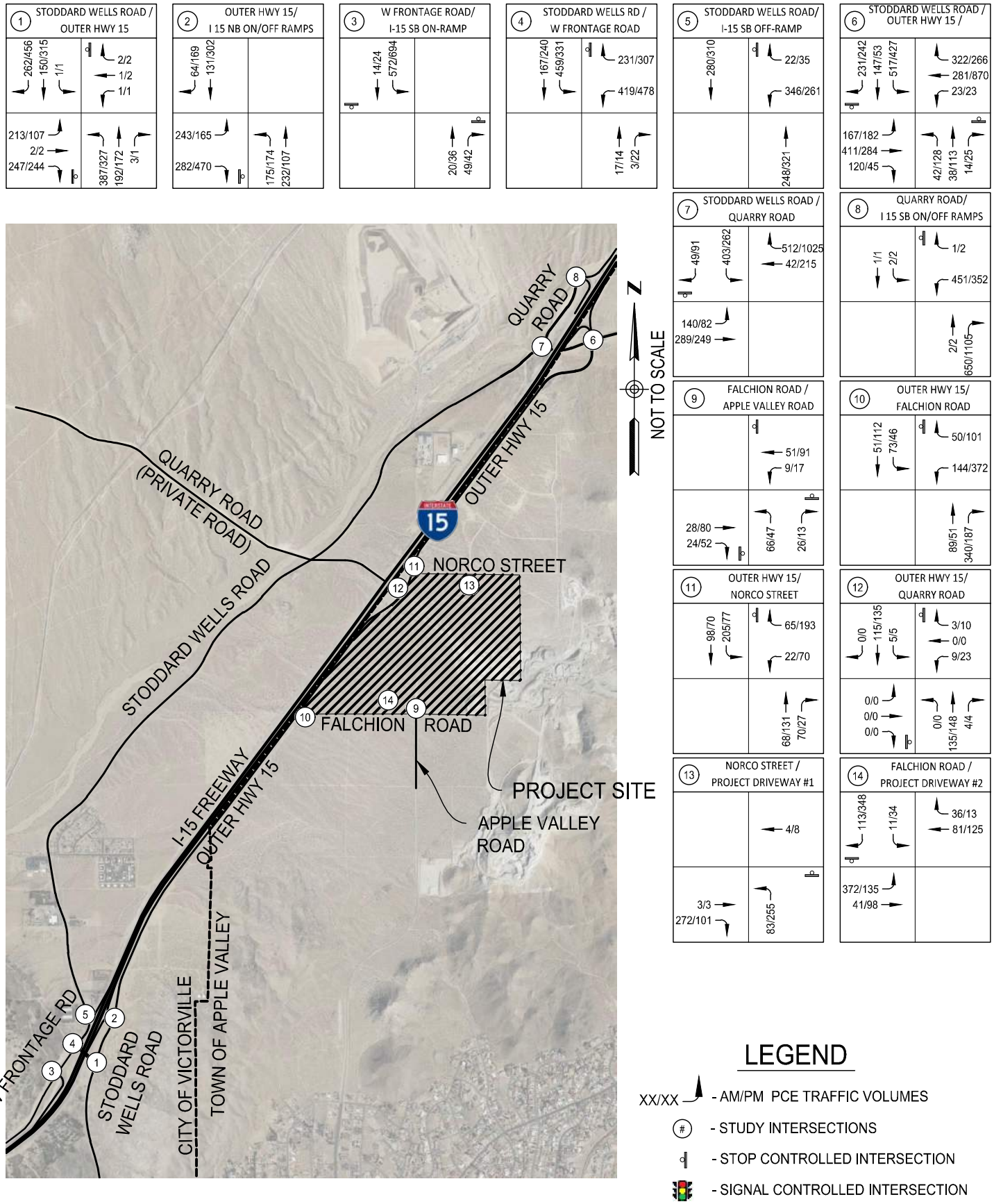

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FIGURE 13: FUTURE YEAR WITH PROJECT PCE TRAFFIC VOLUMES
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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7.1.1 Level of Service With Recommended Improvements

The five existing side-street stop-controlled intersections of Stoddard Wells Rd / Outer Highway 15, Outer Highway 15 / I-15 NB Ramps, Stoddard Wells Rd / W Frontage Rd, Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps, and Stoddard Wells Rd / Quarry Rd experience failure in Background Plus Project Conditions.

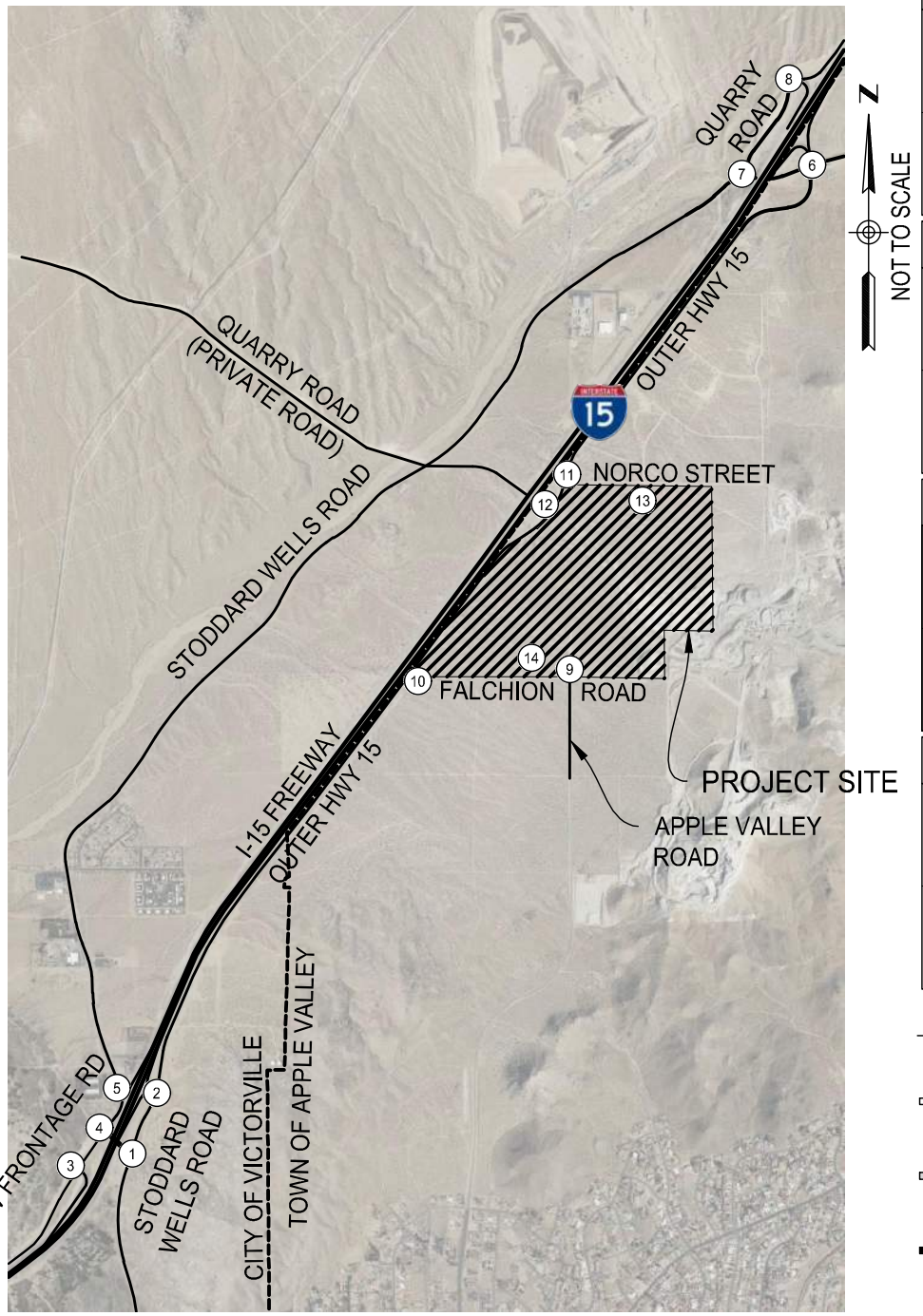
Improvements to the intersection of Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps and the widening of the segment of Stoddard Wells Rd between Quarry Road to I-15 NB Ramps/Outer I-15 were identified in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in **Appendix D.**

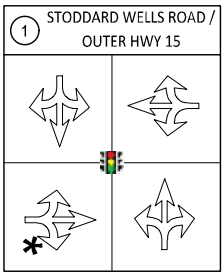
Table 7-2 provides the capacity analysis utilizing the near-term project-specific intersection improvements are outlined in **Chapter 1.6** and illustrated in **Figure 14.** The proposed mitigation improves the LOS deficiency, to a LOS D or better.

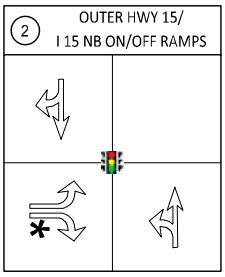
Table 7-2: Improved Level of Service Under Future 2040 + Project Conditions

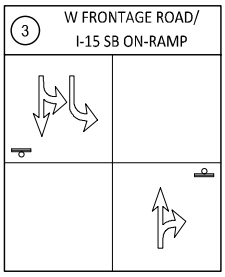
Intersection	Control Type	Future Conditions				Future + Project				Change in Delay (Seconds)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM
1. Stoddard Wells Rd / Outer Highway 15	SSSC	64.8	F	82.5	F	761.5	F	465.8	F	696.7	383.3
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				13.2	B	7.6	A	-51.6	-74.9
2. Outer Highway 15 / I-15 NB Ramps	SSSC	13.9	B	15.6	C	54.3	F	42.9	E	40.4	27.3
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				13.4	B	10.2	B	-0.5	-5.4
4. Stoddard Wells Rd / W Frontage Rd	SSSC	230.6	F	188.3	F	984.2	F	683.8	F	753.6	495.5
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				26.0	C	26.1	C	-204.6	-162.2
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps [2]	SSSC	1941.5	F	4896.0	F	4753.3	F	**[1]**		2811.8	
with Cumulative improvements: convert to traffic signal, modify turn lanes	TS	Not Applicable				38.9	D	37.4	D	-1902.6	-4858.6
7. Stoddard Wells Rd / Quarry Rd [3]	SSSC	41.1	E	28.1	D	116.0	F	38.2	E	74.9	10.1
with Cumulative improvements: convert to traffic signal	TS	Not Applicable				22.8	C	25.5	C	-18.3	-2.6
8. Quarry Rd / I-15 SB Ramps	SSSC	16.2	C	23.1	C	24.0	C	35.4	E	7.8	12.3
with Improvements: provide NBR		Not Applicable				11.6	B	10.6	B	-4.6	-12.5
10. Falchion Rd / Outer Hwy 15	SSSC	9.1	A	9.9	A	15.1	C	25.5	D	6	15.6
with Project Improvements: convert to AWSC, provide turn lanes	AWSC	Not Applicable				10.4	B	14.9	B	1.3	5.0

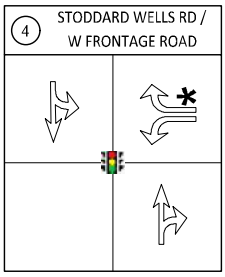
Abbreviations:
SSSC – Side Street Stop Controlled Intersection, AWSC – All Way Stop Controlled Intersection, Not Applicable – Not Applicable Future Intersection Delay – seconds per vehicle, LOS – Level of Service
[1] Computation not defined due to volume exceeding capacity.
[2] The improvements identified for the intersection of Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in **Appendix D.**
[3] The widening of the segment of Stoddard Wells Rd between Quarry Road to I-15 NB Ramps/Outer I-15 are the improvements outlined in the approved Apple Valley 143 Transportation Impact Analysis, dated November 2022, by Dudek. Excerpt of the report is provided in Appendix D.

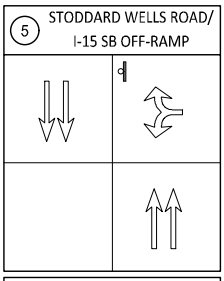


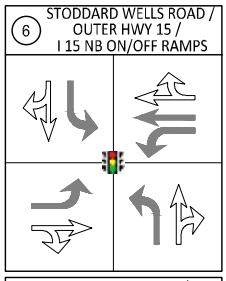


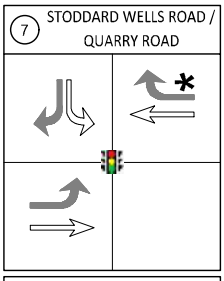


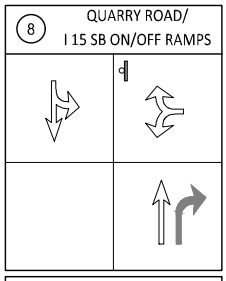


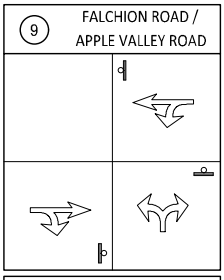


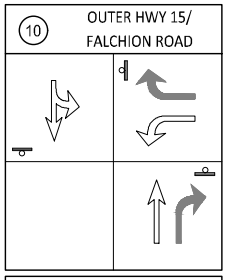


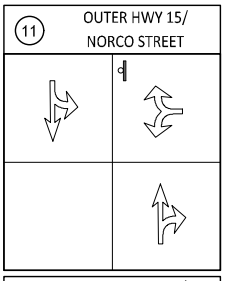


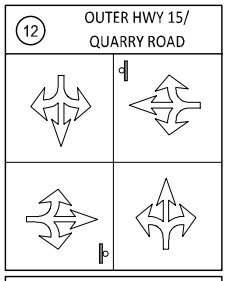


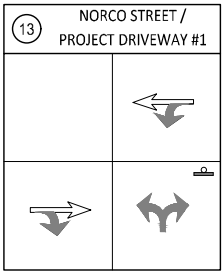


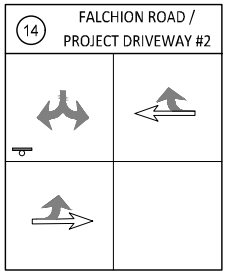












LEGEND

- EXISTING GEOMETRICS
- PROJECT GEOMETRICS
- FUTURE GEOMETRICS

(#) - STUDY INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP CONTROLLED APPROACH
* - FREE RIGHT TURN

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FIGURE 14: FUTURE YEAR WITH PROJECT INTERSECTION GEOMETRICS
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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Last Opened: Aug 22, 2023 - 5:23pm by: Tim

8 RECOMMENDED MITIGATION MEASURES AND PROJECT-SPECIFIC FRONTAGE IMPROVEMENTS

8.1 Recommended Mitigation Measures to Improve LOS Deficiencies

The recommended mitigation measures to improve intersections with deficient levels of service is described comprehensively beginning in **Section 1.6** of Section 1 (Executive Summary).

8.1.1 Project-Specific Improvements

1. Stoddard Wells Rd / Outer Highway 15: Convert intersection to all-way stop control and maintain the current lane configuration at each approach.
2. Stoddard Wells Rd / W Frontage Rd: Convert intersection to all-way stop control and maintain the current lane configuration at each approach.
3. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps: install a traffic signal and widen the eastbound, westbound, northbound, and southbound approaches to accommodate turn lanes.
4. Stoddard Wells Rd / Quarry Rd: install a traffic signal and widen the eastbound, westbound, northbound, and southbound approaches to accommodate turn lanes.
5. Quarry Rd / I-15 SB Ramps: Widen the northbound approach to accommodate turn lanes.
6. Falchion Rd / Outer Hwy 15: Convert intersection to all-way stop control and maintain the current lane configuration at each approach.

8.1.2 Cumulative Long-Term Improvements

1. Stoddard Wells Rd / Outer Highway 15: install a traffic signal and maintain the current lane configuration at each approach.
2. Outer Highway 15 / I-15 NB Ramps: install a traffic signal and maintain the current lane configuration at each approach.
3. Stoddard Wells Rd / W Frontage Rd: widen the eastbound and southbound approaches to accommodate additional turn lanes and retain the project specific proposed improvements.
4. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps: Retain the project specific proposed improvements.
5. Stoddard Wells Rd / Quarry Rd: Retain the project specific proposed improvements.
6. Quarry Rd / I-15 SB Ramps: Retain the project specific proposed improvements.
7. Falchion Rd / Outer Hwy 15: Retain the project specific proposed improvements.

8.2 Project-Specific Frontage and Access Improvements

The required project-specific frontage and access improvements are described in detail **Section 1.11** of the Executive Summary.

1. **Construct access and site frontage improvements on Falchion Road:**
   a. Construct Falchion Rd[7] from Outer Highway 15 to Apple Valley Rd.
   b. Construct and improve the project's frontage with Falchion Rd from Outer Highway 15 to Apple Valley Rd.
      - The project will be required to dedicate land and construct the 52-foot half-width of a major road

section including the project's driveways. Until the southern half of Falchion Road is constructed by others the two travel lanes constructed with the half-width section can provide for two-way traffic.

2. **Construct access and site frontage improvements on Norco Street:**
   a. Construct Norco Street to collector standards from Outer Highway 15 to the realigned Apple Valley Road.
      - The project will be required to construct half-width of a collector street section including the proposed driveways accessing the project from Norco Street.
3. **Construct access and site frontage improvements on Outer Hwy 15:**
   a. Construct and improve the project's frontage with Outer Highway 15 between Falchion Road and Norco Street.
      - The project will be required to dedicate land and construct a 44-foot half-width of a secondary road section including the project's driveways.
4. **Construct site frontage improvements on Apple Valley Road:**
   a. Construct and improve the project's frontage with Apple Valley Road.
      - The project will be required to dedicate land and construct the 64-foot half-width of Apple Valley Road's major divided arterial designation.
      - The project should construct the section of Apple Valley Rd fronting project owned property between Falchion Rd and Norco St as a minimum two-way two-lane (one in each direction) roadway to close this gap.

8.3 Fair Share Calculations

The fair share percentages calculated in Section 1.7 are used to determine the Fair Share Fee for each intersection and by forecast year. **Table 8-1** on the following page provides the Fair Share Fee for the Near-Term (Year 2024) Scenario. **Table 8-2** provides the Fair Share Fee for the Long-Term (Year 2040) Scenario.

Table 8-1: Project's Percent Contribution (Fair Share) to Deficient Intersections for Near-Term (Year 2024)

Intersection	Cost ($)	Fair Share %	Fair Share Fee
1. Stoddard Wells Rd / Outer Highway 15	$50,000	92.3%	$46,167
4. Stoddard Wells Rd / W Frontage Rd	$50,000	89.8%	$44,877
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	$1,400,000	31.2%	$436,348
7. Stoddard Wells Rd / Quarry Rd	$800,000	30.7%	$245,560
8. Quarry Rd / I-15 SB Ramps	$200,000	32.2%	$64,372
Notes: Project traffic used in calculating the fair-share percentage is based on Passenger Car Equivalents (PCEs).			

Table 8-2: Project's Percent Contribution (Fair Share) to Deficient Intersections for Long-Term (Year 2040)

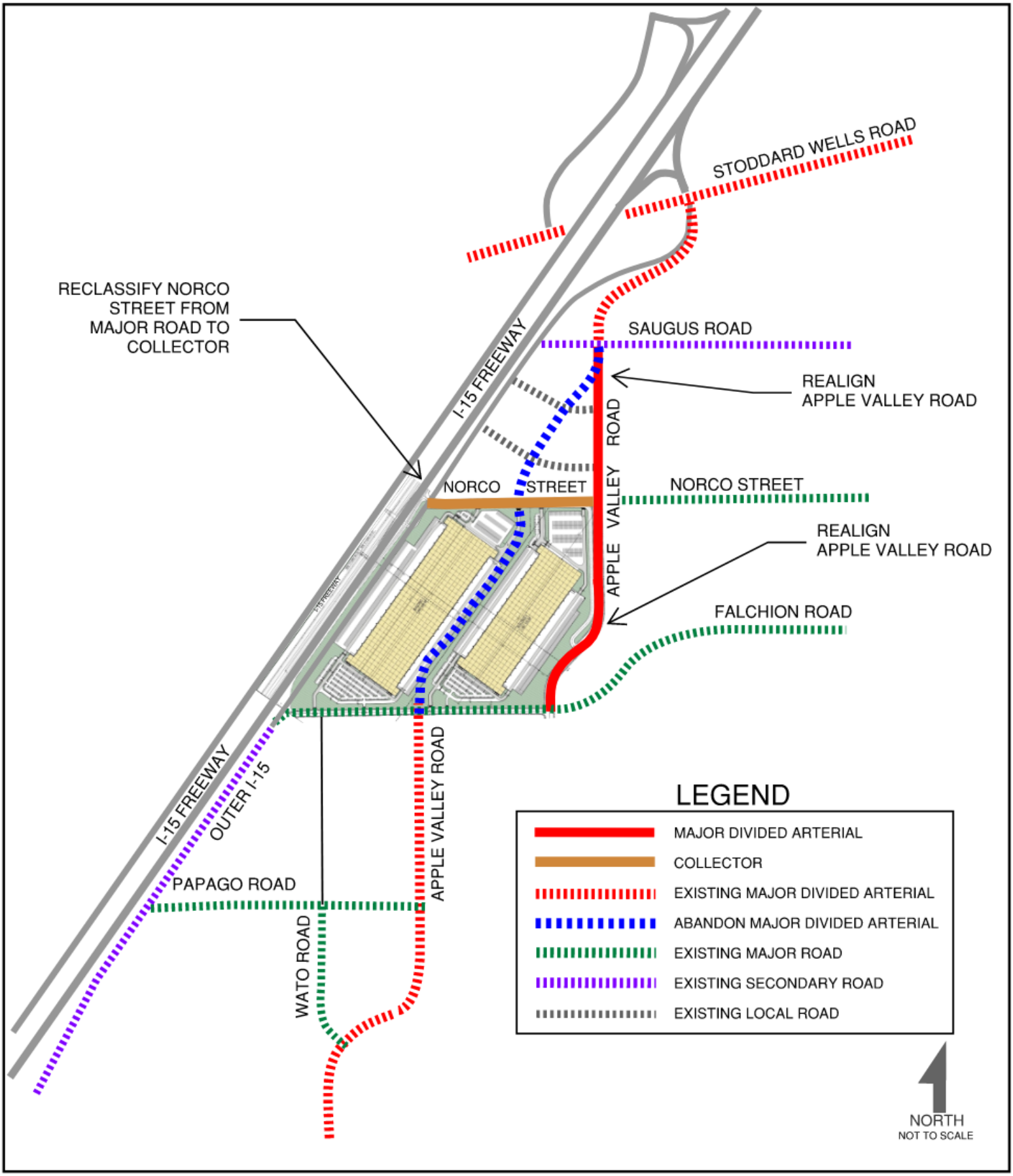
Intersection	Cost ($)	Fair Share %	Fair Share Fee
1. Stoddard Wells Rd / Outer Highway 15	$500,000	36.4%	$181,756
2. Outer Highway 15 / I-15 NB Ramps	$500,000	66.8%	$334,025
4. Stoddard Wells Rd / W Frontage Rd	$500,000	32.8%	$163,922
6. Stoddard Wells Rd / Outer Highway 15 / I-15 NB Ramps	$1,400,000	21.3%	$297,605
7. Stoddard Wells Rd / Quarry Rd	$800,000	23.3%	$186,237
8. Quarry Rd / I-15 SB Ramps	$200,000	24.8%	$49,533
10. Falchion Rd / Outer Hwy 15	$500,000	36.4%	$181,756
Notes: Project traffic used in calculating the fair-share percentage is based on Passenger Car Equivalents (PCEs).			

9 PROPOSED GENERAL PLAN AMENDMENTS

The project proposes changes to the Town's circulation system that will require an amendment to the Town's Streets and Roads Plan in the circulation element of the general plan. The modifications to the circulation system are the street realignment and street reclassification illustrated in **Figure 15**, on the following page.

The primary amendment is the abandonment of the current right of way alignment of Apple Valley Road and realignment of the right of way from Saugus Road to Falchion Road following the eastern boundary of the project's property.

A reclassification amendment proposes to change Norco Street from a major road to a collector street west of the realigned Apple Valley Road.



DAVID EVANS AND ASSOCIATES INC.

FIGURE 15: PROPOSED AMENDMENTS TO
THE TOWN'S GENERL PLAN STREETS AND ROAD PLAN
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

10 APPENDICES

Appendix A: Approved Scope Agreement
Appendix B: Traffic Counts
Appendix C: Forecast Model Plots and Volume Development
Appendix D: Other Area Approved Developments Excerpts
Appendix E: Intersection Capacity Analysis Worksheets
Appendix F: Traffic Signal Warrant Analysis
Appendix G: General Plan Amendment
Appendix H: VMT Analysis

Appendix A: Approved Scope Agreement

DAVID EVANS
AND ASSOCIATES INC.

December 9, 2022 Job No. FGFW0000-0001

MEMORANDUM



To: Herb Krumsick
FGFW IV, LLC, LLC
c/o Jessica Haughton
Synergy Consulting
410 Patti Ann Woods Drive
Henderson, NV 89002

From: James Daisa, PE
Senior Transportation Project Manager / Associate

RE: FOCUSED TRAFFIC IMPACT ANALYSIS SCOPING AGREEMENT FOR THE PROPOSED INLAND EMPIRE NORTH LOGISTICS CENTER LOCATED AT THE NEC OF FALCHION ROAD AND OUTER HIGHWAY 15 SOUTH IN THE TOWN OF APPLE VALLEY, CA (APN: 0472-231-08)

This memorandum presents key elements of the proposed Focused Traffic Impact Analysis (TIA Report) scope of work for the above referenced development project. The purpose of this memorandum is to inform the Town of Apple Valley of the TIA's assumptions and methodologies prior to preparing the analysis. We will incorporate any changes specified by the Town, and once approved, this document will serve as our notification to proceed.

The Town of Apple Valley does not have guidelines for conducting intersection level of service deficiency studies, therefore the assumptions and methods described in this document conform to San Bernardino County's Transportation Impact Study Guidelines (July 2019).

With respect to VMT impacts, the Town of Apple Valley adopted Resolution No. 2021-08 in May 2021. This resolution defines the Town's thresholds of significance for project generated VMT and the project's overall effect of VMT at the town-wide scale. The resolution also defines the specific methods for analyzing VMT in Apple Valley.

The Town has not, however, adopted criteria for screening development from requiring a VMT analysis under CEQA. This scoping agreement uses the county's screening criteria to identify if the proposed project requires a VMT analysis as part of its environmental review.

A. Project Description

The proposed project consists of two speculative warehouse buildings. Building 1 is the westernmost building on the site and is proposed to be a 1,507,326 square foot warehouse building located on approximately 96-acres. Building 2 is proposed to be a 1,097,120 square foot warehouse located on approximately 76-acres. The floor area of each building includes 10,000 square feet of office space on the first floor and the mezzanine level (2nd floor).

The project site is located at the northeast corner of Falchion Road and Outer Highway 15 South, as illustrated in **Exhibit A**. The site is bounded to the north by unimproved Norco Street and undeveloped land; to the south by Falchion Road and undeveloped land; to the west by Outer Highway 15 South and I-15 freeway; and to the east by unimproved Apple Valley Road and undeveloped land. The site is located about 3.5-miles west of the North Apple Valley Industrial Specific Plan's (NAVISP) western boundary and, therefore, it is not within the Plan area or subject to its policies and development standards.

Building 1 includes 103 loading docks on each side of the building and 692 trailer parking spaces / container storage within a secured yard. Building 1 provides 826 automobile parking spaces distributed between the north and south ends of the building. Building 2 include 118 loading docks on both sides of the building, and 663 trailer parking spaces within a secured yard 590 automobile parking spaces. **Exhibit B** shows the proposed site plan.

Site Access

Access to the two buildings on the site will be from driveways on Norco Street, Falchion Road, and Outer Highway 15 South. The proposed circulation and access plan includes four gated driveways on Norco Street (see **Exhibit B** driveways A though D). Prior to the gates, access to parking lots is permitted for employees and visitors, but access to the loading docks and container storage areas to each side of both buildings is gated. The driveways on Norco Street are spaced about 520 feet (A to B), 280 feet (B to C), and 530 feet (C to D).

Access to the site from Falchion Road is via four driveways (see **Exhibit B** driveways E though H) providing unrestricted access to the parking lots on the south side of each building, and gated access to the loading docks and container storage areas. The Falchion Road intersections are spaced about 620 feet (E to F), 830 feet (F to G), and 385 feet (G to H).

One driveway (see **Exhibit B** driveway I) is provided on Outer Highway 15 South about 600 feet north of the Outer Highway 15 South / Falchion Road intersection for access to Building 1.

Project driveways will be reviewed for required traffic control and the gated primary truck entrances will be analyzed for traffic control, lane geometries, and queuing behind the access gates based on industry standard gate processing times, as described in Section G below.

Circulation Amendments

The project proposes changes to the Town's circulation system that will require an amendment to the Town's Streets and Roads Plan in the circulation element of the general plan. The modifications to the circulation system are the street realignments and street reclassifications illustrated in **Figure 1**.

The primary change is the abandonment of the current right of way alignment of Apple Valley Road and realignment of the right of way from Stoddard Wells Road to a point south of Wato Road where it connects back to the current alignment.

The reclassification amendments propose to change Norco Street from a major road to a collector street and change Papago and Wato Roads from major roads to secondary streets.

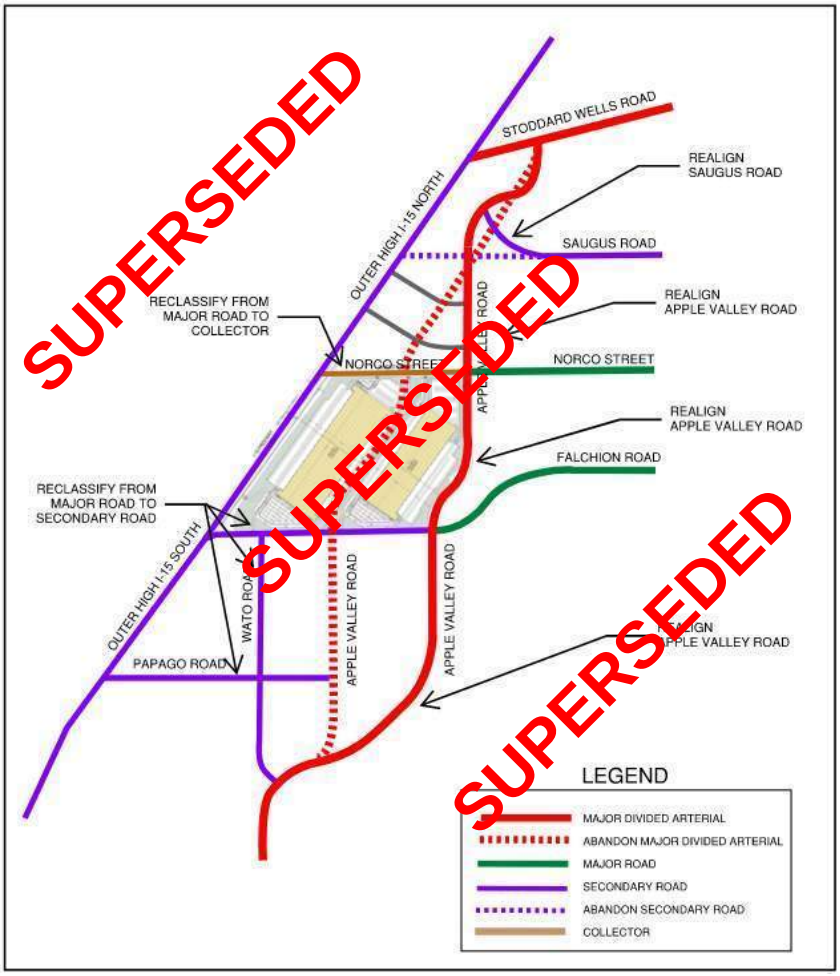


Figure 1: Proposed amendments to the Town's general plan Streets and Roads Plan.

B. Project Trip Generation

The proposed project is a speculative warehouse where the tenant(s) and function as a potential short term storage facility, distribution center, fulfillment center, etc. is unknown. While the impact analysis needs to reflect a reasonable spectrum of tenant types, there is a risk when estimating trip generation of over or under-estimating traffic. The 11th Edition of the Institute of Transportation Engineers' Trip Generation manual contains data for the most common types of warehouse operations with a wide range of rates. **Table 1** summarizes the trip generation rates for warehouse facilities in the current edition of ITE's Trip Generation.

Table 1: Trip Generation Rates for ITE Land Use Categories of Warehousing

Warehouse Type	ITE Land Use Code	Average Trip Generation Rates for Warehouse Types (Trips Per KSF) (Source: ITE Trip Generation 11th Edition)		
		Average Daily Traffic	AM Peak Hour of Adjacent Street Traffic	PM Peak Hour of Adjacent Street Traffic
		Total (In + Out)	Total (In + Out)	Total (In + Out)
High-Cube Transload and Short-Term Storage Warehouse	154	1.54	0.08	0.10
High-Cube Cold Storage Warehouse	157	2.12	0.11	0.12
High-Cube Fulfillment Center Warehouse - Non-Sort	155	1.81	0.15	0.16
General Warehouse	150	1.71	0.17	0.18
High-Cube Parcel Hub Warehouse	156	4.63	0.70	0.64
High-Cube Fulfillment Center Warehouse - Sort	155	6.44	0.87	1.20
Average of All Warehouse Types		3.04	0.35	0.40
Average Without High-Cube Sort Fulfillment Center		2.36	0.24	0.24

To help select a trip generation rate for the proposed project representative of the range of potential owners/tenants, **Table 1** includes the average of the rates for all warehouse types in the ITE Trip Generation manual and the average of the rates for all warehouse types except High-Cube Fulfillment Sort Facility—the most intensive type of warehouse. The secondary average rate (excluding High-Cube Fulfillment Sort Facility) represents two thirds the ITE warehouse types and covers a broad range of tenant types and operations.

Table 2 summarizes the estimated trip generation of the proposed project for an average weekday, and weekday AM (7-9 AM) and PM (4-6 PM) peak hours, based on the secondary average rates identified in **Table 1**. The proposed Inland Empire North Logistics Center would generate about 6,146 vehicle trips per day and 625 vehicle trips in both the AM and PM peak hour. Queuing behind the gates will be estimated using industry standard methods based on typical

It is standard practice to convert vehicle trips to passenger car equivalents (PCEs) for intersection capacity analysis. This conversion reflects the effects of large vehicles on intersection operations both from the physical space a truck occupies but also from their effect on the intersection's saturation flow rate due to the slower acceleration of trucks.

When converted to PCEs, the Inland Empire North Logistics Center generates about 8,637 daily PCEs, and 878 PCEs in both the AM and PM peak hour.

Table 2: Inland Empire North Logistics Center Project Trip Generation

Land Use	Gross Floor Area (KSF)	Daily	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			In	Out	Total	In	Out	Total
Warehouse (Rates are the Average of ITE Land Use Categories 150, 154, 156, and 157) Total floor area of Buildings 1 and 2	2,604.45	Vehicle Trip Generation Rates (Trips Per 1,000 Square Feet of Gross Floor Area)						
		2.36	0.18	0.06	0.24	0.07	0.17	0.24
		Total Vehicle Trip Generation						
		6,146	481	144	625	175	450	625
	Mode Share	Project Trip Generation by Vehicle Type						
Passenger Cars (Percent of Total)	74.21%	4,561	357	107	464	130	334	464
2-Axle Trucks (Percent of Total)	4.55%	280	22	7	28	8	20	28
3-Axle Trucks (Percent of Total)	4.18%	257	20	6	26	7	19	26
4-Axle Trucks (Percent of Total)	17.04%	1047	82	24	107	30	77	107
	PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
Passenger Cars)	1.0	4,561	357	107	464	130	334	464
2-Axle Trucks	1.5	419	33	10	43	12	31	43
3-Axle Trucks	2.0	514	40	12	52	15	38	52
4 + Axle Trucks	3.0	3142	246	73	320	89	230	320
Total Passenger Car Equivalents (PCE)		**8,637**	**676**	**202**	**878**	**246**	**632**	**878**

Notes:
[1] Trip generation rates are the average of the rates of each ITE warehouse type except the High-Cube Fulfillment Sort Center Warehouse, which is the most intense use like an Amazon Fulfillment Center which sorts individual packages for delivery to end users. This type of use is not anticipated for the Inland Empire North Logistics Center See Table 1.
KSF = Thousands of Square Feet.
AM / PM Peak Hour of Adjacent Street Traffic = Trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods.
Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition).
Source of passenger car / truck mode share (percentage of total): South Coast Air Quality Management District High Cube Warehouse Trip Generation Study (2016). Based on data from eight high cube warehouses in the Inland Empire over 1,000,000 square feet in size. The average warehouse building size is 1,364,496 square feet.
Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions

C. Study Intersections

This focused traffic study evaluates key intersections on routes expected to be used by project traffic to access the site. **Exhibit C** and the list below identify the intersections proposed for inclusion in the study.

1. Stoddard Wells Rd / Outer Highway 15 S
2. Outer Highway 15 S / I-15 NB On/Off-Ramps
3. West Frontage Rd / I-15 SB On-Ramp
4. Stoddard Wells Rd / West Frontage Rd
5. Stoddard Wells Rd / I-15 SB Off-Ramp
6. Stoddard Wells Rd / Outer Highway 15 S / I-15 NB Ramps
7. Stoddard Wells Rd / Quarry Rd
8. Quarry Rd / I-15 SB On/Off-Ramps
9. Falchion Rd / Apple Valley Rd
10. Falchion Rd / Outer Hwy 15 N
11. Outer Hwy 15 N / Norco St
12. Outer Hwy 15 N / Quarry Rd

D1. Norco St / Project Driveway #1
D2. Falchion Road / Project Driveway #2

All the study intersections are currently side-street stop controlled, or all-way stop-controlled. Driveway #1 on Norco Street and Driveway #2 on Falchion Road are representative of a series of driveways on both streets serving automobiles accessing parking lots or trucks accessing the gated loading areas. The representative driveways are used in this scoping memorandum to distribute automobile and truck traffic to off-site intersections. The traffic analysis will include a micro-distribution of automobiles and trucks to their respective driveways.

D. Project Trip Distribution and Assignment

Project traffic is distributed by direction separately for automobiles (employees) and trucks. The automobile distribution is based on where the warehouse employees are likely to reside or perform other activities (e.g., concentration of residential neighborhoods and commercial centers). The truck distribution is based on the most direct routes to major roadways and highways trucks are likely to use to access the project and depart for delivery of freight. Project trips are assigned to the area streets that provide the most direct route to the destinations.

Exhibit D1 shows the distribution of project-generated automobile to roadways as a percentage by direction and route. **Exhibit D2** shows the distribution of project-generated truck trips to roadways as a percentage by direction and route. The following exhibits show the assignment of project generated traffic at the study intersections. Truck traffic volumes have been converted into passenger car equivalents (PCEs) as required in the San Bernardino County guidelines for intersection capacity analysis. **Exhibit E** shows the total project PCE trips.

E. Traffic Analysis Scenarios

The traffic analysis scenarios, consistent with the county's impact analysis guidelines, include:

1. Existing conditions AM (7-9 AM) and PM (4-6 PM)
2. Background conditions (representing the project's opening year of 2024 with growth in background traffic without the project):
    a. Growth forecasts (based on the estimated combination of the ambient growth in traffic plus traffic generated by nearby, but unidentified, development equaling 3.5% annually).
3. Project conditions
    a. Project traffic in PCE's added to background condition forecasts
4. Future year 2040 conditions (representing the regional planning horizon of 2040 without project)[1]
    a. Forecasts derived from the San Bernardino Transportation Analysis Model (SBTAM) representing buildout of the General Plan
    b. If required by the Town, the future year 2040 conditions will include proposed development within and affecting the study area.
5. Future year 2040 plus project
    a. Project traffic in PCE's added to the forecasts developed for future year 2040 conditions

F. Level of Service Standard

The Town's general plan policy on level of service is to maintain a level of service (LOS) D in the AM and PM peak hours.

G. Analyses Included in Traffic Impact Analysis

- Intersection capacity analyses will be conducted using SYNCHRO software based on the unsignalized methods in the 6th Edition of the Highway Capacity Manual.
- A traffic signal warrant analysis (warrant 3 – peak hour) will be conducted at public intersections found to operate at LOS E or F under any project scenario.
- A queuing analysis will be conducted at intersections with high left turn volumes but currently do not provide left turn storage lanes. The 95th percentile queue will inform the roadway improvement design process. See Section A for a description of the project driveways.

[1] Caltrans typically requires that cumulative traffic forecasts represent a 20-year design life for infrastructure. If required, the cumulative scenario will be linearly extrapolated to the year 2044.

- Project driveways will be reviewed for traffic control and the gated primary truck entrances will be analyzed for traffic control, lane geometries, and queuing behind the access gate based on industry standard gate processing times.

H. Vehicle Miles of Travel (VMT) Screening

The Town of Apple Valley has adopted thresholds of significance for potential VMT impacts of development as well as the specific methodology for analyzing VMT impacts (Resolution No. 2021-08 - Adopting Thresholds of Significance for Vehicle Miles Traveled (VMT) Under the California Environmental Quality Act (CEQA)). According to the Town's resolution a development project would result in a significant project generated VMT impact if either of the following conditions are satisfied:

1. The baseline (2022) project generated VMT per service population (population plus employees) exceeds the Town of Apple Valley General Plan Buildout VMT per service population, or
2. The cumulative (2040-44) project generated VMT per service population exceeds the Town of Apple Valley General Plan Buildout VMT per service population

The Town, however, has not adopted criteria for screening projects from requiring a VMT analysis. The county and nearby municipalities have adopted such criteria consistent with the technical advisories published by the Governor's Office of Planning and Research. In this scoping agreement, the county's screening criteria are applied to the proposed project for the Town's consideration.

Applying the county's VMT screening criteria results in demonstrating that the proposed project requires a detailed VMT analysis under CEQA.

Screening criteria includes:

1. The project serves the local community and has the potential to reduce VMT by providing services that capture trips locally (the proposed Inland Empire North Logistics Center is not a locally serving type of land use).
2. The project is located within a Transit Priority Area (the proposed Inland Empire North Logistics Center is not located in a TPA).
3. The project generates less than 110 daily vehicle trips (the proposed Inland Empire North Logistics Center generates more than 110 daily trips).
4. The project is in a low VMT generating traffic analysis zone (the proposed Inland Empire North Logistics Center is not located in a low VMT generating zone in baseline year 2022, see **Figure 2**).

The proposed project does not meet any of the county's four screening criteria and therefore is required to conduct a VMT analysis to identify potentially significant impacts under CEQA.

If you have any questions or comments, please feel free to contact me at (909) 912-7304.

Attachments:

1. Exhibit A – Vicinity Map
2. Exhibit B – Project Site Plan
3. Exhibit C – Study Intersections
4. Exhibit D1 – Project Automobile Trip Distribution
5. Exhibit D2 – Project Truck Trip Distribution
6. Exhibit E – Total Project PCE Trips
7. Exhibit F – Recommended Circulation Plan Revisions

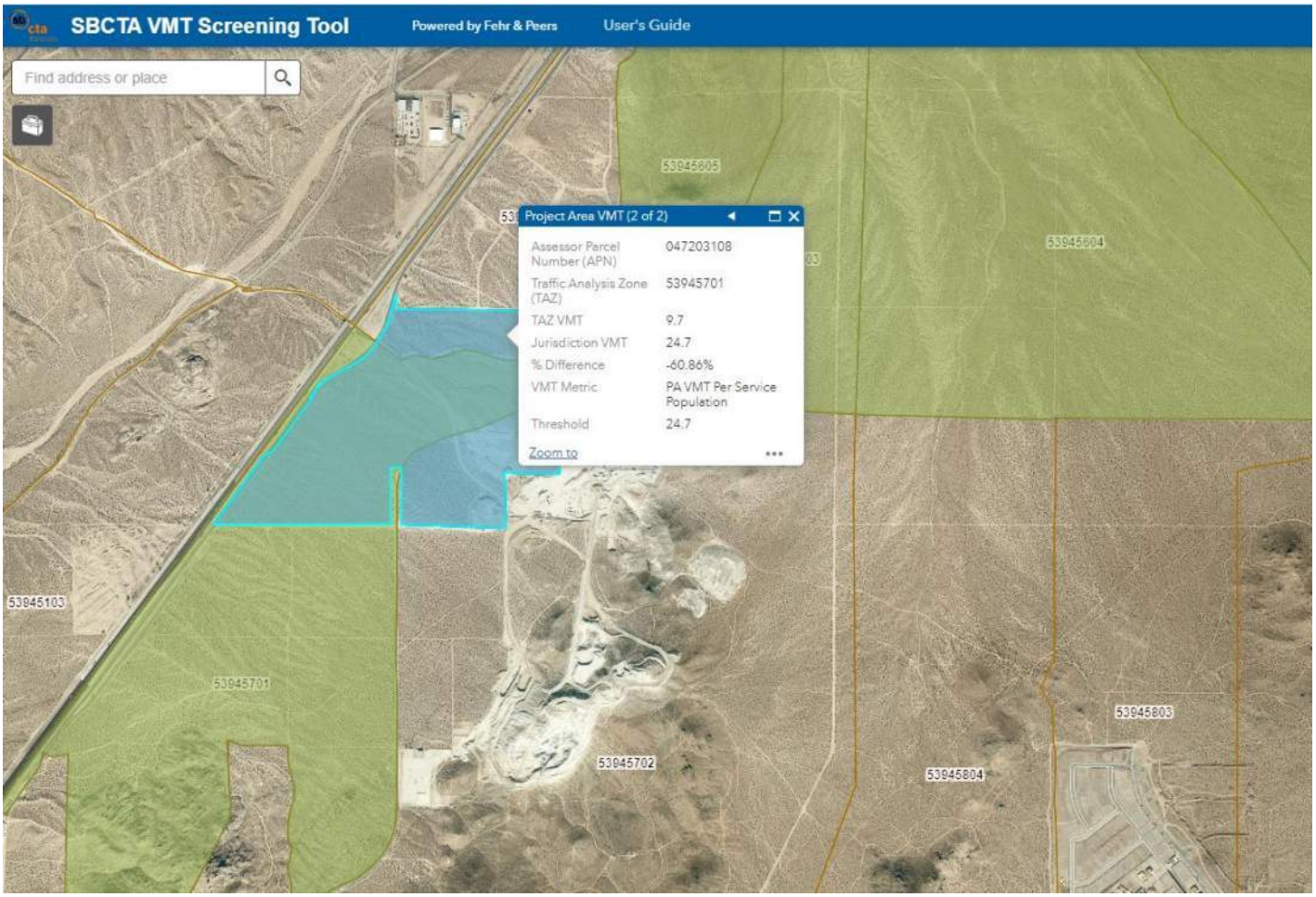
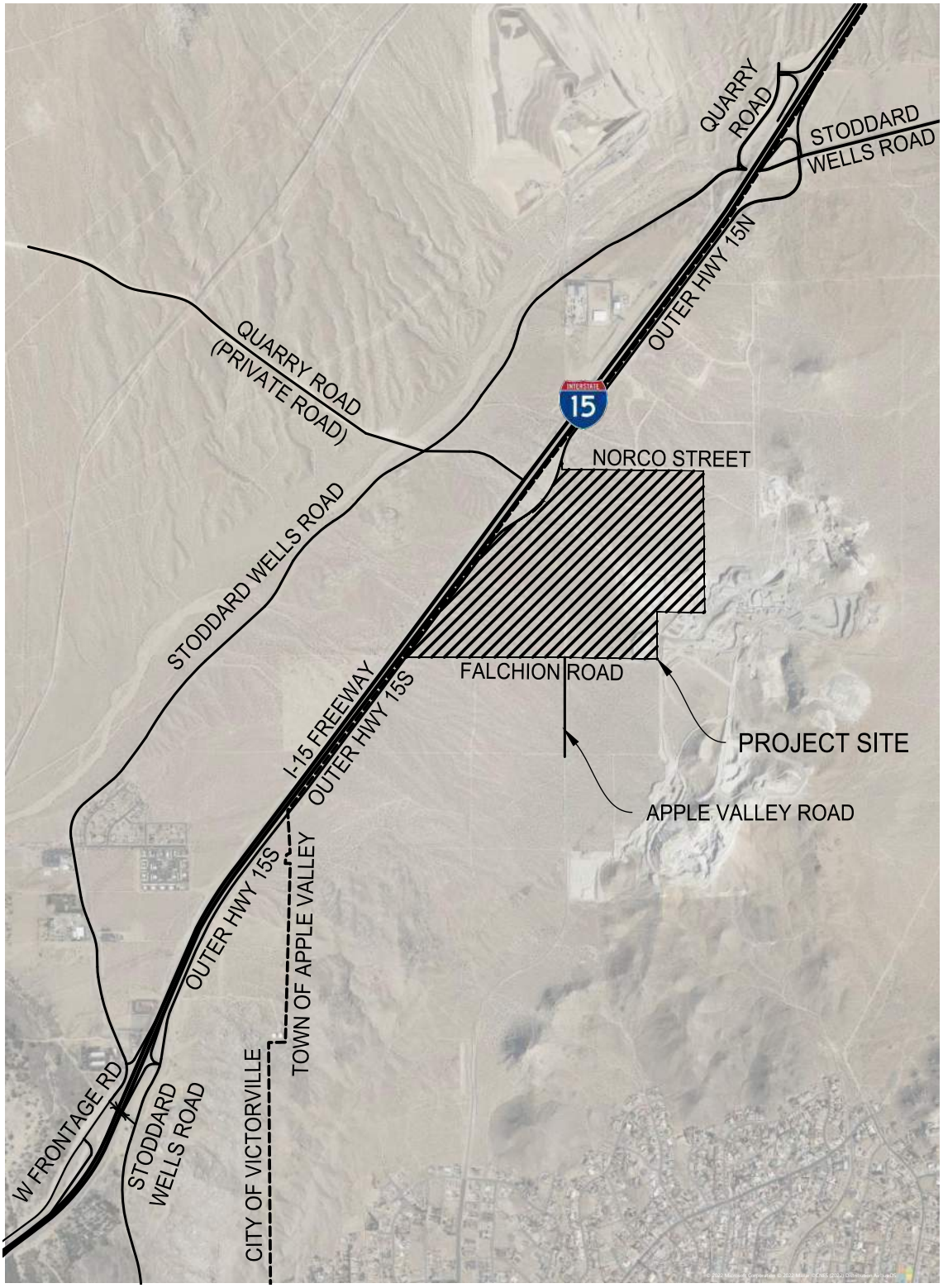


Figure 2: This figure represents baseline (2022) conditions and shows that part of the project (blue outlined area) falls within a low-VMT generating traffic analysis zone (shown in green). However, since the project parcel is not entirely within a low-VMT generating zone, it is not screened from requiring a VMT analysis based on this criterion.



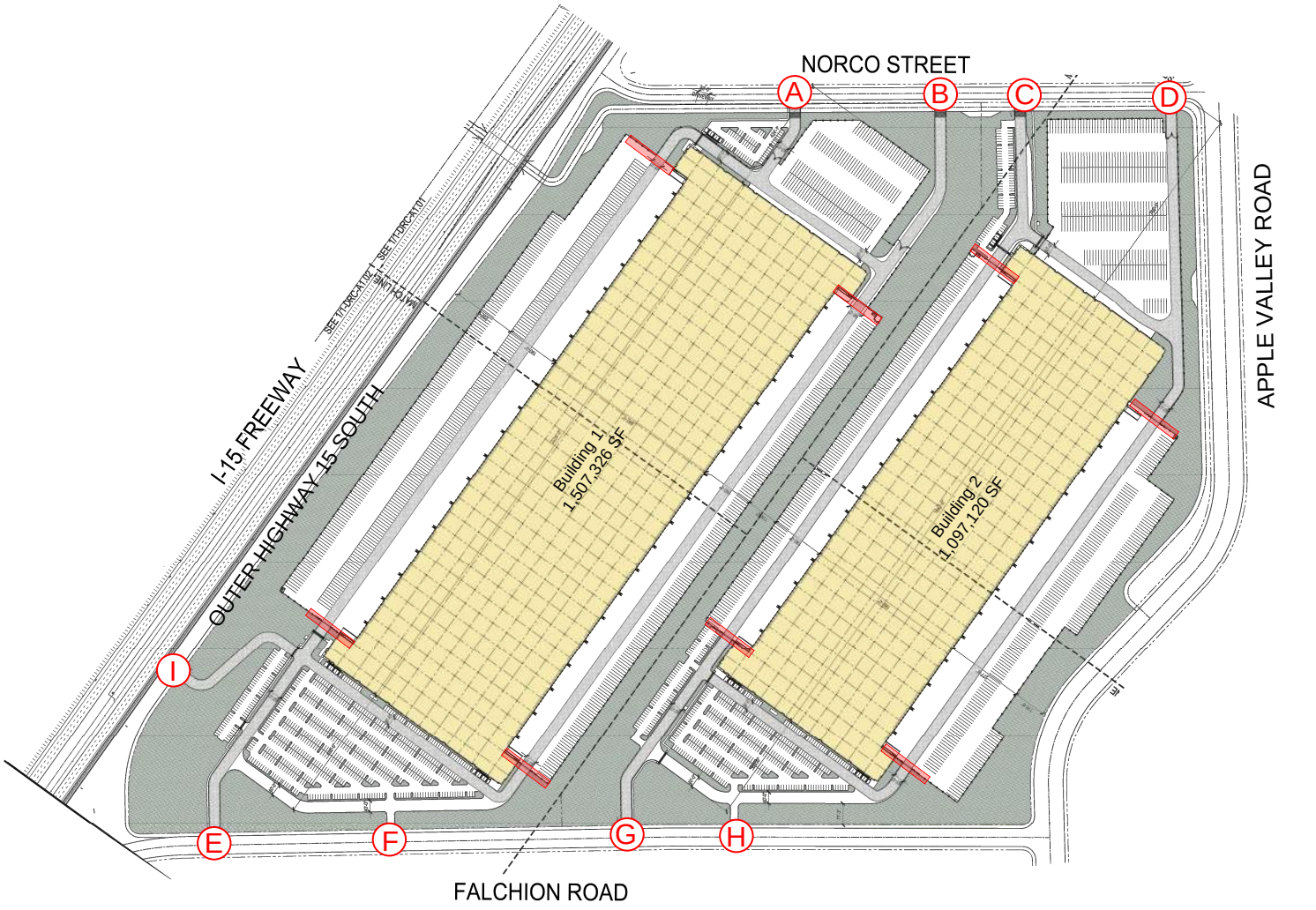
N

NOT TO SCALE

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT A: VICINITY MAP
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

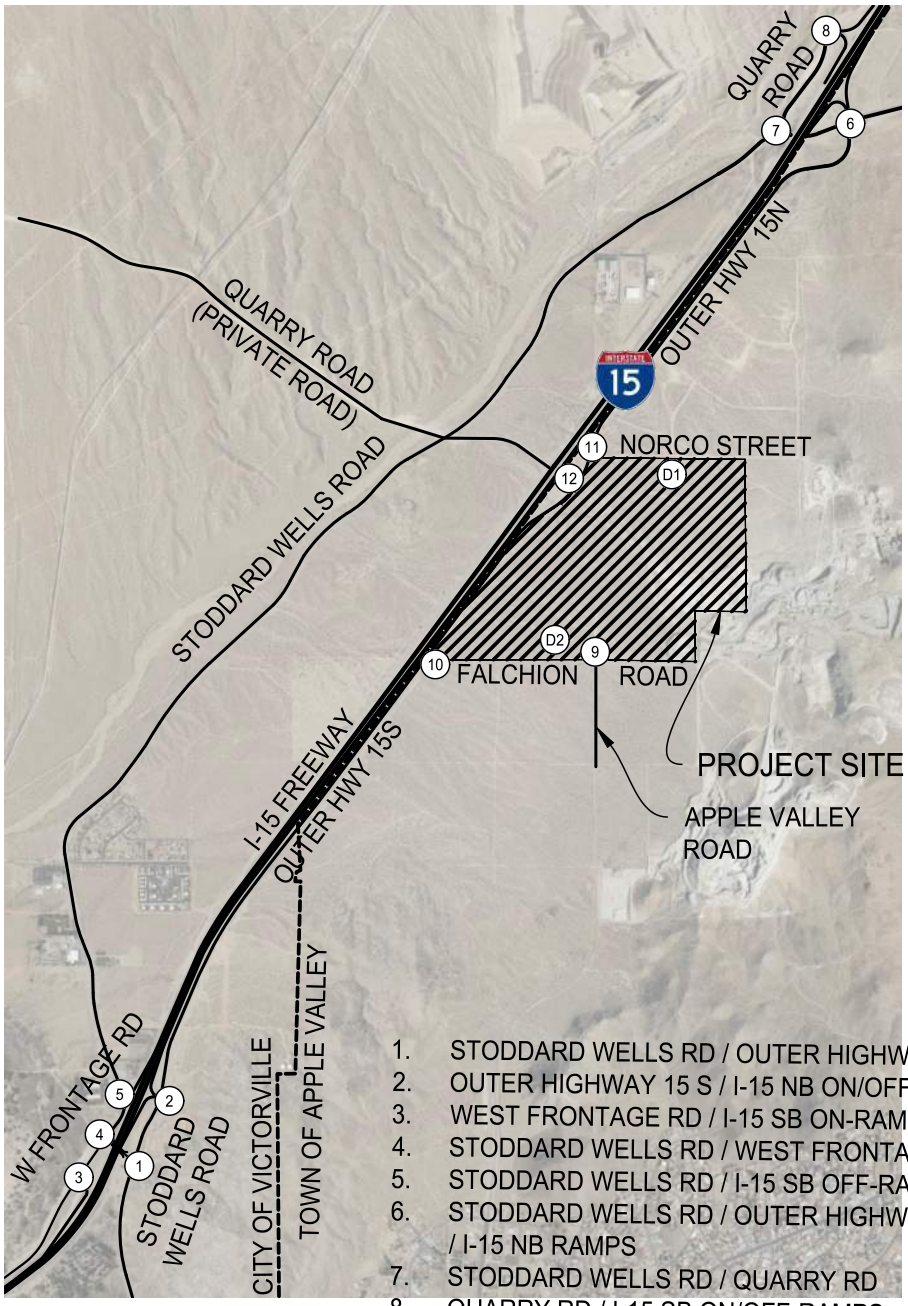
Drawing Name: D:\temp\Acc Publish_67161\Exhibit A.dwg
Last Opened: Dec 02, 2022 - 1:38pm by: Pxb



DAVID EVANS AND ASSOCIATES INC.

EXHIBIT B: SITE PLAN
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

Drawing Name: P:\FGFV\00000001\04000CAD\EXHIBIT\SITraffic\Scope_Apple Valley\Exhibit B.dwg
Last Opened: Nov 23, 2022 - 8:08am by: Pxb



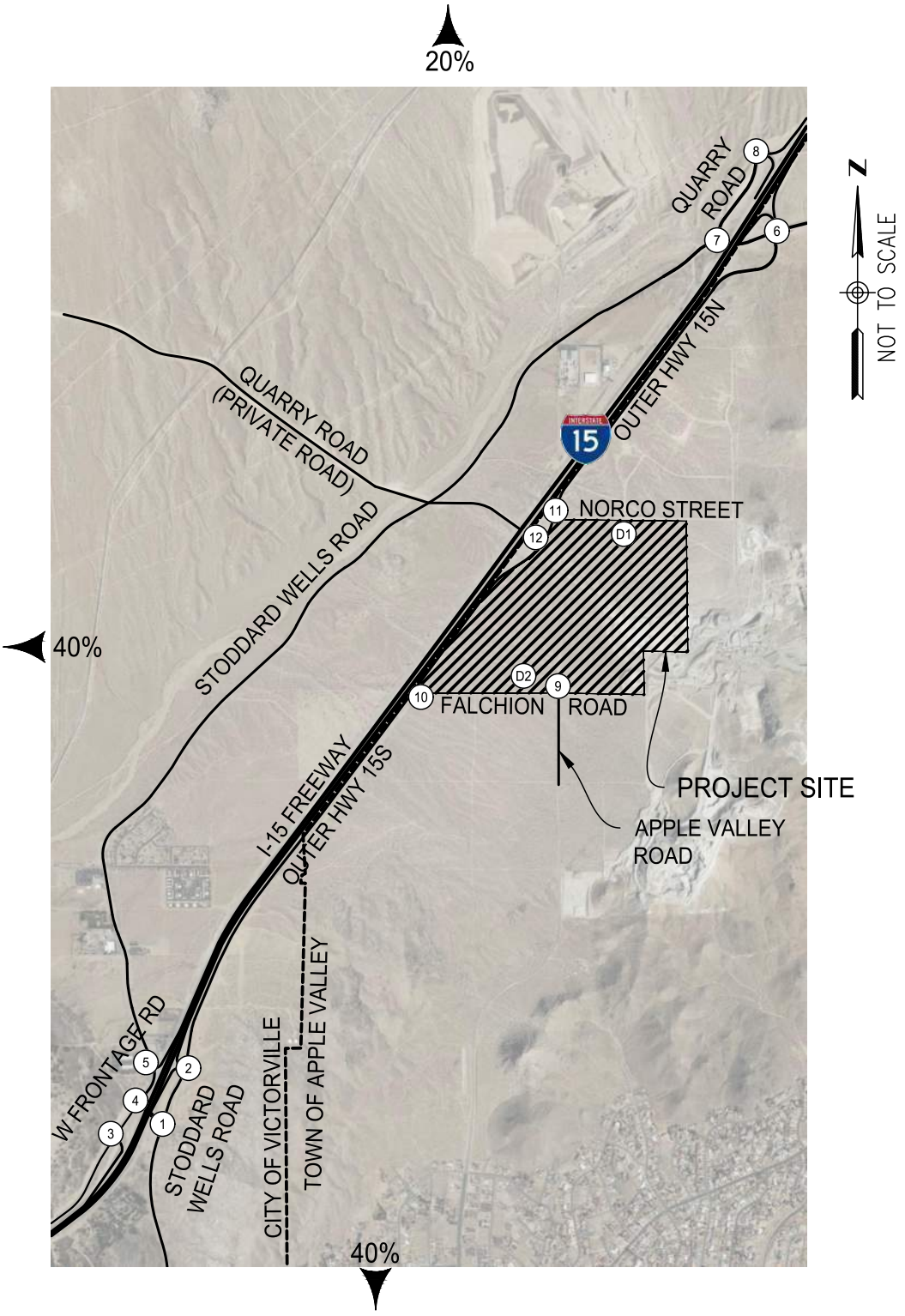
1. STODDARD WELLS RD / OUTER HIGHWAY 15 S
2. OUTER HIGHWAY 15 S / I-15 NB ON/OFF-RAMPS
3. WEST FRONTAGE RD / I-15 SB ON-RAMP
4. STODDARD WELLS RD / WEST FRONTAGE RD
5. STODDARD WELLS RD / I-15 SB OFF-RAMP
6. STODDARD WELLS RD / OUTER HIGHWAY 15 S / I-15 NB RAMPS
7. STODDARD WELLS RD / QUARRY RD
8. QUARRY RD / I-15 SB ON/OFF-RAMPS
9. FALCHION RD / APPLE VALLEY RD
10. FALCHION RD / OUTER HWY 15 N
11. OUTER HWY 15 N / NORCO ST
12. OUTER HWY 15 N / QUARRY RD

D1. NORCO ST / PROJECT DRIVEWAY #1
D2. FALCHION ROAD / PROJECT DRIVEWAY #22

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT C: STUDY INTERSECTIONS
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

Drawing Name: D:\temp\Acc Publish_67165\Exhibit C-INT.dwg
Last Opened: Dec 02, 2022 - 1:38pm by: Pxb



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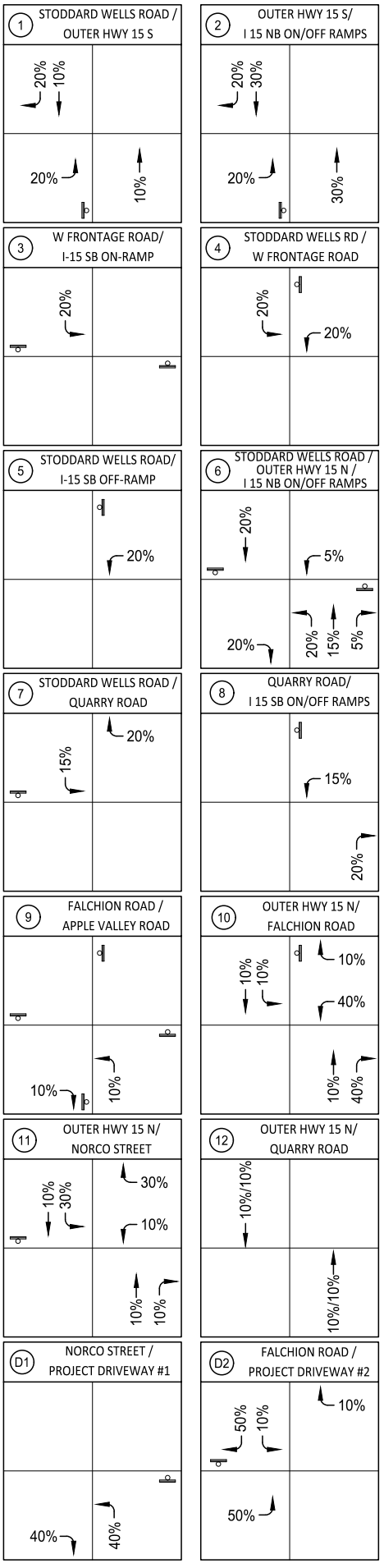
NOT TO SCALE



LEGEND

XX% - GENERAL PROJECT TRIP DISTRIBUTION

XX% - SPECIFIC PROJECT TRIP PERCENTAGE

(#) - STUDY INTERSECTIONS

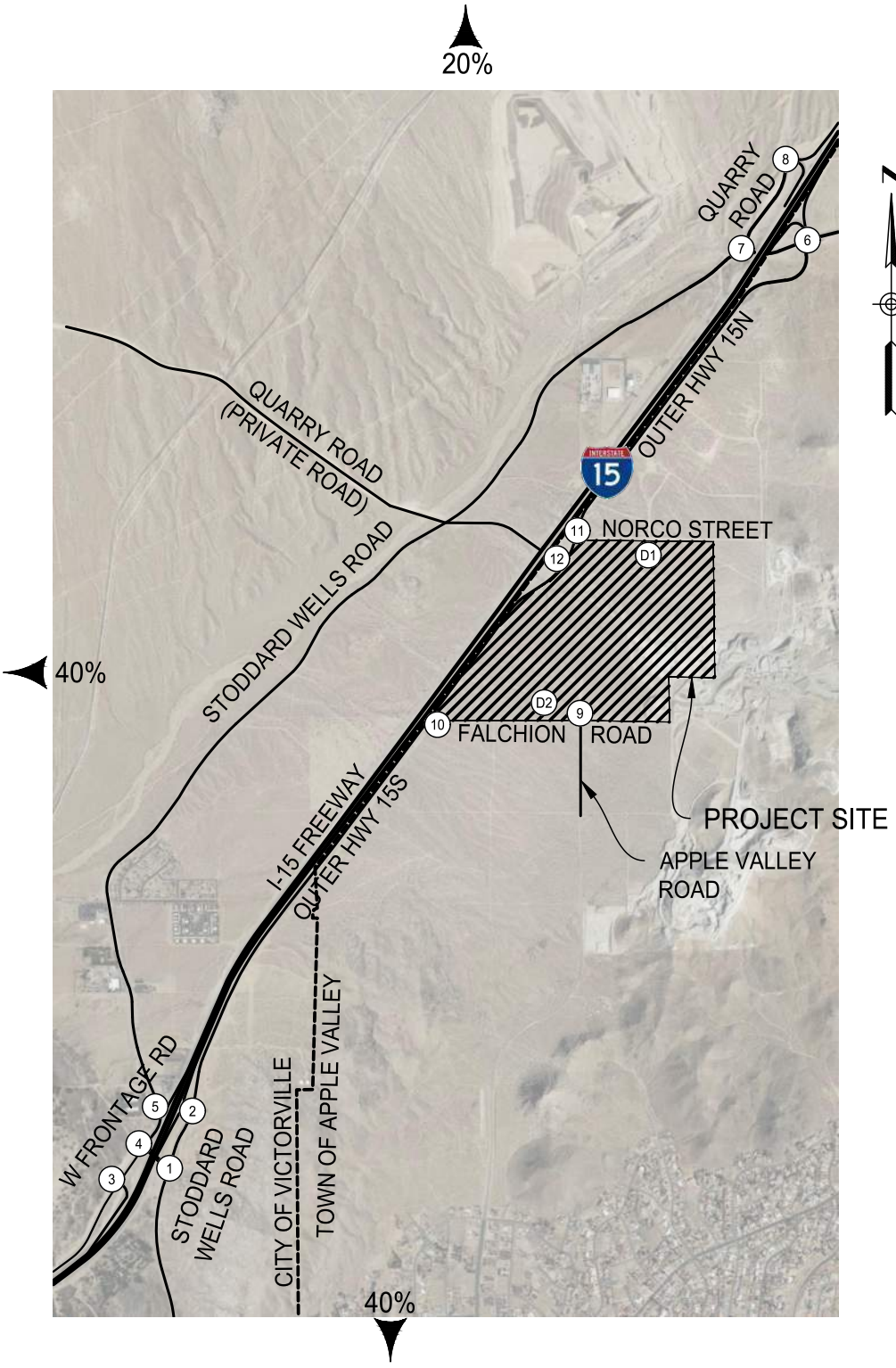
- STOP CONTROLLED INTERSECTION

- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT D1: PROJECT AUTOMOBILE TRIP DISTRIBUTION
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

Drawing Name: D:\temp\Acc Publish_67\16\Exhibit D.dwg
Last Opened: Dec 02, 2022 - 1:39pm by: Pxb



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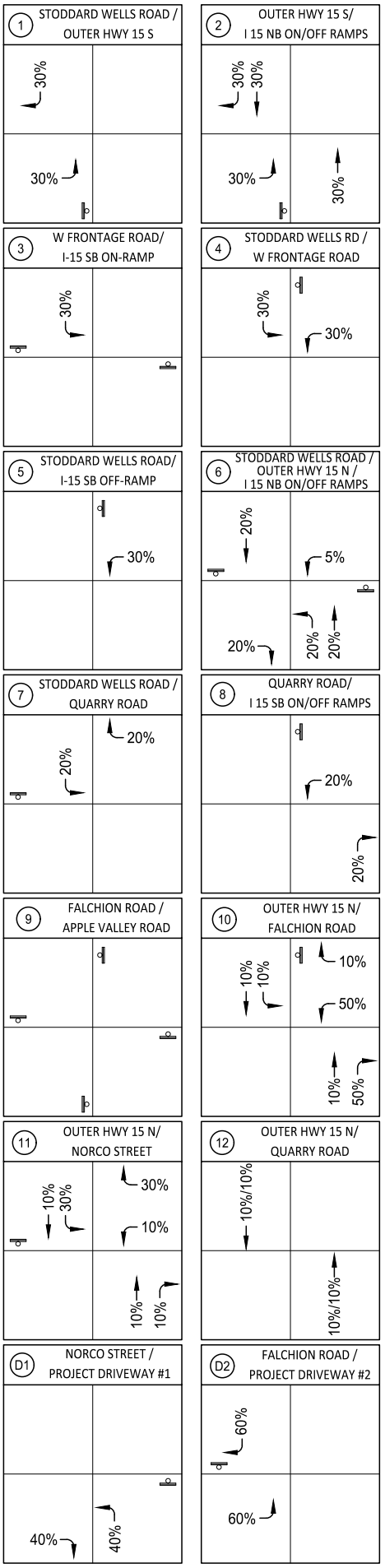

LEGEND

XX% - GENERAL PROJECT TRIP DISTRIBUTION

XX% - SPECIFIC PROJECT TRIP PERCENTAGE

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED INTERSECTION

- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT D2: PROJECT TRUCK TRIP DISTRIBUTION
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

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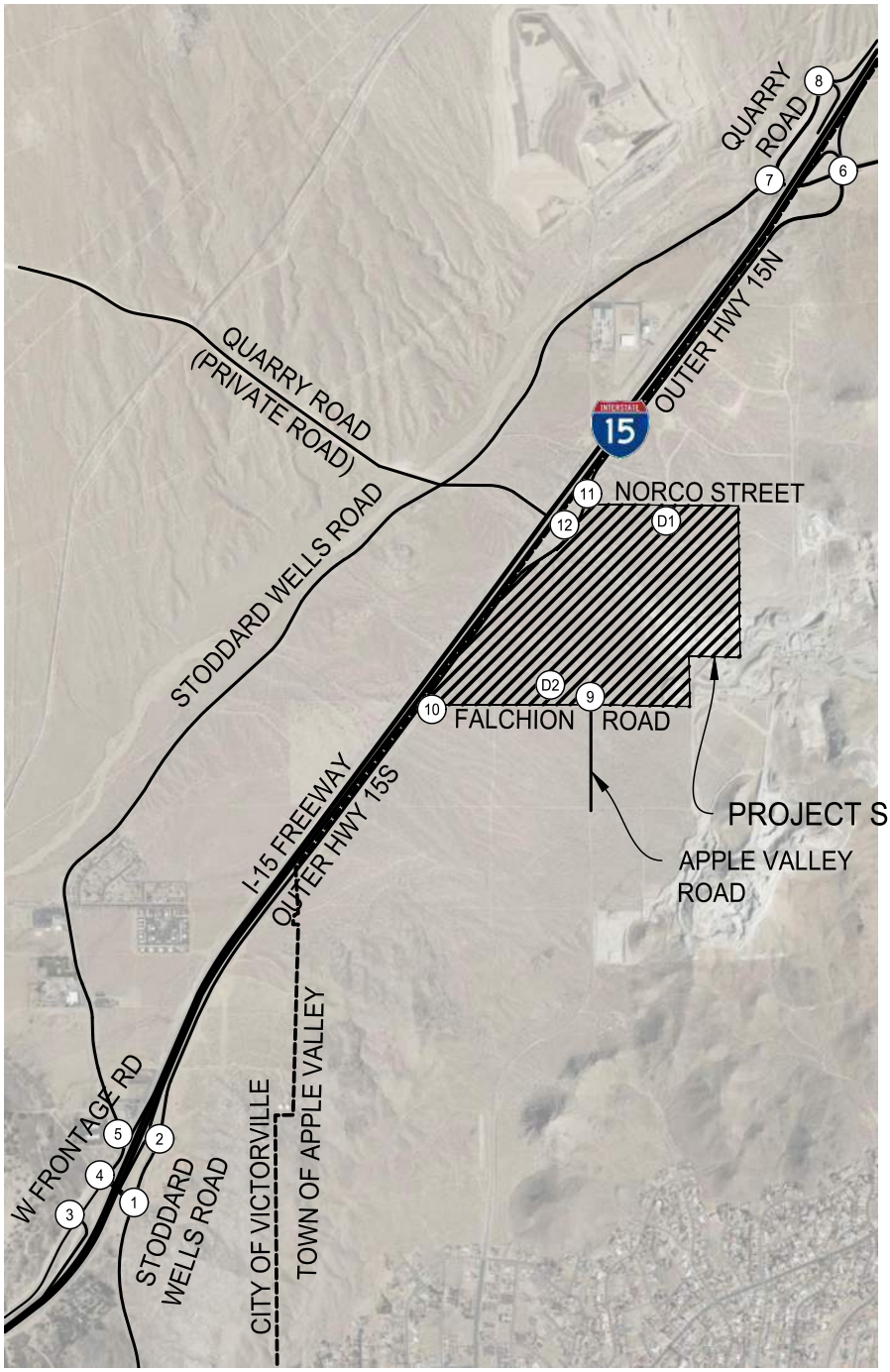
Last Opened: Dec 02, 2022 - 1:39pm by: Pxb



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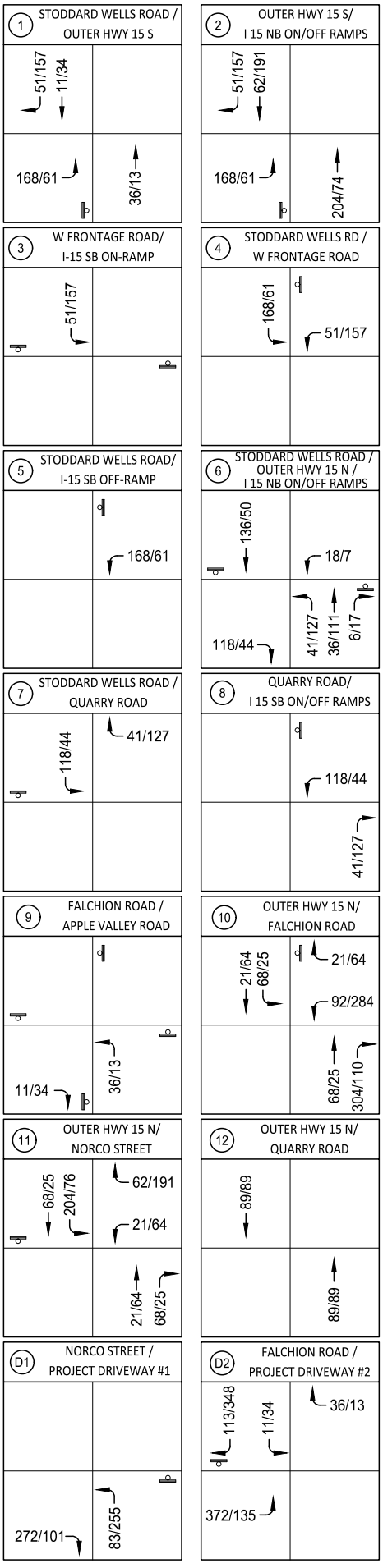


TOTAL PROJECT PCE TRIPS

AM PEAK HOUR TRIPS - 676 IN / 202 OUT
PM PEAK HOUR TRIPS - 246 IN / 632 OUT

LEGEND

XX/XX - AM/PM TOTAL PCE PROJECT TRIPS
(#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT E: TOTAL PROJECT PCE TRIP
INLAND EMPIRE NORTH LOGISTICS CENTER
APPLE VALLEY, CALIFORNIA

Drawing Name: P:\FGFW\0000000\10400CAD\EXHIBIT\STraffic\Scope_Apple Valley\Exhibit E.dwg
Last Opened: Dec 02, 2022 - 1:39pm by: Pxb

Appendix B: Traffic Counts

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15S
EAST-WEST STREET: STODDARD WELLS
JURISDICTION: VV

DATE: 06-28-22

PEAK HOUR: 07:00AM

NORTH LEG

TOTAL: 160

Rt	Thru	Lt	
88	71	1	Total
19	11	0	1st
19	14	1	2nd
25	19	0	3rd
25	27	0	4th

EAST LEG TOTAL: 0

	1st	2nd	3rd	4th	Total
Rt	0	0	0	0	
Thru	0	0	0	0	
Lt	0	0	0	0	

WEST LEG TOTAL: 59

Total	1st	2nd	3rd	4th	
4	1	1	0	2	Lt
	0	0	0	0	Thru
55	16	9	12	18	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.77
SOUTH LEG = 0.95
EAST LEG =
WEST LEG = 0.74

ALL LEGS = 0.86

SOUTH LEG

TOTAL: 296

	Lt	Thru	Rt
1st	58	18	1
2nd	47	15	1
3rd	63	14	1
4th	69	9	0
Total	237	56	3

HOUR TOTAL: 515

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15S VV

EAST-WEST STREET : STODDARD WELLS 06-28-22

BEGINNING TIME : 07:00AM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
10	2	0	3	5	0	4	0	0	2	4	0	30
17	13	1	0	0	0	0	1	0	2	0	0	34
22	15	0	0	0	0	1	1	0	2	3	0	44
18	27	0	0	0	0	4	0	0	3	0	0	52
12	9	0	0	0	0	2	0	0	2	0	0	25
15	5	2	0	0	0	2	1	0	1	1	0	27
13	21	0	1	0	0	1	0	0	1	1	0	38
9	13	0	1	0	0	2	0	0	3	0	0	28
116	105	3	5	5	0	16	3	0	16	9	0	278
SOUTH LEG												
1	14	56	0	2	0	0	1	1	0	1	1	77
1	14	45	0	0	0	0	0	2	0	1	0	63
1	13	60	0	0	1	0	1	2	0	0	0	78
0	8	67	0	0	0	0	0	2	0	1	0	78
0	17	40	0	0	0	0	0	1	0	1	1	60
0	9	37	0	0	1	0	0	0	0	3	0	50
1	3	43	0	0	0	0	0	0	0	1	2	50
2	9	39	0	1	0	0	1	2	0	4	1	59
6	87	387	0	3	2	0	3	10	0	12	5	515
EAST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	1
0	2	1	0	0	0	0	0	0	0	0	0	3
0	1	1	0	0	0	0	0	0	0	0	0	2
0	4	2	0	0	0	0	0	0	0	0	0	6
WEST LEG												
13	0	0	3	0	1	0	0	0	0	0	0	17
9	0	0	0	0	0	0	0	1	0	0	0	10
11	0	0	0	0	0	1	0	0	0	0	0	12
17	0	2	1	0	0	0	0	0	0	0	0	20
14	0	0	1	0	0	0	0	0	0	0	0	15
4	0	0	0	0	0	0	0	0	0	0	0	4
19	0	1	1	0	0	2	0	0	1	0	0	24
14	0	3	1	0	0	1	0	1	1	0	0	21
101	0	6	7	0	1	4	0	2	2	0	0	123

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: STODDARD WELLS

TIME: 07:00AM-08:00AM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
88	71	1	Total
19	11	0	1st
19	14	1	2nd
25	19	0	3rd
25	27	0	4th

	1st	2nd	3rd	4th	Total
Rt	0	0	0	0	0
Thru	0	0	0	0	0
Lt	0	0	0	0	0

Total	1st	2nd	3rd	4th	
4	1	1	0	2	Lt
0	0	0	0	0	Thru
55	16	9	12	18	Rt

	Lt	Thru	Rt
1st	58	18	1
2nd	47	15	1
3rd	63	14	1
4th	69	9	0
Total	237	56	3

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: STODDARD WELLS

TIME: 08:00AM-09:00AM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
65	51	2	Total
16	9	0	1st
18	7	2	2nd
16	22	0	3rd
15	13	0	4th

	1st	2nd	3rd	4th	Total
Rt	0	0	0	0	0
Thru	0	1	2	1	4
Lt	0	0	1	1	2

Total	1st	2nd	3rd	4th	
5	0	0	1	4	Lt
0	0	0	0	0	Thru
59	15	4	23	17	Rt

	Lt	Thru	Rt
1st	42	18	0
2nd	38	12	0
3rd	45	4	1
4th	42	15	2
Total	167	49	3

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15S
EAST-WEST STREET: STODDARD WELLS
JURISDICTION: VV

DATE: 06-28-22

PEAK HOUR: 04:00PM

NORTH LEG

TOTAL: 347

Rt	Thru	Lt	
123	223	1	Total
35	68	0	1st
27	54	0	2nd
31	56	1	3rd
30	45	0	4th

EAST LEG TOTAL: 4

	1st	2nd	3rd	4th	Total
Rt	0	0	1	0	1
Thru	0	0	2	0	2
Lt	0	0	1	0	1

WEST LEG TOTAL: 100

Total	1st	2nd	3rd	4th	
8	2	4	1	1	Lt
	0	0	0	0	Thru
92	24	24	21	23	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.84
SOUTH LEG = 0.85
EAST LEG = 0.25
WEST LEG = 0.89

ALL LEGS = 0.86

SOUTH LEG

TOTAL: 254

	Lt	Thru	Rt
1st	54	21	0
2nd	42	16	0
3rd	42	8	0
4th	55	16	0
Total	193	61	

HOUR TOTAL: 705

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15S VV

EAST-WEST STREET : STODDARD WELLS 06-28-22

BEGINNING TIME : 04:00PM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
26	65	0	1	2	0	8	0	0	0	1	0	103
22	53	0	1	1	0	4	0	0	0	0	0	81
24	56	1	3	0	0	3	0	0	1	0	0	88
20	45	0	1	0	0	7	0	0	2	0	0	75
21	60	2	1	0	0	3	0	0	1	0	0	88
19	56	0	3	0	0	4	0	0	0	0	0	82
21	49	0	1	0	0	1	0	0	0	0	0	72
18	46	3	0	0	0	1	0	0	0	0	0	68
171	430	6	11	3	0	31	0	0	4	1	0	657
SOUTH LEG												
0	20	49	0	0	2	0	0	3	0	1	0	75
0	16	38	0	0	1	0	0	3	0	0	0	58
0	6	38	0	0	1	0	0	3	0	2	0	50
0	15	49	0	1	0	0	0	5	0	0	1	71
0	7	44	0	0	0	0	0	0	0	0	0	51
1	15	35	0	0	0	0	0	0	0	0	0	51
3	10	28	0	0	0	0	0	0	0	0	0	41
1	2	26	0	0	0	0	0	0	0	0	1	30
5	91	307	0	1	4	0	0	14	0	3	2	427
EAST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
1	2	1	0	0	0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	1
1	3	1	0	0	0	0	0	0	0	0	0	5
WEST LEG												
22	0	2	0	0	0	1	0	0	1	0	0	26
23	0	4	1	0	0	0	0	0	0	0	0	28
18	0	1	1	0	0	0	0	0	2	0	0	22
20	0	1	1	0	0	2	0	0	0	0	0	24
33	0	0	1	0	0	0	0	1	1	0	0	36
27	0	4	0	0	0	0	0	0	1	0	0	32
29	0	1	1	0	0	0	0	0	1	0	0	32
18	0	2	1	0	0	0	0	0	1	0	0	22
190	0	15	6	0	0	3	0	1	7	0	0	222

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: STODDARD WELLS

TIME: 04:00PM-05:00PM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
123	223	1	Total
35	68	0	1st
27	54	0	2nd
31	56	1	3rd
30	45	0	4th

	1st	2nd	3rd	4th	Total
Rt	0	0	1	0	1
Thru	0	0	2	0	2
Lt	0	0	1	0	1

Total	1st	2nd	3rd	4th	
8	2	4	1	1	Lt
0	0	0	0	0	Thru
92	24	24	21	23	Rt

	Lt	Thru	Rt
1st	54	21	0
2nd	42	16	0
3rd	42	8	0
4th	55	16	0
Total	193	61	0

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: STODDARD WELLS

TIME: 05:00PM-06:00PM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
94	211	5	Total
26	60	2	1st
26	56	0	2nd
23	49	0	3rd
19	46	3	4th

	1st	2nd	3rd	4th	Total
Rt	0	0	0	0	0
Thru	0	0	0	1	1
Lt	0	0	0	0	0

Total	1st	2nd	3rd	4th	
8	1	4	1	2	Lt
0	0	0	0	0	Thru
114	35	28	31	20	Rt

	Lt	Thru	Rt
1st	44	7	0
2nd	35	15	1
3rd	28	10	3
4th	27	2	1
Total	134	34	5

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15S
EAST-WEST STREET: I-15 NB RAMPS
JURISDICTION: VV

DATE: 06-28-22

PEAK HOUR: 07:15AM

NORTH LEG

TOTAL: 29

Rt	Thru	Lt	
3	26		Total
1	6		1st
2	6		2nd
0	10		3rd
0	4		4th

EAST LEG TOTAL: 0

	1st	2nd	3rd	4th	Total
Rt					
Thru					
Lt					

WEST LEG TOTAL: 195

Total	1st	2nd	3rd	4th	
66	15	17	20	14	Lt
					Thru
129	28	38	42	21	Rt

SOUTH LEG

TOTAL: 59

	Lt	Thru	Rt
1st	13	3	
2nd	13	1	
3rd	9	2	
4th	15	3	
Total	50	9	

PEAK HOUR FACTORS

NORTH LEG = 0.73
SOUTH LEG = 0.82
EAST LEG =
WEST LEG = 0.79

ALL LEGS = 0.85

HOUR TOTAL: 283

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15S VV

EAST-WEST STREET : I-15 NB RAMPS 06-28-22

BEGINNING TIME : 07:00AM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
						NORTH LEG						
0	2	0	0	0	0	0	2	0	0	2	0	6
0	6	0	0	0	0	0	0	0	1	0	0	7
2	6	0	0	0	0	0	0	0	0	0	0	8
0	9	0	0	0	0	0	0	0	0	1	0	10
0	4	0	0	0	0	0	0	0	0	0	0	4
0	3	0	0	0	0	0	0	0	0	0	0	3
0	8	0	0	0	0	0	0	0	0	0	0	8
0	6	0	0	0	0	0	0	0	0	1	0	7
2	44	0	0	0	0	0	2	0	1	4	0	53
						SOUTH LEG						
0	1	13	0	0	3	0	0	1	0	1	0	19
0	2	12	0	0	0	0	0	1	0	1	0	16
0	1	12	0	0	0	0	0	1	0	0	0	14
0	1	9	0	0	0	0	0	0	0	1	0	11
0	2	15	0	0	0	0	0	0	0	1	0	18
0	3	8	0	0	0	0	0	0	0	1	1	13
0	0	5	0	0	0	0	0	0	0	0	0	5
0	3	11	0	0	1	0	0	0	0	2	2	19
0	13	85	0	0	4	0	0	3	0	7	3	115
						EAST LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
						WEST LEG						
10	0	1	8	0	0	2	0	0	4	0	0	25
25	0	15	0	0	0	1	0	0	2	0	0	43
31	0	16	0	0	0	2	0	0	5	0	1	55
36	0	19	0	0	0	4	0	0	2	0	1	62
17	0	14	0	0	0	2	0	0	2	0	0	35
19	0	9	0	0	0	3	0	0	2	0	0	33
26	0	12	1	0	0	1	0	0	2	0	0	42
16	0	6	1	0	0	2	0	0	2	0	0	27
180	0	92	10	0	0	17	0	0	21	0	2	322

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: I-15 NB RAMPS

TIME: 07:00AM-08:00AM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
3	28		Total
0	6		1st
1	6		2nd
2	6		3rd
0	10		4th

	1st	2nd	3rd	4th	Total
Rt					
Thru					
Lt					

Total	1st	2nd	3rd	4th	
53	1	15	17	20	Lt
					Thru
132	24	28	38	42	Rt

	Lt	Thru	Rt
1st	17	2	
2nd	13	3	
3rd	13	1	
4th	9	2	
Total	52	8	

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: I-15 NB RAMPS

TIME: 08:00AM-09:00AM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
0	22		Total
0	4		1st
0	3		2nd
0	8		3rd
0	7		4th

	1st	2nd	3rd	4th	Total
Rt					
Thru					
Lt					

Total	1st	2nd	3rd	4th	
41	14	9	12	6	Lt
					Thru
96	21	24	30	21	Rt

	Lt	Thru	Rt
1st	15	3	
2nd	9	4	
3rd	5	0	
4th	14	5	
Total	43	12	

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15S
EAST-WEST STREET: I-15 NB RAMPS
JURISDICTION: VV

DATE: 06-28-22

PEAK HOUR: 04:00PM

NORTH LEG

TOTAL: 48

Rt	Thru	Lt	
4	44		Total
2	18		1st
1	10		2nd
1	11		3rd
0	5		4th

EAST LEG TOTAL: 0

	1st	2nd	3rd	4th	Total
Rt					
Thru					
Lt					

WEST LEG TOTAL: 382

Total	1st	2nd	3rd	4th	
79	20	17	18	24	Lt
					Thru
303	85	71	77	70	Rt

SOUTH LEG

TOTAL: 69

	Lt	Thru	Rt
1st	15	8	
2nd	15	5	
3rd	8	1	
4th	15	2	
Total	53	16	

PEAK HOUR FACTORS

NORTH LEG = 0.60
SOUTH LEG = 0.75
EAST LEG =
WEST LEG = 0.91

ALL LEGS = 0.84

HOUR TOTAL: 499

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15S VV

EAST-WEST STREET : I-15 NB RAMPS 06-28-22

BEGINNING TIME : 04:00PM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
						NORTH LEG						
2	15	0	0	2	0	0	0	0	0	1	0	20
1	10	0	0	0	0	0	0	0	0	0	0	11
1	11	0	0	0	0	0	0	0	0	0	0	12
0	5	0	0	0	0	0	0	0	0	0	0	5
0	13	0	0	0	0	0	0	0	0	1	0	14
0	6	0	0	0	0	0	0	0	0	0	0	6
0	2	0	0	0	0	0	0	0	0	0	0	2
0	1	0	0	0	0	0	0	0	0	0	0	1
4	63	0	0	2	0	0	0	0	0	2	0	71
						SOUTH LEG						
0	8	14	0	0	0	0	0	0	0	0	1	23
0	5	15	0	0	0	0	0	0	0	0	0	20
0	1	6	0	0	0	0	0	0	0	0	2	9
0	2	14	0	0	1	0	0	0	0	0	0	17
0	1	7	0	0	0	0	0	0	0	0	0	8
0	3	16	0	0	0	0	0	0	0	0	0	19
0	2	9	0	0	0	0	0	0	0	0	0	11
0	0	4	0	0	0	0	0	0	0	0	0	4
0	22	85	0	0	1	0	0	0	0	0	3	111
						EAST LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
						WEST LEG						
75	0	20	1	0	0	8	0	0	1	0	0	105
66	0	17	2	0	0	3	0	0	0	0	0	88
71	0	18	2	0	0	3	0	0	1	0	0	95
61	0	23	1	0	0	7	0	1	1	0	0	94
69	0	19	1	0	0	3	0	0	1	0	0	93
69	0	16	3	0	0	4	0	0	0	0	1	93
68	0	15	1	0	0	1	0	0	0	0	0	85
66	0	18	0	0	0	1	0	0	0	0	0	85
545	0	146	11	0	0	30	0	1	4	0	1	738

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: I-15 NB RAMPS

TIME: 04:00PM-05:00PM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
4	44		Total
2	18		1st
1	10		2nd
1	11		3rd
0	5		4th

	1st	2nd	3rd	4th	Total
Rt					
Thru					
Lt					

Total	1st	2nd	3rd	4th	
79	20	17	18	24	Lt
					Thru
303	85	71	77	70	Rt

	Lt	Thru	Rt
1st	15	8	
2nd	15	5	
3rd	8	1	
4th	15	2	
Total	53	16	

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15S

EAST-WEST STREET: I-15 NB RAMPS

TIME: 05:00PM-06:00PM DATE: 06-28-22

NORTH LEG

Rt	Thru	Lt	
0	23		Total
0	14		1st
0	6		2nd
0	2		3rd
0	1		4th

	1st	2nd	3rd	4th	Total
Rt					
Thru					
Lt					

Total	1st	2nd	3rd	4th	
69	19	17	15	18	Lt
					Thru
287	74	76	70	67	Rt

	Lt	Thru	Rt
1st	7	1	
2nd	16	3	
3rd	9	2	
4th	4	0	
Total	36	6	

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: W FRONTAGE RD
EAST-WEST STREET: I-15 SB ON RAMP
JURISDICTION: VV

DATE: 06-29-22

PEAK HOUR: 07:00AM

NORTH LEG

TOTAL: 315

	Rt	Thru	Lt	
		8	307	Total
		2	57	1st
		1	71	2nd
		3	82	3rd
		2	97	4th

EAST LEG TOTAL: 0

	1st	2nd	3rd	4th	Total
Rt					
Thru					
Lt					

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.80
SOUTH LEG = 0.81
EAST LEG =
WEST LEG =

ALL LEGS = 0.80

SOUTH LEG

TOTAL: 29

	Lt	Thru	Rt
1st		3	4
2nd		3	3
3rd		3	4
4th		2	7
Total		11	18

HOUR TOTAL: 344

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : W FRONTAGE RD VV

EAST-WEST STREET : I-15 SB ON RAMP 06-29-22

BEGINNING TIME : 07:00AM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	1	51	0	0	1	0	0	2	0	1	3	59
0	1	64	0	0	4	0	0	2	0	0	1	72
0	3	79	0	0	2	0	0	0	0	0	1	85
0	0	94	0	1	0	0	0	1	0	1	2	99
0	2	48	0	0	1	0	0	2	0	0	1	54
0	5	55	0	0	1	0	0	4	0	0	3	68
0	2	43	0	1	2	0	0	4	0	0	4	56
0	4	56	0	0	1	0	0	0	0	1	2	64
0	18	490	0	2	12	0	0	15	0	3	17	557
SOUTH LEG												
1	3	0	0	0	0	0	0	0	3	0	0	7
2	3	0	0	0	0	0	0	0	1	0	0	6
1	3	0	1	0	0	0	0	0	2	0	0	7
0	0	0	0	1	0	1	1	0	6	0	0	9
4	0	0	0	0	0	0	0	0	2	0	0	6
5	1	0	0	2	0	0	0	0	4	0	0	12
0	1	0	0	0	0	1	0	0	3	0	0	5
3	3	0	0	0	0	0	0	0	5	0	0	11
16	14	0	1	3	0	2	1	0	26	0	0	63
EAST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: I-15 SB ON RAMP

TIME: 07:00AM-08:00AM DATE: 06-29-22

NORTH LEG

	8	307	Total
	2	57	1st
	1	71	2nd
	3	82	3rd
	2	97	4th
Rt	Thru	Lt	

Rt					
Thru					
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		3	4
2nd		3	3
3rd		3	4
4th		2	7
Total		11	18

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: I-15 SB ON RAMP

TIME: 08:00AM-09:00AM DATE: 06-29-22

NORTH LEG

	15	227	Total
	2	52	1st
	5	63	2nd
	3	53	3rd
	5	59	4th
Rt	Thru	Lt	

Rt					
Thru					
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		0	6
2nd		3	9
3rd		1	4
4th		3	8
Total		7	27

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: W FRONTAGE RD
EAST-WEST STREET: I-15 SB ON RAMP
JURISDICTION: VV

DATE: 06-29-22

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 358

	22	336	Total
	8	73	1st
	4	82	2nd
	4	109	3rd
	6	72	4th
Rt	Thru	Lt	

EAST LEG TOTAL: 0

Rt					
Thru					
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

WEST LEG TOTAL: 0

PEAK HOUR FACTORS

NORTH LEG = 0.79
SOUTH LEG = 0.73
EAST LEG =
WEST LEG =

ALL LEGS = 0.82

	Lt	Thru	Rt	
1st		4	8	
2nd		9	7	
3rd		2	9	
4th		2	6	
Total		17	30	TOTAL: 47

SOUTH LEG

HOUR TOTAL: 405

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : W FRONTAGE RD VV

EAST-WEST STREET : I-15 SB ON RAMP 06-29-22

BEGINNING TIME : 04:00PM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	3	80	0	0	3	0	0	1	0	1	3	91
0	6	45	0	0	3	0	2	1	0	0	3	60
0	7	66	0	0	2	0	1	1	0	0	4	81
0	4	77	0	0	1	0	0	1	0	0	3	86
0	3	100	0	0	2	0	1	2	0	0	5	113
0	6	68	0	0	1	0	0	2	0	0	1	78
0	3	78	0	0	1	0	0	0	0	0	1	83
0	2	61	0	0	0	0	1	0	0	1	0	65
0	34	575	0	0	13	0	5	8	0	2	20	657
SOUTH LEG												
5	4	0	0	2	0	0	0	0	0	1	0	12
7	3	0	0	0	0	0	2	0	2	1	0	15
6	3	0	0	0	0	0	0	0	2	1	0	12
6	8	0	0	0	0	0	0	0	1	1	0	16
7	1	0	0	1	0	1	0	0	1	0	0	11
5	1	0	0	0	0	0	1	0	1	0	0	8
3	2	0	0	0	0	0	0	0	1	0	0	6
3	2	0	0	0	0	1	0	0	1	0	0	7
42	24	0	0	3	0	2	3	0	9	4	0	87
EAST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: I-15 SB ON RAMP

TIME: 04:00PM-05:00PM DATE: 06-29-22

NORTH LEG

	24	294	Total
	4	87	1st
	8	52	2nd
	8	73	3rd
	4	82	4th
Rt	Thru	Lt	

Rt					
Thru					
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		7	5
2nd		6	9
3rd		4	8
4th		9	7
Total		26	29

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: I-15 SB ON RAMP

TIME: 05:00PM-06:00PM DATE: 06-29-22

NORTH LEG

	17	322	Total
	4	109	1st
	6	72	2nd
	3	80	3rd
	4	61	4th
Rt	Thru	Lt	

Rt					
Thru					
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		2	9
2nd		2	6
3rd		2	4
4th		2	5
Total		8	24

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: W FRONTAGE RD
EAST-WEST STREET: STODDARD WELLS
JURISDICTION: VV

DATE: 06-29-22

PEAK HOUR: 07:00AM

NORTH LEG

TOTAL: 114

	47	67	Total
	8	15	1st
	10	21	2nd
	10	13	3rd
	19	18	4th
Rt	Thru	Lt	

EAST LEG TOTAL: 349

Rt	17	18	22	24	81
Thru					
Lt	51	62	75	80	268
	1st	2nd	3rd	4th	Total

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.77
SOUTH LEG = 0.92
EAST LEG = 0.84
WEST LEG =

ALL LEGS = 0.83

SOUTH LEG

TOTAL: 11

	Lt	Thru	Rt
1st		3	0
2nd		1	2
3rd		3	0
4th		2	0
Total		9	2

HOUR TOTAL: 474

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : W FRONTAGE RD VV

EAST-WEST STREET : STODDARD WELLS 06-29-22

BEGINNING TIME : 07:00AM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	6	10	0	1	2	0	0	2	0	1	1	23
0	6	15	0	2	3	0	1	1	0	1	2	31
0	8	10	0	2	1	0	0	1	0	0	1	23
0	16	16	0	0	0	0	1	2	0	2	0	37
0	9	8	0	1	0	0	1	3	0	0	1	23
0	9	12	0	1	0	0	3	0	0	2	1	28
0	7	34	0	1	2	0	2	1	0	2	3	52
0	7	14	0	1	2	0	0	1	0	1	7	33
0	68	119	0	9	10	0	8	11	0	9	16	250
SOUTH LEG												
0	3	0	0	0	0	0	0	0	0	0	0	3
2	1	0	0	0	0	0	0	0	0	0	0	3
0	3	0	0	0	0	0	0	0	0	0	0	3
0	0	0	0	1	0	0	1	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	2	0	0	0	0	0	0	0	3
0	1	0	0	0	0	0	0	0	0	0	0	1
2	1	0	0	0	0	0	0	0	0	0	0	3
4	10	0	0	3	0	0	1	0	0	0	0	18
EAST LEG												
9	0	46	4	0	0	2	0	2	2	0	3	68
12	0	59	3	0	2	1	0	1	2	0	0	80
14	0	74	1	0	0	5	0	0	2	0	1	97
23	0	78	0	0	1	0	0	0	1	0	1	104
21	0	41	0	0	0	1	0	1	1	0	1	66
24	0	50	0	0	0	3	0	1	5	0	1	84
17	0	37	1	0	2	2	0	2	2	0	2	65
24	0	55	0	0	0	5	0	0	6	0	2	92
144	0	440	9	0	5	19	0	7	21	0	11	656
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: STODDARD WELLS

TIME: 07:00AM-08:00AM DATE: 06-29-22

NORTH LEG

	47	67	Total
	8	15	1st
	10	21	2nd
	10	13	3rd
	19	18	4th
Rt	Thru	Lt	

Rt	17	18	22	24	81
Thru					
Lt	51	62	75	80	268
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		3	0
2nd		1	2
3rd		3	0
4th		2	0
Total		9	2

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: STODDARD WELLS

TIME: 08:00AM-09:00AM DATE: 06-29-22

NORTH LEG

	47	89	Total
	11	12	1st
	15	13	2nd
	12	40	3rd
	9	24	4th
Rt	Thru	Lt	

Rt	23	32	22	35	112
Thru					
Lt	43	52	43	57	195
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		0	0
2nd		3	0
3rd		1	0
4th		1	2
Total		5	2

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: W FRONTAGE RD
EAST-WEST STREET: STODDARD WELLS
JURISDICTION: VV

DATE: 06-29-22

PEAK HOUR: 04:15PM

NORTH LEG

TOTAL: 210

	Rt	Thru	Lt	
		131	79	Total
		25	15	1st
		25	24	2nd
		38	12	3rd
		43	28	4th

EAST LEG TOTAL: 339

	1st	2nd	3rd	4th	Total
Rt	51	34	27	19	131
Thru					
Lt	35	56	47	70	208

	Total	1st	2nd	3rd	4th
Lt					
Thru					
Rt					

WEST LEG TOTAL: 0

PEAK HOUR FACTORS

NORTH LEG = 0.74
SOUTH LEG = 0.58
EAST LEG = 0.94
WEST LEG =

ALL LEGS = 0.88

	Lt	Thru	Rt
1st		4	2
2nd		2	2
3rd		2	7
4th		1	1
Total		9	12

TOTAL: 21

SOUTH LEG

HOUR TOTAL: 570

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : W FRONTAGE RD VV

EAST-WEST STREET : STODDARD WELLS 06-29-22

BEGINNING TIME : 04:00PM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
						NORTH LEG						
0	30	20	0	1	0	0	0	1	0	3	3	58
0	19	14	0	3	0	0	2	0	0	1	1	40
0	20	22	0	1	1	0	1	0	0	3	1	49
0	35	10	0	0	1	0	1	0	0	2	1	50
0	37	27	0	1	1	0	0	0	0	5	0	71
0	46	15	0	0	1	0	2	0	0	0	2	66
0	34	4	0	0	1	0	0	0	0	0	1	40
0	21	7	0	0	0	0	1	1	0	1	0	31
0	242	119	0	6	5	0	7	2	0	15	9	405
						SOUTH LEG						
3	1	0	0	2	0	0	0	0	0	1	0	7
2	1	0	0	0	0	0	2	0	0	1	0	6
2	1	0	0	0	0	0	0	0	0	1	0	4
7	1	0	0	0	0	0	0	0	0	1	0	9
1	0	0	0	1	0	0	0	0	0	0	0	2
0	1	0	0	0	0	0	1	0	0	0	0	2
1	1	0	0	0	0	0	0	0	0	0	0	2
0	2	0	0	0	0	0	0	0	0	0	0	2
16	8	0	0	3	0	0	3	0	0	4	0	34
						EAST LEG						
18	0	52	0	0	2	8	0	1	0	0	2	83
32	0	32	1	0	0	14	0	1	4	0	2	86
23	0	53	1	0	1	10	0	1	0	0	1	90
22	0	45	1	0	1	4	0	0	0	0	1	74
19	0	66	0	0	1	0	0	3	0	0	0	89
27	0	28	1	0	1	0	0	0	1	0	1	59
15	0	47	0	0	1	0	0	0	0	0	1	64
9	0	42	1	0	0	1	0	0	0	0	0	53
165	0	365	5	0	7	37	0	6	5	0	8	598
						WEST LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: STODDARD WELLS

TIME: 04:00PM-05:00PM DATE: 06-29-22

NORTH LEG

	122	75	Total
	34	24	1st
	25	15	2nd
	25	24	3rd
	38	12	4th

Rt Thru Lt

Rt	26	51	34	27	138
Thru					
Lt	57	35	56	47	195
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		4	3
2nd		4	2
3rd		2	2
4th		2	7
Total		12	14

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: W FRONTAGE RD

EAST-WEST STREET: STODDARD WELLS

TIME: 05:00PM-06:00PM DATE: 06-29-22

NORTH LEG

	148	60	Total
	43	28	1st
	48	18	2nd
	34	6	3rd
	23	8	4th
	Rt	Thru	Lt

Rt	19	29	15	11	74
Thru					
Lt	70	30	49	42	191
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		1	1
2nd		2	0
3rd		1	1
4th		2	0
Total		6	2

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: I-15 SB OFF RAMP
EAST-WEST STREET: STODDARD WELLS
JURISDICTION: VV

DATE: 06-29-22

PEAK HOUR: 08:00AM

NORTH LEG

TOTAL: 52

Rt	Thru	Lt	
3		49	Total
1		6	1st
0		10	2nd
0		21	3rd
2		12	4th

EAST LEG TOTAL: 117

	1st	2nd	3rd	4th	Total
Rt					
Thru	23	35	23	36	117
Lt					

WEST LEG TOTAL: 86

Total	1st	2nd	3rd	4th	
					Lt
86	14	21	33	18	Thru
					Rt

SOUTH LEG

TOTAL: 0

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

PEAK HOUR FACTORS

NORTH LEG = 0.62
SOUTH LEG =
EAST LEG = 0.81
WEST LEG = 0.65

ALL LEGS = 0.83

HOUR TOTAL: 255

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : I-15 SB OFF RAMP VV

EAST-WEST STREET : STODDARD WELLS 06-29-22

BEGINNING TIME : 07:00AM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
3	0	5	0	0	0	0	0	0	0	0	1	9
2	0	5	0	0	0	0	0	1	0	0	2	10
0	0	7	0	0	1	0	0	0	0	0	1	9
0	0	13	0	0	0	0	0	0	1	0	1	15
1	0	6	0	0	0	0	0	0	0	0	0	7
0	0	9	0	0	1	0	0	0	0	0	0	10
0	0	20	0	0	1	0	0	0	0	0	0	21
2	0	9	0	0	1	0	0	0	0	0	2	14
8	0	74	0	0	4	0	0	1	1	0	7	95
SOUTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
EAST LEG												
0	12	0	0	4	0	0	2	0	0	2	0	20
0	13	0	0	3	0	0	1	0	0	2	0	19
0	17	0	0	1	0	0	5	0	0	2	0	25
0	23	0	0	1	0	0	1	0	0	1	0	26
0	21	0	0	0	0	0	1	0	0	1	0	23
0	25	0	0	2	0	0	3	0	0	5	0	35
0	18	0	0	1	0	0	2	0	0	2	0	23
0	25	0	0	0	0	0	5	0	0	6	0	36
0	154	0	0	12	0	0	20	0	0	21	0	207
WEST LEG												
0	11	0	0	3	0	0	2	0	0	1	0	17
0	16	0	0	5	0	0	1	0	0	1	0	23
0	11	0	0	2	0	0	1	0	0	0	0	14
0	19	0	0	0	0	0	3	0	0	1	0	23
0	8	0	0	1	0	0	4	0	0	1	0	14
0	15	0	0	0	0	0	3	0	0	3	0	21
0	23	0	0	2	0	0	3	0	0	5	0	33
0	9	0	0	2	0	0	1	0	0	6	0	18
0	112	0	0	15	0	0	18	0	0	18	0	163

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 SB OFF RAMP

EAST-WEST STREET: STODDARD WELLS

TIME: 07:00AM-08:00AM DATE: 06-29-22

NORTH LEG

Rt	Thru	Lt	
6		37	Total
3		6	1st
2		8	2nd
0		9	3rd
1		14	4th

	1st	2nd	3rd	4th	Total
Rt					
Thru	20	19	25	26	90
Lt					

Total	1st	2nd	3rd	4th	
					Lt
77	17	23	14	23	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 SB OFF RAMP

EAST-WEST STREET: STODDARD WELLS

TIME: 08:00AM-09:00AM DATE: 06-29-22

NORTH LEG

Rt	Thru	Lt	
3		49	Total
1		6	1st
0		10	2nd
0		21	3rd
2		12	4th

	1st	2nd	3rd	4th	Total
Rt					
Thru	23	35	23	36	117
Lt					

Total	1st	2nd	3rd	4th	
					Lt
86	14	21	33	18	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: I-15 SB OFF RAMP
EAST-WEST STREET: STODDARD WELLS
JURISDICTION: VV

DATE: 06-29-22

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 79

Rt	Thru	Lt	
8		71	Total
3		20	1st
0		17	2nd
3		14	3rd
2		20	4th

EAST LEG TOTAL: 116

	1st	2nd	3rd	4th	Total
Rt					
Thru	36	29	20	31	116
Lt					

WEST LEG TOTAL: 165

Total	1st	2nd	3rd	4th	
					Lt
165	29	33	57	46	Thru
					Rt

SOUTH LEG

TOTAL: 0

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

PEAK HOUR FACTORS

NORTH LEG = 0.86
SOUTH LEG =
EAST LEG = 0.81
WEST LEG = 0.72

ALL LEGS = 0.91

HOUR TOTAL: 360

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : I-15 SB OFF RAMP VV

EAST-WEST STREET : STODDARD WELLS 06-29-22

BEGINNING TIME : 04:00PM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
					NORTH LEG							
2	0	18	0	0	0	0	0	0	0	0	0	20
0	0	16	1	0	0	0	0	0	0	0	0	17
1	0	19	2	0	0	0	0	0	0	0	1	23
0	0	16	0	0	0	0	0	0	0	0	1	17
3	0	12	0	0	0	0	0	0	0	0	2	17
1	0	20	0	0	0	0	0	0	1	0	0	22
4	0	14	0	0	0	0	0	0	0	0	1	19
2	0	10	0	0	0	0	0	0	0	0	0	12
13	0	125	3	0	0	0	0	0	1	0	5	147
					SOUTH LEG							
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
					EAST LEG							
0	19	0	0	2	0	0	8	0	0	1	0	30
0	33	0	0	1	0	0	16	0	0	5	0	55
0	24	0	0	1	0	0	10	0	0	1	0	36
0	23	0	0	1	0	0	4	0	0	1	0	29
0	19	0	0	1	0	0	0	0	0	0	0	20
0	28	0	0	1	0	0	1	0	0	1	0	31
0	16	0	0	0	0	0	0	0	0	0	0	16
0	11	0	0	1	0	0	1	0	0	0	0	13
0	173	0	0	8	0	0	40	0	0	9	0	230
					WEST LEG							
0	31	0	0	1	0	0	1	0	0	6	0	39
0	17	0	0	3	0	0	2	0	0	2	0	24
0	23	0	0	2	0	0	1	0	0	3	0	29
0	29	0	0	1	0	0	1	0	0	2	0	33
0	52	0	0	2	0	0	0	0	0	3	0	57
0	41	0	0	1	0	0	2	0	0	2	0	46
0	25	0	0	1	0	0	0	0	0	0	0	26
0	18	0	0	0	0	0	2	0	0	1	0	21
0	236	0	0	11	0	0	9	0	0	19	0	275

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 SB OFF RAMP

EAST-WEST STREET: STODDARD WELLS

TIME: 04:00PM-05:00PM DATE: 06-29-22

NORTH LEG

Rt	Thru	Lt	
6		71	Total
2		18	1st
1		16	2nd
3		20	3rd
0		17	4th

	1st	2nd	3rd	4th	Total
Rt					
Thru	30	55	36	29	150
Lt					

Total	1st	2nd	3rd	4th	
					Lt
125	39	24	29	33	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 SB OFF RAMP

EAST-WEST STREET: STODDARD WELLS

TIME: 05:00PM-06:00PM DATE: 06-29-22

NORTH LEG

11		59	Total
3		14	1st
2		20	2nd
4		15	3rd
2		10	4th
Rt	Thru	Lt	

Rt					
Thru	20	31	16	13	80
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
150	57	46	26	21	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: I-15 NB RAMPS
EAST-WEST STREET: STODDARD WELLS RD
JURISDICTION: APPLE VALLEY

DATE: 11-09-22

PEAK HOUR: 07:00AM

NORTH LEG

TOTAL: 43

Rt	Thru	Lt	
42		1	Total
1	0	1	1st
16	0	0	2nd
19	0	0	3rd
6	0	0	4th

EAST LEG TOTAL: 183

	1st	2nd	3rd	4th	Total
Rt	7	14	15	21	57
Thru	34	23	38	30	125
Lt	1	0	0	0	1

WEST LEG TOTAL: 345

Total	1st	2nd	3rd	4th	
256	93	25	77	61	Lt
80	11	58	4	7	Thru
9	2	5	2	0	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.57
SOUTH LEG = 0.25
EAST LEG = 0.86
WEST LEG = 0.81

ALL LEGS = 0.92

SOUTH LEG

TOTAL: 2

	Lt	Thru	Rt
1st	0	2	0
2nd	0	0	0
3rd	0	0	0
4th	0	0	0
Total		2	

HOUR TOTAL: 573

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : I-15 NB RAMPS — APPLE VALLEY

EAST-WEST STREET : STODDARD WELLS RD — 11-09-22

BEGINNING TIME : 07:00AM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
0	0	0	1	0	0	0	0	1	0	0	0	2
15	0	0	1	0	0	0	0	0	0	0	0	16
18	0	0	0	0	0	1	0	0	0	0	0	19
6	0	0	0	0	0	0	0	0	0	0	0	6
10	0	2	1	0	0	2	0	0	0	0	0	15
13	0	3	4	0	0	2	0	0	0	0	0	22
18	0	1	0	0	0	0	0	0	0	0	0	19
12	0	0	0	0	0	0	0	0	0	0	0	12
92	0	6	7	0	0	5	0	1	0	0	0	111
SOUTH LEG												
0	2	0	0	0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	6
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
6	2	0	0	0	0	0	0	0	0	0	0	8
EAST LEG												
5	34	1	0	0	0	1	0	0	1	0	0	42
10	22	0	2	0	0	1	0	0	1	1	0	37
15	38	0	0	0	0	0	0	0	0	0	0	53
20	30	0	1	0	0	0	0	0	0	0	0	51
12	28	0	0	0	0	1	0	0	0	0	0	41
18	22	0	2	1	0	5	0	0	0	0	0	48
10	20	0	0	0	0	0	0	0	0	0	0	30
9	13	0	0	0	0	0	0	0	0	0	0	22
99	207	1	5	1	0	8	0	0	2	1	0	324
WEST LEG												
2	11	88	0	0	1	0	0	0	0	0	4	106
5	57	15	0	0	4	0	0	1	0	1	5	88
2	4	69	0	0	1	0	0	4	0	0	3	83
0	6	58	0	1	1	0	0	1	0	0	1	68
0	8	39	0	0	3	0	1	1	0	0	9	61
0	1	6	0	0	0	0	0	2	0	1	8	18
1	9	40	0	0	0	0	0	0	0	0	1	51
0	3	49	0	0	0	0	0	0	0	0	1	53
10	99	364	0	1	10	0	1	9	0	2	32	528

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 NB RAMPS

EAST-WEST STREET: STODDARD WELLS RD

TIME: 07:00AM-08:00AM DATE: 11-09-22

NORTH LEG

Rt	Thru	Lt	
42	0	1	Total
1	0	1	1st
16	0	0	2nd
19	0	0	3rd
6	0	0	4th

	1st	2nd	3rd	4th	Total
Rt	7	14	15	21	57
Thru	34	23	38	30	125
Lt	1	0	0	0	1

Total	1st	2nd	3rd	4th	
256	93	25	77	61	Lt
80	11	58	4	7	Thru
9	2	5	2	0	Rt

	Lt	Thru	Rt
1st	0	2	0
2nd	0	0	0
3rd	0	0	0
4th	0	0	0
Total	0	2	0

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 NB RAMPS

EAST-WEST STREET: STODDARD WELLS RD

TIME: 08:00AM-09:00AM DATE: 11-09-22

NORTH LEG

Rt	Thru	Lt	
62	0	6	Total
13	0	2	1st
19	0	3	2nd
18	0	1	3rd
12	0	0	4th

	1st	2nd	3rd	4th	Total
Rt	13	25	10	9	57
Thru	28	23	20	13	84
Lt	0	0	0	0	0

Total	1st	2nd	3rd	4th	
159	52	16	41	50	Lt
23	9	2	9	3	Thru
1	0	0	1	0	Rt

	Lt	Thru	Rt
1st	0	0	6
2nd	0	0	0
3rd	0	0	0
4th	0	0	0
Total	0	0	6

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: I-15 NB RAMPS
EAST-WEST STREET: STODDARD WELLS RD
JURISDICTION: APPLE VALLEY

DATE: 11-09-22

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 152

Rt	Thru	Lt	
135		17	Total
20	0	4	1st
19	0	4	2nd
64	0	5	3rd
32	0	4	4th

EAST LEG TOTAL: 354

	1st	2nd	3rd	4th	Total
Rt	17	14	12	17	60
Thru	74	81	57	78	290
Lt	0	0	1	3	4

WEST LEG TOTAL: 264

Total	1st	2nd	3rd	4th	
217	53	48	52	64	Lt
46	10	9	10	17	Thru
1	0	0	0	1	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.55
SOUTH LEG = 0.75
EAST LEG = 0.90
WEST LEG = 0.80

ALL LEGS = 0.89

SOUTH LEG

TOTAL: 3

	Lt	Thru	Rt
1st	0	1	0
2nd	0	0	0
3rd	0	1	0
4th	0	1	0
Total		3	

HOUR TOTAL: 773

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : I-15 NB RAMPS — APPLE VALLEY

EAST-WEST STREET : STODDARD WELLS RD — 11-09-22

BEGINNING TIME : 04:00PM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
					NORTH LEG							
17	0	1	2	0	0	1	0	0	0	0	0	21
29	0	3	0	0	0	0	0	0	0	0	0	32
19	0	4	0	0	0	1	0	0	0	0	0	24
19	0	4	0	0	0	0	0	0	0	0	0	23
64	0	5	0	0	0	0	0	0	0	0	0	69
32	0	4	0	0	0	0	0	0	0	0	0	36
57	0	6	0	0	0	0	0	0	0	0	0	63
11	0	1	0	0	0	0	0	0	0	0	0	12
248	0	28	2	0	0	2	0	0	0	0	0	280
					SOUTH LEG							
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	1
0	1	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	1
0	1	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	3	1	0	0	0	0	0	0	0	0	0	4
					EAST LEG							
15	95	0	1	0	0	0	0	0	5	0	0	116
37	22	0	0	0	0	0	0	0	0	0	0	59
17	74	0	0	0	0	0	0	0	0	0	0	91
14	81	0	0	0	0	0	0	0	0	0	0	95
12	57	1	0	0	0	0	0	0	0	0	0	70
17	78	3	0	0	0	0	0	0	0	0	0	98
7	52	3	0	0	0	0	0	0	0	0	0	62
11	60	7	0	0	0	0	0	0	0	0	0	78
130	519	14	1	0	0	0	0	0	5	0	0	669
					WEST LEG							
0	20	57	0	0	2	0	0	5	0	0	6	90
0	19	62	0	0	0	0	0	4	0	0	7	92
0	8	50	0	0	0	0	0	1	0	2	2	63
0	9	48	0	0	0	0	0	0	0	0	0	57
0	10	52	0	0	0	0	0	0	0	0	0	62
1	17	64	0	0	0	0	0	0	0	0	0	82
0	11	37	0	0	0	0	0	0	0	0	0	48
1	13	35	0	0	0	0	0	0	0	0	1	50
2	107	405	0	0	2	0	0	10	0	2	16	544

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 NB RAMPS

EAST-WEST STREET: STODDARD WELLS RD

TIME: 04:00PM-05:00PM DATE: 11-09-22

NORTH LEG

Rt	Thru	Lt	
88	0	12	Total
20	0	1	1st
29	0	3	2nd
20	0	4	3rd
19	0	4	4th

	1st	2nd	3rd	4th	Total
Rt	21	37	17	14	89
Thru	95	22	74	81	272
Lt	0	0	0	0	0

Total	1st	2nd	3rd	4th	
244	70	73	53	48	Lt
58	20	19	10	9	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	0	0	0
2nd	1	0	0
3rd	0	1	0
4th	0	0	0
Total	1	1	0

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: I-15 NB RAMPS

EAST-WEST STREET: STODDARD WELLS RD

TIME: 05:00PM-06:00PM DATE: 11-09-22

NORTH LEG

Rt	Thru	Lt	
164	0	16	Total
64	0	5	1st
32	0	4	2nd
57	0	6	3rd
11	0	1	4th

	1st	2nd	3rd	4th	Total
Rt	12	17	7	11	47
Thru	57	78	52	60	247
Lt	1	3	3	7	14

Total	1st	2nd	3rd	4th	
189	52	64	37	36	Lt
51	10	17	11	13	Thru
2	0	1	0	1	Rt

	Lt	Thru	Rt
1st	0	1	0
2nd	0	1	0
3rd	0	0	0
4th	0	0	0
Total	0	2	0

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: STODDARD WELLS RD
EAST-WEST STREET: QUARRY RD
JURISDICTION: APPLE VALLEY

DATE: 11-09-22

PEAK HOUR: 07:00AM

NORTH LEG

TOTAL: 148

Rt	Thru	Lt	
40		108	Total
6		11	1st
5		44	2nd
14		29	3rd
15		24	4th

EAST LEG TOTAL: 167

	1st	2nd	3rd	4th	Total
Rt	29	34	46	32	141
Thru	6	5	11	4	26
Lt					

WEST LEG TOTAL: 368

Total	1st	2nd	3rd	4th	
131	27	33	31	40	Lt
237	95	44	54	44	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.76
SOUTH LEG =
EAST LEG = 0.73
WEST LEG = 0.75

ALL LEGS = 0.92

SOUTH LEG

TOTAL: 0

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

HOUR TOTAL: 683

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : STODDARD WELLS RD — APPLE VALLEY

EAST-WEST STREET : QUARRY RD — 11-09-22

BEGINNING TIME : 07:00AM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
6	0	9	0	0	0	0	0	0	0	0	2	17
4	0	41	0	0	1	0	0	0	1	0	2	49
12	0	28	0	0	0	0	0	1	2	0	0	43
13	0	22	2	0	1	0	0	0	0	0	1	39
9	0	10	0	0	1	1	0	0	0	0	3	24
9	0	2	1	0	0	0	0	1	0	0	0	13
11	0	9	0	0	0	2	0	0	0	0	2	24
8	0	9	0	0	0	0	0	0	1	0	0	18
72	0	130	3	0	3	3	0	2	4	0	10	227
SOUTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
EAST LEG												
28	5	0	1	1	0	0	0	0	0	0	0	35
33	4	0	0	1	0	0	0	0	1	0	0	39
46	10	0	0	0	0	0	1	0	0	0	0	57
32	4	0	0	0	0	0	0	0	0	0	0	36
26	12	0	0	1	0	2	0	0	0	0	0	41
20	15	0	1	4	0	1	1	0	0	0	0	42
22	16	0	0	0	0	0	0	0	0	0	0	38
13	12	0	0	0	0	0	0	0	0	0	0	25
220	78	0	2	7	0	3	2	0	1	0	0	313
WEST LEG												
0	91	27	0	2	0	0	0	0	0	2	0	122
0	36	33	0	3	0	0	1	0	0	4	0	77
0	47	31	0	1	0	0	3	0	0	3	0	85
0	42	40	0	1	0	0	1	0	0	0	0	84
0	37	23	0	2	0	0	2	0	0	6	0	70
0	7	20	0	0	0	0	1	0	0	7	0	35
0	39	16	0	0	0	0	0	0	0	1	0	56
0	43	19	0	0	0	0	0	0	0	1	0	63
0	342	209	0	9	0	0	8	0	0	24	0	592

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: STODDARD WELLS RD

EAST-WEST STREET: QUARRY RD

TIME: 07:00AM-08:00AM DATE: 11-09-22

NORTH LEG

Rt	Thru	Lt	
40		108	Total
6		11	1st
5		44	2nd
14		29	3rd
15		24	4th

	1st	2nd	3rd	4th	Total
Rt	29	34	46	32	141
Thru	6	5	11	4	26
Lt					

Total	1st	2nd	3rd	4th	
131	27	33	31	40	Lt
237	95	44	54	44	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: STODDARD WELLS RD

EAST-WEST STREET: QUARRY RD

TIME: 08:00AM-09:00AM DATE: 11-09-22

NORTH LEG

Rt	Thru	Lt	
42		37	Total
10		14	1st
10		3	2nd
13		11	3rd
9		9	4th

	1st	2nd	3rd	4th	Total
Rt	28	22	22	13	85
Thru	13	20	16	12	61
Lt					

Total	1st	2nd	3rd	4th	
78	23	20	16	19	Lt
146	47	15	40	44	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: STODDARD WELLS RD
EAST-WEST STREET: QUARRY RD
JURISDICTION: APPLE VALLEY

DATE: 11-09-22

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 102

Rt	Thru	Lt	
58		44	Total
16		8	1st
19		13	2nd
10		7	3rd
13		16	4th

EAST LEG TOTAL: 425

	1st	2nd	3rd	4th	Total
Rt	66	70	53	57	246
Thru	28	30	69	52	179
Lt					

WEST LEG TOTAL: 286

Total	1st	2nd	3rd	4th	
66	13	21	14	18	Lt
220	55	44	55	66	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.80
SOUTH LEG =
EAST LEG = 0.87
WEST LEG = 0.85

ALL LEGS = 0.92

SOUTH LEG

TOTAL: 0

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

HOUR TOTAL: 813

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : STODDARD WELLS RD — APPLE VALLEY

EAST-WEST STREET : QUARRY RD — 11-09-22

BEGINNING TIME : 04:00PM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
						NORTH LEG						
7	0	18	0	0	2	1	0	2	2	0	2	34
16	0	12	0	0	0	0	0	1	0	0	4	33
13	0	7	1	0	0	2	0	0	0	0	1	24
14	0	13	1	0	0	0	0	0	4	0	0	32
10	0	7	0	0	0	0	0	0	0	0	0	17
11	0	16	2	0	0	0	0	0	0	0	0	29
10	0	9	0	0	0	1	0	0	0	0	0	20
6	0	14	1	0	0	0	0	0	1	0	1	23
87	0	96	5	0	2	4	0	3	7	0	8	212
						SOUTH LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
						EAST LEG						
89	23	0	1	1	0	0	1	0	0	0	0	115
20	31	0	0	0	0	0	0	0	0	0	0	51
65	28	0	0	0	0	1	0	0	0	0	0	94
70	30	0	0	0	0	0	0	0	0	0	0	100
53	69	0	0	0	0	0	0	0	0	0	0	122
57	52	0	0	0	0	0	0	0	0	0	0	109
47	63	0	0	0	0	0	0	0	0	0	0	110
40	31	0	0	0	0	0	0	0	0	0	0	71
441	327	0	1	1	0	1	1	0	0	0	0	772
						WEST LEG						
0	60	22	0	0	0	0	3	0	0	3	0	88
0	69	16	0	0	0	0	3	0	0	3	0	91
0	51	13	0	0	0	0	1	0	0	3	0	68
0	44	21	0	0	0	0	0	0	0	0	0	65
0	55	14	0	0	0	0	0	0	0	0	0	69
0	66	18	0	0	0	0	0	0	0	0	0	84
0	39	15	0	0	0	0	0	0	0	0	0	54
0	35	10	0	0	0	0	0	0	0	0	0	45
0	419	129	0	0	0	0	7	0	0	9	0	564

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: STODDARD WELLS RD

EAST-WEST STREET: QUARRY RD

TIME: 04:00PM-05:00PM DATE: 11-09-22

NORTH LEG

61		62	Total
10		24	1st
16		17	2nd
16		8	3rd
19		13	4th
Rt	Thru	Lt	

Rt	90	20	66	70	246
Thru	25	31	28	30	114
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
72	22	16	13	21	Lt
240	66	75	55	44	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: STODDARD WELLS RD

EAST-WEST STREET: QUARRY RD

TIME: 05:00PM-06:00PM DATE: 11-09-22

NORTH LEG

Rt	Thru	Lt	
42		47	Total
10		7	1st
13		16	2nd
11		9	3rd
8		15	4th

	1st	2nd	3rd	4th	Total
Rt	53	57	47	40	197
Thru	69	52	63	31	215
Lt					

Total	1st	2nd	3rd	4th	
57	14	18	15	10	Lt
195	55	66	39	35	Thru
					Rt

	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: QUARRY RD
EAST-WEST STREET: I-15 SB RAMPS
JURISDICTION: APPLE VALLEY

DATE: 11-09-22

PEAK HOUR: 07:15AM

NORTH LEG

TOTAL: 1

Rt	Thru	Lt	
		1	Total
	0	0	1st
	0	0	2nd
	0	1	3rd
	0	0	4th

EAST LEG TOTAL: 156

	1st	2nd	3rd	4th	Total
Rt	0	0	1	0	1
Thru					
Lt	49	43	39	24	155

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.25
SOUTH LEG = 0.89
EAST LEG = 0.80
WEST LEG =

ALL LEGS = 0.90

SOUTH LEG

TOTAL: 266

	Lt	Thru	Rt
1st		0	67
2nd		0	75
3rd		0	73
4th		1	50
Total		1	265

HOUR TOTAL: 423

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : QUARRY RD — APPLE VALLEY

EAST-WEST STREET : I-15 SB RAMPS — 11-09-22

BEGINNING TIME : 07:00AM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	0	0	0	0	0	2
SOUTH LEG												
54	2	0	1	0	0	0	0	0	0	0	0	57
66	0	0	0	0	0	0	0	0	1	0	0	67
75	0	0	0	0	0	0	0	0	0	0	0	75
73	0	0	0	0	0	0	0	0	0	0	0	73
48	1	0	0	0	0	2	0	0	0	0	0	51
40	0	0	1	0	0	1	0	0	0	0	0	42
39	0	0	0	0	0	0	0	0	0	0	0	39
31	1	0	0	0	0	0	0	0	0	0	0	32
426	4	0	2	0	0	3	0	0	1	0	0	436
EAST LEG												
0	0	15	0	0	0	0	0	0	0	0	2	17
0	0	45	0	0	1	0	0	0	0	0	3	49
0	0	40	0	0	0	0	0	1	0	0	2	43
1	0	35	0	0	3	0	0	0	0	0	1	40
0	0	19	0	0	1	0	0	1	0	0	3	24
0	0	12	0	0	1	0	0	1	0	0	0	14
0	0	21	0	0	0	0	0	2	0	0	2	25
0	0	15	0	0	0	0	0	0	0	0	1	16
1	0	202	0	0	6	0	0	5	0	0	14	228
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: QUARRY RD

EAST-WEST STREET: I-15 SB RAMPS

TIME: 07:00AM-08:00AM DATE: 11-09-22

NORTH LEG

	0	1	Total
	0	0	1st
	0	0	2nd
	0	0	3rd
	0	1	4th
Rt	Thru	Lt	

Rt	0	0	0	1	1
Thru					
Lt	17	49	43	39	148
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		2	55
2nd		0	67
3rd		0	75
4th		0	73
Total		2	270

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: QUARRY RD

EAST-WEST STREET: I-15 SB RAMPS

TIME: 08:00AM-09:00AM DATE: 11-09-22

NORTH LEG

	0	1	Total
	0	0	1st
	0	1	2nd
	0	0	3rd
	0	0	4th
Rt	Thru	Lt	

Rt	0	0	0	0	0
Thru					
Lt	24	14	25	16	79
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		1	50
2nd		0	42
3rd		0	39
4th		1	31
Total		2	162

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: QUARRY RD
EAST-WEST STREET: I-15 SB RAMPS
JURISDICTION: APPLE VALLEY

DATE: 11-09-22

PEAK HOUR: 04:00PM

NORTH LEG

TOTAL: 1

	Rt	Thru	Lt	
		1		Total
		0	0	1st
		0	0	2nd
		1	0	3rd
		0	0	4th

EAST LEG TOTAL: 122

	1st	2nd	3rd	4th	Total
Rt	0	0	2	0	2
Thru					
Lt	33	32	24	31	120

WEST LEG TOTAL: 0

	Total	1st	2nd	3rd	4th
Lt					
Thru					
Rt					

PEAK HOUR FACTORS

NORTH LEG = 0.25
SOUTH LEG = 0.71
EAST LEG = 0.92
WEST LEG =

ALL LEGS = 0.76

SOUTH LEG

TOTAL: 316

	Lt	Thru	Rt
1st		0	111
2nd		0	36
3rd		1	78
4th		0	90
Total		1	315

HOUR TOTAL: 439

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : QUARRY RD — APPLE VALLEY

EAST-WEST STREET : I-15 SB RAMPS — 11-09-22

BEGINNING TIME : 04:00PM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	0	0	0	0	0	1
0	1	2	0	0	0	0	0	0	0	0	0	3
SOUTH LEG												
109	0	0	2	0	0	0	0	0	0	0	0	111
36	0	0	0	0	0	0	0	0	0	0	0	36
77	1	0	0	0	0	1	0	0	0	0	0	79
90	0	0	0	0	0	0	0	0	0	0	0	90
66	1	0	0	0	0	0	0	0	0	0	0	67
75	0	0	0	0	0	0	0	0	0	0	0	75
66	0	0	0	0	0	0	0	0	0	0	0	66
48	0	0	0	0	0	0	0	0	0	0	0	48
567	2	0	2	0	0	1	0	0	0	0	0	572
EAST LEG												
0	0	24	0	0	2	0	0	3	0	0	4	33
0	0	27	0	0	0	0	0	1	0	0	4	32
2	0	20	0	0	1	0	0	2	0	0	1	26
0	0	26	0	0	1	0	0	0	0	0	4	31
0	0	17	0	0	0	0	0	0	0	0	0	17
0	0	27	0	0	2	0	0	0	0	0	0	29
1	0	19	0	0	0	0	0	1	0	0	0	21
0	0	20	0	0	1	0	0	0	0	0	2	23
3	0	180	0	0	7	0	0	7	0	0	15	212
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: QUARRY RD

EAST-WEST STREET: I-15 SB RAMPS

TIME: 04:00PM-05:00PM DATE: 11-09-22

NORTH LEG

	1	0	Total
	0	0	1st
	0	0	2nd
	1	0	3rd
	0	0	4th
Rt	Thru	Lt	

Rt	0	0	2	0	2
Thru					
Lt	33	32	24	31	120
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		0	111
2nd		0	36
3rd		1	78
4th		0	90
Total		1	315

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: QUARRY RD

EAST-WEST STREET: I-15 SB RAMPS

TIME: 05:00PM-06:00PM DATE: 11-09-22

NORTH LEG

	0	2	Total
	0	0	1st
	0	0	2nd
	0	1	3rd
	0	1	4th
Rt	Thru	Lt	

Rt	0	0	1	0	1
Thru					
Lt	17	29	20	23	89
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		1	66
2nd		0	75
3rd		0	66
4th		0	48
Total		1	255

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: APPLE VALLEY RD
EAST-WEST STREET: FALCHION RD
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 07:30AM

NORTH LEG

TOTAL: 0

	Rt	Thru	Lt
Total			
1st			
2nd			
3rd			
4th			

EAST LEG TOTAL: 11

	1st	2nd	3rd	4th	Total
Rt					
Thru	0	3	2	1	6
Lt	2	1	1	1	5

WEST LEG TOTAL: 2

	Total	1st	2nd	3rd	4th
Lt					
Thru	2	1	0	1	0
Rt		0	0	0	0

PEAK HOUR FACTORS

NORTH LEG =
SOUTH LEG = 0.75
EAST LEG = 0.69
WEST LEG = 0.50

ALL LEGS = 0.79

SOUTH LEG

TOTAL: 9

	Lt	Thru	Rt
1st	0		1
2nd	0		3
3rd	0		2
4th	1		2
Total	1		8

HOUR TOTAL: 22

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : APPLE VALLEY RD
EAST-WEST STREET : FALCHION RD

APPLE VALLEY
02-22-23

BEGINNING TIME : 07:00AM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	1
1	0	0	0	0	0	0	0	0	2	0	0	3
2	0	0	0	0	0	0	0	0	0	0	0	2
1	0	1	0	0	0	0	0	0	1	0	0	3
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	1	0	0	2
4	0	2	0	0	0	0	0	0	5	0	0	11
EAST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	0	0	0	0	0	2
0	1	1	0	0	0	0	1	0	0	1	0	4
0	2	1	0	0	0	0	0	0	0	0	0	3
0	0	1	0	0	0	0	0	0	0	1	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	1	0	0	0	0	0	0	0	2	0	5
0	5	6	0	0	0	0	1	0	0	4	0	16
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	1	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	1	0	2
0	3	0	0	0	0	0	0	0	0	2	0	5

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: APPLE VALLEY RD

EAST-WEST STREET: FALCHION RD

TIME: 07:00AM-08:00AM DATE: 02-22-23

NORTH LEG

			Total
			1st
			2nd
			3rd
			4th
Rt	Thru	Lt	

	1st	2nd	3rd	4th	Total
Rt					
Thru	0	0	0	3	3
Lt	0	0	2	1	3

Total	1st	2nd	3rd	4th	
					Lt
2	0	1	1	0	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	0		0
2nd	0		0
3rd	0		1
4th	0		3
Total	0		4

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: APPLE VALLEY RD

EAST-WEST STREET: FALCHION RD

TIME: 08:00AM-09:00AM DATE: 02-22-23

NORTH LEG

			Total
			1st
			2nd
			3rd
			4th
Rt	Thru	Lt	

	1st	2nd	3rd	4th	Total
Rt					
Thru	2	1	0	4	7
Lt	1	1	0	1	3

Total	1st	2nd	3rd	4th	
					Lt
3	1	0	0	2	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	0		2
2nd	1		2
3rd	0		0
4th	1		1
Total	2		5

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: APPLE VALLEY RD
EAST-WEST STREET: FALCHION RD
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 04:00PM

NORTH LEG

TOTAL: 0

Rt	Thru	Lt	
			Total
			1st
			2nd
			3rd
			4th

EAST LEG TOTAL: 20

	1st	2nd	3rd	4th	Total
Rt					
Thru	4	4	6	1	15
Lt	2	1	2	0	5

WEST LEG TOTAL: 6

Total	1st	2nd	3rd	4th	
					Lt
6	0	1	4	1	Thru
	0	0	0	0	Rt

SOUTH LEG

TOTAL: 7

	Lt	Thru	Rt
1st	2		1
2nd	2		0
3rd	0		2
4th	0		0
Total	4		3

PEAK HOUR FACTORS

NORTH LEG =
SOUTH LEG = 0.58
EAST LEG = 0.63
WEST LEG = 0.38

ALL LEGS = 0.59

HOUR TOTAL: 33

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : APPLE VALLEY RD

EAST-WEST STREET : FALCHION RD

APPLE VALLEY

02-22-23

BEGINNING TIME : 04:00PM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH LEG												
1	0	2	0	0	0	0	0	0	0	0	0	3
0	0	2	0	0	0	0	0	0	0	0	0	2
2	0	0	0	0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	5	0	0	0	0	0	0	0	0	0	10
EAST LEG												
0	2	2	0	0	0	0	0	0	0	2	0	6
0	2	1	0	0	0	0	0	0	0	2	0	5
0	4	2	0	0	0	0	0	0	0	2	0	8
0	1	0	0	0	0	0	0	0	0	0	0	1
0	3	1	0	0	0	0	0	0	0	1	0	5
0	2	0	0	0	0	0	0	0	0	2	0	4
0	1	1	0	0	0	0	0	0	0	0	0	2
0	1	0	0	0	0	0	0	0	0	0	0	1
0	16	7	0	0	0	0	0	0	0	9	0	32
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0	1
0	2	0	0	0	0	0	0	0	0	2	0	4
0	1	0	0	0	0	0	0	0	0	0	0	1
0	2	0	0	0	0	0	0	0	0	0	0	2
0	1	0	0	0	0	0	0	0	0	1	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	7	0	0	0	0	0	0	0	0	3	0	10

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: APPLE VALLEY RD

EAST-WEST STREET: FALCHION RD

TIME: 04:00PM-05:00PM DATE: 02-22-23

NORTH LEG

			Total
			1st
			2nd
			3rd
			4th
Rt	Thru	Lt	

	1st	2nd	3rd	4th	Total
Rt					
Thru	4	4	6	1	15
Lt	2	1	2	0	5

Total	1st	2nd	3rd	4th	
					Lt
6	0	1	4	1	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	2		1
2nd	2		0
3rd	0		2
4th	0		0
Total	4		3

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: APPLE VALLEY RD

EAST-WEST STREET: FALCHION RD

TIME: 05:00PM-06:00PM DATE: 02-22-23

NORTH LEG

			Total
			1st
			2nd
			3rd
			4th
Rt	Thru	Lt	

	1st	2nd	3rd	4th	Total
Rt					
Thru	4	4	1	1	10
Lt	1	0	1	0	2

Total	1st	2nd	3rd	4th	
					Lt
4	2	2	0	0	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	1		0
2nd	0		1
3rd	0		1
4th	0		0
Total	1		2

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15
EAST-WEST STREET: FALCHION RD
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 08:00AM

NORTH LEG

TOTAL: 31

	Rt	Thru	Lt	
		30	1	Total
		5	0	1st
		5	0	2nd
		11	0	3rd
		9	1	4th

EAST LEG TOTAL: 9

	1st	2nd	3rd	4th	Total
Rt	0	1	0	2	3
Thru					
Lt	2	1	0	3	6

WEST LEG TOTAL: 0

	Total	1st	2nd	3rd	4th
Lt					
Thru					
Rt					

PEAK HOUR FACTORS

NORTH LEG = 0.70
SOUTH LEG = 0.79
EAST LEG = 0.45
WEST LEG =

ALL LEGS = 0.70

SOUTH LEG

TOTAL: 22

	Lt	Thru	Rt
1st		3	1
2nd		5	0
3rd		6	0
4th		6	1
Total		20	2

HOUR TOTAL: 62

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15 APPLE VALLEY

EAST-WEST STREET : FALCHION RD 02-22-23

BEGINNING TIME : 07:00AM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
						NORTH LEG						
0	4	0	0	0	0	0	0	0	0	0	0	4
0	6	0	0	0	0	0	0	0	0	0	0	6
0	9	0	0	0	0	0	0	0	0	0	1	10
0	7	0	0	0	0	0	0	0	0	0	0	7
0	5	0	0	0	0	0	0	0	0	0	0	5
0	5	0	0	0	0	0	0	0	0	0	0	5
0	11	0	0	0	0	0	0	0	0	0	0	11
0	9	1	0	0	0	0	0	0	0	0	0	10
0	56	1	0	0	0	0	0	0	0	0	1	58
						SOUTH LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
1	2	0	0	0	0	0	0	0	0	0	0	3
0	1	0	0	0	0	0	0	0	0	0	0	1
0	2	0	0	0	0	0	0	0	0	0	0	2
1	3	0	0	0	0	0	0	0	0	0	0	4
0	5	0	0	0	0	0	0	0	0	0	0	5
0	6	0	0	0	0	0	0	0	0	0	0	6
0	6	0	0	0	0	0	0	0	1	0	0	7
2	25	0	0	0	0	0	0	0	1	0	0	28
						EAST LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	1	1	0	0	3
0	0	2	0	0	0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	0	0	0	0	1	2
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	2	0	0	0	0	0	0	1	0	1	5
2	0	5	0	0	0	0	0	1	2	0	2	12
						WEST LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: FALCHION RD

TIME: 07:00AM-08:00AM DATE: 02-22-23

NORTH LEG

	26	1	Total
	4	0	1st
	6	0	2nd
	9	1	3rd
	7	0	4th
Rt	Thru	Lt	

Rt	0	0	0	1	1
Thru					
Lt	0	0	0	2	2
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		0	0
2nd		2	1
3rd		1	0
4th		2	0
Total		5	1

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: FALCHION RD

TIME: 08:00AM-09:00AM DATE: 02-22-23

NORTH LEG

	30	1	Total
	5	0	1st
	5	0	2nd
	11	0	3rd
	9	1	4th
Rt	Thru	Lt	

Rt	0	1	0	2	3
Thru					
Lt	2	1	0	3	6
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		3	1
2nd		5	0
3rd		6	0
4th		6	1
Total		20	2

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15
EAST-WEST STREET: FALCHION RD
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 04:00PM

NORTH LEG

TOTAL: 41

	39	2	Total
	15	0	1st
	8	0	2nd
	10	1	3rd
	6	1	4th
Rt	Thru	Lt	

EAST LEG TOTAL: 19

Rt	0	2	2	1	5
Thru					
Lt	6	4	4	0	14
	1st	2nd	3rd	4th	Total

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.68
SOUTH LEG = 0.65
EAST LEG = 0.79
WEST LEG =

ALL LEGS = 0.69

SOUTH LEG

TOTAL: 26

	Lt	Thru	Rt
1st		10	0
2nd		6	1
3rd		4	3
4th		2	0
Total		22	4

HOUR TOTAL: 86

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15 APPLE VALLEY

EAST-WEST STREET : FALCHION RD 02-22-23

BEGINNING TIME : 04:00PM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	15	0	0	0	0	0	0	0	0	0	0	15
0	8	0	0	0	0	0	0	0	0	0	0	8
0	10	1	0	0	0	0	0	0	0	0	0	11
0	6	1	0	0	0	0	0	0	0	0	0	7
0	10	2	0	0	0	0	0	0	0	0	0	12
0	5	0	0	0	0	0	0	0	0	0	0	5
0	2	0	0	0	0	0	0	0	0	0	0	2
0	2	0	0	0	0	0	0	0	0	0	0	2
0	58	4	0	0	0	0	0	0	0	0	0	62
SOUTH LEG												
0	10	0	0	0	0	0	0	0	0	0	0	10
1	6	0	0	0	0	0	0	0	0	0	0	7
1	4	0	0	0	0	0	0	0	2	0	0	7
0	2	0	0	0	0	0	0	0	0	0	0	2
0	2	0	0	0	0	0	0	0	0	0	0	2
1	2	0	0	0	0	0	0	0	1	0	0	4
0	1	0	0	0	0	0	0	0	0	0	0	1
0	2	0	0	0	0	0	0	0	0	0	0	2
3	29	0	0	0	0	0	0	0	3	0	0	35
EAST LEG												
0	0	4	0	0	0	0	0	0	0	0	2	6
1	0	3	0	0	0	0	0	0	1	0	1	6
1	0	3	0	0	0	0	0	0	1	0	1	6
1	0	0	0	0	0	0	0	0	0	0	0	1
0	0	4	0	0	0	0	0	0	0	0	1	5
0	0	2	0	0	0	0	0	0	1	0	1	4
1	0	0	0	0	0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	0	0	0	0	0	1
4	0	17	0	0	0	0	0	0	3	0	6	30
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: FALCHION RD

TIME: 04:00PM-05:00PM DATE: 02-22-23

NORTH LEG

	39	2	Total
	15	0	1st
	8	0	2nd
	10	1	3rd
	6	1	4th

Rt Thru Lt

Rt	0	2	2	1	5
Thru					
Lt	6	4	4	0	14

1st 2nd 3rd 4th Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		10	0
2nd		6	1
3rd		4	3
4th		2	0
Total		22	4

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: FALCHION RD

TIME: 05:00PM-06:00PM DATE: 02-22-23

NORTH LEG

	19	2	Total
	10	2	1st
	5	0	2nd
	2	0	3rd
	2	0	4th
Rt	Thru	Lt	

Rt	0	1	1	0	2
Thru					
Lt	5	3	0	1	9
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		2	0
2nd		2	2
3rd		1	0
4th		2	0
Total		7	2

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15
EAST-WEST STREET: NORCO ST
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 08:00AM

NORTH LEG

TOTAL: 26

	Rt	Thru	Lt	
Total		25	1	Total
1st		4	0	1st
2nd		6	0	2nd
3rd		8	0	3rd
4th		7	1	4th

EAST LEG TOTAL: 3

	1st	2nd	3rd	4th	Total
Rt	0	1	1	0	2
Thru					
Lt	0	0	1	0	1

WEST LEG TOTAL: 0

	Total	1st	2nd	3rd	4th
Lt					
Thru					
Rt					

PEAK HOUR FACTORS

NORTH LEG = 0.81
SOUTH LEG = 0.79
EAST LEG = 0.38
WEST LEG =

ALL LEGS = 0.75

SOUTH LEG

TOTAL: 22

	Lt	Thru	Rt
1st		3	0
2nd		5	0
3rd		7	0
4th		6	1
Total		21	1

HOUR TOTAL: 51

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15 APPLE VALLEY

EAST-WEST STREET : NORCO ST 02-22-23

BEGINNING TIME : 07:00AM

AUTOS			LARGE 2 AXLE			3 AXLE			4(+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
						NORTH LEG						
0	2	0	0	0	0	0	0	0	0	0	0	2
0	5	0	0	0	0	0	0	0	0	0	0	5
0	7	0	0	0	0	0	0	0	0	0	0	7
0	6	0	0	0	0	0	0	0	0	0	0	6
0	4	0	0	0	0	0	0	0	0	0	0	4
0	6	0	0	0	0	0	0	0	0	0	0	6
0	8	0	0	0	0	0	0	0	0	0	0	8
0	7	1	0	0	0	0	0	0	0	0	0	8
0	45	1	0	0	0	0	0	0	0	0	0	46
						SOUTH LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	0	0	0	0	0	2
0	2	0	0	0	0	0	0	0	0	0	0	2
0	3	0	0	0	0	0	0	0	0	1	0	4
0	3	0	0	0	0	0	0	0	0	0	0	3
0	5	0	0	0	0	0	0	0	0	0	0	5
0	7	0	0	0	0	0	0	0	0	0	0	7
1	5	0	0	0	0	0	0	0	0	1	0	7
1	27	0	0	0	0	0	0	0	0	2	0	30
						EAST LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	1
1	0	1	0	0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	1	0	0	0	0	0	0	0	0	0	4
						WEST LEG						
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: NORCO ST

TIME: 07:00AM-08:00AM DATE: 02-22-23

NORTH LEG

	20	0	Total
	2	0	1st
	5	0	2nd
	7	0	3rd
	6	0	4th
Rt	Thru	Lt	

Rt	0	0	1	0	1
Thru					
Lt	0	0	0	0	0
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		0	0
2nd		2	0
3rd		2	0
4th		4	0
Total		8	0

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: NORCO ST

TIME: 08:00AM-09:00AM DATE: 02-22-23

NORTH LEG

	25	1	Total
	4	0	1st
	6	0	2nd
	8	0	3rd
	7	1	4th
Rt	Thru	Lt	

Rt	0	1	1	0	2
Thru					
Lt	0	0	1	0	1
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		3	0
2nd		5	0
3rd		7	0
4th		6	1
Total		21	1

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15
EAST-WEST STREET: NORCO ST
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 04:00PM

NORTH LEG

TOTAL: 26

	26		Total
	11	0	1st
	4	0	2nd
	7	0	3rd
	4	0	4th
Rt	Thru	Lt	

EAST LEG TOTAL: 5

Rt	0	1	0	0	1
Thru					
Lt	1	0	2	1	4
	1st	2nd	3rd	4th	Total

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.59
SOUTH LEG = 0.83
EAST LEG = 0.63
WEST LEG =

ALL LEGS = 0.73

SOUTH LEG

TOTAL: 33

	Lt	Thru	Rt
1st		10	0
2nd		8	1
3rd		9	0
4th		5	0
Total		32	1

HOUR TOTAL: 64

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15 APPLE VALLEY
EAST-WEST STREET : NORCO ST 02-22-23
BEGINNING TIME : 04:00PM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
0	11	0	0	0	0				0	0	0	11
0	4	0	0	0	0				0	0	0	4
0	7	0	0	0	0				0	0	0	7
0	4	0	0	0	0				0	0	0	4
0	8	0	0	0	0				0	0	0	8
0	3	0	0	0	0				0	0	0	3
0	2	0	0	0	0				0	0	0	2
0	2	0	0	0	0				0	0	0	2
0	41	0	0	0	0	0	0	0	0	0	0	41
SOUTH LEG												
0	10	0	0	0	0				0	0	0	10
1	7	0	0	0	0				0	1	0	9
0	8	0	0	0	0				0	1	0	9
0	5	0	0	0	0				0	0	0	5
0	3	0	0	0	0				0	0	0	3
0	4	0	0	0	0				0	1	0	5
0	1	0	0	0	0				0	0	0	1
0	3	0	0	0	0				0	0	0	3
1	41	0	0	0	0	0	0	0	0	3	0	45
EAST LEG												
0	0	1	0	0	0				0	0	0	1
1	0	0	0	0	0				0	0	0	1
0	0	2	0	0	0				0	0	0	2
0	0	1	0	0	0				0	0	0	1
2	0	1	0	0	0				0	0	0	3
0	0	1	0	0	0				0	0	0	1
1	0	0	0	0	0				0	0	0	1
0	0	0	0	0	0				0	0	0	0
4	0	6	0	0	0	0	0	0	0	0	0	10
WEST LEG												
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0				0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: NORCO ST

TIME: 04:00PM-05:00PM DATE: 02-22-23

NORTH LEG

	26	0	Total
	11	0	1st
	4	0	2nd
	7	0	3rd
	4	0	4th

Rt Thru Lt

Rt	0	1	0	0	1
Thru					
Lt	1	0	2	1	4

1st 2nd 3rd 4th Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		10	0
2nd		8	1
3rd		9	0
4th		5	0
Total		32	1

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: NORCO ST

TIME: 05:00PM-06:00PM DATE: 02-22-23

NORTH LEG

	15	0	Total
	8	0	1st
	3	0	2nd
	2	0	3rd
	2	0	4th
Rt	Thru	Lt	

Rt	2	0	1	0	3
Thru					
Lt	1	1	0	0	2
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
					Thru
					Rt

	Lt	Thru	Rt
1st		3	0
2nd		5	0
3rd		1	0
4th		3	0
Total		12	0

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15
EAST-WEST STREET: QUARRY RD
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 08:00AM

NORTH LEG

TOTAL: 27

	Rt	Thru	Lt	
		22	5	Total
1st	0	3	1	
2nd	0	5	1	
3rd	0	8	1	
4th	0	6	2	

EAST LEG TOTAL: 11

	1st	2nd	3rd	4th	Total
Rt	0	1	1	0	2
Thru	0	0	0	0	
Lt	2	0	3	4	9

WEST LEG TOTAL: 0

	Total	1st	2nd	3rd	4th	
Lt		0	0	0	0	
Thru		0	0	0	0	
Rt		0	0	0	0	

PEAK HOUR FACTORS

NORTH LEG = 0.75
SOUTH LEG = 0.72
EAST LEG = 0.69
WEST LEG =

ALL LEGS = 0.76

SOUTH LEG

TOTAL: 23

	Lt	Thru	Rt
1st	0	3	0
2nd	0	4	2
3rd	0	6	0
4th	0	7	1
Total		20	3

HOUR TOTAL: 61

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15 — APPLE VALLEY

EAST-WEST STREET : QUARRY RD — 02-22-23

BEGINNING TIME : 07:00AM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
0	2	0	0	0	0	0	0	0	0	0	0	2
0	4	1	0	0	0	0	0	0	0	0	0	5
0	5	2	0	0	0	0	0	0	0	0	0	7
0	4	2	0	0	0	0	0	0	0	0	0	6
0	3	1	0	0	0	0	0	0	0	0	0	4
0	5	1	0	0	0	0	0	0	0	0	0	6
0	8	1	0	0	0	0	0	0	0	0	0	9
0	6	2	0	0	0	0	0	0	0	0	0	8
0	37	10	0	0	0	0	0	0	0	0	0	47
SOUTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	0	0	0	0	0	2
0	1	0	0	0	0	0	0	0	0	0	0	1
0	1	0	0	0	0	0	0	0	0	1	0	2
0	3	0	0	0	0	0	0	0	0	0	0	3
2	4	0	0	0	0	0	0	0	0	0	0	6
0	6	0	0	0	0	0	0	0	0	0	0	6
1	6	0	0	0	0	0	0	0	0	1	0	8
3	23	0	0	0	0	0	0	0	0	2	0	28
EAST LEG												
0	0	2	0	0	0	0	0	0	0	0	0	2
0	0	2	0	0	0	0	0	0	0	0	0	2
1	0	4	0	0	0	0	0	0	0	0	1	6
2	0	3	0	0	0	0	0	0	0	0	0	5
0	0	2	0	0	0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	0	0	0	0	0	1
1	0	3	0	0	0	0	0	0	0	0	0	4
0	0	4	0	0	0	0	0	0	0	0	0	4
5	0	20	0	0	0	0	0	0	0	0	1	26
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: QUARRY RD

TIME: 07:00AM-08:00AM DATE: 02-22-23

NORTH LEG

Rt	Thru	Lt	
0	15	5	Total
0	2	0	1st
0	4	1	2nd
0	5	2	3rd
0	4	2	4th

	1st	2nd	3rd	4th	Total
Rt	0	0	1	2	3
Thru	0	0	0	0	0
Lt	2	2	5	3	12

Total	1st	2nd	3rd	4th	
0	0	0	0	0	Lt
0	0	0	0	0	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	0	0	0
2nd	0	2	0
3rd	0	1	0
4th	0	2	0
Total	0	5	0

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: QUARRY RD

TIME: 08:00AM-09:00AM DATE: 02-22-23

NORTH LEG

Rt	Thru	Lt	
0	22	5	Total
0	3	1	1st
0	5	1	2nd
0	8	1	3rd
0	6	2	4th

	1st	2nd	3rd	4th	Total
Rt	0	1	1	0	2
Thru	0	0	0	0	0
Lt	2	0	3	4	9

Total	1st	2nd	3rd	4th	
0	0	0	0	0	Lt
0	0	0	0	0	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	0	3	0
2nd	0	4	2
3rd	0	6	0
4th	0	7	1
Total	0	20	3

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: OUTER HWY 15
EAST-WEST STREET: QUARRY RD
JURISDICTION: APPLE VALLEY

DATE: 02-22-23

PEAK HOUR: 04:00PM

NORTH LEG

TOTAL: 30

	25	5	Total
0	10	2	1st
0	4	0	2nd
0	6	3	3rd
0	5	0	4th
Rt	Thru	Lt	

EAST LEG TOTAL: 25

Rt	2	2	3	2	9
Thru	0	0	0	0	
Lt	5	4	5	2	16
	1st	2nd	3rd	4th	Total

WEST LEG TOTAL: 0

Total	1st	2nd	3rd	4th	
	0	0	0	0	Lt
	0	0	0	0	Thru
	0	0	0	0	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.63
SOUTH LEG = 0.68
EAST LEG = 0.78
WEST LEG =

ALL LEGS = 0.71

SOUTH LEG

TOTAL: 27

	Lt	Thru	Rt
1st	0	8	2
2nd	0	7	1
3rd	0	6	0
4th	0	3	0
Total		24	3

HOUR TOTAL: 82

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : OUTER HWY 15 APPLE VALLEY

EAST-WEST STREET : QUARRY RD 02-22-23

BEGINNING TIME : 04:00PM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
NORTH LEG												
0	10	2	0	0	0	0	0	0	0	0	0	12
0	4	0	0	0	0	0	0	0	0	0	0	4
0	6	3	0	0	0	0	0	0	0	0	0	9
0	5	0	0	0	0	0	0	0	0	0	0	5
0	9	0	0	0	0	0	0	0	0	0	0	9
0	3	1	0	0	0	0	0	0	0	0	0	4
0	2	0	0	0	0	0	0	0	0	0	0	2
0	2	0	0	0	0	0	0	0	0	0	0	2
0	41	6	0	0	0	0	0	0	0	0	0	47
SOUTH LEG												
2	8	0	0	0	0	0	0	0	0	0	0	10
1	6	0	0	0	0	0	0	0	0	1	0	8
0	5	0	0	0	0	0	0	0	0	1	0	6
0	3	0	0	0	0	0	0	0	0	0	0	3
0	2	0	0	0	0	0	0	0	0	0	0	2
0	2	0	0	0	0	0	0	0	0	1	0	3
1	1	0	0	0	0	0	0	0	0	0	0	2
0	2	0	0	0	0	0	0	0	0	0	0	2
4	29	0	0	0	0	0	0	0	0	3	0	36
EAST LEG												
2	0	5	0	0	0	0	0	0	0	0	0	7
2	0	4	0	0	0	0	0	0	0	0	0	6
3	0	5	0	0	0	0	0	0	0	0	0	8
2	0	2	0	0	0	0	0	0	0	0	0	4
1	0	3	0	0	0	0	0	0	0	0	0	4
2	0	2	0	0	0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	1
13	0	21	0	0	0	0	0	0	0	0	0	34
WEST LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: QUARRY RD

TIME: 04:00PM-05:00PM DATE: 02-22-23

NORTH LEG

Rt	Thru	Lt	
0	25	5	Total
0	10	2	1st
0	4	0	2nd
0	6	3	3rd
0	5	0	4th

	1st	2nd	3rd	4th	Total
Rt	2	2	3	2	9
Thru	0	0	0	0	0
Lt	5	4	5	2	16

Total	1st	2nd	3rd	4th	
0	0	0	0	0	Lt
0	0	0	0	0	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	0	8	2
2nd	0	7	1
3rd	0	6	0
4th	0	3	0
Total	0	24	3

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: OUTER HWY 15

EAST-WEST STREET: QUARRY RD

TIME: 05:00PM-06:00PM DATE: 02-22-23

NORTH LEG

Rt	Thru	Lt	
0	16	1	Total
0	9	0	1st
0	3	1	2nd
0	2	0	3rd
0	2	0	4th

	1st	2nd	3rd	4th	Total
Rt	1	2	0	1	4
Thru	0	0	0	0	0
Lt	3	2	0	0	5

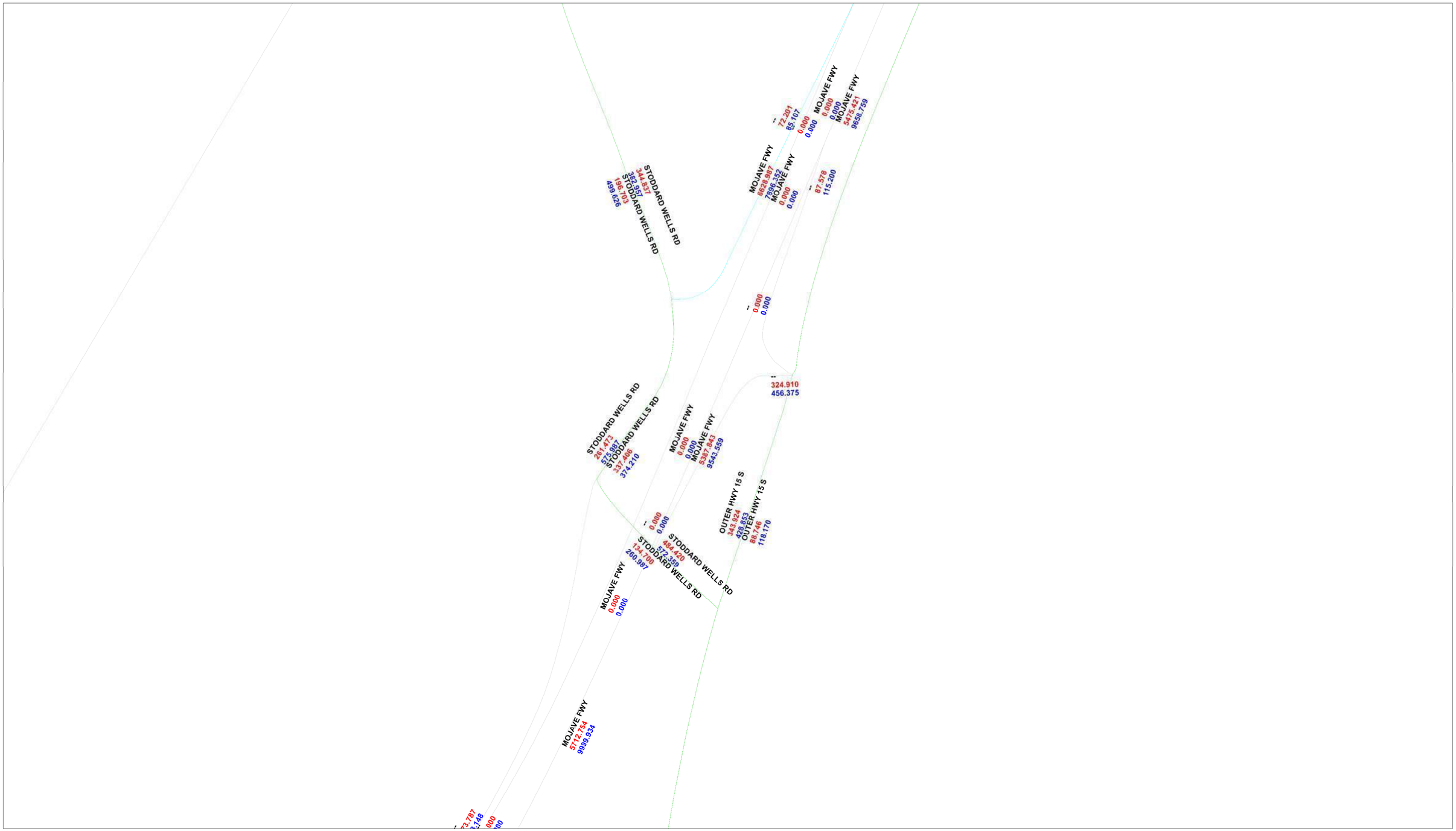
Total	1st	2nd	3rd	4th	
0	0	0	0	0	Lt
0	0	0	0	0	Thru
0	0	0	0	0	Rt

	Lt	Thru	Rt
1st	0	2	0
2nd	0	3	0
3rd	0	1	1
4th	0	2	0
Total	0	8	1

Prepared by NEWPORT TRAFFIC STUDIES

Appendix C: Forecast Model Plots and Volume Development

2016 - Volumes I-15/SW Int



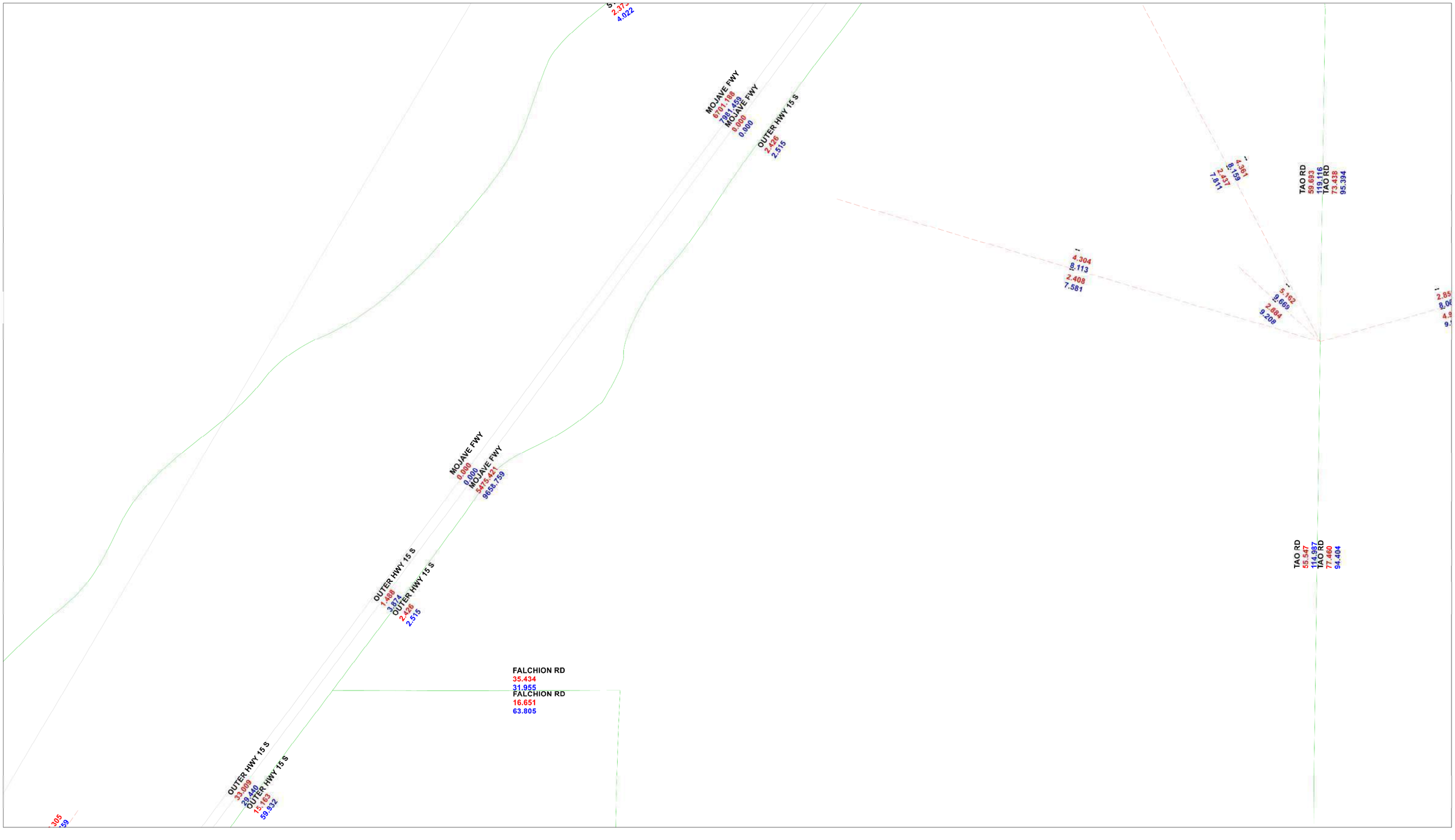
AM Volumes PM Volumes Intersection 6 & 7



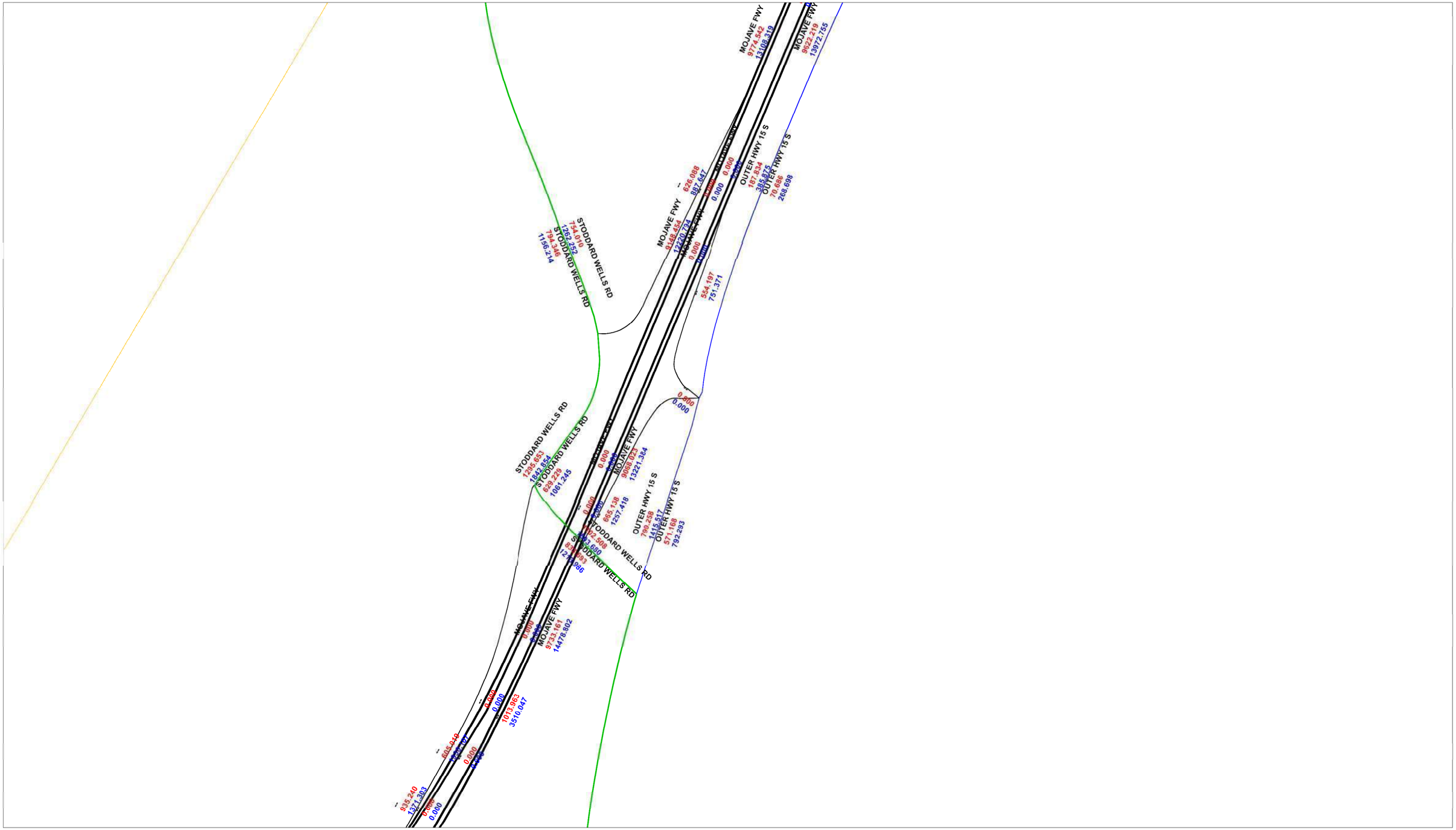
AM Volumes PM Volumes Intersection 8



2016 - Volumes Falchion



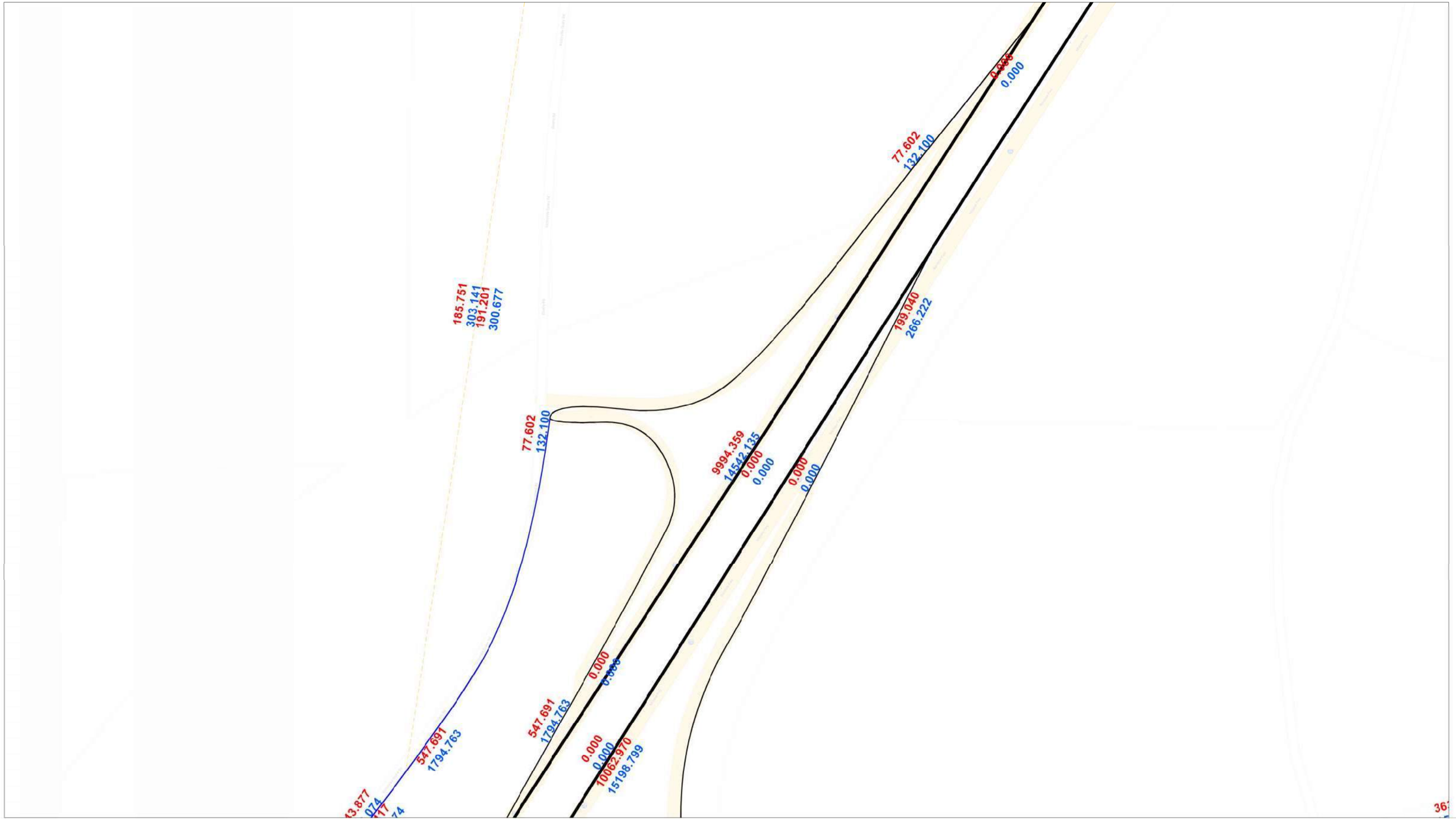
2040 - Volumes I-15/SW Int



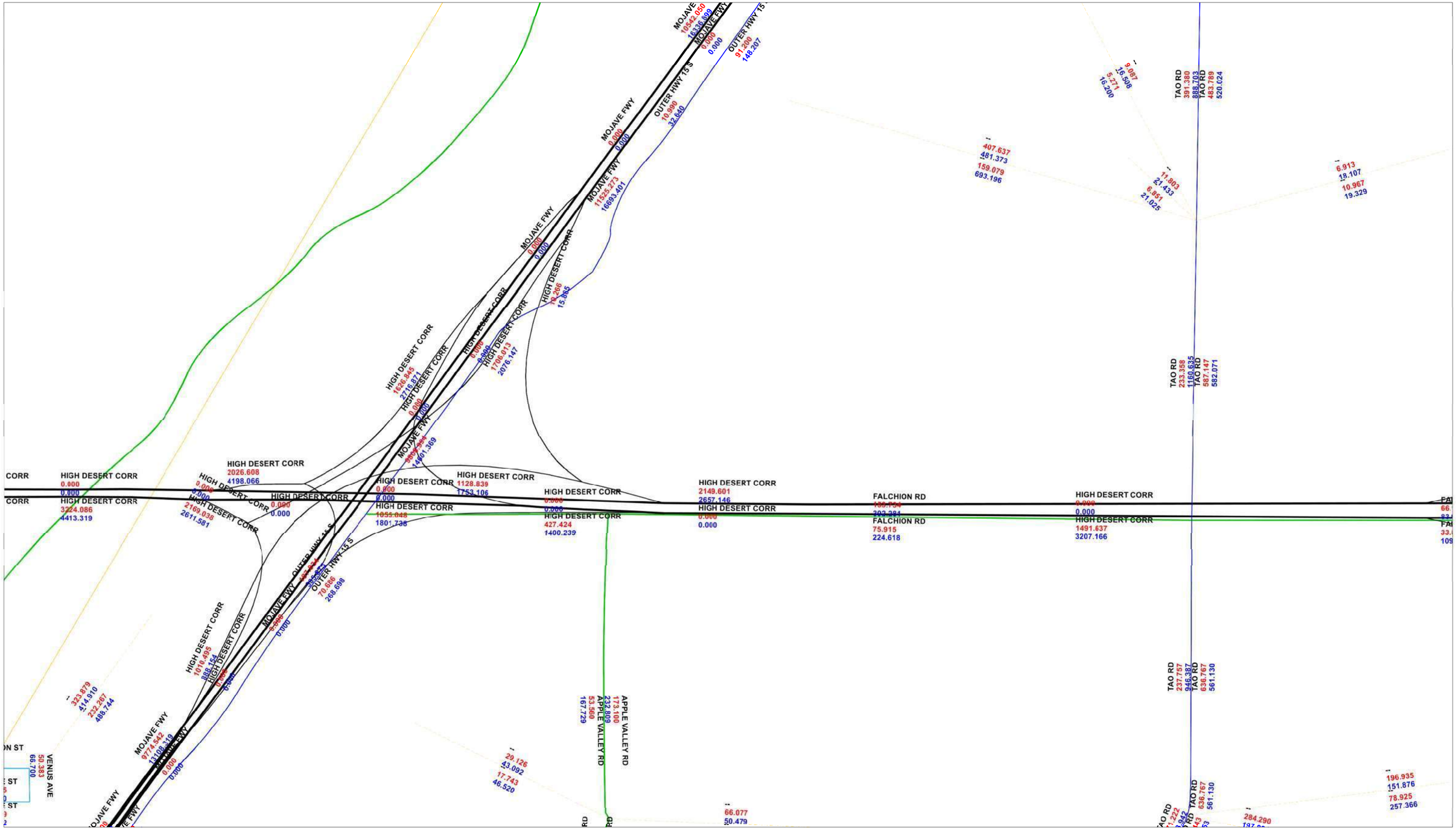
AM Volumes PM Volumes Intersection 6 & 7 - 2040



AM Volumes PM Volumes Intersection 8 - 2040



2040 - Volumes Falchion



Appendix D: Other Area Approved Developments Excerpts

Initial Study

Apple Valley 143 Project

JULY 2022

Prepared for:

TOWN OF APPLE VALLEY
14955 Dale Evans Parkway
Apple Valley, California 92307
Contact: Daniel Alcayaga, Planning Manager

Prepared by:

DUDEK

38 N. Marengo Avenue
Pasadena, California 91101
Contact: Patrick Cruz, Project Manager

2 Project Description

2.1 Project Location

The approximately 143-acre Project site is located in the northern part of the Town, which is within the Victor Valley Region of San Bernardino County (Figure 1, Project Location). The Project site is located on the northeast quadrant of I-15 and Stoddard Wells Road. The Project site is located south of Johnson Road, approximately 0.25 miles west of Grasshopper Road, north of Stoddard Wells Road, and north of I-15. The Project site consists of Assessor's Parcel Numbers (APNs) 047-221-105, 047-221-106, 047-221-115, 047-222-206, and 047-222-211. Specifically, the Project site is located in Sections 13 and 24, Township 6N, Ranges 3W and 4W, as depicted on the U.S. Geological Survey Apple Valley North and Victorville, California 7.5-minute topographic quadrangle maps. Regional access to the Project site is provided via I-15, immediately adjacent to the northeast of the Project site.

2.2 Environmental Setting

Town of Apple Valley

The Town is approximately 72 square miles in the Victor Valley region of San Bernardino County. The Town is bordered by the City of Victorville to the west, the City of Hesperia to the southwest, and unincorporated County to the north and east.

Existing Project Site

The approximately 143-acre, irregularly-shaped project site consists of vacant, undeveloped land. The Project site is bordered to the west by I-15, which runs northeast-southwest, and to the southwest by another parcel, which gives the site its roughly trapezoidal shape. According to the Town's General Plan, the land use and zoning designations for the project site are Regional Commercial (C-R) (Town of Apple Valley 2015; Town of Apple Valley 2021) (see Figure 2, Land Use Designations, and Figure 3, Zoning Designations). Additionally, the Project site is located within the Warehouse Distribution Regional Commercial (C-R) Overlay.

Surrounding Land Uses

Land uses surrounding the Project site primarily consist of vacant land. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North**: Johnson Road and vacant land
- **East**: vacant land and Grasshopper Road
- **South**: Stoddard Wells Road and a planned travel center
- **West**: I-15

2.3 Project Characteristics

The Project would include construction of three industrial/warehouse buildings and associated improvements on 143 acres of vacant land (see Figure 4, Site Plan). Building 1, the southernmost building, would be approximately

615,000 square feet, Building 2, the center building, would be approximately 1,220,000 square feet, and Building 3, the northernmost building, would be approximately 793,000 square feet. The Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

On-Site and Off-Site Improvements

The Project would include improvements along Stoddard Wells Road and Johnson Road, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse buildings and throughout the Project site. The Project would also involve the off-site construction of Outer I-15 Road on the eastern boundary of the Project Site. This would be a public road once constructed.

Site Access and Circulation

Access to the Project site would be provided via Outer I-15 Road on the eastern boundary of the project site, as well as a driveway off of Stoddard Wells Road. Paved passenger vehicle parking areas would be provided within areas east of Buildings 1, 2 and 3, while tractor-trailer stalls and loading docks would be surrounding Building 1 to the north and south, and surrounding Buildings 2 and 3 to the north, south, and west. In total, the Project would provide approximately 515 loading dock positions, approximately 884 tractor-trailer stalls, roughly 975 passenger vehicle spaces, and approximately 920,000 square feet of landscape area coverage.

Utility Improvements

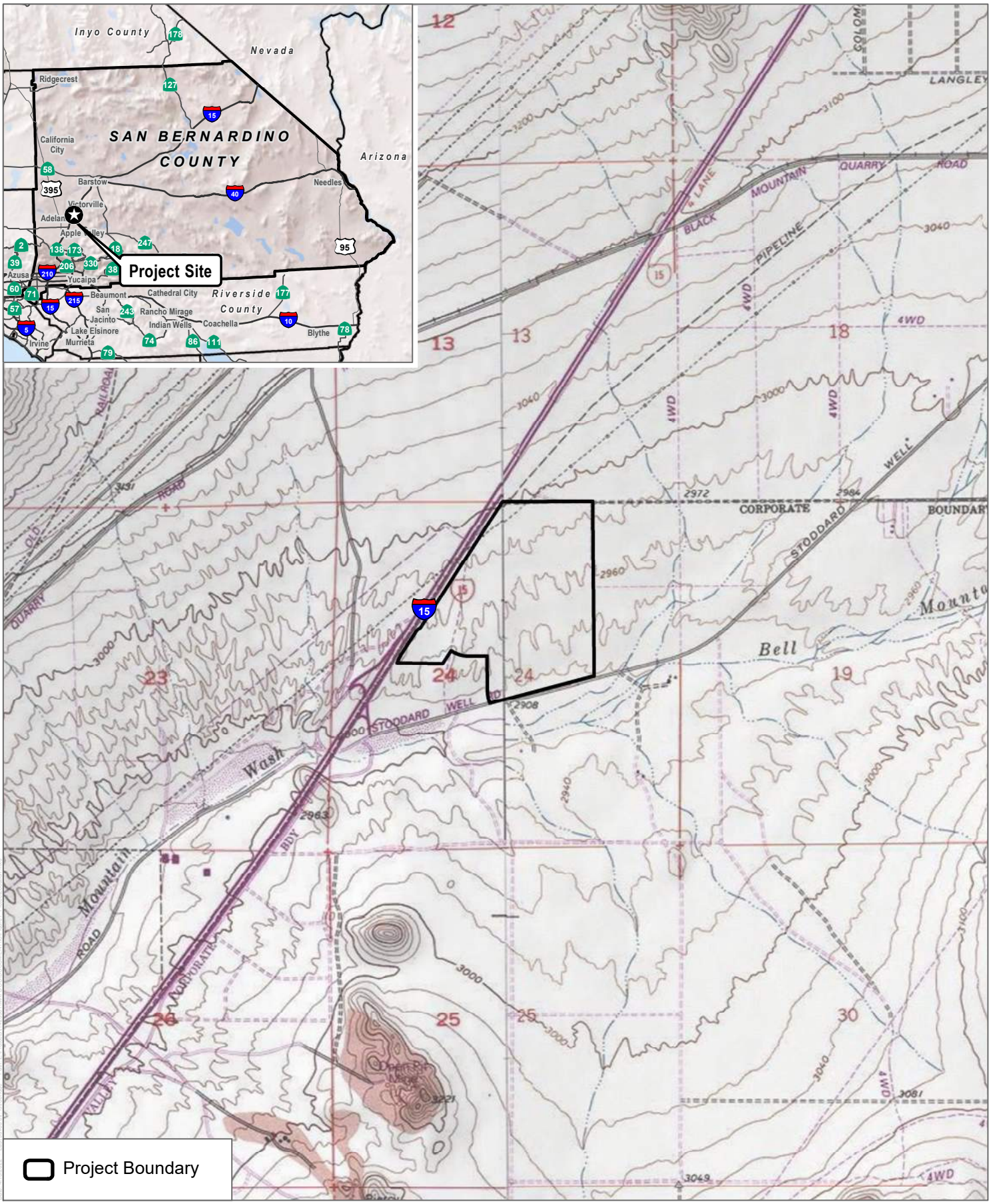
Given the vacant, undeveloped nature of the Project site, both wet and dry utilities, including domestic water, sanitary sewer, storm drainage, and electricity, would need to be extended onto the Project site.

Operations

Tenants for the Project have not been identified and the three industrial warehouse buildings are considered speculative. Business operations would be expected to be conducted within the enclosed buildings, with the exception of ingressing and egressing of trucks and passenger vehicles accessing the site, passenger and truck parking, the loading and unloading of trailers within designated truck courts/loading area, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week.

2.4 Project Approvals

At this time, it is anticipated that that the Project would require approval of a conditional use permit and development agreement. This list is preliminary and may not be comprehensive. Subsequent non-discretionary approvals (which would require separate processing through the Town) would include, but may not be limited to, a grading permit, building permits, and occupancy permits.



SOURCE: USGS 7.5-minute Series Victorville and Apple Valley North Quadrangles

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Apple Valley Stoddard Wells Warehouse Project Initial Study



SOURCE: RGA 2022

FIGURE 4

Site Plan

Apple Valley Stoddard Wells Warehouse Project Initial Study

DUDEK

Estimated Trip Generation of Apple Valley 143 Project

Land Use	Gross Floor Area (KSF)	Daily	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			In	Out	Total	In	Out	Total
Warehouse (ITE Land Use Category 150)	2,628.00	Vehicle Trip Generation Rates						
		2.36	0.18	0.06	0.24	0.07	0.17	0.24
		Total Vehicle Trip Generation						
		6,202	486	145	631	177	454	631
	Mode Share	Project Trip Generation by Vehicle Type						
Passenger Cars (Percent of Total)	74.21%	4,603	360	108	468	131	337	468
2-Axle Trucks (Percent of Total)	4.55%	282	22	7	29	8	21	29
3-Axle Trucks (Percent of Total)	4.18%	259	20	6	26	7	19	26
4-Axle Trucks (Percent of Total)	17.04%	1057	83	25	107	30	77	107
	PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
Passenger Cars)	1.0	4,603	360	108	468	131	337	468
2-Axle Trucks	1.5	423	33	10	43	12	31	43
3-Axle Trucks	2.0	518	41	12	53	15	38	53
4 + Axle Trucks	3.0	3171	248	74	322	90	232	322
Total Passenger Car Equivalents (PCE)		**8,715**	**682**	**204**	**886**	**248**	**638**	**886**

Notes:
KSF = Thousands of Square Feet.
AM / PM Peak Hour of Adjacent Street Traffic = Trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods.
Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition). Average rates for land use category 150 (Warehouse).
Source of passenger car / truck mode share (percentage of total): South Coast Air Quality Management District High Cube Warehouse Trip Generation Study (2016). Based on data from eight high cube warehouses in the Inland Empire over 1,000,000 square feet in size. The average warehouse building size is 1,364,496 square feet.
Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions

Building 1: 615,000 square feet
Building 2: 1,220,000 square feet
Building 3: 793,000 square feet
Total: 2,628,000 square feet

APPLE VALLEY 143 PROJECT TRIPS

		AM	AM	AM					
		PM	PM	PM					
AM	PM						AM	PM	
AM	PM		Intersection #				AM	PM	
AM	PM						AM	PM	
		AM	AM	AM					
		PM	PM	PM					

AM PEAK:	682 IN / 204 OUT
PM PEAK:	248 IN / 638 OUT

MRound: 1

INSTRUCTIONS:
FILL OUT AM/PM PEAK ONLY. DATA CALCULATED BASED ON THE VALUES IN THE "PRIMARY MOVEMENT IN-OUT" AND "PRIMARY DISTRIBUTION" TABS. TO BE USED IN EXHIBT D1.

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		1				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		2				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		3				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		4				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		5				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	377					
		0	0	138					
0	0						86	269	
287	105		6				113	353	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	287					
		0	0	105					
0	0						113	353	
0	0		7				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		8				0	0	
0	0						287	105	
		0	0	113					
		0	0	353					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		9				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		10				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		11				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		12				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		13				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

		0	0	0					
		0	0	0					
0	0						0	0	
0	0		14				0	0	
0	0						0	0	
		0	0	0					
		0	0	0					

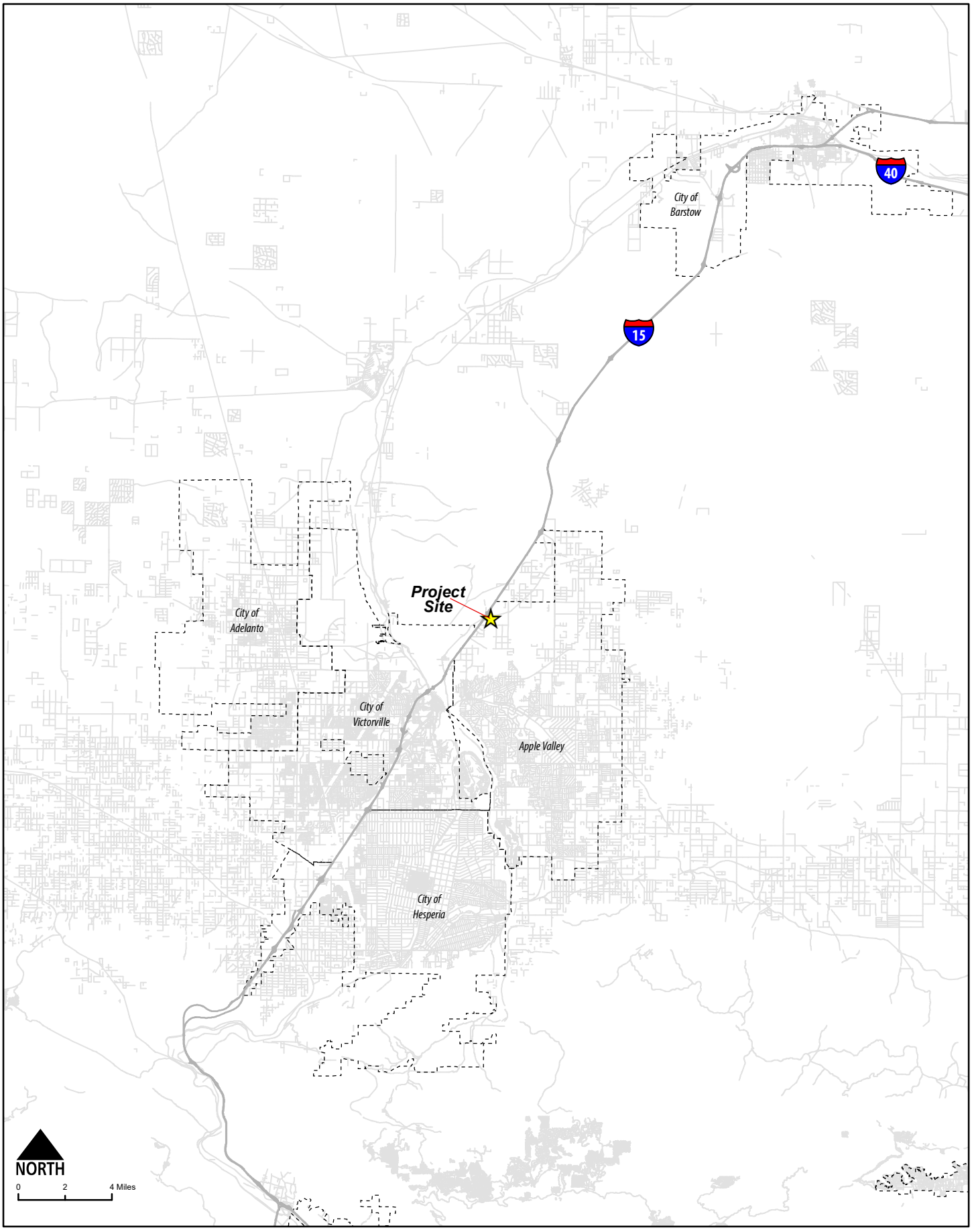
LOVE'S TRAVEL CENTER

DRAFT
Transportation Impact Study

July 2022

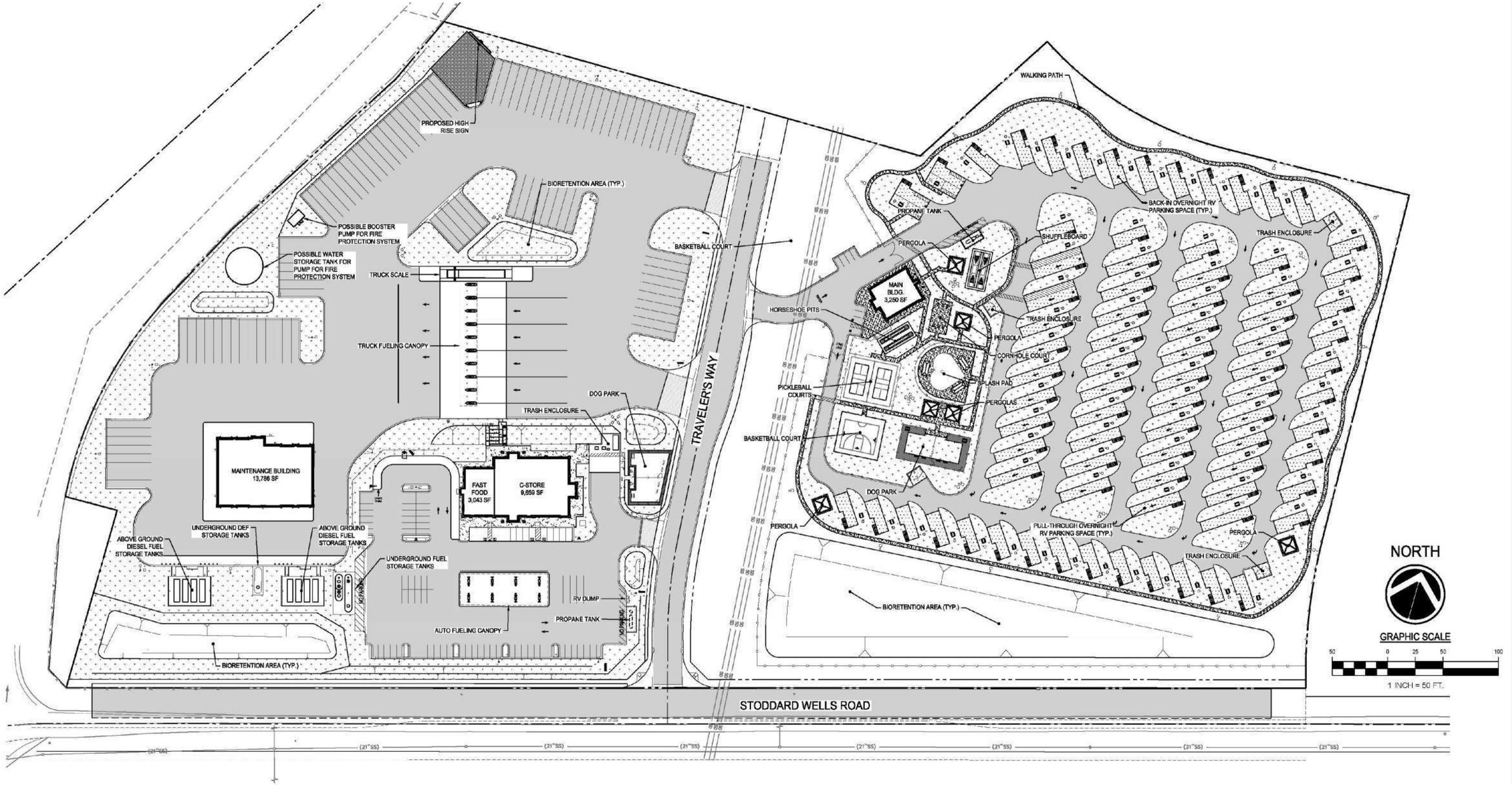
Prepared For
Love's Travel Stops & Country Stores
10601 N. Pennsylvania Avenue
The Village, OK 73120

Prepared By
CR Associates
3900 Fifth Avenue, Suite 310
San Diego, CA 92103



Love's Travel Center
Transportation Impact Study

Figure 1.1
Project Regional Location



Love's Travel Center
Transportation Impact Study

C+R

Figure 1.2
Project Site Plan

Table 3.1 Proposed Project Trip Generation

Land Use	Units	Vehicle Type	Daily Trip Rate	Daily Total	AM Peak Hour Trip Rate	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Trip Rate	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out
		Total Travel Center Trips[1] (A)										
		Auto	106.52	2,663	5.24	131	66	66	6.92	173	87	86
		Truck	106.52	2,663	5.48	137	68	68	5.20	130	65	65
		Both		5,326		268	134	134		303	152	151
		Diverted Trip Reduction (B)										
Travel Center	25 fuel positions	Auto	*90%*	*-2,397*	*90%*	*-118*	*-59*	*-59*	*90%*	*-156*	*-78*	*-77*
		Truck	*95%*	*-2,530*	*95%*	*-130*	*-65*	*-65*	*95%*	*-124*	*-62*	*-62*
		Both		*-4,927*		*-248*	*-124*	*-124*		*-280*	*-140*	*-139*
		Net New Travel Center Trips (C) = (A+B)										
		Auto		266		13	7	7		17	9	9
		Truck		133		7	3	3		6	3	3
		Both		399		20	10	10		23	12	12
		Total RV Stop Trips (D)										
RV Stop[2]	80 Overnight Parking Spots	-	2.7	216[3]	0.21	17	6	11	0.27	22	14	8
Proposed Project Total Trips (A+D)												
				5,542		**285**	**140**	**145**		**325**	**166**	**159**
Proposed Project Net New Trips (C+D)												
				615		**37**	**16**	**21**		**45**	**26**	**20**

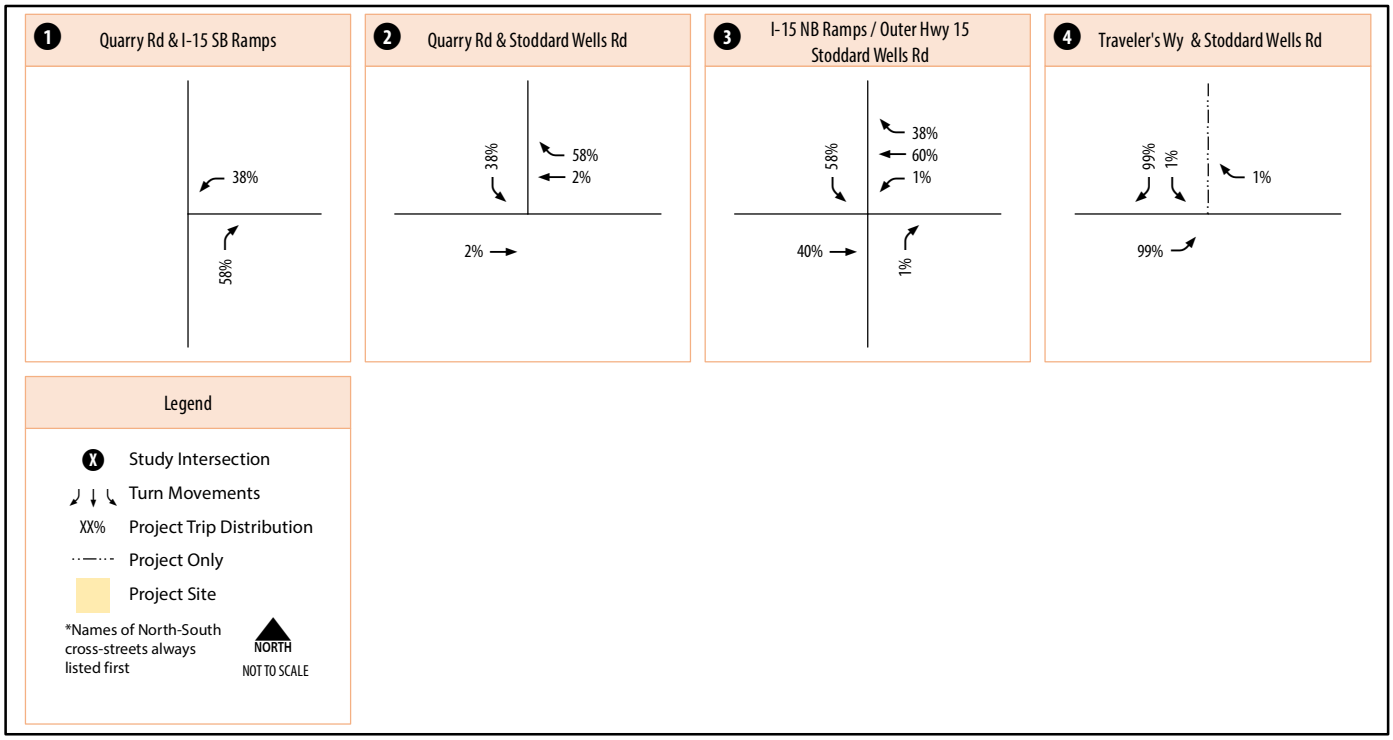
Notes:
[1]Trip generation rate from *Love's Trip Generation and Travel Characteristic Study (Omni-Means, June 2018).*
[2]Trip generation rate from ITE Trip Generation 11th Edition for LU Code 416 Campground/Recreational Vehicle Park.
[3]Daily trip rate not available for RV stop, therefore PM peak hour trips assumed to be 10 percent of daily traffic.

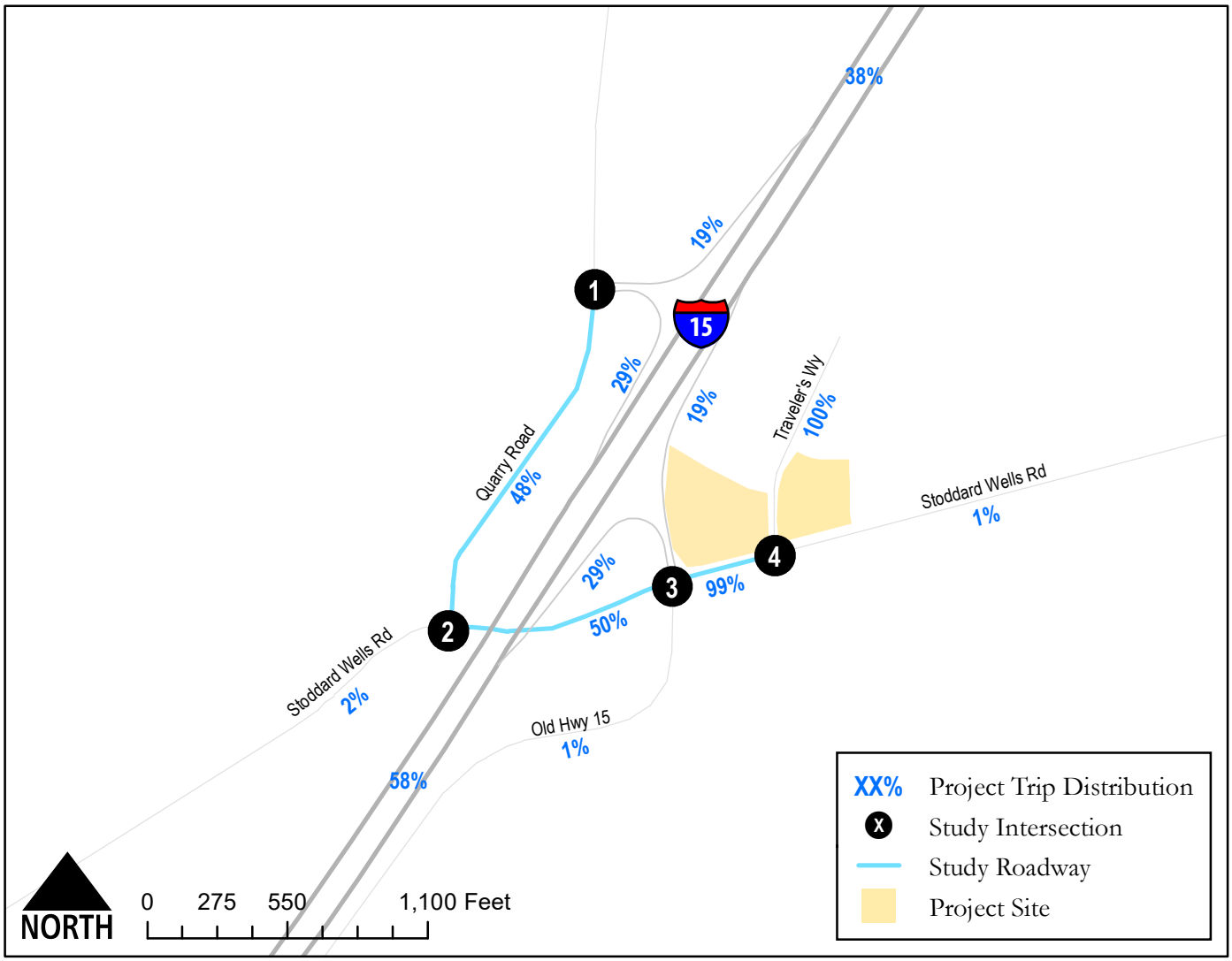
As shown, the Proposed Project land uses are anticipated to generate 5,542 daily trips, with 285 trips during the AM peak hour and 325 trips during the PM peak hour. These project trips were analyzed along adjacent roadway segments and intersections to determine if improvements are needed for study facilities to operate at acceptable levels of service.

Since most trips are assumed to be existing diverted trips, only 615 daily trips, 37 AM peak hour trips, and 45 PM peak hour trips are expected to be net new generated trips in the study area by the Proposed Project. This is important to Vehicle Miles Traveled (VMT) and further explained in Chapter 7.3 as most of the trips to the Travel Center are diverted, resulting in a low VMT for the Travel Center component.

3.2 Project Trip Distribution and Assignment

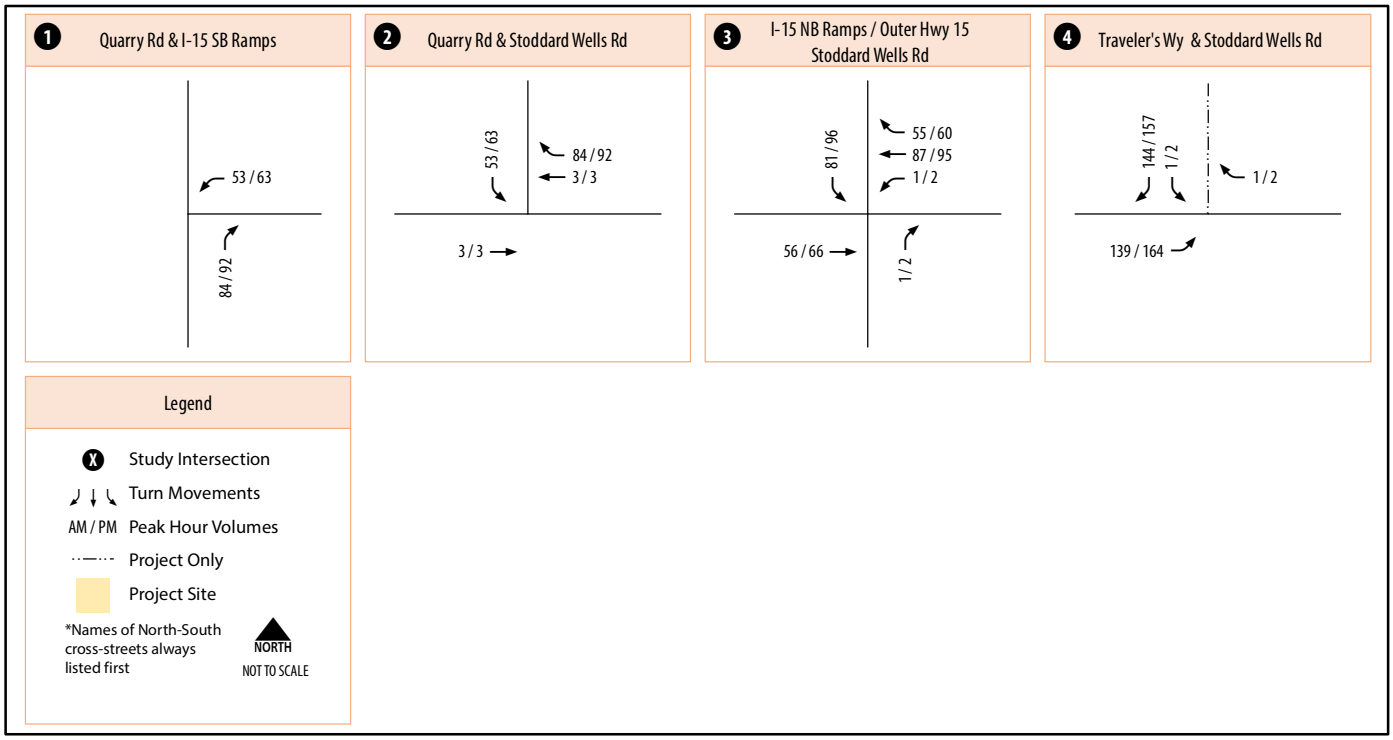
The project trip distribution was developed using engineering judgment based upon project land use characteristics, location, proximity to freeway access points, and corresponding land uses in the vicinity of the project site. **Figure 3.1** displays the regional trip distribution for the Proposed Project. Based upon the project trip distribution patterns, daily and AM/PM peak hour project trips were assigned to the adjacent roadway network. **Figure 3.2** displays the Proposed Project roadway and intersection trip assignment, respectively.

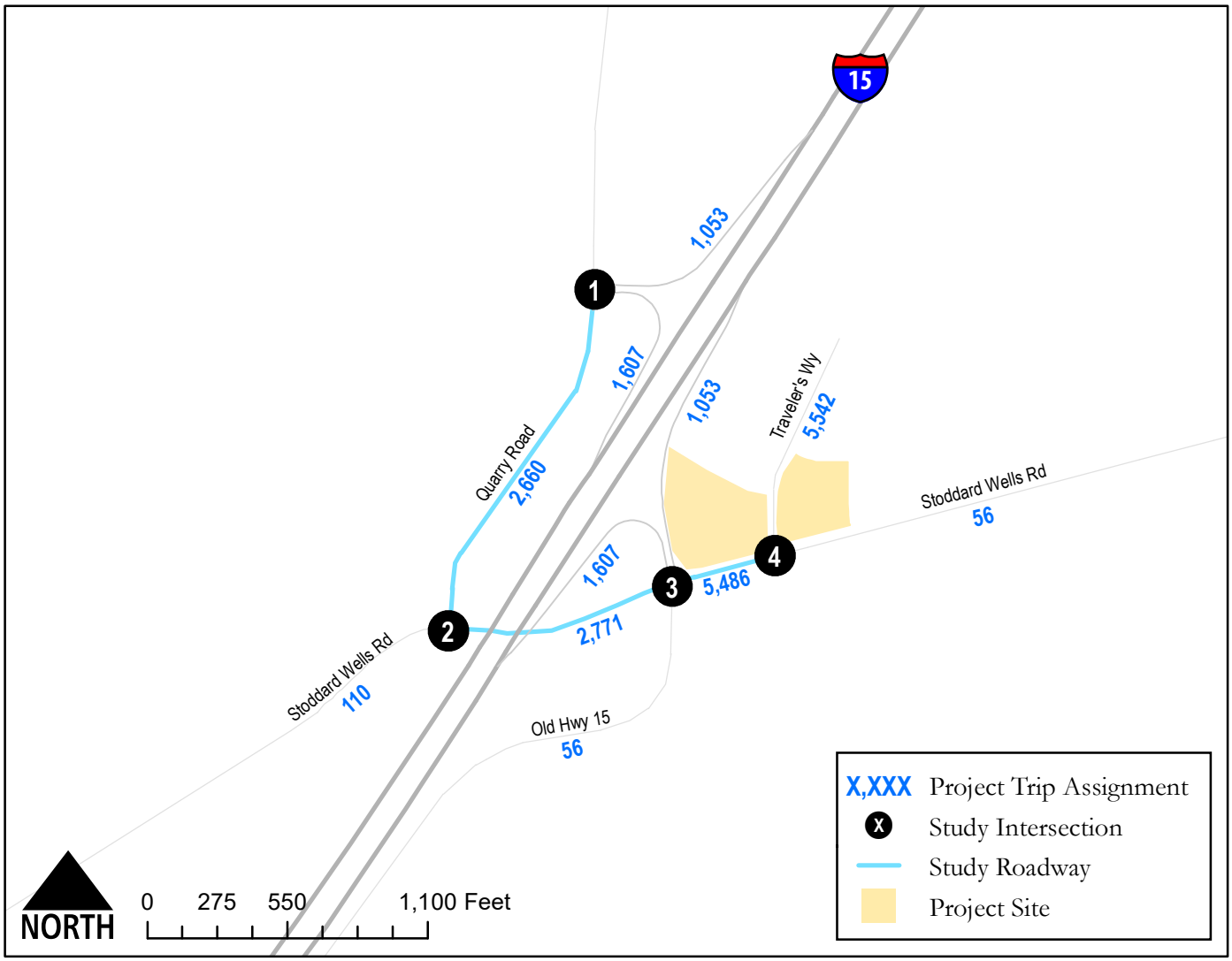




Love's Travel Center
Transportation Impact Study

Figure 3.1
Project Trip Distribution





Love's Travel Center
Transportation Impact Study

C+R

Figure 3.2
Project Trip Assignment

Appendix E: Intersection Capacity Analysis Worksheets

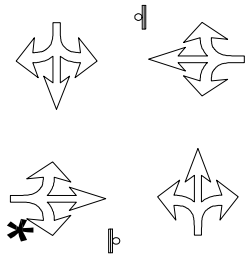
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

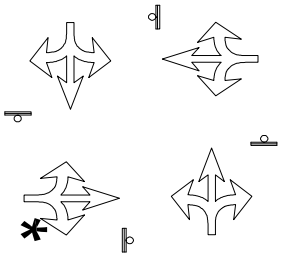
E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S
CONDITION : AM PEAK HOUR

INTERSECTION : 1
PROJECTED GROWTH PER YEAR : 2.0%

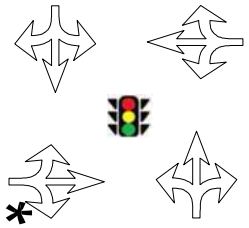
CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS



FUTURE GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
STODDARD WELLS RD								
EB LEFT	10	0	0	10	168	178	45	213
EB THRU	2	0	0	2	0	2	2	2
EB RIGHT	98	4	0	102	0	102	247	247
WB LEFT	1	0	0	1	0	1	1	1
WB THRU	1	0	0	1	0	1	1	1
WB RIGHT	1	0	0	1	0	1	2	2
OUTER HWY 15S								
NB LEFT	288	12	0	300	0	300	387	387
NB THRU	65	3	0	68	36	104	156	192
NB RIGHT	3	0	0	3	0	3	3	3
SB LEFT	1	0	0	1	0	1	1	1
SB THRU	90	4	0	94	11	105	139	150
SB RIGHT	136	5	0	141	51	192	211	262
TOTALS	**696**	**28**	**0**	**724**	**266**	**990**	**1195**	**1461**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S
CONDITION : AM PEAK HOUR
PHF : 0.86

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
10	2	0	3	5	0	4	0	0	2	4	0
17	13	1	0	0	0	0	1	0	2	0	0
22	15	0	0	0	0	1	1	0	2	3	0
18	27	0	0	0	0	4	0	0	3	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	14	56	0	2	0	0	1	1	0	1	1
1	14	45	0	0	0	0	0	2	0	1	0
1	13	60	0	0	1	0	1	2	0	0	0
0	8	67	0	0	0	0	0	2	0	1	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
13	0	0	3	0	1	0	0	0	0	0	0
9	0	0	0	0	0	0	0	1	0	0	0
11	0	0	0	0	0	1	0	0	0	0	0
17	0	2	1	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	2	2	**4**	**6**	**10**
EB THRU	0	0	**0**	**1**	**2**
EB RIGHT	5	50	**55**	**58**	**98**
WB LEFT	0	0	**0**	**1**	**1**
WB THRU	0	0	**0**	**1**	**1**
WB RIGHT	0	0	**0**	**1**	**1**
OUTER HWY 15S					
NB LEFT	9	228	**237**	**247**	**288**
NB THRU	7	49	**56**	**65**	**65**
NB RIGHT	0	3	**3**	**3**	**3**
SB LEFT	0	1	**1**	**1**	**1**
SB THRU	14	57	**71**	**90**	**90**
SB RIGHT	21	67	**88**	**117**	**136**

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	10	2	98	1	1	1	288	65	3	1	90	136
Future Vol, veh/h	10	2	98	1	1	1	288	65	3	1	90	136
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	2	114	1	1	1	335	76	3	1	105	158

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	935	935	-	935	1013	78	263	0	0	79	0	0
Stage 1	186	186	-	748	748	-	-	-	-	-	-	-
Stage 2	749	749	-	187	265	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	248	267	0	248	241	988	1313	-	-	1532	-	-
Stage 1	820	750	0	408	423	-	-	-	-	-	-	-
Stage 2	407	422	0	819	693	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	195	195	-	195	176	988	1313	-	-	1532	-	-
Mov Cap-2 Maneuver	195	195	-	195	176	-	-	-	-	-	-	-
Stage 1	601	749	-	299	310	-	-	-	-	-	-	-
Stage 2	297	309	-	816	692	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.9	19.4	7	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1313	-	-	195	-	254	1532	-	-
HCM Lane V/C Ratio	0.255	-	-	0.072	-	0.014	0.001	-	-
HCM Control Delay (s)	8.7	0	-	24.9	0	19.4	7.4	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	1	-	-	0.2	-	0	0	-	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	10	2	102	1	1	1	300	68	3	1	94	141
Future Vol, veh/h	10	2	102	1	1	1	300	68	3	1	94	141
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	2	119	1	1	1	349	79	3	1	109	164

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	973	973	-	973	1054	81	273	0	0	82	0	0
Stage 1	193	193	-	779	779	-	-	-	-	-	-	-
Stage 2	780	780	-	194	275	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	233	254	0	233	228	985	1302	-	-	1528	-	-
Stage 1	813	745	0	392	409	-	-	-	-	-	-	-
Stage 2	391	409	0	812	686	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	181	182	-	181	164	985	1302	-	-	1528	-	-
Mov Cap-2 Maneuver	181	182	-	181	164	-	-	-	-	-	-	-
Stage 1	585	744	-	282	294	-	-	-	-	-	-	-
Stage 2	280	294	-	809	685	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.5	20.4	7.1	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1302	-	-	181	-	237	1528	-	-
HCM Lane V/C Ratio	0.268	-	-	0.077	-	0.015	0.001	-	-
HCM Control Delay (s)	8.8	0	-	26.5	0	20.4	7.4	0	-
HCM Lane LOS	A	A	-	D	A	C	A	A	-
HCM 95th %tile Q(veh)	1.1	-	-	0.2	-	0	0	-	-

Intersection	
Int Delay, s/veh	54.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	178	2	102	1	1	1	300	104	3	1	105	192
Future Vol, veh/h	178	2	102	1	1	1	300	104	3	1	105	192
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	207	2	119	1	1	1	349	121	3	1	122	223

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1058	1058	-	1058	1168	123	345	0	0	124	0	0
Stage 1	236	236	-	821	821	-	-	-	-	-	-	-
Stage 2	822	822	-	237	347	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 204	227	0	204	195	933	1225	-	-	1475	-	-
Stage 1	772	713	0	371	391	-	-	-	-	-	-	-
Stage 2	371	391	0	771	638	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 154	157	-	154	135	933	1225	-	-	1475	-	-
Mov Cap-2 Maneuver	~ 154	157	-	154	135	-	-	-	-	-	-	-
Stage 1	536	712	-	257	271	-	-	-	-	-	-	-
Stage 2	256	271	-	768	637	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	253.5	23.3	6.7	0
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1225	-	-	154	-	200	1475	-	-
HCM Lane V/C Ratio	0.285	-	-	1.359	-	0.017	0.001	-	-
HCM Control Delay (s)	9.1	0	-	253.5	0	23.3	7.4	0	-
HCM Lane LOS	A	A	-	F	A	C	A	A	-
HCM 95th %tile Q(veh)	1.2	-	-	13	-	0.1	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	178	2	102	1	1	1	300	104	3	1	105	192
Future Vol, veh/h	178	2	102	1	1	1	300	104	3	1	105	192
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	207	2	119	1	1	1	349	121	3	1	122	223
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	13.2	10	22.5	13.7
HCM LOS	B	A	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	74%	99%	0%	33%	0%
Vol Thru, %	26%	1%	0%	33%	35%
Vol Right, %	1%	0%	100%	33%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	407	180	102	3	298
LT Vol	300	178	0	1	1
Through Vol	104	2	0	1	105
RT Vol	3	0	102	1	192
Lane Flow Rate	473	209	119	3	347
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.734	0.415	0.195	0.007	0.508
Departure Headway (Hd)	5.58	7.145	5.926	6.975	5.28
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	502	604	516	679
Service Time	3.63	4.904	3.685	4.975	3.337
HCM Lane V/C Ratio	0.73	0.416	0.197	0.006	0.511
HCM Control Delay	22.5	14.9	10.1	10	13.7
HCM Lane LOS	C	B	B	A	B
HCM 95th-tile Q	6.4	2	0.7	0	2.9

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	45	2	247	1	1	2	387	156	3	1	139	211
Future Vol, veh/h	45	2	247	1	1	2	387	156	3	1	139	211
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	47	2	260	1	1	2	407	164	3	1	146	222

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1240	1240	-	1240	1350	166	368	0	0	167	0	0
Stage 1	259	259	-	980	980	-	-	-	-	-	-	-
Stage 2	981	981	-	260	370	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	153	177	0	153	152	884	1202	-	-	1423	-	-
Stage 1	750	697	0	303	331	-	-	-	-	-	-	-
Stage 2	303	330	0	749	624	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	111	-	107	95	884	1202	-	-	1423	-	-
Mov Cap-2 Maneuver	107	111	-	107	95	-	-	-	-	-	-	-
Stage 1	470	696	-	190	208	-	-	-	-	-	-	-
Stage 2	189	207	-	746	623	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	64.8	25.4	6.7	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1202	-	-	107	-	181	1423	-	-
HCM Lane V/C Ratio	0.339	-	-	0.462	-	0.023	0.001	-	-
HCM Control Delay (s)	9.5	0	-	64.8	0	25.4	7.5	0	-
HCM Lane LOS	A	A	-	F	A	D	A	A	-
HCM 95th %tile Q(veh)	1.5	-	-	2	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	138.1

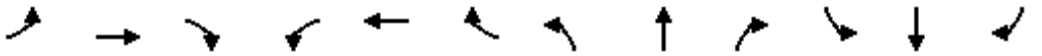
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	213	2	247	1	1	2	387	192	3	1	150	262
Future Vol, veh/h	213	2	247	1	1	2	387	192	3	1	150	262
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	224	2	260	1	1	2	407	202	3	1	158	276

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1317	1317	-	1317	1454	204	434	0	0	205	0	0
Stage 1	298	298	-	1018	1018	-	-	-	-	-	-	-
Stage 2	1019	1019	-	299	436	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 136	159	0	136	131	842	1136	-	-	1378	-	-
Stage 1	715	671	0	289	317	-	-	-	-	-	-	-
Stage 2	288	317	0	714	583	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 92	94	-	92	78	842	1136	-	-	1378	-	-
Mov Cap-2 Maneuver	~ 92	94	-	92	78	-	-	-	-	-	-	-
Stage 1	425	670	-	172	189	-	-	-	-	-	-	-
Stage 2	~ 170	189	-	711	582	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 761.5	29.2	6.6	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1136	-	-	92	-	153	1378	-	-
HCM Lane V/C Ratio	0.359	-	-	2.46	-	0.028	0.001	-	-
HCM Control Delay (s)	9.9	0	-	$ 761.5	0	29.2	7.6	0	-
HCM Lane LOS	A	A	-	F	A	D	A	A	-
HCM 95th %tile Q(veh)	1.6	-	-	20.9	-	0.1	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	2	247	1	1	2	387	192	3	1	150	262
Future Volume (veh/h)	213	2	247	1	1	2	387	192	3	1	150	262
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1728	1800	1800	1800	1800
Adj Flow Rate, veh/h	224	2	0	1	1	2	407	202	3	1	158	276
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	332	2		101	100	150	604	267	4	40	434	753
Arrive On Green	0.18	0.18	0.00	0.18	0.18	0.18	0.73	0.73	0.73	1.00	1.00	1.00
Sat Flow, veh/h	1429	13	1525	286	567	853	732	363	5	0	590	1025
Grp Volume(v), veh/h	226	0	0	4	0	0	612	0	0	435	0	0
Grp Sat Flow(s),veh/h/ln	1442	0	1525	1706	0	0	1100	0	0	1615	0	0
Q Serve(g_s), s	13.6	0.0	0.0	0.0	0.0	0.0	29.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.8	0.0	0.0	0.2	0.0	0.0	29.9	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.99		1.00	0.25		0.50	0.67		0.00	0.00		0.63
Lane Grp Cap(c), veh/h	334	0		351	0	0	875	0	0	1227	0	0
V/C Ratio(X)	0.68	0.00		0.01	0.00	0.00	0.70	0.00	0.00	0.35	0.00	0.00
Avail Cap(c_a), veh/h	352	0		370	0	0	875	0	0	1227	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d), s/veh	36.2	0.0	0.0	30.6	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	0.0	0.1	0.0	0.0	5.1	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	0.0	0.0	30.6	0.0	0.0	11.8	0.0	0.0	0.8	0.0	0.0
LnGrp LOS	D	A		C	A	A	B	A	A	A	A	A
Approach Vol, veh/h		226	A		4			612			435	
Approach Delay, s/veh		41.0			30.6			11.8			0.8	
Approach LOS		D			C			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		70.1		19.9		70.1		19.9				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		65.0		17.0		65.0		17.0				
Max Q Clear Time (g_c+I1), s		31.9		15.8		2.0		2.2				
Green Ext Time (p_c), s		5.4		0.1		2.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			B									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S
CONDITION : PM PEAK HOUR

INTERSECTION : 1
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
STODDARD WELLS RD								
EB LEFT	8	0	0	8	61	69	46	107
EB THRU	1	0	0	1	0	1	2	2
EB RIGHT	102	4	0	106	0	106	244	244
WB LEFT	1	0	0	1	0	1	1	1
WB THRU	2	0	0	2	0	2	2	2
WB RIGHT	1	0	0	1	0	1	2	2
OUTER HWY 15S								
NB LEFT	223	9	0	232	0	232	327	327
NB THRU	68	3	0	71	13	84	159	172
NB RIGHT	1	0	0	1	0	1	1	1
SB LEFT	1	0	0	1	0	1	1	1
SB THRU	227	9	0	236	34	270	281	315
SB RIGHT	162	6	0	168	157	325	299	456
TOTALS	**797**	**31**	**0**	**828**	**265**	**1093**	**1365**	**1630**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S
CONDITION : PM PEAK HOUR
PHF : 0.86

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
26	65	0	1	2	0	8	0	0	0	1	0
22	53	0	1	1	0	4	0	0	0	0	0
24	56	1	3	0	0	3	0	0	1	0	0
20	45	0	1	0	0	7	0	0	2	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	20	49	0	0	2	0	0	3	0	1	0
0	16	38	0	0	1	0	0	3	0	0	0
0	6	38	0	0	1	0	0	3	0	2	0
0	15	49	0	1	0	0	0	5	0	0	1

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1	2	1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
22	0	2	0	0	0	1	0	0	1	0	0
23	0	4	1	0	0	0	0	0	0	0	0
18	0	1	1	0	0	0	0	0	2	0	0
20	0	1	1	0	0	2	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	0	8	**8**	**8**	**8**
EB THRU	0	0	**0**	**1**	**1**
EB RIGHT	9	83	**92**	**102**	**102**
WB LEFT	0	1	**1**	**1**	**1**
WB THRU	0	2	**2**	**2**	**2**
WB RIGHT	0	1	**1**	**1**	**1**
OUTER HWY 15S					
NB LEFT	19	174	**193**	**211**	**223**
NB THRU	4	57	**61**	**68**	**68**
NB RIGHT	0	0	**0**	**1**	**1**
SB LEFT	0	1	**1**	**1**	**1**
SB THRU	4	219	**223**	**227**	**227**
SB RIGHT	31	92	**123**	**154**	**162**

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	8	1	102	1	2	1	223	68	1	1	227	162
Future Vol, veh/h	8	1	102	1	2	1	223	68	1	1	227	162
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	1	119	1	2	1	259	79	1	1	264	188

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	959	958	-	959	1052	80	452	0	0	80	0	0
Stage 1	360	360	-	598	598	-	-	-	-	-	-	-
Stage 2	599	598	-	361	454	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	239	259	0	239	228	986	1119	-	-	1531	-	-
Stage 1	662	630	0	492	494	-	-	-	-	-	-	-
Stage 2	492	494	0	662	573	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	192	196	-	193	173	986	1119	-	-	1531	-	-
Mov Cap-2 Maneuver	192	196	-	193	173	-	-	-	-	-	-	-
Stage 1	502	629	-	373	374	-	-	-	-	-	-	-
Stage 2	370	374	-	660	572	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.8	21.3	7	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1119	-	-	192	-	225	1531	-	-
HCM Lane V/C Ratio	0.232	-	-	0.055	-	0.021	0.001	-	-
HCM Control Delay (s)	9.2	0	-	24.8	0	21.3	7.4	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.2	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	8	1	106	1	2	1	232	71	1	1	236	168
Future Vol, veh/h	8	1	106	1	2	1	232	71	1	1	236	168
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	1	123	1	2	1	270	83	1	1	274	195

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	999	998	-	998	1095	84	469	0	0	84	0	0
Stage 1	374	374	-	624	624	-	-	-	-	-	-	-
Stage 2	625	624	-	374	471	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	224	246	0	224	215	981	1103	-	-	1526	-	-
Stage 1	651	621	0	477	481	-	-	-	-	-	-	-
Stage 2	476	481	0	651	563	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	177	183	-	179	160	981	1103	-	-	1526	-	-
Mov Cap-2 Maneuver	177	183	-	179	160	-	-	-	-	-	-	-
Stage 1	484	620	-	354	357	-	-	-	-	-	-	-
Stage 2	351	357	-	649	562	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.5	22.6	7.1	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1103	-	-	178	-	209	1526	-	-
HCM Lane V/C Ratio	0.245	-	-	0.059	-	0.022	0.001	-	-
HCM Control Delay (s)	9.3	0	-	26.5	0	22.6	7.4	0	-
HCM Lane LOS	A	A	-	D	A	C	A	A	-
HCM 95th %tile Q(veh)	1	-	-	0.2	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	69	1	106	1	2	1	232	84	1	1	270	325
Future Vol, veh/h	69	1	106	1	2	1	232	84	1	1	270	325
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	80	1	123	1	2	1	270	98	1	1	314	378

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1145	1144	-	1145	1333	99	692	0	0	99	0	0
Stage 1	505	505	-	639	639	-	-	-	-	-	-	-
Stage 2	640	639	-	506	694	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	178	202	0	178	155	962	912	-	-	1507	-	-
Stage 1	553	544	0	468	474	-	-	-	-	-	-	-
Stage 2	467	474	0	552	447	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	132	139	-	134	106	962	912	-	-	1507	-	-
Mov Cap-2 Maneuver	132	139	-	134	106	-	-	-	-	-	-	-
Stage 1	380	543	-	322	326	-	-	-	-	-	-	-
Stage 2	318	326	-	550	447	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	68.5	30.5	7.8	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	912	-	-	132	-	146	1507	-	-
HCM Lane V/C Ratio	0.296	-	-	0.617	-	0.032	0.001	-	-
HCM Control Delay (s)	10.6	0	-	68.5	0	30.5	7.4	0	-
HCM Lane LOS	B	A	-	F	A	D	A	A	-
HCM 95th %tile Q(veh)	1.2	-	-	3.2	-	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	27.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	1	106	1	2	1	232	84	1	1	270	325
Future Vol, veh/h	69	1	106	1	2	1	232	84	1	1	270	325
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	80	1	123	1	2	1	270	98	1	1	314	378
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	11.2	10.3	16	38.7
HCM LOS	B	B	C	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	73%	99%	0%	25%	0%
Vol Thru, %	26%	1%	0%	50%	45%
Vol Right, %	0%	0%	100%	25%	55%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	317	70	106	4	596
LT Vol	232	69	0	1	1
Through Vol	84	1	0	2	270
RT Vol	1	0	106	1	325
Lane Flow Rate	369	81	123	5	693
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.575	0.171	0.217	0.009	0.924
Departure Headway (Hd)	5.619	7.55	6.328	7.098	4.8
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	641	475	566	501	755
Service Time	3.666	5.307	4.084	5.19	2.839
HCM Lane V/C Ratio	0.576	0.171	0.217	0.01	0.918
HCM Control Delay	16	11.9	10.8	10.3	38.7
HCM Lane LOS	C	B	B	B	E
HCM 95th-tile Q	3.7	0.6	0.8	0	12.9

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	46	2	244	1	2	2	327	159	1	1	281	299
Future Vol, veh/h	46	2	244	1	2	2	327	159	1	1	281	299
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	48	2	257	1	2	2	344	167	1	1	296	315

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1314	1312	-	1313	1469	168	611	0	0	168	0	0
Stage 1	456	456	-	856	856	-	-	-	-	-	-	-
Stage 2	858	856	-	457	613	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	136	160	0	137	129	881	978	-	-	1422	-	-
Stage 1	588	572	0	355	377	-	-	-	-	-	-	-
Stage 2	354	377	0	587	486	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	93	98	-	94	79	881	978	-	-	1422	-	-
Mov Cap-2 Maneuver	93	98	-	94	79	-	-	-	-	-	-	-
Stage 1	360	571	-	217	231	-	-	-	-	-	-	-
Stage 2	214	231	-	584	486	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	82.5	33.6	7.2	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	978	-	-	93	-	131	1422	-	-
HCM Lane V/C Ratio	0.352	-	-	0.543	-	0.04	0.001	-	-
HCM Control Delay (s)	10.7	0	-	82.5	0	33.6	7.5	0	-
HCM Lane LOS	B	A	-	F	A	D	A	A	-
HCM 95th %tile Q(veh)	1.6	-	-	2.4	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	39.8

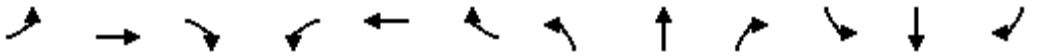
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↕			↕			↕	
Traffic Vol, veh/h	107	2	244	1	2	2	327	172	1	1	315	456
Future Vol, veh/h	107	2	244	1	2	2	327	172	1	1	315	456
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	113	2	257	1	2	2	344	181	1	1	332	480

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1446	1444	-	1445	1684	182	812	0	0	182	0	0
Stage 1	574	574	-	870	870	-	-	-	-	-	-	-
Stage 2	872	870	-	575	814	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	-	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 111	133	0	111	95	866	823	-	-	1405	-	-
Stage 1	507	506	0	349	372	-	-	-	-	-	-	-
Stage 2	348	372	0	507	394	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 68	71	-	69	51	866	823	-	-	1405	-	-
Mov Cap-2 Maneuver	~ 68	71	-	69	51	-	-	-	-	-	-	-
Stage 1	271	505	-	187	199	-	-	-	-	-	-	-
Stage 2	184	199	-	504	394	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 465.8	48	8.2	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	823	-	-	68	-	89	1405	-	-
HCM Lane V/C Ratio	0.418	-	-	1.687	-	0.059	0.001	-	-
HCM Control Delay (s)	12.5	0	-	$ 465.8	0	48	7.6	0	-
HCM Lane LOS	B	A	-	F	A	E	A	A	-
HCM 95th %tile Q(veh)	2.1	-	-	10.1	-	0.2	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	2	244	1	2	2	327	172	1	1	315	456
Future Volume (veh/h)	107	2	244	1	2	2	327	172	1	1	315	456
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1728	1800	1800	1800	1800
Adj Flow Rate, veh/h	113	2	0	1	2	2	344	181	1	1	332	480
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	218	2		62	85	66	506	244	1	40	542	781
Arrive On Green	0.10	0.10	0.00	0.10	0.10	0.10	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	1422	25	1525	146	866	675	541	299	2	0	666	961
Grp Volume(v), veh/h	115	0	0	5	0	0	526	0	0	813	0	0
Grp Sat Flow(s),veh/h/ln	1447	0	1525	1687	0	0	842	0	0	1627	0	0
Q Serve(g_s), s	6.8	0.0	0.0	0.0	0.0	0.0	26.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	0.0	0.2	0.0	0.0	26.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.98		1.00	0.20		0.40	0.65		0.00	0.00		0.59
Lane Grp Cap(c), veh/h	221	0		213	0	0	751	0	0	1363	0	0
V/C Ratio(X)	0.52	0.00		0.02	0.00	0.00	0.70	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	336	0		341	0	0	751	0	0	1363	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.82	0.00	0.00
Uniform Delay (d), s/veh	39.8	0.0	0.0	36.7	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	0.1	0.0	0.0	2.2	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	0.0	0.0	36.8	0.0	0.0	9.3	0.0	0.0	1.6	0.0	0.0
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		115	A		5			526			813	
Approach Delay, s/veh		41.7			36.8			9.3			1.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.2		12.8		77.2		12.8				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		66.0		16.0		66.0		16.0				
Max Q Clear Time (g_c+I1), s		28.8		9.0		2.0		2.2				
Green Ext Time (p_c), s		6.5		0.3		6.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			7.6									
HCM 6th LOS			A									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 1
North/South Street: OUTER HWY 15S
East/West Street: STODDARD WELLS RD

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	288	Approach	538	Left	380	387
NB	Through	65	Departure	385	Through	156	156
	Right	3			Right	3	3
North leg	Left	1	Approach	347	Left	1	1
SB	Through	90	Departure	202	Through	139	139
	Right	136			Right	207	211
West leg	Left	10	Approach	292	Left	45	45
EB	Through	2	Departure	587	Through	2	2
	Right	98			Right	246	247
East leg	Left	1	Approach	3	Left	1	1
WB	Through	1	Departure	5	Through	1	1
	Right	1			Right	2	2

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	223	Approach	479	Left	322	327
NB	Through	68	Departure	524	Through	158	159
	Right	1			Right	1	1
North leg	Left	1	Approach	575	Left	1	1
SB	Through	227	Departure	204	Through	281	281
	Right	162			Right	295	299
West leg	Left	8	Approach	290	Left	46	46
EB	Through	1	Departure	618	Through	2	2
	Right	102			Right	244	244
East leg	Left	1	Approach	4	Left	1	1
WB	Through	2	Departure	3	Through	2	2

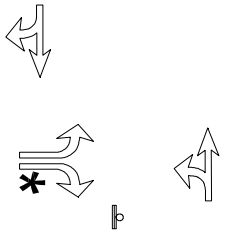
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

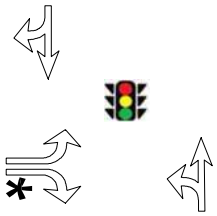
E/W STREET : I-15 NB OFF / ON-RAMP
N/S STREET : OUTER HWY 15S
CONDITION : AM PEAK HOUR

INTERSECTION : 2
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



FUTURE GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
I-15 NB OFF / ON-RAMP								
EB LEFT	70	3	0	73	168	241	75	243
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	192	8	0	200	0	200	282	282
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	0	0	0	0	0	0	0	0
OUTER HWY 15S								
NB LEFT	59	2	0	61	0	61	175	175
NB THRU	17	1	0	18	204	222	28	232
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	35	1	0	36	62	98	69	131
SB RIGHT	5	0	0	5	51	56	13	64
TOTALS	**378**	**15**	**0**	**393**	**485**	**878**	**642**	**1127**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 NB OFF / ON-RAMP
N/S STREET : OUTER HWY 15S
CONDITION : AM PEAK HOUR
PHF : 0.85

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	6	0	0	0	0	0	0	0	1	0	0
2	6	0	0	0	0	0	0	0	0	0	0
0	9	0	0	0	0	0	0	0	0	1	0
0	4	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	2	12	0	0	0	0	0	1	0	1	0
0	1	12	0	0	0	0	0	1	0	0	0
0	1	9	0	0	0	0	0	0	0	1	0
0	2	15	0	0	0	0	0	0	0	1	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
25	0	15	0	0	0	1	0	0	2	0	0
31	0	16	0	0	0	2	0	0	5	0	1
36	0	19	0	0	0	4	0	0	2	0	1
17	0	14	0	0	0	2	0	0	2	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 NB OFF / ON-RAMP					
EB LEFT	2	64	**66**	**70**	**70**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	20	109	**129**	**156**	**192**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	0	**0**	**0**	**0**
OUTER HWY 15S					
NB LEFT	2	48	**50**	**52**	**59**
NB THRU	3	6	**9**	**15**	**17**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	1	25	**26**	**28**	**35**
SB RIGHT	1	2	**3**	**5**	**5**

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	192	59	17	35	5
Future Vol, veh/h	70	192	59	17	35	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	82	226	69	20	41	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	202	-	47	0	-	0
Stage 1	44	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	791	0	1573	-	-	-
Stage 1	984	0	-	-	-	-
Stage 2	875	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	756	-	1573	-	-	-
Mov Cap-2 Maneuver	756	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	5.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1573	-	756	-	-	-
HCM Lane V/C Ratio	0.044	-	0.109	-	-	-
HCM Control Delay (s)	7.4	0	10.3	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	73	200	61	18	36	5
Future Vol, veh/h	73	200	61	18	36	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	86	235	72	21	42	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	210	-	48	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	783	0	1572	-	-	-
Stage 1	983	0	-	-	-	-
Stage 2	869	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	747	-	1572	-	-	-
Mov Cap-2 Maneuver	747	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	5.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1572	-	747	-	-	-
HCM Lane V/C Ratio	0.046	-	0.115	-	-	-
HCM Control Delay (s)	7.4	0	10.4	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-	-

Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	241	200	61	222	98	56
Future Vol, veh/h	241	200	61	222	98	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	284	235	72	261	115	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	553	-	181	0	-	0
Stage 1	148	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	498	0	1407	-	-	-
Stage 1	884	0	-	-	-	-
Stage 2	678	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	468	-	1407	-	-	-
Mov Cap-2 Maneuver	468	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	678	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.8	1.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1407	-	468	-	-	-
HCM Lane V/C Ratio	0.051	-	0.606	-	-	-
HCM Control Delay (s)	7.7	0	23.8	0	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	3.9	-	-	-

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	282	175	28	69	13
Future Vol, veh/h	75	282	175	28	69	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	79	297	184	29	73	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	477	-	87	0	-	0
Stage 1	80	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	551	0	1522	-	-	-
Stage 1	948	0	-	-	-	-
Stage 2	683	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	483	-	1522	-	-	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	6.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1522	-	483	-	-	-
HCM Lane V/C Ratio	0.121	-	0.163	-	-	-
HCM Control Delay (s)	7.7	0	13.9	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	-

Intersection	
Int Delay, s/veh	17.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	243	282	175	232	131	64
Future Vol, veh/h	243	282	175	232	131	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	256	297	184	244	138	67

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	784	-	205	0	-	0
Stage 1	172	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	365	0	1378	-	-	-
Stage 1	863	0	-	-	-	-
Stage 2	545	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	309	-	1378	-	-	-
Mov Cap-2 Maneuver	309	-	-	-	-	-
Stage 1	730	-	-	-	-	-
Stage 2	545	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	54.3	3.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1378	-	309	-	-	-
HCM Lane V/C Ratio	0.134	-	0.828	-	-	-
HCM Control Delay (s)	8	0	54.3	0	-	-
HCM Lane LOS	A	A	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	7	-	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	243	282	175	232	131	64
Future Volume (veh/h)	243	282	175	232	131	64
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1872	1872	1800	1800	1800	1800
Adj Flow Rate, veh/h	256	0	184	244	138	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	299		507	650	851	413
Arrive On Green	0.17	0.00	1.00	1.00	0.74	0.74
Sat Flow, veh/h	1783	1586	606	874	1144	556
Grp Volume(v), veh/h	256	0	428	0	0	205
Grp Sat Flow(s),veh/h/ln	1783	1586	1480	0	0	1700
Q Serve(g_s), s	12.6	0.0	0.3	0.0	0.0	3.2
Cycle Q Clear(g_c), s	12.6	0.0	3.5	0.0	0.0	3.2
Prop In Lane	1.00	1.00	0.43			0.33
Lane Grp Cap(c), veh/h	299		1157	0	0	1263
V/C Ratio(X)	0.86		0.37	0.00	0.00	0.16
Avail Cap(c_a), veh/h	515		1157	0	0	1263
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.28	0.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	0.0	0.0	0.0	3.4
Incr Delay (d2), s/veh	6.9	0.0	0.3	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.1	0.0	0.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.3	0.0	0.3	0.0	0.0	3.7
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	256	A		428	205	
Approach Delay, s/veh	43.3			0.3	3.7	
Approach LOS	D			A	A	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	70.9		19.1		70.9
Change Period (Y+Rc), s	4.0		4.0		4.0
Max Green Setting (Gmax), s	56.0		26.0		56.0
Max Q Clear Time (g_c+I1), s	5.5		14.6		5.2
Green Ext Time (p_c), s	2.7		0.6		1.1

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : I-15 NB OFF / ON-RAMP
N/S STREET : OUTER HWY 15S
CONDITION : PM PEAK HOUR

INTERSECTION : 2
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
I-15 NB OFF / ON-RAMP								
EB LEFT	80	3	0	83	61	144	104	165
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	340	14	0	354	0	354	470	470
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	0	0	0	0	0	0	0	0
OUTER HWY 15S								
NB LEFT	61	2	0	63	0	63	174	174
NB THRU	16	1	0	17	74	91	33	107
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	50	2	0	52	191	243	111	302
SB RIGHT	4	0	0	4	157	161	12	169
TOTALS	**551**	**22**	**0**	**573**	**483**	**1056**	**904**	**1387**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 NB OFF / ON-RAMP
N/S STREET : OUTER HWY 15S
CONDITION : PM PEAK HOUR
PHF : 0.84

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
2	15	0	0	2	0	0	0	0	0	1	0
1	10	0	0	0	0	0	0	0	0	0	0
1	11	0	0	0	0	0	0	0	0	0	0
0	5	0	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	8	14	0	0	0	0	0	0	0	0	1
0	5	15	0	0	0	0	0	0	0	0	0
0	1	6	0	0	0	0	0	0	0	0	2
0	2	14	0	0	1	0	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
75	0	20	1	0	0	8	0	0	1	0	0
66	0	17	2	0	0	3	0	0	0	0	0
71	0	18	2	0	0	3	0	0	1	0	0
61	0	23	1	0	0	7	0	1	1	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 NB OFF / ON-RAMP					
EB LEFT	1	78	**79**	**80**	**80**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	30	273	**303**	**323**	**340**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	0	**0**	**0**	**0**
OUTER HWY 15S					
NB LEFT	4	49	**53**	**60**	**61**
NB THRU	0	16	**16**	**16**	**16**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	3	41	**44**	**47**	**50**
SB RIGHT	0	4	**4**	**4**	**4**

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	80	340	61	16	50	4
Future Vol, veh/h	80	340	61	16	50	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	95	405	73	19	60	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	228	-	65	0	-	0
Stage 1	63	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	765	0	1550	-	-	-
Stage 1	965	0	-	-	-	-
Stage 2	869	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	728	-	1550	-	-	-
Mov Cap-2 Maneuver	728	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	5.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1550	-	728	-	-	-
HCM Lane V/C Ratio	0.047	-	0.131	-	-	-
HCM Control Delay (s)	7.4	0	10.7	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	83	354	63	17	52	4
Future Vol, veh/h	83	354	63	17	52	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	99	421	75	20	62	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	235	-	67	0	-	0
Stage 1	65	-	-	-	-	-
Stage 2	170	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	758	0	1547	-	-	-
Stage 1	963	0	-	-	-	-
Stage 2	865	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	721	-	1547	-	-	-
Mov Cap-2 Maneuver	721	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	865	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	5.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1547	-	721	-	-	-
HCM Lane V/C Ratio	0.048	-	0.137	-	-	-
HCM Control Delay (s)	7.4	0	10.8	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	144	354	63	91	243	161
Future Vol, veh/h	144	354	63	91	243	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	171	421	75	108	289	192

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	643	-	481	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	258	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	441	0	1092	-	-	-
Stage 1	692	0	-	-	-	-
Stage 2	790	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	409	-	1092	-	-	-
Mov Cap-2 Maneuver	409	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	790	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20	3.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1092	-	409	-	-	-
HCM Lane V/C Ratio	0.069	-	0.419	-	-	-
HCM Control Delay (s)	8.5	0	20	0	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	2	-	-	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	104	470	174	33	111	12
Future Vol, veh/h	104	470	174	33	111	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	109	495	183	35	117	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	525	-	130	0	-	0
Stage 1	124	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	516	0	1468	-	-	-
Stage 1	907	0	-	-	-	-
Stage 2	681	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	450	-	1468	-	-	-
Mov Cap-2 Maneuver	450	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	681	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	6.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1468	-	450	-	-	-
HCM Lane V/C Ratio	0.125	-	0.243	-	-	-
HCM Control Delay (s)	7.8	0	15.6	0	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	0.9	-	-	-

Intersection	
Int Delay, s/veh	9.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	165	470	174	107	302	169
Future Vol, veh/h	165	470	174	107	302	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	174	495	183	113	318	178

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	886	-	496	0	-	0
Stage 1	407	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	318	0	1078	-	-	-
Stage 1	676	0	-	-	-	-
Stage 2	627	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	260	-	1078	-	-	-
Mov Cap-2 Maneuver	260	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	42.9	5.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1078	-	260	-	-	-
HCM Lane V/C Ratio	0.17	-	0.668	-	-	-
HCM Control Delay (s)	9	0	42.9	0	-	-
HCM Lane LOS	A	A	E	A	-	-
HCM 95th %tile Q(veh)	0.6	-	4.3	-	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	165	470	174	107	302	169
Future Volume (veh/h)	165	470	174	107	302	169
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1872	1872	1800	1800	1800	1800
Adj Flow Rate, veh/h	174	0	183	113	318	178
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	215		555	327	857	480
Arrive On Green	0.12	0.00	1.00	1.00	0.79	0.79
Sat Flow, veh/h	1783	1586	620	414	1084	607
Grp Volume(v), veh/h	174	0	296	0	0	496
Grp Sat Flow(s),veh/h/ln	1783	1586	1034	0	0	1691
Q Serve(g_s), s	8.6	0.0	3.3	0.0	0.0	7.8
Cycle Q Clear(g_c), s	8.6	0.0	11.1	0.0	0.0	7.8
Prop In Lane	1.00	1.00	0.62			0.36
Lane Grp Cap(c), veh/h	215		882	0	0	1337
V/C Ratio(X)	0.81		0.34	0.00	0.00	0.37
Avail Cap(c_a), veh/h	555		882	0	0	1337
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.09	0.00	0.00	1.00
Uniform Delay (d), s/veh	38.6	0.0	0.5	0.0	0.0	2.8
Incr Delay (d2), s/veh	7.1	0.0	0.1	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	0.0	0.0	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.7	0.0	0.5	0.0	0.0	3.6
LnGrp LOS	D		A	A	A	A
Approach Vol, veh/h	174	A		296	496	
Approach Delay, s/veh	45.7			0.5	3.6	
Approach LOS	D			A	A	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	75.2		14.8		75.2
Change Period (Y+Rc), s	4.0		4.0		4.0
Max Green Setting (Gmax), s	54.0		28.0		54.0
Max Q Clear Time (g_c+I1), s	13.1		10.6		9.8
Green Ext Time (p_c), s	2.3		0.4		3.1

Intersection Summary		
HCM 6th Ctrl Delay		10.2
HCM 6th LOS		B

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 2
North/South Street: OUTER HWY 15S
East/West Street: I-15 NB OFF / ON-RAMP

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	59	Approach	202	Left	175	175
NB	Through	17	Departure	339	Through	28	28
	Right	0			Right	0	0
North leg	Left	0	Approach	81	Left	0	0
SB	Through	35	Departure	102	Through	67	69
	Right	5			Right	13	13
West leg	Left	70	Approach	352	Left	75	75
EB	Through	0	Departure	187	Through	0	0
	Right	192			Right	273	282
East leg	Left	0	Approach	0	Left	0	0
WB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	61	Approach	204	Left	174	174
NB	Through	16	Departure	575	Through	33	33
	Right	0			Right	0	0
North leg	Left	0	Approach	121	Left	0	0
SB	Through	50	Departure	136	Through	110	111
	Right	4			Right	12	12
West leg	Left	80	Approach	570	Left	104	104
EB	Through	0	Departure	185	Through	0	0
	Right	340			Right	466	470
East leg	Left	0	Approach	0	Left	0	0
WB	Through	0	Departure	0	Through	0	0

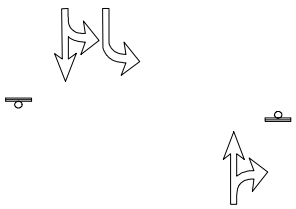
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : I-15 SB ON-RAMP
N/S STREET : W FRONTAGE RD
CONDITION : AM PEAK HOUR

INTERSECTION : 3
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
I-15 SB ON-RAMP								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	0	0	0	0	0	0	0	0
W FRONTAGE RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	18	1	0	19	0	19	20	20
NB RIGHT	44	2	0	46	0	46	49	49
SB LEFT	346	14	0	360	51	411	521	572
SB THRU	14	1	0	15	0	15	14	14
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**422**	**18**	**0**	**440**	**51**	**491**	**604**	**655**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 SB ON-RAMP
CONDITION : AM PEAK HOUR

N/S STREET : W FRONTAGE RD
PHF : 0.80

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	1	51	0	0	1	0	0	2	0	1	3
0	1	64	0	0	4	0	0	2	0	0	1
0	3	79	0	0	2	0	0	0	0	0	1
0	0	94	0	1	0	0	0	1	0	1	2

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	3	0	0	0	0	0	0	0	3	0	0
2	3	0	0	0	0	0	0	0	1	0	0
1	3	0	1	0	0	0	0	0	2	0	0
0	0	0	0	1	0	1	1	0	6	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 SB ON-RAMP					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	0	**0**	**0**	**0**
W FRONTAGE RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	2	9	**11**	**13**	**18**
NB RIGHT	14	4	**18**	**44**	**44**
SB LEFT	19	288	**307**	**330**	**346**
SB THRU	3	5	**8**	**13**	**14**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	18	44	346	14
Future Vol, veh/h	0	0	18	44	346	14
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	23	55	433	18
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	92%
Vol Thru, %	29%	0%	8%
Vol Right, %	71%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	62	180	180
LT Vol	0	180	166
Through Vol	18	0	14
RT Vol	44	0	0
Lane Flow Rate	78	225	225
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	19	46	360	15
Future Vol, veh/h	0	0	19	46	360	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	24	58	450	19
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	92%
Vol Thru, %	29%	0%	8%
Vol Right, %	71%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	65	187	188
LT Vol	0	187	173
Through Vol	19	0	15
RT Vol	46	0	0
Lane Flow Rate	81	234	235
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	19	46	411	15
Future Vol, veh/h	0	0	19	46	411	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	24	58	514	19
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	93%
Vol Thru, %	29%	0%	7%
Vol Right, %	71%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	65	214	212
LT Vol	0	214	197
Through Vol	19	0	15
RT Vol	46	0	0
Lane Flow Rate	81	267	265
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	20	49	521	14
Future Vol, veh/h	0	0	20	49	521	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	21	52	548	15
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	95%
Vol Thru, %	29%	0%	5%
Vol Right, %	71%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	69	266	269
LT Vol	0	266	255
Through Vol	20	0	14
RT Vol	49	0	0
Lane Flow Rate	73	280	283
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	20	49	572	14
Future Vol, veh/h	0	0	20	49	572	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	21	52	602	15
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	95%
Vol Thru, %	29%	0%	5%
Vol Right, %	71%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	69	292	294
LT Vol	0	292	280
Through Vol	20	0	14
RT Vol	49	0	0
Lane Flow Rate	73	307	310
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : I-15 SB ON-RAMP
N/S STREET : W FRONTAGE RD
CONDITION : PM PEAK HOUR

INTERSECTION : 3
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
I-15 SB ON-RAMP								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	0	0	0	0	0	0	0	0
W FRONTAGE RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	34	1	0	35	0	35	36	36
NB RIGHT	41	2	0	43	0	43	42	42
SB LEFT	375	15	0	390	157	547	537	694
SB THRU	24	1	0	25	0	25	24	24
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**474**	**19**	**0**	**493**	**157**	**650**	**639**	**796**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 SB ON-RAMP
CONDITION : PM PEAK HOUR

N/S STREET : W FRONTAGE RD
PHF : 0.82

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	7	66	0	0	2	0	1	1	0	0	4
0	4	77	0	0	1	0	0	1	0	0	3
0	3	100	0	0	2	0	1	2	0	0	5
0	6	68	0	0	1	0	0	2	0	0	1

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
6	3	0	0	0	0	0	0	0	2	1	0
6	8	0	0	0	0	0	0	0	1	1	0
7	1	0	0	1	0	1	0	0	1	0	0
5	1	0	0	0	0	0	1	0	1	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 SB ON-RAMP					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	0	**0**	**0**	**0**
W FRONTAGE RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	4	13	**17**	**23**	**34**
NB RIGHT	6	24	**30**	**41**	**41**
SB LEFT	25	311	**336**	**371**	**375**
SB THRU	2	20	**22**	**24**	**24**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	34	41	375	24
Future Vol, veh/h	0	0	34	41	375	24
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	41	50	457	29
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	88%
Vol Thru, %	45%	0%	12%
Vol Right, %	55%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	75	199	200
LT Vol	0	199	176
Through Vol	34	0	24
RT Vol	41	0	0
Lane Flow Rate	91	242	244
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	35	43	390	25
Future Vol, veh/h	0	0	35	43	390	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	43	52	476	30
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	88%
Vol Thru, %	45%	0%	12%
Vol Right, %	55%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	78	207	208
LT Vol	0	207	183
Through Vol	35	0	25
RT Vol	43	0	0
Lane Flow Rate	95	252	254
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	35	43	547	25
Future Vol, veh/h	0	0	35	43	547	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	43	52	667	30
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	91%
Vol Thru, %	45%	0%	9%
Vol Right, %	55%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	78	284	288
LT Vol	0	284	263
Through Vol	35	0	25
RT Vol	43	0	0
Lane Flow Rate	95	347	351
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	36	42	537	24
Future Vol, veh/h	0	0	36	42	537	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	38	44	565	25
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	91%
Vol Thru, %	46%	0%	9%
Vol Right, %	54%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	78	279	282
LT Vol	0	279	258
Through Vol	36	0	24
RT Vol	42	0	0
Lane Flow Rate	82	294	297
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	36	42	694	24
Future Vol, veh/h	0	0	36	42	694	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	38	44	731	25
Number of Lanes	0	0	1	0	1	1

Approach	NB	SB
Opposing Approach	SB	NB
Opposing Lanes	2	1
Conflicting Approach Left		
Conflicting Lanes Left	0	0
Conflicting Approach Right		
Conflicting Lanes Right	0	0
HCM Control Delay	5	5
HCM LOS	A	A

Lane	NBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	93%
Vol Thru, %	46%	0%	7%
Vol Right, %	54%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	78	361	357
LT Vol	0	361	333
Through Vol	36	0	24
RT Vol	42	0	0
Lane Flow Rate	82	380	376
Geometry Grp	0	0	0
Degree of Util (X)	0	0	0
Departure Headway (Hd)	0	0	0
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	0	0	0
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	5	5	5
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 3
North/South Street: W FRONTAGE RD
East/West Street: I-15 SB ON-RAMP

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	62	Left	0	0
NB	Through	18	Departure	14	Through	13	20
	Right	44			Right	49	49
North leg	Left	346	Approach	534	Left	516	521
SB	Through	14	Departure	13	Through	14	14
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	0	Approach	0	Left	0	0
WB	Through	0	Departure	564	Through	0	0
	Right	0			Right	0	0

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	75	Left	0	0
NB	Through	34	Departure	24	Through	34	36
	Right	41			Right	42	42
North leg	Left	375	Approach	560	Left	536	537
SB	Through	24	Departure	34	Through	24	24
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	0	Approach	0	Left	0	0
WB	Through	0	Departure	577	Through	0	0

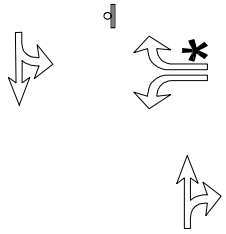
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

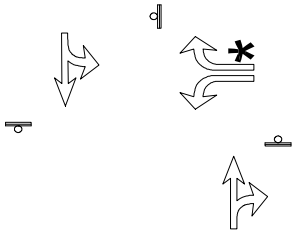
E/W STREET : STODDARD WELLS RD
N/S STREET : W FRONTAGE RD
CONDITION : AM PEAK HOUR

INTERSECTION : 4
PROJECTED GROWTH PER YEAR : 2.0%

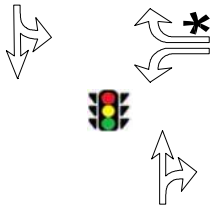
CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS



FUTURE GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
STODDARD WELLS RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	283	11	0	294	51	345	368	419
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	142	6	0	148	0	148	231	231
W FRONTAGE RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	16	1	0	17	0	17	17	17
NB RIGHT	2	0	0	2	0	2	3	3
SB LEFT	108	4	0	112	168	280	291	459
SB THRU	77	3	0	80	0	80	167	167
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**628**	**25**	**0**	**653**	**219**	**872**	**1077**	**1296**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : W FRONTAGE RD
CONDITION : AM PEAK HOUR
PHF : 0.83

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	6	10	0	1	2	0	0	2	0	1	1
0	6	15	0	2	3	0	1	1	0	1	2
0	8	10	0	2	1	0	0	1	0	0	1
0	16	16	0	0	0	0	1	2	0	2	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	3	0	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0	0	0
0	3	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	1	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
9	0	46	4	0	0	2	0	2	2	0	3
12	0	59	3	0	2	1	0	1	2	0	0
14	0	74	1	0	0	5	0	0	2	0	1
23	0	78	0	0	1	0	0	0	1	0	1

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	11	257	**268**	**283**	**283**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	23	58	**81**	**95**	**142**
W FRONTAGE RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	2	7	**9**	**11**	**16**
NB RIGHT	0	2	**2**	**2**	**2**
SB LEFT	16	51	**67**	**84**	**108**
SB THRU	11	36	**47**	**60**	**77**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	13.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	283	142	16	2	108	77
Future Vol, veh/h	283	142	16	2	108	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	341	171	19	2	130	93

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	373	-	0	0	21	0
Stage 1	20	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	632	0	-	-	1608	-
Stage 1	1008	0	-	-	-	-
Stage 2	716	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	578	-	-	-	1608	-
Mov Cap-2 Maneuver	578	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	655	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.8	0	4.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	578	-	1608	-
HCM Lane V/C Ratio	-	-	0.59	-	0.081	-
HCM Control Delay (s)	-	-	19.8	0	7.4	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	3.8	-	0.3	-

Intersection	
Int Delay, s/veh	14.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	294	148	17	2	112	80
Future Vol, veh/h	294	148	17	2	112	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	354	178	20	2	135	96

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	387	-	0	0	22	0
Stage 1	21	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	620	0	-	-	1607	-
Stage 1	1007	0	-	-	-	-
Stage 2	706	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	565	-	-	-	1607	-
Mov Cap-2 Maneuver	565	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	4.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	565	-	1607	-
HCM Lane V/C Ratio	-	-	0.627	-	0.084	-
HCM Control Delay (s)	-	-	21.5	0	7.4	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	4.3	-	0.3	-

Intersection	
Int Delay, s/veh	130.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	345	148	17	2	280	80
Future Vol, veh/h	345	148	17	2	280	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	416	178	20	2	337	96

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	791	-	0	0	22	0
Stage 1	21	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	~ 361	0	-	-	1607	-
Stage 1	1007	0	-	-	-	-
Stage 2	460	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 281	-	-	-	1607	-
Mov Cap-2 Maneuver	~ 281	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	~ 358	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	267.6	0	6.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	281	-	1607	-
HCM Lane V/C Ratio	-	-	1.479	-	0.21	-
HCM Control Delay (s)	-	-	267.6	0	7.8	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	23.5	-	0.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	345	148	17	2	280	80
Future Vol, veh/h	345	148	17	2	280	80
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	416	178	20	2	337	96
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	20.3	9.5	20
HCM LOS	C	A	C

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	78%
Vol Thru, %	89%	0%	0%	22%
Vol Right, %	11%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	345	148	360
LT Vol	0	345	0	280
Through Vol	17	0	0	80
RT Vol	2	0	148	0
Lane Flow Rate	23	416	178	434
Geometry Grp	2	7	7	2
Degree of Util (X)	0.039	0.736	0.256	0.683
Departure Headway (Hd)	6.169	6.374	5.16	5.669
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	579	569	695	642
Service Time	4.218	4.104	2.891	3.669
HCM Lane V/C Ratio	0.04	0.731	0.256	0.676
HCM Control Delay	9.5	24.9	9.7	20
HCM Lane LOS	A	C	A	C
HCM 95th-tile Q	0.1	6.3	1	5.3

Intersection	
Int Delay, s/veh	103

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	368	231	17	3	291	167
Future Vol, veh/h	368	231	17	3	291	167
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	387	243	18	3	306	176

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	808	-	0	0	21	0
Stage 1	20	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	~ 353	0	-	-	1608	-
Stage 1	1008	0	-	-	-	-
Stage 2	452	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 279	-	-	-	1608	-
Mov Cap-2 Maneuver	~ 279	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	~ 357	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	230.6	0	4.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	279	-	1608	-
HCM Lane V/C Ratio	-	-	1.388	-	0.19	-
HCM Control Delay (s)	-	-	230.6	0	7.8	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	20.6	-	0.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	390.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	419	231	17	3	459	167
Future Vol, veh/h	419	231	17	3	459	167
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	441	243	18	3	483	176

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1162	-	0	0	21	0
Stage 1	20	-	-	-	-	-
Stage 2	1142	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	~ 218	0	-	-	1608	-
Stage 1	1008	0	-	-	-	-
Stage 2	~ 307	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 145	-	-	-	1608	-
Mov Cap-2 Maneuver	~ 145	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	~ 205	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 984.2	0	6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	145	-	1608	-
HCM Lane V/C Ratio	-	-	3.042	-	0.3	-
HCM Control Delay (s)	-	-	$ 984.2	0	8.2	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	41	-	1.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	419	231	17	3	459	167
Future Volume (veh/h)	419	231	17	3	459	167
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1800	1872	1800	1800	1800	1872
Adj Flow Rate, veh/h	441	0	18	3	483	176
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	769		695	116	590	190
Arrive On Green	0.45	0.00	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1714	1586	1504	251	1127	410
Grp Volume(v), veh/h	441	0	0	21	659	0
Grp Sat Flow(s),veh/h/ln	1714	1586	0	1755	1537	0
Q Serve(g_s), s	17.2	0.0	0.0	0.6	35.9	0.0
Cycle Q Clear(g_c), s	17.2	0.0	0.0	0.6	36.5	0.0
Prop In Lane	1.00	1.00		0.14	0.73	
Lane Grp Cap(c), veh/h	769		0	811	780	0
V/C Ratio(X)	0.57		0.00	0.03	0.84	0.00
Avail Cap(c_a), veh/h	769		0	975	925	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.4	0.0	0.0	13.2	23.1	0.0
Incr Delay (d2), s/veh	3.1	0.0	0.0	0.0	6.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.0	0.2	12.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.5	0.0	0.0	13.2	29.4	0.0
LnGrp LOS	C		A	B	C	A
Approach Vol, veh/h	441	A	21			659
Approach Delay, s/veh	21.5		13.2			29.4
Approach LOS	C		B			C

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	44.4	45.6	45.6
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	32.0	50.0	50.0
Max Q Clear Time (g_c+I1), s	19.2	2.6	38.5
Green Ext Time (p_c), s	1.1	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : W FRONTAGE RD
CONDITION : PM PEAK HOUR

INTERSECTION : 4
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
STODDARD WELLS RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	223	9	0	232	157	389	321	478
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	164	7	0	171	0	171	307	307
W FRONTAGE RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	18	1	0	19	0	19	14	14
NB RIGHT	16	1	0	17	0	17	22	22
SB LEFT	95	4	0	99	61	160	270	331
SB THRU	176	7	0	183	0	183	240	240
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**692**	**29**	**0**	**721**	**218**	**939**	**1174**	**1392**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : W FRONTAGE RD
CONDITION : PM PEAK HOUR
PHF : 0.88

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	19	14	0	3	0	0	2	0	0	1	1
0	20	22	0	1	1	0	1	0	0	3	1
0	35	10	0	0	1	0	1	0	0	2	1
0	37	27	0	1	1	0	0	0	0	5	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
2	1	0	0	0	0	0	2	0	0	1	0
2	1	0	0	0	0	0	0	0	0	1	0
7	1	0	0	0	0	0	0	0	0	1	0
1	0	0	0	1	0	0	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
32	0	32	1	0	0	14	0	1	4	0	2
23	0	53	1	0	1	10	0	1	0	0	1
22	0	45	1	0	1	4	0	0	0	0	1
19	0	66	0	0	1	0	0	3	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	12	196	**208**	**223**	**223**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	35	96	**131**	**164**	**164**
W FRONTAGE RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	6	3	**9**	**18**	**18**
NB RIGHT	0	12	**12**	**12**	**16**
SB LEFT	6	73	**79**	**87**	**95**
SB THRU	20	111	**131**	**160**	**176**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	8.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	223	164	18	16	95	176
Future Vol, veh/h	223	164	18	16	95	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	253	186	20	18	108	200

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	445	-	0	0	38	0
Stage 1	29	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	574	0	-	-	1585	-
Stage 1	999	0	-	-	-	-
Stage 2	670	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	530	-	-	-	1585	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	618	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.9	0	2.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	530	-	1585	-
HCM Lane V/C Ratio	-	-	0.478	-	0.068	-
HCM Control Delay (s)	-	-	17.9	0	7.4	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	2.6	-	0.2	-

Intersection	
Int Delay, s/veh	9.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	232	171	19	17	99	183
Future Vol, veh/h	232	171	19	17	99	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	264	194	22	19	113	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	466	-	0	0	41	0
Stage 1	32	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	559	0	-	-	1581	-
Stage 1	996	0	-	-	-	-
Stage 2	658	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	514	-	-	-	1581	-
Mov Cap-2 Maneuver	514	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	605	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	2.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	514	-	1581	-
HCM Lane V/C Ratio	-	-	0.513	-	0.071	-
HCM Control Delay (s)	-	-	19.1	0	7.5	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	2.9	-	0.2	-

Intersection	
Int Delay, s/veh	54.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	389	171	19	17	160	183
Future Vol, veh/h	389	171	19	17	160	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	442	194	22	19	182	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	604	-	0	0	41	0
Stage 1	32	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	465	0	-	-	1581	-
Stage 1	996	0	-	-	-	-
Stage 2	569	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 405	-	-	-	1581	-
Mov Cap-2 Maneuver	~ 405	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	103.7	0	3.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	405	-	1581	-
HCM Lane V/C Ratio	-	-	1.091	-	0.115	-
HCM Control Delay (s)	-	-	103.7	0	7.6	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	15.4	-	0.4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	389	171	19	17	160	183
Future Vol, veh/h	389	171	19	17	160	183
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	442	194	22	19	182	208
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	21.9	9.4	17.4
HCM LOS	C	A	C

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	47%
Vol Thru, %	53%	0%	0%	53%
Vol Right, %	47%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	389	171	343
LT Vol	0	389	0	160
Through Vol	19	0	0	183
RT Vol	17	0	171	0
Lane Flow Rate	41	442	194	390
Geometry Grp	2	7	7	2
Degree of Util (X)	0.067	0.773	0.274	0.617
Departure Headway (Hd)	5.938	6.293	5.08	5.702
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	602	575	707	635
Service Time	3.984	4.019	2.807	3.702
HCM Lane V/C Ratio	0.068	0.769	0.274	0.614
HCM Control Delay	9.4	27.3	9.7	17.4
HCM Lane LOS	A	D	A	C
HCM 95th-tile Q	0.2	7.1	1.1	4.2

Intersection	
Int Delay, s/veh	72.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	321	307	14	22	270	240
Future Vol, veh/h	321	307	14	22	270	240
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	338	323	15	23	284	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	848	-	0	0	38	0
Stage 1	27	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	~ 334	0	-	-	1585	-
Stage 1	1001	0	-	-	-	-
Stage 2	436	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 265	-	-	-	1585	-
Mov Cap-2 Maneuver	~ 265	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	345	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	188.3	0	4.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	265	-	1585	-
HCM Lane V/C Ratio	-	-	1.275	-	0.179	-
HCM Control Delay (s)	-	-	188.3	0	7.8	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	16.7	-	0.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	303.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	478	307	14	22	331	240
Future Vol, veh/h	478	307	14	22	331	240
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	60	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	503	323	15	23	348	253

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	976	-	0	0	38	0
Stage 1	27	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Critical Hdwy	6.4	-	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	-	-	2.2	-
Pot Cap-1 Maneuver	~ 281	0	-	-	1585	-
Stage 1	1001	0	-	-	-	-
Stage 2	~ 379	0	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 209	-	-	-	1585	-
Mov Cap-2 Maneuver	~ 209	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	~ 282	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 683.8	0	4.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	209	-	1585	-
HCM Lane V/C Ratio	-	-	2.407	-	0.22	-
HCM Control Delay (s)	-	-	$ 683.8	0	7.9	0
HCM Lane LOS	-	-	F	A	A	A
HCM 95th %tile Q(veh)	-	-	41.3	-	0.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	478	307	14	22	331	240
Future Volume (veh/h)	478	307	14	22	331	240
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1800	1872	1800	1800	1800	1872
Adj Flow Rate, veh/h	503	0	15	23	348	253
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	840		270	414	440	274
Arrive On Green	0.49	0.00	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1714	1586	641	982	896	651
Grp Volume(v), veh/h	503	0	0	38	601	0
Grp Sat Flow(s),veh/h/ln	1714	1586	0	1623	1547	0
Q Serve(g_s), s	19.1	0.0	0.0	1.2	32.1	0.0
Cycle Q Clear(g_c), s	19.1	0.0	0.0	1.2	33.3	0.0
Prop In Lane	1.00	1.00		0.61	0.58	
Lane Grp Cap(c), veh/h	840		0	683	715	0
V/C Ratio(X)	0.60		0.00	0.06	0.84	0.00
Avail Cap(c_a), veh/h	840		0	812	841	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.6	0.0	0.0	15.4	25.3	0.0
Incr Delay (d2), s/veh	3.1	0.0	0.0	0.0	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	0.4	12.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.7	0.0	0.0	15.5	32.1	0.0
LnGrp LOS	B		A	B	C	A
Approach Vol, veh/h	503	A	38			601
Approach Delay, s/veh	19.7		15.5			32.1
Approach LOS	B		B			C

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	48.1	41.9	41.9
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	37.0	45.0	45.0
Max Q Clear Time (g_c+I1), s	21.1	3.2	35.3
Green Ext Time (p_c), s	1.4	0.2	2.5

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 4
North/South Street: W FRONTAGE RD
East/West Street: STODDARD WELLS RD

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

			Forecast Future Year				
Approach Direction		**Base Year Count**		**Link Volume**		**Turn Volume**	**Rounded Volume**
South leg	Left	0	Approach	18	Left	0	0
NB	Through	16	Departure	534	Through	16	17
	Right	2			Right	3	3
North leg	Left	108	Approach	457	Left	291	291
SB	Through	77	Departure	235	Through	167	167
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	283	Approach	587	Left	368	368
WB	Through	0	Departure	293	Through	0	0
	Right	142			Right	220	231

P.M. Peak Hour

			Forecast Future Year				
Approach Direction		**Base Year Count**		**Link Volume**		**Turn Volume**	**Rounded Volume**
South leg	Left	0	Approach	34	Left	0	0
NB	Through	18	Departure	560	Through	14	14
	Right	16			Right	21	22
North leg	Left	95	Approach	509	Left	270	270
SB	Through	176	Departure	311	Through	240	240
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	223	Approach	618	Left	321	321
WB	Through	0	Departure	290	Through	0	0

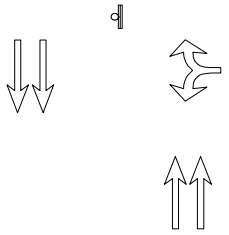
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : I-15 SB OFF-RAMP
N/S STREET : STODDARD WELLS RD
CONDITION : AM PEAK HOUR

INTERSECTION : 5
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
I-15 SB OFF-RAMP								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	55	2	0	57	168	225	178	346
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	3	0	0	3	0	3	22	22
STODDARD WELLS RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	158	6	0	164	0	164	248	248
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	130	5	0	135	0	135	280	280
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**346**	**13**	**0**	**359**	**168**	**527**	**728**	**896**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 SB OFF-RAMP
CONDITION : AM PEAK HOUR

N/S STREET : STODDARD WELLS RD
PHF : 0.83

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	8	0	0	1	0	0	4	0	0	1	0
0	15	0	0	0	0	0	3	0	0	3	0
0	23	0	0	2	0	0	3	0	0	5	0
0	9	0	0	2	0	0	1	0	0	6	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	21	0	0	0	0	0	1	0	0	1	0
0	25	0	0	2	0	0	3	0	0	5	0
0	18	0	0	1	0	0	2	0	0	2	0
0	25	0	0	0	0	0	5	0	0	6	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	0	6	0	0	0	0	0	0	0	0	0
0	0	9	0	0	1	0	0	0	0	0	0
0	0	20	0	0	1	0	0	0	0	0	0
2	0	9	0	0	1	0	0	0	0	0	2

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 SB OFF-RAMP					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	5	44	**49**	**55**	**55**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	3	**3**	**3**	**3**
STODDARD WELLS RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	28	89	**117**	**158**	**158**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	31	55	**86**	**130**	**130**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	3	158	0	0	130
Future Vol, veh/h	55	3	158	0	0	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	66	4	190	0	0	157

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	269	95	0	-	-	-
Stage 1	190	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	703	949	-	0	0	-
Stage 1	829	-	-	0	0	-
Stage 2	941	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	703	949	-	-	-	-
Mov Cap-2 Maneuver	703	-	-	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	941	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	713	-
HCM Lane V/C Ratio	-	0.098	-
HCM Control Delay (s)	-	10.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	3	164	0	0	135
Future Vol, veh/h	57	3	164	0	0	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	69	4	198	0	0	163

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	280	99	0	-	-	-
Stage 1	198	-	-	-	-	-
Stage 2	82	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	692	944	-	0	0	-
Stage 1	822	-	-	0	0	-
Stage 2	938	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	692	944	-	-	-	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	938	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	701	-
HCM Lane V/C Ratio	-	0.103	-
HCM Control Delay (s)	-	10.7	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-

Intersection	
Int Delay, s/veh	5.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	225	3	164	0	0	135
Future Vol, veh/h	225	3	164	0	0	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	271	4	198	0	0	163

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	280	99	0	-	-	-
Stage 1	198	-	-	-	-	-
Stage 2	82	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	692	944	-	0	0	-
Stage 1	822	-	-	0	0	-
Stage 2	938	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	692	944	-	-	-	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	938	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	694	-
HCM Lane V/C Ratio	-	0.396	-
HCM Control Delay (s)	-	13.5	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	1.9	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	178	22	248	0	0	280
Future Vol, veh/h	178	22	248	0	0	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	187	23	261	0	0	295

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	409	131	0	-	-	-
Stage 1	261	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	576	901	-	0	0	-
Stage 1	765	-	-	0	0	-
Stage 2	870	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	576	901	-	-	-	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	600	-
HCM Lane V/C Ratio	-	0.351	-
HCM Control Delay (s)	-	14.2	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	1.6	-

Intersection	
Int Delay, s/veh	9.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	346	22	248	0	0	280
Future Vol, veh/h	346	22	248	0	0	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	364	23	261	0	0	295

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	409	131	0	-	-	-
Stage 1	261	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	576	901	-	0	0	-
Stage 1	765	-	-	0	0	-
Stage 2	870	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	576	901	-	-	-	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	589	-
HCM Lane V/C Ratio	-	0.658	-
HCM Control Delay (s)	-	22.1	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	4.8	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : I-15 SB OFF-RAMP
N/S STREET : STODDARD WELLS RD
CONDITION : PM PEAK HOUR

INTERSECTION : 5
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
I-15 SB OFF-RAMP								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	79	3	0	82	61	143	200	261
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	8	0	0	8	0	8	35	35
STODDARD WELLS RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	182	7	0	189	0	189	321	321
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	192	8	0	200	0	200	310	310
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**461**	**18**	**0**	**479**	**61**	**540**	**866**	**927**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 SB OFF-RAMP
CONDITION : PM PEAK HOUR
N/S STREET : STODDARD WELLS RD
PHF : 0.91

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	23	0	0	2	0	0	1	0	0	3	0
0	29	0	0	1	0	0	1	0	0	2	0
0	52	0	0	2	0	0	0	0	0	3	0
0	41	0	0	1	0	0	2	0	0	2	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	24	0	0	1	0	0	10	0	0	1	0
0	23	0	0	1	0	0	4	0	0	1	0
0	19	0	0	1	0	0	0	0	0	0	0
0	28	0	0	1	0	0	1	0	0	1	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	0	19	2	0	0	0	0	0	0	0	1
0	0	16	0	0	0	0	0	0	0	0	1
3	0	12	0	0	0	0	0	0	0	0	2
1	0	20	0	0	0	0	0	0	1	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 SB OFF-RAMP					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	4	67	**71**	**79**	**79**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	3	5	**8**	**8**	**8**
STODDARD WELLS RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	22	94	**116**	**139**	**182**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	20	145	**165**	**192**	**192**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	79	8	182	0	0	192
Future Vol, veh/h	79	8	182	0	0	192
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	87	9	200	0	0	211

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	306	100	0	-	-	-
Stage 1	200	-	-	-	-	-
Stage 2	106	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	667	943	-	0	0	-
Stage 1	820	-	-	0	0	-
Stage 2	913	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	667	943	-	-	-	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	913	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	685	-
HCM Lane V/C Ratio	-	0.14	-
HCM Control Delay (s)	-	11.1	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.5	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	82	8	189	0	0	200
Future Vol, veh/h	82	8	189	0	0	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	90	9	208	0	0	220

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	318	104	0	-	-	-
Stage 1	208	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	656	937	-	0	0	-
Stage 1	813	-	-	0	0	-
Stage 2	908	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	656	937	-	-	-	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	908	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	674	-
HCM Lane V/C Ratio	-	0.147	-
HCM Control Delay (s)	-	11.3	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.5	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	143	8	189	0	0	200
Future Vol, veh/h	143	8	189	0	0	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	157	9	208	0	0	220

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	318	104	0	-	-	-
Stage 1	208	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	656	937	-	0	0	-
Stage 1	813	-	-	0	0	-
Stage 2	908	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	656	937	-	-	-	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	908	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	667	-
HCM Lane V/C Ratio	-	0.249	-
HCM Control Delay (s)	-	12.2	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	200	35	321	0	0	310
Future Vol, veh/h	200	35	321	0	0	310
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	211	37	338	0	0	326

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	501	169	0	-	-	-
Stage 1	338	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	504	852	-	0	0	-
Stage 1	700	-	-	0	0	-
Stage 2	855	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	504	852	-	-	-	-
Mov Cap-2 Maneuver	504	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	537	-
HCM Lane V/C Ratio	-	0.461	-
HCM Control Delay (s)	-	17.3	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	2.4	-

Intersection	
Int Delay, s/veh	6.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	261	35	321	0	0	310
Future Vol, veh/h	261	35	321	0	0	310
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	275	37	338	0	0	326

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	501	169	0	-	-	-
Stage 1	338	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	504	852	-	0	0	-
Stage 1	700	-	-	0	0	-
Stage 2	855	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	504	852	-	-	-	-
Mov Cap-2 Maneuver	504	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	530	-
HCM Lane V/C Ratio	-	0.588	-
HCM Control Delay (s)	-	21	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	3.8	-

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 5
North/South Street: STODDARD WELLS RD
East/West Street: I-15 SB OFF-RAMP

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	235	Left	0	0
NB	Through	158	Departure	457	Through	248	248
	Right	0			Right	0	0
North leg	Left	0	Approach	288	Left	0	0
SB	Through	130	Departure	269	Through	280	280
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	55	Approach	204	Left	178	178
WB	Through	0	Departure	0	Through	0	0
	Right	3			Right	22	22

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	311	Left	0	0
NB	Through	182	Departure	509	Through	321	321
	Right	0			Right	0	0
North leg	Left	0	Approach	316	Left	0	0
SB	Through	192	Departure	355	Through	310	310
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	79	Approach	237	Left	200	200
WB	Through	0	Departure	0	Through	0	0

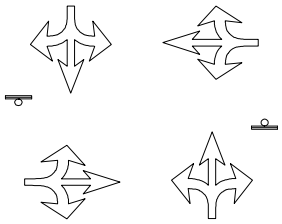
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

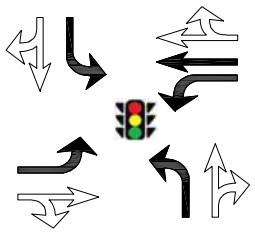
E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S / I-15 NB RAMPS
CONDITION : AM PEAK HOUR

INTERSECTION : 6
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
STODDARD WELLS RD								
EB LEFT	299	12	0	311	0	311	167	167
EB THRU	85	3	131	219	0	219	411	411
EB RIGHT	9	0	0	9	118	127	2	120
WB LEFT	1	0	3	4	18	22	5	23
WB THRU	131	5	198	334	0	334	281	281
WB RIGHT	66	3	79	148	0	148	322	322
OUTER HWY 15S / I-15 NB R								
NB LEFT	1	0	0	1	41	42	1	42
NB THRU	2	0	0	2	36	38	2	38
NB RIGHT	1	0	5	6	6	12	8	14
SB LEFT	1	0	343	344	0	344	517	517
SB THRU	1	0	0	1	136	137	11	147
SB RIGHT	46	2	0	48	0	48	231	231
TOTALS	**643**	**25**	**759**	**1427**	**355**	**1782**	**1958**	**2313**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S / I-15 NB RAMPS
CONDITION : AM PEAK HOUR
PHF : 0.92

NORTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	0	1	0	0	0	0	1	0	0	0
15	0	0	1	0	0	0	0	0	0	0	0
18	0	0	0	0	0	1	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	2	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
5	34	1	0	0	0	1	0	0	1	0	0
10	22	0	2	0	0	1	0	0	1	1	0
15	38	0	0	0	0	0	0	0	0	0	0
20	30	0	1	0	0	0	0	0	0	0	0

WEST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
2	11	88	0	0	1	0	0	0	0	0	4
5	57	15	0	0	4	0	0	1	0	1	5
2	4	69	0	0	1	0	0	4	0	0	3
0	6	58	0	1	1	0	0	1	0	0	1

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	26	230	**256**	**292**	**299**
EB THRU	2	78	**80**	**83**	**85**
EB RIGHT	0	9	**9**	**9**	**9**
WB LEFT	0	1	**1**	**1**	**1**
WB THRU	1	124	**125**	**127**	**131**
WB RIGHT	7	50	**57**	**66**	**66**
OUTER HWY 15S / I-15 NB					
NB LEFT	0	0	**0**	**1**	**1**
NB THRU	0	2	**2**	**2**	**2**
NB RIGHT	0	0	**0**	**1**	**1**
SB LEFT	1	0	**1**	**2**	**1**
SB THRU	0	0	**0**	**1**	**1**
SB RIGHT	3	39	**42**	**44**	**46**

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	299	85	9	1	131	66	1	2	1	1	1	46
Future Vol, veh/h	299	85	9	1	131	66	1	2	1	1	1	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	325	92	10	1	142	72	1	2	1	1	1	50

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	102	0	0	953	963	97	929	932	178
Stage 1	-	-	-	-	-	-	747	747	-	180	180	-
Stage 2	-	-	-	-	-	-	206	216	-	749	752	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1368	-	-	1503	-	-	241	258	965	250	269	870
Stage 1	-	-	-	-	-	-	408	423	-	826	754	-
Stage 2	-	-	-	-	-	-	801	728	-	407	421	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1368	-	-	1503	-	-	182	193	965	199	201	870
Mov Cap-2 Maneuver	-	-	-	-	-	-	182	193	-	199	201	-
Stage 1	-	-	-	-	-	-	305	316	-	618	753	-
Stage 2	-	-	-	-	-	-	753	727	-	302	315	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.4	0	20.5	10.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	237	1368	-	-	1503	-	-	763
HCM Lane V/C Ratio	0.018	0.238	-	-	0.001	-	-	0.068
HCM Control Delay (s)	20.5	8.4	0	-	7.4	0	-	10.1
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.9	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	460.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	311	219	9	4	334	148	1	2	6	344	1	48
Future Vol, veh/h	311	219	9	4	334	148	1	2	6	344	1	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	338	238	10	4	363	161	1	2	7	374	1	52

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	248	0	0	1397	1451	243	1376	1376	444
Stage 1	-	-	-	-	-	-	919	919	-	452	452	-
Stage 2	-	-	-	-	-	-	478	532	-	924	924	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1053	-	-	1330	-	-	120	132	801	~ 124	146	618
Stage 1	-	-	-	-	-	-	328	353	-	591	574	-
Stage 2	-	-	-	-	-	-	572	529	-	~ 326	351	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1053	-	-	1330	-	-	77	82	801	~ 85	91	618
Mov Cap-2 Maneuver	-	-	-	-	-	-	77	82	-	~ 85	91	-
Stage 1	-	-	-	-	-	-	206	221	-	~ 371	572	-
Stage 2	-	-	-	-	-	-	521	527	-	~ 201	220	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.8	0.1	23.8	$ 1663.7
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	201	1053	-	-	1330	-	-	95
HCM Lane V/C Ratio	0.049	0.321	-	-	0.003	-	-	4.497
HCM Control Delay (s)	23.8	10	0	-	7.7	0	-	$ 1663.7
HCM Lane LOS	C	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.2	1.4	-	-	0	-	-	45.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1707.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	311	219	127	22	334	148	42	38	12	344	137	48
Future Vol, veh/h	311	219	127	22	334	148	42	38	12	344	137	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	338	238	138	24	363	161	46	41	13	374	149	52

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	376	0	0	1575	1555	307	1502	1544	444
Stage 1	-	-	-	-	-	-	983	983	-	492	492	-
Stage 2	-	-	-	-	-	-	592	572	-	1010	1052	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1053	-	-	1194	-	-	90	114	738	~ 101	~ 116	618
Stage 1	-	-	-	-	-	-	302	329	-	562	551	-
Stage 2	-	-	-	-	-	-	496	508	-	~ 292	306	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1053	-	-	1194	-	-	-	65	738	~ 34	~ 66	618
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	65	-	~ 34	~ 66	-
Stage 1	-	-	-	-	-	-	177	193	-	~ 329	535	-
Stage 2	-	-	-	-	-	-	318	493	-	~ 132	179	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.7	0.4		$ 5745.2
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1053	-	-	1194	-	-	43
HCM Lane V/C Ratio	-	0.321	-	-	0.02	-	-	13.372
HCM Control Delay (s)	-	10	0	-	8.1	0	-	$ 5745.2
HCM Lane LOS	-	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	-	1.4	-	-	0.1	-	-	69.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	219	127	22	334	148	42	38	12	344	137	48
Future Volume (veh/h)	311	219	127	22	334	148	42	38	12	344	137	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800
Adj Flow Rate, veh/h	338	238	138	24	363	161	46	41	13	374	149	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	375	509	295	34	600	262	345	242	77	575	416	145
Arrive On Green	0.22	0.46	0.46	0.02	0.26	0.26	0.03	0.18	0.18	0.17	0.31	0.31
Sat Flow, veh/h	1714	1112	644	1714	2317	1011	1714	1362	432	1714	1326	463
Grp Volume(v), veh/h	338	0	376	24	266	258	46	0	54	374	0	201
Grp Sat Flow(s),veh/h/ln	1714	0	1756	1714	1710	1618	1714	0	1794	1714	0	1789
Q Serve(g_s), s	17.3	0.0	13.3	1.3	12.3	12.6	2.0	0.0	2.3	15.0	0.0	7.8
Cycle Q Clear(g_c), s	17.3	0.0	13.3	1.3	12.3	12.6	2.0	0.0	2.3	15.0	0.0	7.8
Prop In Lane	1.00		0.37	1.00		0.62	1.00		0.24	1.00		0.26
Lane Grp Cap(c), veh/h	375	0	804	34	443	419	345	0	319	575	0	562
V/C Ratio(X)	0.90	0.00	0.47	0.70	0.60	0.61	0.13	0.00	0.17	0.65	0.00	0.36
Avail Cap(c_a), veh/h	457	0	804	114	443	419	408	0	319	575	0	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.00	0.90	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	0.0	16.8	43.8	29.3	29.4	29.0	0.0	31.4	23.4	0.0	23.9
Incr Delay (d2), s/veh	16.8	0.0	1.8	22.5	5.9	6.6	0.2	0.0	1.1	2.6	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	5.0	0.7	5.3	5.2	0.8	0.0	1.0	6.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	18.6	66.3	35.2	36.0	29.2	0.0	32.5	26.0	0.0	25.6
LnGrp LOS	D	A	B	E	D	D	C	A	C	C	A	C
Approach Vol, veh/h		714			548			100			575	
Approach Delay, s/veh		34.0			36.9			31.0			25.9	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	45.2	6.7	32.3	23.7	27.3	19.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	37.0	6.0	25.0	24.0	19.0	15.0	16.0
Max Q Clear Time (g_c+I1), s	3.3	15.3	4.0	9.8	19.3	14.6	17.0	4.3
Green Ext Time (p_c), s	0.0	1.9	0.0	1.0	0.4	1.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	753.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	167	411	2	5	281	322	1	2	8	517	11	231
Future Vol, veh/h	167	411	2	5	281	322	1	2	8	517	11	231
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	176	433	2	5	296	339	1	2	8	544	12	243

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	635	0	0	435	0	0	1389	1431	434	1267	1263	466
Stage 1	-	-	-	-	-	-	786	786	-	476	476	-
Stage 2	-	-	-	-	-	-	603	645	-	791	787	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	958	-	-	1135	-	-	121	136	626	~ 147	171	601
Stage 1	-	-	-	-	-	-	388	406	-	574	560	-
Stage 2	-	-	-	-	-	-	489	471	-	~ 386	406	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	958	-	-	1135	-	-	54	102	626	~ 116	129	601
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	102	-	~ 116	129	-
Stage 1	-	-	-	-	-	-	294	308	-	~ 435	556	-
Stage 2	-	-	-	-	-	-	283	468	-	~ 287	308	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.8	0.1	22.6	$ 1941.5
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	216	958	-	-	1135	-	-	154
HCM Lane V/C Ratio	0.054	0.183	-	-	0.005	-	-	5.188
HCM Control Delay (s)	22.6	9.6	0	-	8.2	0	-	$ 1941.5
HCM Lane LOS	C	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.2	0.7	-	-	0	-	-	84.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1840

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	167	411	120	23	281	322	42	38	14	517	147	231
Future Vol, veh/h	167	411	120	23	281	322	42	38	14	517	147	231
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	176	433	126	24	296	339	44	40	15	544	155	243

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	635	0	0	559	0	0	1561	1531	496	1390	1425	466
Stage 1	-	-	-	-	-	-	848	848	-	514	514	-
Stage 2	-	-	-	-	-	-	713	683	-	876	911	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	958	-	-	1022	-	-	92	118	578	~ 121	~ 137	601
Stage 1	-	-	-	-	-	-	359	380	-	547	539	-
Stage 2	-	-	-	-	-	-	426	452	-	~ 346	356	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	958	-	-	1022	-	-	-	83	578	~ 58	~ 96	601
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	83	-	~ 58	~ 96	-
Stage 1	-	-	-	-	-	-	261	277	-	~ 398	518	-
Stage 2	-	-	-	-	-	-	171	434	-	~ 210	259	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0.3		$ 4753.3
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	958	-	-	1022	-	-	83
HCM Lane V/C Ratio	-	0.183	-	-	0.024	-	-	11.351
HCM Control Delay (s)	-	9.6	0	-	8.6	0	-	$ 4753.3
HCM Lane LOS	-	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	-	0.7	-	-	0.1	-	-	110.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	411	120	23	281	322	42	38	14	517	147	231
Future Volume (veh/h)	167	411	120	23	281	322	42	38	14	517	147	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800
Adj Flow Rate, veh/h	176	433	126	24	296	339	44	40	15	544	155	243
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	209	607	177	34	571	509	134	115	43	558	220	345
Arrive On Green	0.12	0.44	0.44	0.02	0.33	0.33	0.03	0.09	0.09	0.28	0.34	0.34
Sat Flow, veh/h	1714	1394	406	1714	1710	1525	1714	1298	487	1714	657	1030
Grp Volume(v), veh/h	176	0	559	24	296	339	44	0	55	544	0	398
Grp Sat Flow(s),veh/h/ln	1714	0	1799	1714	1710	1525	1714	0	1784	1714	0	1687
Q Serve(g_s), s	9.0	0.0	22.9	1.3	12.5	17.1	2.2	0.0	2.6	23.9	0.0	18.5
Cycle Q Clear(g_c), s	9.0	0.0	22.9	1.3	12.5	17.1	2.2	0.0	2.6	23.9	0.0	18.5
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.27	1.00		0.61
Lane Grp Cap(c), veh/h	209	0	783	34	571	509	134	0	159	558	0	566
V/C Ratio(X)	0.84	0.00	0.71	0.70	0.52	0.67	0.33	0.00	0.35	0.98	0.00	0.70
Avail Cap(c_a), veh/h	229	0	783	76	571	509	175	0	317	558	0	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.00	0.90	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	20.8	43.8	24.1	25.7	40.3	0.0	38.5	30.3	0.0	26.0
Incr Delay (d2), s/veh	20.7	0.0	5.0	22.5	3.3	6.7	1.4	0.0	1.3	31.8	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	9.3	0.7	5.1	6.5	0.9	0.0	1.1	15.3	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	0.0	25.8	66.3	27.5	32.4	41.7	0.0	39.8	62.1	0.0	28.7
LnGrp LOS	E	A	C	E	C	C	D	A	D	E	A	C
Approach Vol, veh/h		735			659			99			942	
Approach Delay, s/veh		33.8			31.4			40.7			48.0	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	43.2	6.8	34.2	14.9	34.1	29.0	12.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.6	29.0	5.0	36.0	12.0	21.0	25.0	16.0
Max Q Clear Time (g_c+I1), s	3.3	24.9	4.2	20.5	11.0	19.1	25.9	4.6
Green Ext Time (p_c), s	0.0	1.2	0.0	2.4	0.0	0.7	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S / I-15 NB RAMPS
CONDITION : PM PEAK HOUR

INTERSECTION : 6
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
STODDARD WELLS RD								
EB LEFT	234	9	0	243	0	243	182	182
EB THRU	53	2	120	175	0	175	284	284
EB RIGHT	1	0	0	1	44	45	1	45
WB LEFT	4	0	6	10	7	17	16	23
WB THRU	292	12	333	637	0	637	870	870
WB RIGHT	60	2	113	175	0	175	266	266
OUTER HWY 15S / I-15 NB R								
NB LEFT	1	0	0	1	127	128	1	128
NB THRU	3	0	0	3	111	114	2	113
NB RIGHT	1	0	5	6	17	23	8	25
SB LEFT	17	1	261	279	0	279	427	427
SB THRU	1	0	0	1	50	51	3	53
SB RIGHT	137	5	0	142	0	142	242	242
TOTALS	**804**	**31**	**838**	**1673**	**356**	**2029**	**2302**	**2658**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : OUTER HWY 15S / I-15 NB RAMPS
CONDITION : PM PEAK HOUR
PHF : 0.89

NORTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
19	0	4	0	0	0	1	0	0	0	0	0
19	0	4	0	0	0	0	0	0	0	0	0
64	0	5	0	0	0	0	0	0	0	0	0
32	0	4	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
17	74	0	0	0	0	0	0	0	0	0	0
14	81	0	0	0	0	0	0	0	0	0	0
12	57	1	0	0	0	0	0	0	0	0	0
17	78	3	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	8	50	0	0	0	0	0	1	0	2	2
0	9	48	0	0	0	0	0	0	0	0	0
0	10	52	0	0	0	0	0	0	0	0	0
1	17	64	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	3	214	**217**	**222**	**234**
EB THRU	2	44	**46**	**50**	**53**
EB RIGHT	0	1	**1**	**1**	**1**
WB LEFT	0	4	**4**	**4**	**4**
WB THRU	0	290	**290**	**290**	**292**
WB RIGHT	0	60	**60**	**60**	**60**
OUTER HWY 15S / I-15 NB					
NB LEFT	0	0	**0**	**1**	**1**
NB THRU	0	3	**3**	**3**	**3**
NB RIGHT	0	0	**0**	**1**	**1**
SB LEFT	0	17	**17**	**17**	**17**
SB THRU	0	0	**0**	**1**	**1**
SB RIGHT	1	134	**135**	**136**	**137**

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	234	53	1	4	292	60	1	3	1	17	1	137
Future Vol, veh/h	234	53	1	4	292	60	1	3	1	17	1	137
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	263	60	1	4	328	67	1	3	1	19	1	154

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	395	0	0	61	0	0	1034	990	61	959	957	362
Stage 1	-	-	-	-	-	-	587	587	-	370	370	-
Stage 2	-	-	-	-	-	-	447	403	-	589	587	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1175	-	-	1555	-	-	212	248	1010	239	260	687
Stage 1	-	-	-	-	-	-	499	500	-	654	624	-
Stage 2	-	-	-	-	-	-	595	603	-	498	500	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1175	-	-	1555	-	-	134	190	1010	193	199	687
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	190	-	193	199	-
Stage 1	-	-	-	-	-	-	383	384	-	502	622	-
Stage 2	-	-	-	-	-	-	459	601	-	379	384	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	7.3	0.1	23	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	206	1175	-	-	1555	-	-	530
HCM Lane V/C Ratio	0.027	0.224	-	-	0.003	-	-	0.329
HCM Control Delay (s)	23	8.9	0	-	7.3	0	-	15.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.9	-	-	0	-	-	1.4

Intersection	
Int Delay, s/veh	596.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	243	175	1	10	637	175	1	3	6	279	1	142
Future Vol, veh/h	243	175	1	10	637	175	1	3	6	279	1	142
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	273	197	1	11	716	197	1	3	7	313	1	160

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	913	0	0	198	0	0	1661	1679	198	1586	1581	815
Stage 1	-	-	-	-	-	-	744	744	-	837	837	-
Stage 2	-	-	-	-	-	-	917	935	-	749	744	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	755	-	-	1387	-	-	78	96	848	~ 88	110	381
Stage 1	-	-	-	-	-	-	410	424	-	364	385	-
Stage 2	-	-	-	-	-	-	329	347	-	407	424	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	755	-	-	1387	-	-	30	56	848	~ 56	64	381
Mov Cap-2 Maneuver	-	-	-	-	-	-	30	56	-	~ 56	64	-
Stage 1	-	-	-	-	-	-	244	252	-	~ 216	378	-
Stage 2	-	-	-	-	-	-	187	341	-	~ 237	252	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	7.2	0.1	43	$ 2354.9
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	106	755	-	-	1387	-	-	79
HCM Lane V/C Ratio	0.106	0.362	-	-	0.008	-	-	6.002
HCM Control Delay (s)	43	12.4	0	-	7.6	0	-	$ 2354.9
HCM Lane LOS	E	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.3	1.7	-	-	0	-	-	52.8

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	243	175	45	17	637	175	128	114	23	279	51	142
Future Vol, veh/h	243	175	45	17	637	175	128	114	23	279	51	142
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	273	197	51	19	716	197	144	128	26	313	57	160

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	913	0	0	248	0	0	1730	1720	223	1699	1647	815
Stage 1	-	-	-	-	-	-	769	769	-	853	853	-
Stage 2	-	-	-	-	-	-	961	951	-	846	794	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	755	-	-	1330	-	-	~ 70	~ 90	822	~ 74	100	381
Stage 1	-	-	-	-	-	-	397	413	-	357	378	-
Stage 2	-	-	-	-	-	-	311	341	-	360	403	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	755	-	-	1330	-	-	-	~ 50	822	-	~ 56	381
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 50	-	-	~ 56	-
Stage 1	-	-	-	-	-	-	229	239	-	~ 206	367	-
Stage 2	-	-	-	-	-	-	148	331	-	~ 94	233	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.5	0.2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	755	-	-	1330	-	-	-
HCM Lane V/C Ratio	-	0.362	-	-	0.014	-	-	-
HCM Control Delay (s)	-	12.4	0	-	7.7	0	-	-
HCM Lane LOS	-	B	A	-	A	A	-	-
HCM 95th %tile Q(veh)	-	1.7	-	-	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	175	45	17	637	175	128	114	23	279	51	142
Future Volume (veh/h)	243	175	45	17	637	175	128	114	23	279	51	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800
Adj Flow Rate, veh/h	273	197	51	19	716	197	144	128	26	313	57	160
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	307	769	199	29	990	272	249	268	55	350	92	257
Arrive On Green	0.18	0.54	0.54	0.02	0.37	0.37	0.06	0.18	0.18	0.09	0.21	0.21
Sat Flow, veh/h	1714	1434	371	1714	2650	729	1714	1510	307	1714	434	1219
Grp Volume(v), veh/h	273	0	248	19	462	451	144	0	154	313	0	217
Grp Sat Flow(s),veh/h/ln	1714	0	1805	1714	1710	1669	1714	0	1817	1714	0	1653
Q Serve(g_s), s	14.0	0.0	6.6	1.0	20.9	20.9	0.0	0.0	6.9	5.8	0.0	10.7
Cycle Q Clear(g_c), s	14.0	0.0	6.6	1.0	20.9	20.9	0.0	0.0	6.9	5.8	0.0	10.7
Prop In Lane	1.00		0.21	1.00		0.44	1.00		0.17	1.00		0.74
Lane Grp Cap(c), veh/h	307	0	968	29	639	624	249	0	323	350	0	349
V/C Ratio(X)	0.89	0.00	0.26	0.66	0.72	0.72	0.58	0.00	0.48	0.89	0.00	0.62
Avail Cap(c_a), veh/h	343	0	968	114	639	624	321	0	323	422	0	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.1	0.0	11.2	44.0	24.2	24.2	38.7	0.0	33.2	36.5	0.0	32.2
Incr Delay (d2), s/veh	21.4	0.0	0.6	22.8	7.0	7.1	2.1	0.0	5.0	18.5	0.0	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	2.3	0.6	8.6	8.4	3.0	0.0	3.3	8.4	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	0.0	11.8	66.8	31.1	31.3	40.8	0.0	38.2	55.1	0.0	40.3
LnGrp LOS	E	A	B	E	C	C	D	A	D	E	A	D
Approach Vol, veh/h		521			932			298			530	
Approach Delay, s/veh		35.7			32.0			39.4			49.0	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	52.3	9.2	23.0	20.1	37.6	12.2	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.6	40.0	9.0	19.0	18.0	28.0	12.0	16.0
Max Q Clear Time (g_c+I1), s	3.0	8.6	2.0	12.7	16.0	22.9	7.8	8.9
Green Ext Time (p_c), s	0.0	1.2	0.2	0.6	0.2	2.3	0.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1431.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	182	284	1	16	870	266	1	2	8	427	3	242
Future Vol, veh/h	182	284	1	16	870	266	1	2	8	427	3	242
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	192	299	1	17	916	280	1	2	8	449	3	255

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1196	0	0	300	0	0	1903	1914	300	1779	1774	1056
Stage 1	-	-	-	-	-	-	684	684	-	1090	1090	-
Stage 2	-	-	-	-	-	-	1219	1230	-	689	684	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	591	-	-	1273	-	-	53	69	744	~ 65	84	276
Stage 1	-	-	-	-	-	-	442	452	-	~ 263	294	-
Stage 2	-	-	-	-	-	-	223	252	-	~ 439	452	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	591	-	-	1273	-	-	3	40	744	~ 42	49	276
Mov Cap-2 Maneuver	-	-	-	-	-	-	3	40	-	~ 42	49	-
Stage 1	-	-	-	-	-	-	270	276	-	~ 160	281	-
Stage 2	-	-	-	-	-	-	16	241	-	~ 263	276	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.5	0.1	204.9	$ 4896
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	28	591	-	-	1273	-	-	61
HCM Lane V/C Ratio	0.414	0.324	-	-	0.013	-	-	11.596
HCM Control Delay (s)	204.9	14	0	-	7.9	0	-	$ 4896
HCM Lane LOS	F	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1.3	1.4	-	-	0	-	-	84

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	182	284	45	23	870	266	128	113	25	427	53	242
Future Vol, veh/h	182	284	45	23	870	266	128	113	25	427	53	242
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	192	299	47	24	916	280	135	119	26	449	56	255

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1196	0	0	346	0	0	1967	1951	323	1883	1834	1056
Stage 1	-	-	-	-	-	-	707	707	-	1104	1104	-
Stage 2	-	-	-	-	-	-	1260	1244	-	779	730	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	591	-	-	1224	-	-	~ 48	~ 65	723	~ 55	77	276
Stage 1	-	-	-	-	-	-	429	441	-	~ 258	289	-
Stage 2	-	-	-	-	-	-	211	248	-	~ 392	431	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	591	-	-	1224	-	-	-	~ 36	723	-	~ 43	276
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 36	-	-	~ 43	-
Stage 1	-	-	-	-	-	-	255	262	-	~ 154	271	-
Stage 2	-	-	-	-	-	-	~ 12	232	-	~ 123	256	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	591	-	-	1224	-	-	-
HCM Lane V/C Ratio	-	0.324	-	-	0.02	-	-	-
HCM Control Delay (s)	-	14	0	-	8	0	-	-
HCM Lane LOS	-	B	A	-	A	A	-	-
HCM 95th %tile Q(veh)	-	1.4	-	-	0.1	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	284	45	23	870	266	128	113	25	427	53	242
Future Volume (veh/h)	182	284	45	23	870	266	128	113	25	427	53	242
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800
Adj Flow Rate, veh/h	192	299	47	24	916	280	135	119	26	449	56	255
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	190	977	154	34	1362	415	236	265	58	446	84	384
Arrive On Green	0.11	0.62	0.62	0.02	0.53	0.53	0.09	0.18	0.18	0.19	0.29	0.29
Sat Flow, veh/h	1714	1579	248	1714	2581	787	1714	1488	325	1714	294	1338
Grp Volume(v), veh/h	192	0	346	24	606	590	135	0	145	449	0	311
Grp Sat Flow(s),veh/h/ln	1714	0	1827	1714	1710	1658	1714	0	1813	1714	0	1631
Q Serve(g_s), s	10.0	0.0	8.0	1.3	23.3	23.5	6.5	0.0	6.4	17.5	0.0	15.1
Cycle Q Clear(g_c), s	10.0	0.0	8.0	1.3	23.3	23.5	6.5	0.0	6.4	17.5	0.0	15.1
Prop In Lane	1.00		0.14	1.00		0.47	1.00		0.18	1.00		0.82
Lane Grp Cap(c), veh/h	190	0	1131	34	903	875	236	0	322	446	0	468
V/C Ratio(X)	1.01	0.00	0.31	0.70	0.67	0.67	0.57	0.00	0.45	1.01	0.00	0.66
Avail Cap(c_a), veh/h	190	0	1131	95	903	875	261	0	322	446	0	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.00	0.88	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	0.0	8.1	43.8	15.5	15.6	34.6	0.0	33.1	34.0	0.0	28.3
Incr Delay (d2), s/veh	63.2	0.0	0.6	22.5	4.0	4.1	2.4	0.0	4.5	44.5	0.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	2.6	0.7	8.3	8.1	2.7	0.0	3.0	14.3	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.2	0.0	8.7	66.3	19.5	19.7	37.0	0.0	37.5	78.5	0.0	35.6
LnGrp LOS	F	A	A	E	B	B	D	A	D	F	A	D
Approach Vol, veh/h		538			1220			280			760	
Approach Delay, s/veh		42.4			20.5			37.3			60.9	
Approach LOS		D			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	60.2	11.7	29.8	14.0	52.0	21.5	20.0
Change Period (Y+Rc), s	4.0	4.0	3.5	4.0	4.0	4.0	4.0	* 4
Max Green Setting (Gmax), s	5.8	36.0	9.5	24.0	10.0	31.0	17.5	* 16
Max Q Clear Time (g_c+I1), s	3.3	10.0	8.5	17.1	12.0	25.5	19.5	8.4
Green Ext Time (p_c), s	0.0	1.8	0.0	1.1	0.0	3.1	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 6
North/South Street: OUTER HWY 15S / I-15 NB RAMPS
East/West Street: STODDARD WELLS RD

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	1	Approach	4	Left	1	1
NB	Through	2	Departure	14	Through	2	2
	Right	1			Right	3	3
North leg	Left	1	Approach	408	Left	174	174
SB	Through	1	Departure	410	Through	11	11
	Right	46			Right	231	231
West leg	Left	299	Approach	438	Left	167	167
EB	Through	85	Departure	313	Through	280	280
	Right	9			Right	2	2
East leg	Left	1	Approach	320	Left	2	2
WB	Through	131	Departure	456	Through	83	83
	Right	66			Right	243	243

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	1	Approach	5	Left	1	1
NB	Through	3	Departure	13	Through	2	2
	Right	1			Right	3	3
North leg	Left	17	Approach	401	Left	166	166
SB	Through	1	Departure	336	Through	3	3
	Right	137			Right	242	242
West leg	Left	234	Approach	338	Left	182	182
EB	Through	53	Departure	779	Through	164	164
	Right	1			Right	1	1
East leg	Left	4	Approach	686	Left	10	10
WB	Through	292	Departure	331	Through	537	537

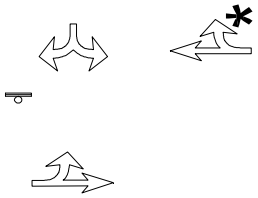
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

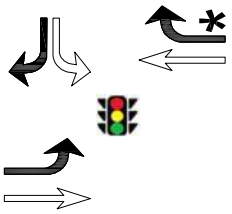
E/W STREET : STODDARD WELLS RD
N/S STREET : QUARRY RD
CONDITION : AM PEAK HOUR

INTERSECTION : 7
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
STODDARD WELLS RD								
EB LEFT	131	5	0	136	0	136	140	140
EB THRU	264	11	7	282	0	282	289	289
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	25	1	5	31	0	31	42	42
WB RIGHT	153	6	193	352	41	393	471	512
QUARRY RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	129	5	124	258	118	376	285	403
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	50	2	0	52	0	52	49	49
TOTALS	**752**	**30**	**329**	**1111**	**159**	**1270**	**1276**	**1435**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : QUARRY RD
CONDITION : AM PEAK HOUR
PHF : 0.92

NORTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
6	0	9	0	0	0	0	0	0	0	0	2
4	0	41	0	0	1	0	0	0	1	0	2
12	0	28	0	0	0	0	0	1	2	0	0
13	0	22	2	0	1	0	0	0	0	0	1

SOUTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
28	5	0	1	1	0	0	0	0	0	0	0
33	4	0	0	1	0	0	0	0	1	0	0
46	10	0	0	0	0	0	1	0	0	0	0
32	4	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	91	27	0	2	0	0	0	0	0	2	0
0	36	33	0	3	0	0	1	0	0	4	0
0	47	31	0	1	0	0	3	0	0	3	0
0	42	40	0	1	0	0	1	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	0	131	**131**	**131**	**131**
EB THRU	21	216	**237**	**264**	**264**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	3	23	**26**	**25**	**25**
WB RIGHT	2	139	**141**	**153**	**153**
QUARRY RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	8	100	**108**	**120**	**129**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	5	35	**40**	**47**	**50**

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	131	264	25	153	129	50
Future Vol, veh/h	131	264	25	153	129	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	142	287	27	166	140	54

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	598	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	571	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1600	-	-	0	468	1054
Stage 1	-	-	-	0	1001	-
Stage 2	-	-	-	0	569	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1600	-	-	-	418	1054
Mov Cap-2 Maneuver	-	-	-	-	418	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	569	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1600	-	-	503
HCM Lane V/C Ratio	0.089	-	-	0.387
HCM Control Delay (s)	7.5	0	-	16.6
HCM Lane LOS	A	A	-	C
HCM 95th %tile Q(veh)	0.3	-	-	1.8

Intersection	
Int Delay, s/veh	15.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	136	282	31	352	258	52
Future Vol, veh/h	136	282	31	352	258	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	148	307	34	383	280	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	34	0	-	0	637	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	603	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1591	-	-	0	445	1045
Stage 1	-	-	-	0	994	-
Stage 2	-	-	-	0	550	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1591	-	-	-	395	1045
Mov Cap-2 Maneuver	-	-	-	-	395	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	35.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1591	-	-	441
HCM Lane V/C Ratio	0.093	-	-	0.764
HCM Control Delay (s)	7.5	0	-	35.1
HCM Lane LOS	A	A	-	E
HCM 95th %tile Q(veh)	0.3	-	-	6.5

Intersection	
Int Delay, s/veh	50.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	136	282	31	393	376	52
Future Vol, veh/h	136	282	31	393	376	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	148	307	34	427	409	57

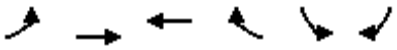
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	34	0	-	0	637	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	603	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1591	-	-	0	445	1045
Stage 1	-	-	-	0	994	-
Stage 2	-	-	-	0	550	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1591	-	-	-	~ 395	1045
Mov Cap-2 Maneuver	-	-	-	-	~ 395	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	100.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1591	-	-	427
HCM Lane V/C Ratio	0.093	-	-	1.09
HCM Control Delay (s)	7.5	0	-	100.9
HCM Lane LOS	A	A	-	F
HCM 95th %tile Q(veh)	0.3	-	-	15.8

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	136	282	31	393	376	52
Future Volume (veh/h)	136	282	31	393	376	52
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1800	1872	1872	1800	1872	1800
Adj Flow Rate, veh/h	148	307	34	0	409	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	182	874	591		792	678
Arrive On Green	0.11	0.47	0.32	0.00	0.44	0.44
Sat Flow, veh/h	1714	1872	1872	1525	1783	1525
Grp Volume(v), veh/h	148	307	34	0	409	57
Grp Sat Flow(s),veh/h/ln	1714	1872	1872	1525	1783	1525
Q Serve(g_s), s	7.6	9.4	1.1	0.0	14.9	1.9
Cycle Q Clear(g_c), s	7.6	9.4	1.1	0.0	14.9	1.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	182	874	591		792	678
V/C Ratio(X)	0.81	0.35	0.06		0.52	0.08
Avail Cap(c_a), veh/h	362	874	591		792	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.78	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	15.3	21.5	0.0	18.0	14.4
Incr Delay (d2), s/veh	8.3	1.1	0.1	0.0	2.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.7	0.5	0.0	6.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.7	16.4	21.6	0.0	20.4	14.7
LnGrp LOS	D	B	C		C	B
Approach Vol, veh/h		455	34	A	466	
Approach Delay, s/veh		26.6	21.6		19.7	
Approach LOS		C	C		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.0		44.0	13.6	32.4
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		42.0		40.0	19.0	19.0
Max Q Clear Time (g_c+I1), s		11.4		16.9	9.6	3.1
Green Ext Time (p_c), s		1.5		1.4	0.2	0.1

Intersection Summary		
HCM 6th Ctrl Delay		23.1
HCM 6th LOS		C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	18.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	140	289	42	471	285	49
Future Vol, veh/h	140	289	42	471	285	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	147	304	44	496	300	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	44	0	-	0	642	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	598	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1577	-	-	0	442	1032
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	553	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1577	-	-	-	392	1032
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	41.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1577	-	-	431
HCM Lane V/C Ratio	0.093	-	-	0.816
HCM Control Delay (s)	7.5	0	-	41.1
HCM Lane LOS	A	A	-	E
HCM 95th %tile Q(veh)	0.3	-	-	7.5

Intersection	
Int Delay, s/veh	58

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	140	289	42	512	403	49
Future Vol, veh/h	140	289	42	512	403	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	147	304	44	539	424	52

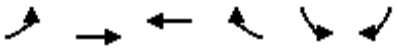
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	44	0	-	0	642	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	598	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1577	-	-	0	442	1032
Stage 1	-	-	-	0	984	-
Stage 2	-	-	-	0	553	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1577	-	-	-	~ 392	1032
Mov Cap-2 Maneuver	-	-	-	-	~ 392	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	116
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1577	-	-	420
HCM Lane V/C Ratio	0.093	-	-	1.133
HCM Control Delay (s)	7.5	0	-	116
HCM Lane LOS	A	A	-	F
HCM 95th %tile Q(veh)	0.3	-	-	17.3

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	289	42	512	403	49
Future Volume (veh/h)	140	289	42	512	403	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1800	1872	1872	1800	1872	1800
Adj Flow Rate, veh/h	147	304	44	0	424	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	181	811	530		852	729
Arrive On Green	0.11	0.43	0.28	0.00	0.48	0.48
Sat Flow, veh/h	1714	1872	1872	1525	1783	1525
Grp Volume(v), veh/h	147	304	44	0	424	52
Grp Sat Flow(s),veh/h/ln	1714	1872	1872	1525	1783	1525
Q Serve(g_s), s	7.5	9.9	1.6	0.0	14.7	1.7
Cycle Q Clear(g_c), s	7.5	9.9	1.6	0.0	14.7	1.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	181	811	530		852	729
V/C Ratio(X)	0.81	0.37	0.08		0.50	0.07
Avail Cap(c_a), veh/h	362	811	530		852	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.83	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	17.3	23.7	0.0	16.1	12.7
Incr Delay (d2), s/veh	8.4	1.3	0.3	0.0	2.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.0	0.7	0.0	6.0	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.7	18.6	23.9	0.0	18.2	12.9
LnGrp LOS	D	B	C		B	B
Approach Vol, veh/h		451	44	A	476	
Approach Delay, s/veh		28.1	23.9		17.6	
Approach LOS		C	C		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		43.0		47.0	13.5	29.5
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		39.0		43.0	19.0	16.0
Max Q Clear Time (g_c+I1), s		11.9		16.7	9.5	3.6
Green Ext Time (p_c), s		1.5		1.5	0.2	0.1

Intersection Summary		
HCM 6th Ctrl Delay		22.8
HCM 6th LOS		C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : QUARRY RD
CONDITION : PM PEAK HOUR

INTERSECTION : 7
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
STODDARD WELLS RD								
EB LEFT	67	3	0	70	0	70	82	82
EB THRU	227	9	6	242	0	242	249	249
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	179	7	7	193	0	193	215	215
WB RIGHT	251	10	326	587	127	714	898	1025
QUARRY RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	61	2	114	177	44	221	218	262
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	94	4	0	98	0	98	91	91
TOTALS	**879**	**35**	**453**	**1367**	**171**	**1538**	**1753**	**1924**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : STODDARD WELLS RD
N/S STREET : QUARRY RD
CONDITION : PM PEAK HOUR
PHF : 0.92

NORTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
13	0	7	1	0	0	2	0	0	0	0	1
14	0	13	1	0	0	0	0	0	4	0	0
10	0	7	0	0	0	0	0	0	0	0	0
11	0	16	2	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
65	28	0	0	0	0	1	0	0	0	0	0
70	30	0	0	0	0	0	0	0	0	0	0
53	69	0	0	0	0	0	0	0	0	0	0
57	52	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	51	13	0	0	0	0	1	0	0	3	0
0	44	21	0	0	0	0	0	0	0	0	0
0	55	14	0	0	0	0	0	0	0	0	0
0	66	18	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
STODDARD WELLS RD					
EB LEFT	0	66	**66**	**66**	**67**
EB THRU	4	216	**220**	**227**	**227**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	0	179	**179**	**179**	**179**
WB RIGHT	1	245	**246**	**247**	**251**
QUARRY RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	1	43	**44**	**46**	**61**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	10	48	**58**	**70**	**94**

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	67	227	179	251	61	94
Future Vol, veh/h	67	227	179	251	61	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	73	247	195	273	66	102

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	195	0	-	0	588	195
Stage 1	-	-	-	-	195	-
Stage 2	-	-	-	-	393	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1390	-	-	0	475	851
Stage 1	-	-	-	0	843	-
Stage 2	-	-	-	0	686	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1390	-	-	-	446	851
Mov Cap-2 Maneuver	-	-	-	-	446	-
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	686	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1390	-	-	627
HCM Lane V/C Ratio	0.052	-	-	0.269
HCM Control Delay (s)	7.7	0	-	12.8
HCM Lane LOS	A	A	-	B
HCM 95th %tile Q(veh)	0.2	-	-	1.1

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	242	193	587	177	98
Future Vol, veh/h	70	242	193	587	177	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	76	263	210	638	192	107

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	210	0	-	0	625	210
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	415	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1373	-	-	0	452	835
Stage 1	-	-	-	0	830	-
Stage 2	-	-	-	0	671	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1373	-	-	-	423	835
Mov Cap-2 Maneuver	-	-	-	-	423	-
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	671	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	21.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1373	-	-	513
HCM Lane V/C Ratio	0.055	-	-	0.583
HCM Control Delay (s)	7.8	0	-	21.4
HCM Lane LOS	A	A	-	C
HCM 95th %tile Q(veh)	0.2	-	-	3.7

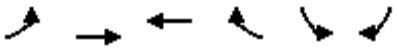
Intersection	
Int Delay, s/veh	11.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	242	193	714	221	98
Future Vol, veh/h	70	242	193	714	221	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	76	263	210	776	240	107

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	210	0	-	0	625	210
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	415	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1373	-	-	0	452	835
Stage 1	-	-	-	0	830	-
Stage 2	-	-	-	0	671	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1373	-	-	-	423	835
Mov Cap-2 Maneuver	-	-	-	-	423	-
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	671	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1373	-	-	499
HCM Lane V/C Ratio	0.055	-	-	0.695
HCM Control Delay (s)	7.8	0	-	27
HCM Lane LOS	A	A	-	D
HCM 95th %tile Q(veh)	0.2	-	-	5.3



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	242	193	714	221	98
Future Volume (veh/h)	70	242	193	714	221	98
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1800	1872	1872	1800	1872	1800
Adj Flow Rate, veh/h	76	263	210	0	240	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	98	1019	829		654	559
Arrive On Green	0.06	0.54	0.15	0.00	0.37	0.37
Sat Flow, veh/h	1714	1872	1872	1525	1783	1525
Grp Volume(v), veh/h	76	263	210	0	240	107
Grp Sat Flow(s),veh/h/ln	1714	1872	1872	1525	1783	1525
Q Serve(g_s), s	3.9	6.7	9.0	0.0	8.9	4.3
Cycle Q Clear(g_c), s	3.9	6.7	9.0	0.0	8.9	4.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	98	1019	829		654	559
V/C Ratio(X)	0.78	0.26	0.25		0.37	0.19
Avail Cap(c_a), veh/h	305	1019	829		654	559
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.56	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	10.9	25.2	0.0	20.9	19.4
Incr Delay (d2), s/veh	12.5	0.6	0.4	0.0	1.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.4	4.0	0.0	3.8	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.3	11.5	25.6	0.0	22.4	20.2
LnGrp LOS	D	B	C		C	C
Approach Vol, veh/h		339	210	A	347	
Approach Delay, s/veh		21.1	25.6		21.7	
Approach LOS		C	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		53.0		37.0	9.1	43.9
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		49.0		33.0	16.0	29.0
Max Q Clear Time (g_c+I1), s		8.7		10.9	5.9	11.0
Green Ext Time (p_c), s		1.3		1.0	0.1	0.8

Intersection Summary		
HCM 6th Ctrl Delay		22.4
HCM 6th LOS		C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	10.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	249	215	898	218	91
Future Vol, veh/h	82	249	215	898	218	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	86	262	226	945	229	96

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	226	0	-	0	660	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	434	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1354	-	-	0	431	818
Stage 1	-	-	-	0	816	-
Stage 2	-	-	-	0	658	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1354	-	-	-	399	818
Mov Cap-2 Maneuver	-	-	-	-	399	-
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	658	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	28.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1354	-	-	470
HCM Lane V/C Ratio	0.064	-	-	0.692
HCM Control Delay (s)	7.8	0	-	28.1
HCM Lane LOS	A	A	-	D
HCM 95th %tile Q(veh)	0.2	-	-	5.2

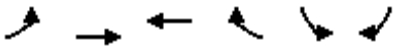
Intersection	
Int Delay, s/veh	15.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	249	215	1025	262	91
Future Vol, veh/h	82	249	215	1025	262	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	86	262	226	1079	276	96

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	226	0	-	0	660	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	434	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1354	-	-	0	431	818
Stage 1	-	-	-	0	816	-
Stage 2	-	-	-	0	658	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1354	-	-	-	399	818
Mov Cap-2 Maneuver	-	-	-	-	399	-
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	658	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	38.2
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1354	-	-	460
HCM Lane V/C Ratio	0.064	-	-	0.808
HCM Control Delay (s)	7.8	0	-	38.2
HCM Lane LOS	A	A	-	E
HCM 95th %tile Q(veh)	0.2	-	-	7.5



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	82	249	215	1025	262	91
Future Volume (veh/h)	82	249	215	1025	262	91
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1800	1872	1872	1800	1872	1800
Adj Flow Rate, veh/h	86	262	226	0	276	96
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	110	1362	1159		327	280
Arrive On Green	0.06	0.73	0.20	0.00	0.18	0.18
Sat Flow, veh/h	1714	1872	1872	1525	1783	1525
Grp Volume(v), veh/h	86	262	226	0	276	96
Grp Sat Flow(s),veh/h/ln	1714	1872	1872	1525	1783	1525
Q Serve(g_s), s	4.4	4.0	9.0	0.0	13.5	4.9
Cycle Q Clear(g_c), s	4.4	4.0	9.0	0.0	13.5	4.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	110	1362	1159		327	280
V/C Ratio(X)	0.78	0.19	0.20		0.84	0.34
Avail Cap(c_a), veh/h	305	1362	1159		654	559
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.15	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	3.9	17.2	0.0	35.5	32.0
Incr Delay (d2), s/veh	11.2	0.3	0.1	0.0	6.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.0	3.5	0.0	6.2	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.7	4.2	17.3	0.0	41.5	32.8
LnGrp LOS	D	A	B		D	C
Approach Vol, veh/h		348	226	A	372	
Approach Delay, s/veh		16.2	17.3		39.2	
Approach LOS		B	B		D	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	69.5		20.5	9.8	59.7
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	49.0		33.0	16.0	29.0
Max Q Clear Time (g_c+I1), s	6.0		15.5	6.4	11.0
Green Ext Time (p_c), s	1.3		1.0	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 7
North/South Street: QUARRY RD
East/West Street: STODDARD WELLS RD

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	0	Left	0	0
NB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
North leg	Left	129	Approach	205	Left	157	161
SB	Through	0	Departure	417	Through	0	0
	Right	50			Right	49	49
West leg	Left	131	Approach	421	Left	140	140
EB	Through	264	Departure	84	Through	282	282
	Right	0			Right	0	0
East leg	Left	0	Approach	313	Left	0	0
WB	Through	25	Departure	438	Through	36	37
	Right	153			Right	278	278

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	0	Left	0	0
NB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
North leg	Left	61	Approach	191	Left	101	104
SB	Through	0	Departure	653	Through	0	0
	Right	94			Right	91	91
West leg	Left	67	Approach	317	Left	82	82
EB	Through	227	Departure	297	Through	236	243
	Right	0			Right	0	0
East leg	Left	0	Approach	779	Left	0	0
WB	Through	179	Departure	336	Through	207	208

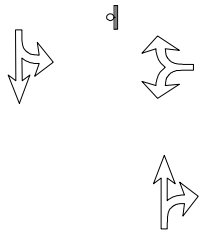
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

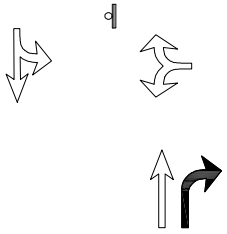
E/W STREET : I-15 SB RAMPS
N/S STREET : QUARRY RD
CONDITION : AM PEAK HOUR

INTERSECTION : 8
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
I-15 SB RAMPS								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	178	7	124	309	118	427	333	451
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	1	0	0	1	0	1	1	1
QUARRY RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	1	0	0	1	0	1	2	2
NB RIGHT	283	11	193	487	41	528	609	650
SB LEFT	1	0	0	1	0	1	2	2
SB THRU	1	0	0	1	0	1	1	1
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**465**	**18**	**317**	**800**	**159**	**959**	**948**	**1107**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 SB RAMPS
CONDITION : AM PEAK HOUR

N/S STREET : QUARRY RD
PHF : 0.90

NORTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
66	0	0	0	0	0	0	0	0	1	0	0
75	0	0	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0	0	0
48	1	0	0	0	0	2	0	0	0	0	0

EAST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	45	0	0	1	0	0	0	0	0	3
0	0	40	0	0	0	0	0	1	0	0	2
1	0	35	0	0	3	0	0	0	0	0	1
0	0	19	0	0	1	0	0	1	0	0	3

WEST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 SB RAMPS					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	16	139	**155**	**178**	**178**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	1	**1**	**1**	**1**
QUARRY RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	1	**1**	**1**	**1**
NB RIGHT	3	262	**265**	**269**	**283**
SB LEFT	0	1	**1**	**1**	**1**
SB THRU	0	0	**1**	**1**	**1**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	178	1	1	283	1	1
Future Vol, veh/h	178	1	1	283	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	198	1	1	314	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	161	158	0	0	315	0
Stage 1	158	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	835	893	-	-	1257	-
Stage 1	875	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	834	893	-	-	1257	-
Mov Cap-2 Maneuver	834	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	3.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	834	1257	-
HCM Lane V/C Ratio	-	-	0.238	0.001	-
HCM Control Delay (s)	-	-	10.7	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0	-

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	309	1	1	487	1	1
Future Vol, veh/h	309	1	1	487	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	343	1	1	541	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	275	272	0	0	542	0
Stage 1	272	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	719	772	-	-	1037	-
Stage 1	778	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	718	772	-	-	1037	-
Mov Cap-2 Maneuver	718	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	4.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	718	1037	-
HCM Lane V/C Ratio	-	-	0.48	0.001	-
HCM Control Delay (s)	-	-	14.5	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	2.6	0	-

Intersection	
Int Delay, s/veh	9.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	427	1	1	528	1	1
Future Vol, veh/h	427	1	1	528	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	474	1	1	587	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	298	295	0	0	588	0
Stage 1	295	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	698	749	-	-	997	-
Stage 1	760	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	697	749	-	-	997	-
Mov Cap-2 Maneuver	697	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.5	0	4.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	697	997	-
HCM Lane V/C Ratio	-	-	0.682	0.001	-
HCM Control Delay (s)	-	-	20.5	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	5.4	0	-

Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	427	1	1	528	1	1
Future Vol, veh/h	427	1	1	528	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	474	1	1	587	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4	1	0	0	588	0
Stage 1	1	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1023	1090	-	-	997	-
Stage 1	1028	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	1090	-	-	997	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1022	997	-
HCM Lane V/C Ratio	-	-	0.465	0.001	-
HCM Control Delay (s)	-	-	11.6	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	2.5	0	-

Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	333	1	2	609	2	1
Future Vol, veh/h	333	1	2	609	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	351	1	2	641	2	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	328	323	0	0	643	0
Stage 1	323	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	671	723	-	-	951	-
Stage 1	738	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	670	723	-	-	951	-
Mov Cap-2 Maneuver	670	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	5.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	670	951	-
HCM Lane V/C Ratio	-	-	0.525	0.002	-
HCM Control Delay (s)	-	-	16.2	8.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	3.1	0	-

Intersection	
Int Delay, s/veh	9.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	451	1	2	650	2	1
Future Vol, veh/h	451	1	2	650	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	475	1	2	684	2	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	349	344	0	0	686	0
Stage 1	344	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	652	703	-	-	917	-
Stage 1	722	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	651	703	-	-	917	-
Mov Cap-2 Maneuver	651	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24	0	6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	651	917	-
HCM Lane V/C Ratio	-	-	0.731	0.002	-
HCM Control Delay (s)	-	-	24	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	6.3	0	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	451	1	2	650	2	1
Future Vol, veh/h	451	1	2	650	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	475	1	2	684	2	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	7	2	0	0	686	0
Stage 1	2	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1019	1088	-	-	917	-
Stage 1	1026	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1017	1088	-	-	917	-
Mov Cap-2 Maneuver	1017	-	-	-	-	-
Stage 1	1026	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1017	917	-
HCM Lane V/C Ratio	-	-	0.468	0.002	-
HCM Control Delay (s)	-	-	11.6	8.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	2.5	0	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : I-15 SB RAMPS
N/S STREET : QUARRY RD
CONDITION : PM PEAK HOUR

INTERSECTION : 8
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
I-15 SB RAMPS								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	154	6	114	274	44	318	308	352
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	2	0	0	2	0	2	2	2
QUARRY RD								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	1	0	0	1	0	1	2	2
NB RIGHT	317	13	326	656	127	783	978	1105
SB LEFT	1	0	0	1	0	1	2	2
SB THRU	1	0	0	1	0	1	1	1
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**476**	**19**	**440**	**935**	**171**	**1106**	**1293**	**1464**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : I-15 SB RAMPS
CONDITION : PM PEAK HOUR
N/S STREET : QUARRY RD
PHF : 0.76

NORTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
109	0	0	2	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0
77	1	0	0	0	0	1	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	24	0	0	2	0	0	3	0	0	4
0	0	27	0	0	0	0	0	1	0	0	4
2	0	20	0	0	1	0	0	2	0	0	1
0	0	26	0	0	1	0	0	0	0	0	4

WEST LEG											
AUTOS			2 AXLE			3 AXLE			4(+) AXLE		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
I-15 SB RAMPS					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	23	97	**120**	**154**	**154**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	2	**2**	**2**	**2**
QUARRY RD					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	1	**1**	**1**	**1**
NB RIGHT	3	312	**315**	**317**	**317**
SB LEFT	0	0	**1**	**1**	**1**
SB THRU	0	1	**1**	**1**	**1**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	154	2	1	317	1	1
Future Vol, veh/h	154	2	1	317	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	203	3	1	417	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	213	210	0	0	418	0
Stage 1	210	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	780	835	-	-	1152	-
Stage 1	830	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	779	835	-	-	1152	-
Mov Cap-2 Maneuver	779	-	-	-	-	-
Stage 1	830	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	4.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	780	1152	-
HCM Lane V/C Ratio	-	-	0.263	0.001	-
HCM Control Delay (s)	-	-	11.3	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Intersection	
Int Delay, s/veh	6.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	274	2	1	656	1	1
Future Vol, veh/h	274	2	1	656	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	361	3	1	863	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	436	433	0	0	864	0
Stage 1	433	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	581	627	-	-	787	-
Stage 1	658	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	580	627	-	-	787	-
Mov Cap-2 Maneuver	580	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21	0	4.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	580	787	-
HCM Lane V/C Ratio	-	-	0.626	0.002	-
HCM Control Delay (s)	-	-	21	9.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	4.3	0	-

Intersection	
Int Delay, s/veh	10.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	318	2	1	783	1	1
Future Vol, veh/h	318	2	1	783	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	418	3	1	1030	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	519	516	0	0	1031	0
Stage 1	516	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	521	563	-	-	682	-
Stage 1	603	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	520	563	-	-	682	-
Mov Cap-2 Maneuver	520	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.1	0	5.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	520	682	-
HCM Lane V/C Ratio	-	-	0.81	0.002	-
HCM Control Delay (s)	-	-	35.1	10.3	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	7.8	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	318	2	1	783	1	1
Future Vol, veh/h	318	2	1	783	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	418	3	1	1030	1	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4	1	0	0	1031	0
Stage 1	1	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1023	1090	-	-	682	-
Stage 1	1028	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	1090	-	-	682	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1024	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	5.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1022	682	-
HCM Lane V/C Ratio	-	-	0.412	0.002	-
HCM Control Delay (s)	-	-	11	10.3	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	2	0	-

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	308	2	2	978	2	1
Future Vol, veh/h	308	2	2	978	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	324	2	2	1029	2	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	522	517	0	0	1031	0
Stage 1	517	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	519	562	-	-	682	-
Stage 1	603	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	517	562	-	-	682	-
Mov Cap-2 Maneuver	517	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.1	0	6.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	517	682	-
HCM Lane V/C Ratio	-	-	0.631	0.003	-
HCM Control Delay (s)	-	-	23.1	10.3	0
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	4.3	0	-

Intersection	
Int Delay, s/veh	8.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	352	2	2	1105	2	1
Future Vol, veh/h	352	2	2	1105	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	371	2	2	1163	2	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	589	584	0	0	1165	0
Stage 1	584	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	474	515	-	-	607	-
Stage 1	561	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	473	515	-	-	607	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	561	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.4	0	7.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	473	607	-
HCM Lane V/C Ratio	-	-	0.788	0.003	-
HCM Control Delay (s)	-	-	35.4	11	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	7.1	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	352	2	2	1105	2	1
Future Vol, veh/h	352	2	2	1105	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	371	2	2	1163	2	1

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	7	2	0	0	1165	0
Stage 1	2	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1019	1088	-	-	607	-
Stage 1	1026	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1016	1088	-	-	607	-
Mov Cap-2 Maneuver	1016	-	-	-	-	-
Stage 1	1026	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	7.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1016	607	-
HCM Lane V/C Ratio	-	-	0.367	0.003	-
HCM Control Delay (s)	-	-	10.6	11	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	1.7	0	-

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 8
North/South Street: QUARRY RD
East/West Street: I-15 SB RAMPS

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	406	Left	0	0
NB	Through	1	Departure	188	Through	2	2
	Right	283			Right	405	416
North leg	Left	1	Approach	2	Left	2	2
SB	Through	1	Departure	2	Through	1	1
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	178	Approach	188	Left	188	209
WB	Through	0	Departure	406	Through	0	0
	Right	1			Right	1	1

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	629	Left	0	0
NB	Through	1	Departure	170	Through	2	2
	Right	317			Right	628	652
North leg	Left	1	Approach	2	Left	2	2
SB	Through	1	Departure	3	Through	1	1
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	154	Approach	171	Left	170	194
WB	Through	0	Departure	629	Through	0	0

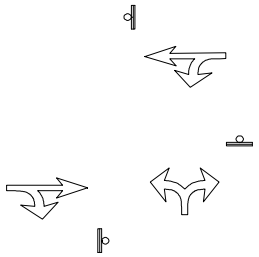
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : FALCHION RD
N/S STREET : APPLE VALLEY RD
CONDITION : AM PEAK HOUR

INTERSECTION : 9
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
FALCHION RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	5	0	0	5	0	5	28	28
EB RIGHT	1	0	0	1	11	12	13	24
WB LEFT	5	0	0	5	0	5	9	9
WB THRU	12	0	0	12	0	12	51	51
WB RIGHT	0	0	0	0	0	0	0	0
APPLE VALLEY RD								
NB LEFT	3	0	0	3	36	39	30	66
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	16	0	0	16	0	16	26	26
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**42**	**0**	**0**	**42**	**47**	**89**	**157**	**204**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : FALCHION RD
CONDITION : AM PEAK HOUR
N/S STREET : APPLE VALLEY RD
PHF : 0.79

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	1	0	0
1	0	0	0	0	0	0	0	0	2	0	0
2	0	0	0	0	0	0	0	0	0	0	0
1	0	1	0	0	0	0	0	0	1	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	2	0	0	0	0	0	0	0	0	0
0	1	1	0	0	0	0	1	0	0	1	0
0	2	1	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	1	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
FALCHION RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	1	1	**2**	**4**	**5**
EB RIGHT	0	0	**0**	**1**	**1**
WB LEFT	0	5	**5**	**5**	**5**
WB THRU	3	3	**6**	**11**	**12**
WB RIGHT	0	0	**0**	**0**	**0**
APPLE VALLEY RD					
NB LEFT	0	1	**1**	**1**	**3**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	4	4	**8**	**16**	**16**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	1	5	12	3	16
Future Vol, veh/h	5	1	5	12	3	16
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	6	1	6	15	4	20
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.9	7.1	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	16%	0%	29%
Vol Thru, %	0%	83%	71%
Vol Right, %	84%	17%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	19	6	17
LT Vol	3	0	5
Through Vol	0	5	12
RT Vol	16	1	0
Lane Flow Rate	24	8	22
Geometry Grp	1	1	1
Degree of Util (X)	0.023	0.008	0.024
Departure Headway (Hd)	3.477	3.857	4.006
Convergence, Y/N	Yes	Yes	Yes
Cap	1032	931	898
Service Time	1.488	1.866	2.011
HCM Lane V/C Ratio	0.023	0.009	0.024
HCM Control Delay	6.6	6.9	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0.1

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	1	5	12	3	16
Future Vol, veh/h	10	1	5	12	3	16
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	1	6	15	4	20
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7	7.1	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	16%	0%	29%
Vol Thru, %	0%	91%	71%
Vol Right, %	84%	9%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	19	11	17
LT Vol	3	0	5
Through Vol	0	10	12
RT Vol	16	1	0
Lane Flow Rate	24	14	22
Geometry Grp	1	1	1
Degree of Util (X)	0.023	0.015	0.024
Departure Headway (Hd)	3.486	3.903	4.01
Convergence, Y/N	Yes	Yes	Yes
Cap	1028	921	896
Service Time	1.502	1.911	2.017
HCM Lane V/C Ratio	0.023	0.015	0.025
HCM Control Delay	6.6	7	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0.1

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	35	5	12	39	16
Future Vol, veh/h	10	35	5	12	39	16
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	44	6	15	49	20
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.8	7.3	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	71%	0%	29%
Vol Thru, %	0%	22%	71%
Vol Right, %	29%	78%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	55	45	17
LT Vol	39	0	5
Through Vol	0	10	12
RT Vol	16	35	0
Lane Flow Rate	70	57	22
Geometry Grp	1	1	1
Degree of Util (X)	0.077	0.057	0.025
Departure Headway (Hd)	4.003	3.571	4.125
Convergence, Y/N	Yes	Yes	Yes
Cap	895	999	866
Service Time	2.026	1.606	2.16
HCM Lane V/C Ratio	0.078	0.057	0.025
HCM Control Delay	7.4	6.8	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	18	9	51	30	26
Future Vol, veh/h	80	18	9	51	30	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	84	19	9	54	32	27
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.5	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	54%	0%	15%
Vol Thru, %	0%	82%	85%
Vol Right, %	46%	18%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	56	98	60
LT Vol	30	0	9
Through Vol	0	80	51
RT Vol	26	18	0
Lane Flow Rate	59	103	63
Geometry Grp	1	1	1
Degree of Util (X)	0.066	0.113	0.072
Departure Headway (Hd)	4.014	3.94	4.111
Convergence, Y/N	Yes	Yes	Yes
Cap	882	906	867
Service Time	2.084	1.982	2.157
HCM Lane V/C Ratio	0.067	0.114	0.073
HCM Control Delay	7.4	7.5	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.4	0.2

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	52	9	51	66	26
Future Vol, veh/h	80	52	9	51	66	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	84	55	9	54	69	27
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	7.6	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	72%	0%	15%
Vol Thru, %	0%	61%	85%
Vol Right, %	28%	39%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	92	132	60
LT Vol	66	0	9
Through Vol	0	80	51
RT Vol	26	52	0
Lane Flow Rate	97	139	63
Geometry Grp	1	1	1
Degree of Util (X)	0.114	0.15	0.074
Departure Headway (Hd)	4.221	3.881	4.207
Convergence, Y/N	Yes	Yes	Yes
Cap	838	913	841
Service Time	2.304	1.953	2.287
HCM Lane V/C Ratio	0.116	0.152	0.075
HCM Control Delay	7.9	7.6	7.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.5	0.2

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : FALCHION RD
N/S STREET : APPLE VALLEY RD
CONDITION : PM PEAK HOUR

INTERSECTION : 9
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
FALCHION RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	10	0	0	10	0	10	80	80
EB RIGHT	1	0	0	1	34	35	18	52
WB LEFT	5	0	0	5	0	5	17	17
WB THRU	27	1	0	28	0	28	91	91
WB RIGHT	0	0	0	0	0	0	0	0
APPLE VALLEY RD								
NB LEFT	4	0	0	4	13	17	34	47
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	3	0	0	3	0	3	13	13
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**50**	**1**	**0**	**51**	**47**	**98**	**253**	**300**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : FALCHION RD
CONDITION : PM PEAK HOUR
N/S STREET : APPLE VALLEY RD
PHF : 0.59

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	0	2	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	2	2	0	0	0	0	0	0	0	2	0
0	2	1	0	0	0	0	0	0	0	2	0
0	4	2	0	0	0	0	0	0	0	2	0
0	1	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	0	0	0	2	0
0	1	0	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
FALCHION RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	2	4	**6**	**10**	**10**
EB RIGHT	0	0	**0**	**1**	**1**
WB LEFT	0	5	**5**	**5**	**5**
WB THRU	6	9	**15**	**27**	**27**
WB RIGHT	0	0	**0**	**0**	**0**
APPLE VALLEY RD					
NB LEFT	0	4	**4**	**4**	**4**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	3	**3**	**3**	**3**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	1	5	27	4	3
Future Vol, veh/h	10	1	5	27	4	3
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	2	8	46	7	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7	7.2	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	57%	0%	16%
Vol Thru, %	0%	91%	84%
Vol Right, %	43%	9%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	7	11	32
LT Vol	4	0	5
Through Vol	0	10	27
RT Vol	3	1	0
Lane Flow Rate	12	19	54
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.02	0.06
Departure Headway (Hd)	3.883	3.907	3.967
Convergence, Y/N	Yes	Yes	Yes
Cap	920	918	907
Service Time	1.912	1.921	1.974
HCM Lane V/C Ratio	0.013	0.021	0.06
HCM Control Delay	7	7	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.2

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	1	5	28	4	3
Future Vol, veh/h	10	1	5	28	4	3
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	2	8	47	7	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7	7.2	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	57%	0%	15%
Vol Thru, %	0%	91%	85%
Vol Right, %	43%	9%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	7	11	33
LT Vol	4	0	5
Through Vol	0	10	28
RT Vol	3	1	0
Lane Flow Rate	12	19	56
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.02	0.062
Departure Headway (Hd)	3.887	3.909	3.966
Convergence, Y/N	Yes	Yes	Yes
Cap	919	918	907
Service Time	1.916	1.923	1.973
HCM Lane V/C Ratio	0.013	0.021	0.062
HCM Control Delay	7	7	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.2

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	35	5	28	17	3
Future Vol, veh/h	10	35	5	28	17	3
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	59	8	47	29	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.9	7.3	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	85%	0%	15%
Vol Thru, %	0%	22%	85%
Vol Right, %	15%	78%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	20	45	33
LT Vol	17	0	5
Through Vol	0	10	28
RT Vol	3	35	0
Lane Flow Rate	34	76	56
Geometry Grp	1	1	1
Degree of Util (X)	0.04	0.075	0.063
Departure Headway (Hd)	4.208	3.534	4.047
Convergence, Y/N	Yes	Yes	Yes
Cap	848	1011	885
Service Time	2.246	1.565	2.073
HCM Lane V/C Ratio	0.04	0.075	0.063
HCM Control Delay	7.4	6.9	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	18	17	91	34	13
Future Vol, veh/h	80	18	17	91	34	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	84	19	18	96	36	14
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.8	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	72%	0%	16%
Vol Thru, %	0%	82%	84%
Vol Right, %	28%	18%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	47	98	108
LT Vol	34	0	17
Through Vol	0	80	91
RT Vol	13	18	0
Lane Flow Rate	49	103	114
Geometry Grp	1	1	1
Degree of Util (X)	0.058	0.114	0.129
Departure Headway (Hd)	4.249	3.962	4.097
Convergence, Y/N	Yes	Yes	Yes
Cap	830	899	871
Service Time	2.343	2.014	2.144
HCM Lane V/C Ratio	0.059	0.115	0.131
HCM Control Delay	7.6	7.5	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.4	0.4

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	52	17	91	47	13
Future Vol, veh/h	80	52	17	91	47	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	84	55	18	96	49	14
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	7.8	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	78%	0%	16%
Vol Thru, %	0%	61%	84%
Vol Right, %	22%	39%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	60	132	108
LT Vol	47	0	17
Through Vol	0	80	91
RT Vol	13	52	0
Lane Flow Rate	63	139	114
Geometry Grp	1	1	1
Degree of Util (X)	0.078	0.149	0.131
Departure Headway (Hd)	4.46	3.86	4.148
Convergence, Y/N	Yes	Yes	Yes
Cap	808	918	856
Service Time	2.46	1.93	2.214
HCM Lane V/C Ratio	0.078	0.151	0.133
HCM Control Delay	7.8	7.6	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.5	0.5

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 9
North/South Street: APPLE VALLEY RD
East/West Street: FALCHION RD

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	3	Approach	55	Left	30	30
NB	Through	0	Departure	16	Through	0	0
	Right	16			Right	26	26
North leg	Left	0	Approach	0	Left	0	0
SB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
West leg	Left	0	Approach	24	Left	0	0
EB	Through	5	Departure	79	Through	17	28
	Right	1			Right	8	13
East leg	Left	5	Approach	58	Left	9	9
WB	Through	12	Departure	42	Through	50	51
	Right	0			Right	0	0

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	4	Approach	46	Left	34	34
NB	Through	0	Departure	26	Through	0	0
	Right	3			Right	13	13
North leg	Left	0	Approach	0	Left	0	0
SB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
West leg	Left	0	Approach	54	Left	0	0
EB	Through	10	Departure	124	Through	44	80
	Right	1			Right	10	18
East leg	Left	5	Approach	107	Left	17	17
WB	Through	27	Departure	56	Through	91	91

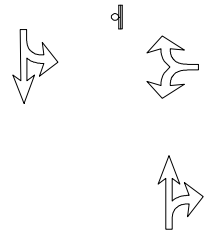
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

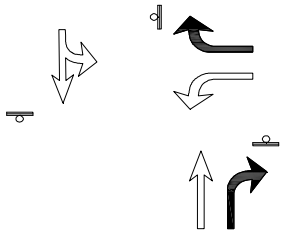
E/W STREET : FALCHION RD
N/S STREET : OUTER HWY 15N
CONDITION : AM PEAK HOUR

INTERSECTION : 10
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
FALCHION RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	10	0	0	10	92	102	52	144
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	5	0	0	5	21	26	29	50
OUTER HWY 15N								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	20	0	0	20	68	88	21	89
NB RIGHT	5	0	0	5	304	309	36	340
SB LEFT	1	0	0	1	68	69	5	73
SB THRU	30	1	0	31	21	52	30	51
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**71**	**1**	**0**	**72**	**574**	**646**	**173**	**747**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : FALCHION RD
CONDITION : AM PEAK HOUR
N/S STREET : OUTER HWY 15N
PHF : 0.70

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	5	0	0	0	0	0	0	0	0	0	0
0	5	0	0	0	0	0	0	0	0	0	0
0	11	0	0	0	0	0	0	0	0	0	0
0	9	1	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	3	0	0	0	0	0	0	0	0	0	0
0	5	0	0	0	0	0	0	0	0	0	0
0	6	0	0	0	0	0	0	0	0	0	0
0	6	0	0	0	0	0	0	0	1	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	2	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0
1	0	2	0	0	0	0	0	0	1	0	1

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
FALCHION RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	2	4	**6**	**10**	**10**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	1	2	**3**	**5**	**5**
OUTER HWY 15N					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	20	**20**	**20**	**20**
NB RIGHT	1	1	**2**	**4**	**5**
SB LEFT	0	1	**1**	**1**	**1**
SB THRU	0	30	**30**	**30**	**30**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	20	5	1	30
Future Vol, veh/h	10	5	20	5	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	7	29	7	1	43

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	78	33	0	0	36	0
Stage 1	33	-	-	-	-	-
Stage 2	45	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	930	1046	-	-	1588	-
Stage 1	995	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	929	1046	-	-	1588	-
Mov Cap-2 Maneuver	929	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	982	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	965	1588	-
HCM Lane V/C Ratio	-	-	0.022	0.001	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	20	5	1	31
Future Vol, veh/h	10	5	20	5	1	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	7	29	7	1	44

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	79	33	0	0	36	0
Stage 1	33	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	929	1046	-	-	1588	-
Stage 1	995	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	928	1046	-	-	1588	-
Mov Cap-2 Maneuver	928	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	964	1588	-
HCM Lane V/C Ratio	-	-	0.022	0.001	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	102	26	88	309	69	52
Future Vol, veh/h	102	26	88	309	69	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	146	37	126	441	99	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	619	347	0	0	567	0
Stage 1	347	-	-	-	-	-
Stage 2	272	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	455	701	-	-	1015	-
Stage 1	720	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	409	701	-	-	1015	-
Mov Cap-2 Maneuver	409	-	-	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	699	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	5.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	447	1015	-
HCM Lane V/C Ratio	-	-	0.409	0.097	-
HCM Control Delay (s)	-	-	18.5	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2	0.3	-

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	102	26	88	309	69	52
Future Vol, veh/h	102	26	88	309	69	52
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	146	37	126	441	99	74
Number of Lanes	1	1	1	1	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.2	12.2	10.7
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	57%
Vol Thru, %	100%	0%	0%	0%	43%
Vol Right, %	0%	100%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	309	102	26	121
LT Vol	0	0	102	0	69
Through Vol	88	0	0	0	52
RT Vol	0	309	0	26	0
Lane Flow Rate	126	441	146	37	173
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.184	0.558	0.272	0.057	0.267
Departure Headway (Hd)	5.259	4.554	6.718	5.503	5.556
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	678	786	538	655	640
Service Time	3.03	2.324	4.418	3.203	3.651
HCM Lane V/C Ratio	0.186	0.561	0.271	0.056	0.27
HCM Control Delay	9.2	13	11.9	8.5	10.7
HCM Lane LOS	A	B	B	A	B
HCM 95th-tile Q	0.7	3.5	1.1	0.2	1.1

Intersection	
Int Delay, s/veh	4.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	29	21	36	5	30
Future Vol, veh/h	52	29	21	36	5	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	55	31	22	38	5	32

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	41	0	0	60	0
Stage 1	41	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	924	1036	-	-	1556	-
Stage 1	987	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	921	1036	-	-	1556	-
Mov Cap-2 Maneuver	921	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	983	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1556	-
HCM Lane V/C Ratio	-	-	0.089	0.003	-
HCM Control Delay (s)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	144	50	89	340	73	51
Future Vol, veh/h	144	50	89	340	73	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	152	53	94	358	77	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	481	273	0	0	452	0
Stage 1	273	-	-	-	-	-
Stage 2	208	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	548	771	-	-	1119	-
Stage 1	778	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	509	771	-	-	1119	-
Mov Cap-2 Maneuver	509	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	773	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	558	1119	-
HCM Lane V/C Ratio	-	-	0.366	0.069	-
HCM Control Delay (s)	-	-	15.1	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.7	0.2	-

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	144	50	89	340	73	51
Future Vol, veh/h	144	50	89	340	73	51
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	152	53	94	358	77	54
Number of Lanes	1	1	1	1	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.6	10.5	9.9
HCM LOS	B	B	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	59%
Vol Thru, %	100%	0%	0%	0%	41%
Vol Right, %	0%	100%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	340	144	50	124
LT Vol	0	0	144	0	73
Through Vol	89	0	0	0	51
RT Vol	0	340	0	50	0
Lane Flow Rate	94	358	152	53	131
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.136	0.451	0.265	0.074	0.199
Departure Headway (Hd)	5.244	4.539	6.298	5.087	5.489
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	681	791	567	697	650
Service Time	2.993	2.288	4.082	2.871	3.558
HCM Lane V/C Ratio	0.138	0.453	0.268	0.076	0.202
HCM Control Delay	8.8	11	11.4	8.3	9.9
HCM Lane LOS	A	B	B	A	A
HCM 95th-tile Q	0.5	2.4	1.1	0.2	0.7

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : FALCHION RD
N/S STREET : OUTER HWY 15N
CONDITION : PM PEAK HOUR

INTERSECTION : 10
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
FALCHION RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	22	0	0	22	284	306	88	372
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	9	0	0	9	64	73	37	101
OUTER HWY 15N								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	22	0	0	22	25	47	26	51
NB RIGHT	8	0	0	8	110	118	77	187
SB LEFT	2	0	0	2	25	27	21	46
SB THRU	39	1	0	40	64	104	48	112
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**102**	**1**	**0**	**103**	**572**	**675**	**297**	**869**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : FALCHION RD
CONDITION : PM PEAK HOUR
N/S STREET : OUTER HWY 15N
PHF : 0.69

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	15	0	0	0	0	0	0	0	0	0	0
0	8	0	0	0	0	0	0	0	0	0	0
0	10	1	0	0	0	0	0	0	0	0	0
0	6	1	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	10	0	0	0	0	0	0	0	0	0	0
1	6	0	0	0	0	0	0	0	0	0	0
1	4	0	0	0	0	0	0	0	2	0	0
0	2	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	4	0	0	0	0	0	0	0	0	2
1	0	3	0	0	0	0	0	0	1	0	1
1	0	3	0	0	0	0	0	0	1	0	1
1	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
FALCHION RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	4	10	**14**	**22**	**22**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	2	3	**5**	**9**	**9**
OUTER HWY 15N					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	22	**22**	**22**	**22**
NB RIGHT	2	2	**4**	**8**	**8**
SB LEFT	0	2	**2**	**2**	**2**
SB THRU	0	39	**39**	**39**	**39**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	9	22	8	2	39
Future Vol, veh/h	22	9	22	8	2	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	13	32	12	3	57

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	101	38	0	0	44	0
Stage 1	38	-	-	-	-	-
Stage 2	63	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	902	1040	-	-	1577	-
Stage 1	990	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	900	1040	-	-	1577	-
Mov Cap-2 Maneuver	900	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	937	1577	-
HCM Lane V/C Ratio	-	-	0.048	0.002	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	9	22	8	2	40
Future Vol, veh/h	22	9	22	8	2	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	13	32	12	3	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	102	38	0	0	44	0
Stage 1	38	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	901	1040	-	-	1577	-
Stage 1	990	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	899	1040	-	-	1577	-
Mov Cap-2 Maneuver	899	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	936	1577	-
HCM Lane V/C Ratio	-	-	0.048	0.002	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	19.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	306	73	47	118	27	104
Future Vol, veh/h	306	73	47	118	27	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	443	106	68	171	39	151

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	383	154	0	0	239	0
Stage 1	154	-	-	-	-	-
Stage 2	229	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	624	897	-	-	1340	-
Stage 1	879	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	604	897	-	-	1340	-
Mov Cap-2 Maneuver	604	-	-	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	788	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.2	0	1.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	645	1340	-
HCM Lane V/C Ratio	-	-	0.852	0.029	-
HCM Control Delay (s)	-	-	34.2	7.8	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	9.6	0.1	-

Intersection	
Intersection Delay, s/veh	18.2
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	306	73	47	118	27	104
Future Vol, veh/h	306	73	47	118	27	104
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	443	106	68	171	39	151
Number of Lanes	1	1	1	1	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	23.6	10.5	12.5
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	21%
Vol Thru, %	100%	0%	0%	0%	79%
Vol Right, %	0%	100%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	118	306	73	131
LT Vol	0	0	306	0	27
Through Vol	47	0	0	0	104
RT Vol	0	118	0	73	0
Lane Flow Rate	68	171	443	106	190
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.123	0.274	0.772	0.149	0.333
Departure Headway (Hd)	6.479	5.767	6.267	5.056	6.319
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	552	622	577	710	568
Service Time	4.228	3.515	3.996	2.785	4.364
HCM Lane V/C Ratio	0.123	0.275	0.768	0.149	0.335
HCM Control Delay	10.1	10.7	27.1	8.7	12.5
HCM Lane LOS	B	B	D	A	B
HCM 95th-tile Q	0.4	1.1	7.1	0.5	1.5

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	37	26	77	21	48
Future Vol, veh/h	88	37	26	77	21	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	39	27	81	22	51

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	163	68	0	0	108	0
Stage 1	68	-	-	-	-	-
Stage 2	95	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	832	1001	-	-	1495	-
Stage 1	960	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	820	1001	-	-	1495	-
Mov Cap-2 Maneuver	820	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	920	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	866	1495	-
HCM Lane V/C Ratio	-	-	0.152	0.015	-
HCM Control Delay (s)	-	-	9.9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	14.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	372	101	51	187	46	112
Future Vol, veh/h	372	101	51	187	46	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	392	106	54	197	48	118

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	367	153	0	0	251	0
Stage 1	153	-	-	-	-	-
Stage 2	214	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	637	898	-	-	1326	-
Stage 1	880	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	612	898	-	-	1326	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.5	0	2.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	657	1326	-
HCM Lane V/C Ratio	-	-	0.758	0.037	-
HCM Control Delay (s)	-	-	25.5	7.8	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	7	0.1	-

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	372	101	51	187	46	112
Future Vol, veh/h	372	101	51	187	46	112
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	392	106	54	197	48	118
Number of Lanes	1	1	1	1	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	18.2	10.5	11.7
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	29%
Vol Thru, %	100%	0%	0%	0%	71%
Vol Right, %	0%	100%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	187	372	101	158
LT Vol	0	0	372	0	46
Through Vol	51	0	0	0	112
RT Vol	0	187	0	101	0
Lane Flow Rate	54	197	392	106	166
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.093	0.303	0.674	0.147	0.285
Departure Headway (Hd)	6.245	5.535	6.194	4.984	6.169
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	574	650	583	721	582
Service Time	3.983	3.272	3.919	2.709	4.207
HCM Lane V/C Ratio	0.094	0.303	0.672	0.147	0.285
HCM Control Delay	9.6	10.7	20.8	8.6	11.7
HCM Lane LOS	A	B	C	A	B
HCM 95th-tile Q	0.3	1.3	5.1	0.5	1.2

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 10
North/South Street: OUTER HWY 15N
East/West Street: FALCHION RD

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	40	Left	0	0
NB	Through	20	Departure	81	Through	21	21
	Right	5			Right	20	36
North leg	Left	1	Approach	34	Left	5	5
SB	Through	30	Departure	49	Through	30	30
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	10	Approach	79	Left	52	52
WB	Through	0	Departure	24	Through	0	0
	Right	5			Right	29	29

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	70	Left	0	0
NB	Through	22	Departure	128	Through	26	26
	Right	8			Right	77	77
North leg	Left	2	Approach	47	Left	21	21
SB	Through	39	Departure	59	Through	48	48
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	22	Approach	80	Left	81	88
WB	Through	0	Departure	97	Through	0	0

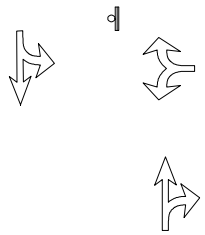
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : NORCO ST
N/S STREET : OUTER HWY 15N
CONDITION : AM PEAK HOUR

INTERSECTION : 11
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
NORCO ST								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	1	0	0	1	21	22	1	22
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	2	0	0	2	62	64	3	65
OUTER HWY 15N								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	23	0	0	23	21	44	47	68
NB RIGHT	1	0	0	1	68	69	2	70
SB LEFT	1	0	0	1	204	205	1	205
SB THRU	26	1	0	27	68	95	30	98
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**54**	**1**	**0**	**55**	**444**	**499**	**84**	**528**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : NORCO ST
CONDITION : AM PEAK HOUR
N/S STREET : OUTER HWY 15N
PHF : 0.75

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	4	0	0	0	0	0	0	0	0	0	0
0	6	0	0	0	0	0	0	0	0	0	0
0	8	0	0	0	0	0	0	0	0	0	0
0	7	1	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	3	0	0	0	0	0	0	0	0	0	0
0	5	0	0	0	0	0	0	0	0	0	0
0	7	0	0	0	0	0	0	0	0	0	0
1	5	0	0	0	0	0	0	0	0	1	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
1	0	1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
NORCO ST					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	1	**1**	**1**	**1**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	2	**2**	**2**	**2**
OUTER HWY 15N					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	1	20	**21**	**23**	**23**
NB RIGHT	0	1	**1**	**1**	**1**
SB LEFT	0	1	**1**	**1**	**1**
SB THRU	0	25	**25**	**25**	**26**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	23	1	1	26
Future Vol, veh/h	1	2	23	1	1	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	3	31	1	1	35

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	69	32	0	0	32	0
Stage 1	32	-	-	-	-	-
Stage 2	37	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	941	1048	-	-	1593	-
Stage 1	996	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	940	1048	-	-	1593	-
Mov Cap-2 Maneuver	940	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	990	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1009	1593	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	23	1	1	27
Future Vol, veh/h	1	2	23	1	1	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	3	31	1	1	36

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	70	32	0	0	32	0
Stage 1	32	-	-	-	-	-
Stage 2	38	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	939	1048	-	-	1593	-
Stage 1	996	-	-	-	-	-
Stage 2	990	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	938	1048	-	-	1593	-
Mov Cap-2 Maneuver	938	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	989	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1009	1593	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	5.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	64	44	69	205	95
Future Vol, veh/h	22	64	44	69	205	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	29	85	59	92	273	127

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	778	105	0	0	151	0
Stage 1	105	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	368	955	-	-	1442	-
Stage 1	924	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	293	955	-	-	1442	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	407	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	5.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	605	1442	-
HCM Lane V/C Ratio	-	-	0.19	0.19	-
HCM Control Delay (s)	-	-	12.3	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.7	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	47	2	1	30
Future Vol, veh/h	1	3	47	2	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	3	49	2	1	32

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	84	50	0	0	51	0
Stage 1	50	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	923	1024	-	-	1568	-
Stage 1	978	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	922	1024	-	-	1568	-
Mov Cap-2 Maneuver	922	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1568	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	65	68	70	205	98
Future Vol, veh/h	22	65	68	70	205	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	23	68	72	74	216	103

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	644	109	0	0	146	0
Stage 1	109	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	440	950	-	-	1448	-
Stage 1	921	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	370	950	-	-	1448	-
Mov Cap-2 Maneuver	370	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	498	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	5.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	1448	-
HCM Lane V/C Ratio	-	-	0.135	0.149	-
HCM Control Delay (s)	-	-	11.1	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.5	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : NORCO ST
N/S STREET : OUTER HWY 15N
CONDITION : PM PEAK HOUR

INTERSECTION : 11
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
NORCO ST								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	4	0	0	4	64	68	6	70
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	1	0	0	1	191	192	2	193
OUTER HWY 15N								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	36	1	0	37	64	101	67	131
NB RIGHT	1	0	0	1	25	26	2	27
SB LEFT	1	0	0	1	76	77	1	77
SB THRU	26	1	0	27	25	52	45	70
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**69**	**2**	**0**	**71**	**445**	**516**	**123**	**568**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : NORCO ST
CONDITION : PM PEAK HOUR
N/S STREET : OUTER HWY 15N
PHF : 0.73

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	11	0	0	0	0	0	0	0	0	0	0
0	4	0	0	0	0	0	0	0	0	0	0
0	7	0	0	0	0	0	0	0	0	0	0
0	4	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	10	0	0	0	0	0	0	0	0	0	0
1	7	0	0	0	0	0	0	0	0	1	0
0	8	0	0	0	0	0	0	0	0	1	0
0	5	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	1	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
NORCO ST					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	4	**4**	**4**	**4**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	1	**1**	**1**	**1**
OUTER HWY 15N					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	2	30	**32**	**36**	**36**
NB RIGHT	0	1	**1**	**1**	**1**
SB LEFT	0	0	**0**	**1**	**1**
SB THRU	0	26	**26**	**26**	**26**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	36	1	1	26
Future Vol, veh/h	4	1	36	1	1	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	1	49	1	1	36

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	88	50	0	0	50	0
Stage 1	50	-	-	-	-	-
Stage 2	38	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	918	1024	-	-	1570	-
Stage 1	978	-	-	-	-	-
Stage 2	990	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	917	1024	-	-	1570	-
Mov Cap-2 Maneuver	917	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	989	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	937	1570	-
HCM Lane V/C Ratio	-	-	0.007	0.001	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	37	1	1	27
Future Vol, veh/h	4	1	37	1	1	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	1	51	1	1	37

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	91	52	0	0	52	0
Stage 1	52	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	914	1021	-	-	1567	-
Stage 1	976	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	913	1021	-	-	1567	-
Mov Cap-2 Maneuver	913	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	988	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	933	1567	-
HCM Lane V/C Ratio	-	-	0.007	0.001	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	8.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	192	101	26	77	52
Future Vol, veh/h	68	192	101	26	77	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	263	138	36	105	71

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	437	156	0	0	174	0
Stage 1	156	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	581	895	-	-	1415	-
Stage 1	877	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	536	895	-	-	1415	-
Mov Cap-2 Maneuver	536	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	4.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	762	1415	-
HCM Lane V/C Ratio	-	-	0.467	0.075	-
HCM Control Delay (s)	-	-	13.8	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	2.5	0.2	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	2	67	2	1	45
Future Vol, veh/h	6	2	67	2	1	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	6	2	71	2	1	47

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	121	72	0	0	73	0
Stage 1	72	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	879	996	-	-	1540	-
Stage 1	956	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	878	996	-	-	1540	-
Mov Cap-2 Maneuver	878	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	905	1540	-
HCM Lane V/C Ratio	-	-	0.009	0.001	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	193	131	27	77	70
Future Vol, veh/h	70	193	131	27	77	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	74	203	138	28	81	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	388	152	0	0	166	0
Stage 1	152	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	619	900	-	-	1424	-
Stage 1	881	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	582	900	-	-	1424	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	760	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	786	1424	-
HCM Lane V/C Ratio	-	-	0.352	0.057	-
HCM Control Delay (s)	-	-	12.1	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.6	0.2	-

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 11
North/South Street: OUTER HWY 15N
East/West Street: NORCO ST

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	48	Left	0	0
NB	Through	23	Departure	30	Through	47	47
	Right	1			Right	2	2
North leg	Left	1	Approach	30	Left	1	1
SB	Through	26	Departure	49	Through	30	30
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	1	Approach	3	Left	1	1
WB	Through	0	Departure	2	Through	0	0
	Right	2			Right	3	3

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	65	Left	0	0
NB	Through	36	Departure	36	Through	64	67
	Right	1			Right	2	2
North leg	Left	1	Approach	33	Left	1	1
SB	Through	26	Departure	65	Through	33	45
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	4	Approach	5	Left	4	6
WB	Through	0	Departure	2	Through	0	0

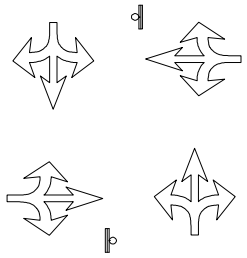
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : QUARRY RD
N/S STREET : OUTER HWY 15N
CONDITION : AM PEAK HOUR

INTERSECTION : 12
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



EXISTING GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
QUARRY RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	9	0	0	9	0	9	9	9
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	2	0	0	2	0	2	3	3
OUTER HWY 15N								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	22	0	0	22	89	111	46	135
NB RIGHT	3	0	0	3	0	3	4	4
SB LEFT	5	0	0	5	0	5	5	5
SB THRU	22	0	0	22	89	111	26	115
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**63**	**0**	**0**	**63**	**178**	**241**	**93**	**271**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : QUARRY RD
CONDITION : AM PEAK HOUR
N/S STREET : OUTER HWY 15N
PHF : 0.76

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	3	1	0	0	0	0	0	0	0	0	0
0	5	1	0	0	0	0	0	0	0	0	0
0	8	1	0	0	0	0	0	0	0	0	0
0	6	2	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	3	0	0	0	0	0	0	0	0	0	0
2	4	0	0	0	0	0	0	0	0	0	0
0	6	0	0	0	0	0	0	0	0	0	0
1	6	0	0	0	0	0	0	0	0	1	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	2	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
1	0	3	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
QUARRY RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	9	**9**	**9**	**9**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	2	**2**	**2**	**2**
OUTER HWY 15N					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	1	19	**20**	**22**	**22**
NB RIGHT	0	3	**3**	**3**	**3**
SB LEFT	0	5	**5**	**5**	**5**
SB THRU	0	22	**22**	**22**	**22**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	9	0	2	0	22	3	5	22	0
Future Vol, veh/h	0	0	0	9	0	2	0	22	3	5	22	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	12	0	3	0	29	4	7	29	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	76	76	29	74	74	31	29	0	0	33	0	0
Stage 1	43	43	-	31	31	-	-	-	-	-	-	-
Stage 2	33	33	-	43	43	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	919	818	1052	921	820	1049	1597	-	-	1592	-	-
Stage 1	976	863	-	991	873	-	-	-	-	-	-	-
Stage 2	988	872	-	976	863	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	913	815	1052	918	817	1049	1597	-	-	1592	-	-
Mov Cap-2 Maneuver	913	815	-	918	817	-	-	-	-	-	-	-
Stage 1	976	860	-	991	873	-	-	-	-	-	-	-
Stage 2	986	872	-	972	860	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0	1.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1597	-	-	-	939	1592	-	-
HCM Lane V/C Ratio	-	-	-	-	0.015	0.004	-	-
HCM Control Delay (s)	0	-	-	0	8.9	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	9	0	2	0	22	3	5	22	0
Future Vol, veh/h	0	0	0	9	0	2	0	22	3	5	22	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	12	0	3	0	29	4	7	29	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	76	76	29	74	74	31	29	0	0	33	0	0
Stage 1	43	43	-	31	31	-	-	-	-	-	-	-
Stage 2	33	33	-	43	43	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	919	818	1052	921	820	1049	1597	-	-	1592	-	-
Stage 1	976	863	-	991	873	-	-	-	-	-	-	-
Stage 2	988	872	-	976	863	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	913	815	1052	918	817	1049	1597	-	-	1592	-	-
Mov Cap-2 Maneuver	913	815	-	918	817	-	-	-	-	-	-	-
Stage 1	976	860	-	991	873	-	-	-	-	-	-	-
Stage 2	985	872	-	972	860	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0	1.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1597	-	-	-	939	1592	-	-
HCM Lane V/C Ratio	-	-	-	-	0.016	0.004	-	-
HCM Control Delay (s)	0	-	-	0	8.9	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	9	0	2	0	111	3	5	111	0
Future Vol, veh/h	0	0	0	9	0	2	0	111	3	5	111	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	12	0	3	0	146	4	7	146	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	310	310	146	308	308	148	146	0	0	150	0	0
Stage 1	160	160	-	148	148	-	-	-	-	-	-	-
Stage 2	150	150	-	160	160	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	646	608	906	648	609	904	1448	-	-	1444	-	-
Stage 1	847	769	-	859	779	-	-	-	-	-	-	-
Stage 2	857	777	-	847	769	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	641	605	906	645	606	904	1448	-	-	1444	-	-
Mov Cap-2 Maneuver	641	605	-	645	606	-	-	-	-	-	-	-
Stage 1	847	765	-	859	779	-	-	-	-	-	-	-
Stage 2	855	777	-	843	765	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.4	0	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	-	680	1444	-	-
HCM Lane V/C Ratio	-	-	-	-	0.021	0.005	-	-
HCM Control Delay (s)	0	-	-	0	10.4	7.5	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	9	0	3	0	46	4	5	26	0
Future Vol, veh/h	0	0	0	9	0	3	0	46	4	5	26	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	9	0	3	0	48	4	5	27	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	89	89	27	87	87	50	27	0	0	52	0	0
Stage 1	37	37	-	50	50	-	-	-	-	-	-	-
Stage 2	52	52	-	37	37	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	901	805	1054	904	807	1024	1600	-	-	1567	-	-
Stage 1	984	868	-	968	857	-	-	-	-	-	-	-
Stage 2	966	856	-	984	868	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	896	803	1054	902	805	1024	1600	-	-	1567	-	-
Mov Cap-2 Maneuver	896	803	-	902	805	-	-	-	-	-	-	-
Stage 1	984	865	-	968	857	-	-	-	-	-	-	-
Stage 2	963	856	-	981	865	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0	1.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1600	-	-	-	930	1567	-	-
HCM Lane V/C Ratio	-	-	-	-	0.014	0.003	-	-
HCM Control Delay (s)	0	-	-	0	8.9	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	9	0	3	0	135	4	5	115	0
Future Vol, veh/h	0	0	0	9	0	3	0	135	4	5	115	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	9	0	3	0	142	4	5	121	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	277	277	121	275	275	144	121	0	0	146	0	0
Stage 1	131	131	-	144	144	-	-	-	-	-	-	-
Stage 2	146	146	-	131	131	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	679	634	936	681	636	909	1479	-	-	1448	-	-
Stage 1	877	792	-	864	782	-	-	-	-	-	-	-
Stage 2	861	780	-	877	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	674	631	936	679	633	909	1479	-	-	1448	-	-
Mov Cap-2 Maneuver	674	631	-	679	633	-	-	-	-	-	-	-
Stage 1	877	789	-	864	782	-	-	-	-	-	-	-
Stage 2	858	780	-	873	789	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.1	0	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1479	-	-	-	725	1448	-	-
HCM Lane V/C Ratio	-	-	-	-	0.017	0.004	-	-
HCM Control Delay (s)	0	-	-	0	10.1	7.5	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : QUARRY RD
N/S STREET : OUTER HWY 15N
CONDITION : PM PEAK HOUR

INTERSECTION : 12
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
QUARRY RD								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	16	0	0	16	0	16	23	23
WB THRU	0	0	0	0	0	0	0	0
WB RIGHT	9	0	0	9	0	9	10	10
OUTER HWY 15N								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	28	1	0	29	89	118	59	148
NB RIGHT	3	0	0	3	0	3	4	4
SB LEFT	5	0	0	5	0	5	5	5
SB THRU	25	1	0	26	89	115	46	135
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**86**	**2**	**0**	**88**	**178**	**266**	**147**	**325**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	HEAY	4-Apr-23	FGFW0000-0001	2	OF 2

E/W STREET : QUARRY RD
CONDITION : PM PEAK HOUR
N/S STREET : OUTER HWY 15N
PHF : 0.71

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	10	2	0	0	0	0	0	0	0	0	0
0	4	0	0	0	0	0	0	0	0	0	0
0	6	3	0	0	0	0	0	0	0	0	0
0	5	0	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
2	8	0	0	0	0	0	0	0	0	0	0
1	6	0	0	0	0	0	0	0	0	1	0
0	5	0	0	0	0	0	0	0	0	1	0
0	3	0	0	0	0	0	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
2	0	5	0	0	0	0	0	0	0	0	0
2	0	4	0	0	0	0	0	0	0	0	0
3	0	5	0	0	0	0	0	0	0	0	0
2	0	2	0	0	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
QUARRY RD					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	0	0	**0**	**0**	**0**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	16	**16**	**16**	**16**
WB THRU	0	0	**0**	**0**	**0**
WB RIGHT	0	9	**9**	**9**	**9**
OUTER HWY 15N					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	2	22	**24**	**28**	**28**
NB RIGHT	0	3	**3**	**3**	**3**
SB LEFT	0	5	**5**	**5**	**5**
SB THRU	0	25	**25**	**25**	**25**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	16	0	9	0	28	3	5	25	0
Future Vol, veh/h	0	0	0	16	0	9	0	28	3	5	25	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	23	0	13	0	39	4	7	35	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	97	92	35	90	90	41	35	0	0	43	0	0
Stage 1	49	49	-	41	41	-	-	-	-	-	-	-
Stage 2	48	43	-	49	49	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	890	802	1044	900	804	1036	1589	-	-	1579	-	-
Stage 1	969	858	-	979	865	-	-	-	-	-	-	-
Stage 2	971	863	-	969	858	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	876	798	1044	896	800	1036	1589	-	-	1579	-	-
Mov Cap-2 Maneuver	876	798	-	896	800	-	-	-	-	-	-	-
Stage 1	969	854	-	979	865	-	-	-	-	-	-	-
Stage 2	959	863	-	964	854	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9	0	1.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1589	-	-	-	942	1579	-	-
HCM Lane V/C Ratio	-	-	-	-	0.037	0.004	-	-
HCM Control Delay (s)	0	-	-	0	9	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	16	0	9	0	29	3	5	26	0
Future Vol, veh/h	0	0	0	16	0	9	0	29	3	5	26	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	23	0	13	0	41	4	7	37	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	101	96	37	94	94	43	37	0	0	45	0	0
Stage 1	51	51	-	43	43	-	-	-	-	-	-	-
Stage 2	50	45	-	51	51	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	885	798	1041	894	800	1033	1587	-	-	1576	-	-
Stage 1	967	856	-	976	863	-	-	-	-	-	-	-
Stage 2	968	861	-	967	856	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	871	794	1041	890	796	1033	1587	-	-	1576	-	-
Mov Cap-2 Maneuver	871	794	-	890	796	-	-	-	-	-	-	-
Stage 1	967	852	-	976	863	-	-	-	-	-	-	-
Stage 2	956	861	-	962	852	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9	0	1.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1587	-	-	-	937	1576	-	-
HCM Lane V/C Ratio	-	-	-	-	0.038	0.004	-	-
HCM Control Delay (s)	0	-	-	0	9	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	16	0	9	0	118	3	5	115	0
Future Vol, veh/h	0	0	0	16	0	9	0	118	3	5	115	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	23	0	13	0	166	4	7	162	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	351	346	162	344	344	168	162	0	0	170	0	0
Stage 1	176	176	-	168	168	-	-	-	-	-	-	-
Stage 2	175	170	-	176	176	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	608	580	888	614	582	881	1429	-	-	1420	-	-
Stage 1	831	757	-	839	763	-	-	-	-	-	-	-
Stage 2	832	762	-	831	757	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	597	577	888	612	579	881	1429	-	-	1420	-	-
Mov Cap-2 Maneuver	597	577	-	612	579	-	-	-	-	-	-	-
Stage 1	831	753	-	839	763	-	-	-	-	-	-	-
Stage 2	820	762	-	827	753	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.5	0	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1429	-	-	-	688	1420	-	-
HCM Lane V/C Ratio	-	-	-	-	0.051	0.005	-	-
HCM Control Delay (s)	0	-	-	0	10.5	7.5	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	23	0	10	0	59	4	5	46	0
Future Vol, veh/h	0	0	0	23	0	10	0	59	4	5	46	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	24	0	11	0	62	4	5	48	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	128	124	48	122	122	64	48	0	0	66	0	0
Stage 1	58	58	-	64	64	-	-	-	-	-	-	-
Stage 2	70	66	-	58	58	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	850	770	1027	858	772	1006	1572	-	-	1549	-	-
Stage 1	959	851	-	952	846	-	-	-	-	-	-	-
Stage 2	945	844	-	959	851	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	839	768	1027	856	770	1006	1572	-	-	1549	-	-
Mov Cap-2 Maneuver	839	768	-	856	770	-	-	-	-	-	-	-
Stage 1	959	848	-	952	846	-	-	-	-	-	-	-
Stage 2	935	844	-	956	848	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.2	0	0.7
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1572	-	-	-	897	1549	-	-
HCM Lane V/C Ratio	-	-	-	-	0.039	0.003	-	-
HCM Control Delay (s)	0	-	-	0	9.2	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	23	0	10	0	148	4	5	135	0
Future Vol, veh/h	0	0	0	23	0	10	0	148	4	5	135	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	24	0	11	0	156	4	5	142	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	316	312	142	310	310	158	142	0	0	160	0	0
Stage 1	152	152	-	158	158	-	-	-	-	-	-	-
Stage 2	164	160	-	152	152	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	641	606	911	646	608	893	1453	-	-	1432	-	-
Stage 1	855	775	-	849	771	-	-	-	-	-	-	-
Stage 2	843	769	-	855	775	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	631	604	911	644	606	893	1453	-	-	1432	-	-
Mov Cap-2 Maneuver	631	604	-	644	606	-	-	-	-	-	-	-
Stage 1	855	772	-	849	771	-	-	-	-	-	-	-
Stage 2	833	769	-	852	772	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.4	0	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1453	-	-	-	703	1432	-	-
HCM Lane V/C Ratio	-	-	-	-	0.049	0.004	-	-
HCM Control Delay (s)	0	-	-	0	10.4	7.5	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0	-	-

CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)

Intersection No.: 12
North/South Street: OUTER HWY 15N
East/West Street: QUARRY RD

Analysis Condition: YEAR 2040 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	49	Left	0	0
NB	Through	22	Departure	34	Through	46	46
	Right	3			Right	4	4
North leg	Left	5	Approach	30	Left	5	5
SB	Through	22	Departure	48	Through	26	26
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	9	Approach	11	Left	9	9
WB	Through	0	Departure	8	Through	0	0
	Right	2			Right	3	3

P.M. Peak Hour

Approach Direction		Base Year Count	Forecast Future Year Link Volume			Turn Volume	Rounded Volume
South leg	Left	0	Approach	59	Left	0	0
NB	Through	28	Departure	47	Through	56	59
	Right	3			Right	4	4
North leg	Left	5	Approach	36	Left	5	5
SB	Through	25	Departure	65	Through	32	46
	Right	0			Right	0	0
West leg	Left	0	Approach	0	Left	0	0
EB	Through	0	Departure	0	Through	0	0
	Right	0			Right	0	0
East leg	Left	16	Approach	25	Left	16	23
WB	Through	0	Departure	8	Through	0	0

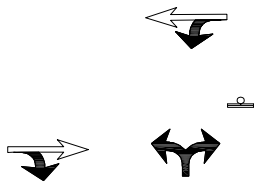
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : NORCO ST
N/S STREET : PROJECT DWY 1
CONDITION : AM PEAK HOUR

INTERSECTION : 13
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
NORCO ST								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	2	0	0	2	0	2	3	3
EB RIGHT	0	0	0	0	272	272	0	272
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	3	0	0	3	0	3	4	4
WB RIGHT	0	0	0	0	0	0	0	0
PROJECT DWY 1								
NB LEFT	0	0	0	0	83	83	0	83
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**5**	**0**	**0**	**5**	**355**	**360**	**7**	**362**

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	272	0	3	83	0
Future Vol, veh/h	2	272	0	3	83	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	363	0	4	111	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	366	0	189	185
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1204	-	805	862
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	1024	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1204	-	805	862
Mov Cap-2 Maneuver	-	-	-	-	805	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	1024	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	805	-	-	1204	-
HCM Lane V/C Ratio	0.137	-	-	-	-
HCM Control Delay (s)	10.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	272	0	4	83	0
Future Vol, veh/h	3	272	0	4	83	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	286	0	4	87	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	289	0	150	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1284	-	847	906
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	1024	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1284	-	847	906
Mov Cap-2 Maneuver	-	-	-	-	847	-
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	1024	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	847	-	-	1284	-
HCM Lane V/C Ratio	0.103	-	-	-	-
HCM Control Delay (s)	9.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : NORCO ST
N/S STREET : PROJECT DWY 1
CONDITION : PM PEAK HOUR

INTERSECTION : 13
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
NORCO ST								
EB LEFT	0	0	0	0	0	0	0	0
EB THRU	2	0	0	2	0	2	3	3
EB RIGHT	0	0	0	0	101	101	0	101
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	5	0	0	5	0	5	8	8
WB RIGHT	0	0	0	0	0	0	0	0
PROJECT DWY 1								
NB LEFT	0	0	0	0	255	255	0	255
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0	0
TOTALS	**7**	**0**	**0**	**7**	**356**	**363**	**11**	**367**

Intersection	
Int Delay, s/veh	7.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	101	0	5	255	0
Future Vol, veh/h	2	101	0	5	255	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	138	0	7	349	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	141	0	79	72
Stage 1	-	-	-	-	72	-
Stage 2	-	-	-	-	7	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1455	-	929	996
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	1021	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1455	-	929	996
Mov Cap-2 Maneuver	-	-	-	-	929	-
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	1021	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	929	-	-	1455	-
HCM Lane V/C Ratio	0.376	-	-	-	-
HCM Control Delay (s)	11.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	101	0	8	255	0
Future Vol, veh/h	3	101	0	8	255	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	106	0	8	268	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	109	0	64	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1494	-	947	1016
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	1020	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	947	1016
Mov Cap-2 Maneuver	-	-	-	-	947	-
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	1020	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	947	-	-	1494	-
HCM Lane V/C Ratio	0.283	-	-	-	-
HCM Control Delay (s)	10.3	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0	-

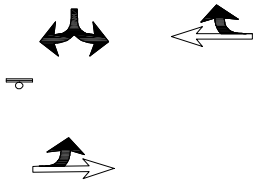
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : FALCHION RD
N/S STREET : PROJECT DWY 2
CONDITION : AM PEAK HOUR

INTERSECTION : 14
PROJECTED GROWTH PER YEAR : 2.0%

CONDITION DIAGRAMS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	1			3		5	7	9
FALCHION RD								
EB LEFT	0	0	0	0	372	372	0	372
EB THRU	6	0	0	6	0	6	41	41
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	15	0	0	15	0	15	81	81
WB RIGHT	0	0	0	0	36	36	0	36
PROJECT DWY 2								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	11	11	0	11
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	113	113	0	113
TOTALS	**21**	**0**	**0**	**21**	**532**	**553**	**122**	**654**

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	372	6	15	36	11	113
Future Vol, veh/h	372	6	15	36	11	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	531	9	21	51	16	161

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	72	0	-	0	1118	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	1071	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1541	-	-	-	231	1028
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	332	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1541	-	-	-	151	1028
Mov Cap-2 Maneuver	-	-	-	-	151	-
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	332	-

Approach	EB	WB	SB
HCM Control Delay, s	8.4	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1541	-	-	-	678
HCM Lane V/C Ratio	0.345	-	-	-	0.261
HCM Control Delay (s)	8.6	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	1.6	-	-	-	1

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	372	41	81	36	11	113
Future Vol, veh/h	372	41	81	36	11	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	392	43	85	38	12	119

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	123	0	-	0	931	104
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	827	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1477	-	-	-	299	956
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	433	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1477	-	-	-	218	956
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	673	-
Stage 2	-	-	-	-	433	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1477	-	-	-	735
HCM Lane V/C Ratio	0.265	-	-	-	0.178
HCM Control Delay (s)	8.3	0	-	-	11
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	1.1	-	-	-	0.6

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	HEAY	4-Apr-23	FGFW0000-0001	1 OF 2

E/W STREET : FALCHION RD
N/S STREET : PROJECT DWY 2
CONDITION : PM PEAK HOUR

INTERSECTION : 14
PROJECTED GROWTH PER YEAR : 2.0%

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Total Cumulative Project Trips	Background Condition	Project Trips	Project Condition	Future Year 2040 Condition	Future Year 2040 + Project Condition
Scenario #	2			4		6	8	10
FALCHION RD								
EB LEFT	0	0	0	0	135	135	0	135
EB THRU	10	0	0	10	0	10	98	98
EB RIGHT	0	0	0	0	0	0	0	0
WB LEFT	0	0	0	0	0	0	0	0
WB THRU	31	0	0	31	0	31	125	125
WB RIGHT	0	0	0	0	13	13	0	13
PROJECT DWY 2								
NB LEFT	0	0	0	0	0	0	0	0
NB THRU	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	34	34	0	34
SB THRU	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	348	348	0	348
TOTALS	**41**	**0**	**0**	**41**	**530**	**571**	**223**	**753**

Intersection	
Int Delay, s/veh	11.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	135	10	31	13	34	348
Future Vol, veh/h	135	10	31	13	34	348
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	196	14	45	19	49	504

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	64	0	-	0	461	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	406	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1551	-	-	-	562	1018
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	677	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1551	-	-	-	491	1018
Mov Cap-2 Maneuver	-	-	-	-	491	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	677	-

Approach	EB	WB	SB
HCM Control Delay, s	7.1	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1551	-	-	-	929
HCM Lane V/C Ratio	0.126	-	-	-	0.596
HCM Control Delay (s)	7.7	0	-	-	14.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	4.1

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	135	98	125	13	11	113
Future Vol, veh/h	135	98	125	13	11	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	142	103	132	14	12	119

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	146	0	-	0	526	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	387	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1448	-	-	-	516	915
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1448	-	-	-	462	915
Mov Cap-2 Maneuver	-	-	-	-	462	-
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1448	-	-	-	842
HCM Lane V/C Ratio	0.098	-	-	-	0.155
HCM Control Delay (s)	7.8	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5

Appendix F: Traffic Signal Warrant Analysis

PROJECT CONDITIONS
Page 1/2

COUNT DATE 6-28-22

CALC HEAY DATE 3-28-23

CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: STODDARD WELLS RD — Critical Approach Speed 50 mph

Minor St: OUTER HIGHWAY 15 S — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒

or

In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

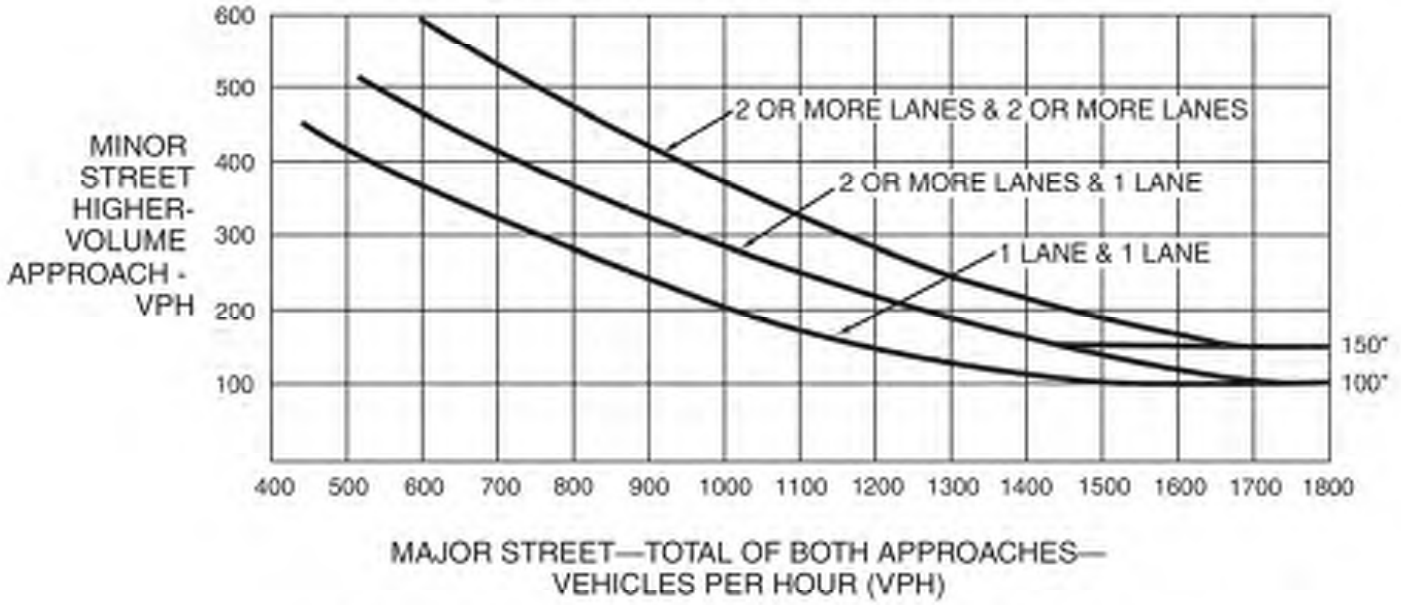
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:00 - 5:00 PM Hour
Both Approaches - Major Street	X		913
Higher Approach - Minor Street		X	176

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

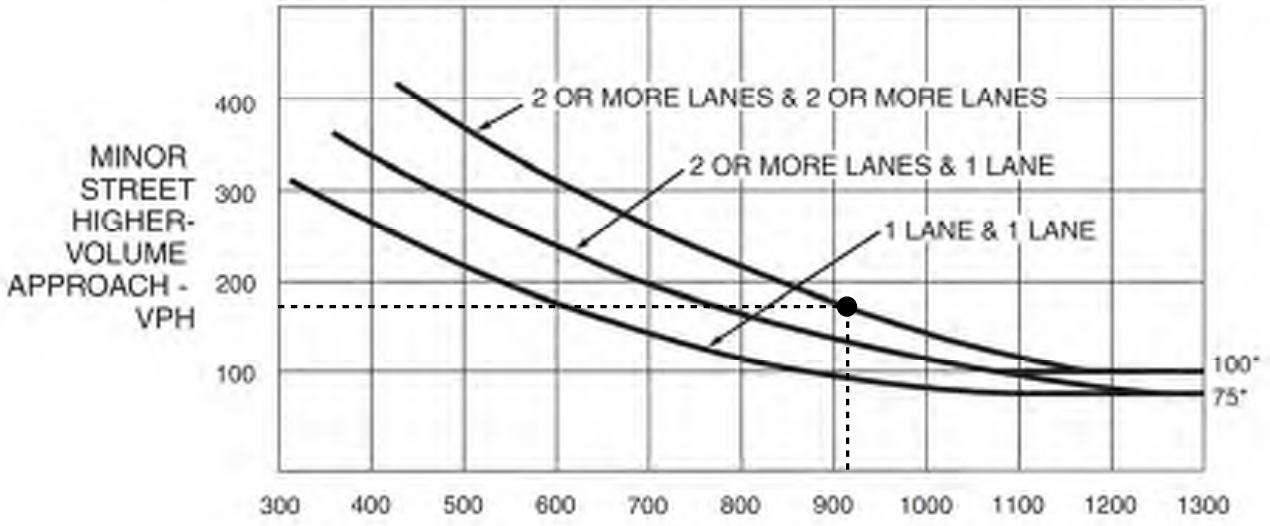
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

FUTURE + PROJECT CONDITIONS

COUNT DATE 6-28-22

CALC HEAY DATE 3-28-23

CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: STODDARD WELLS RD — Critical Approach Speed 50 mph

Minor St: OUTER HIGHWAY 15 S — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or In built up area of isolated community of < 10,000 population ☐ } RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

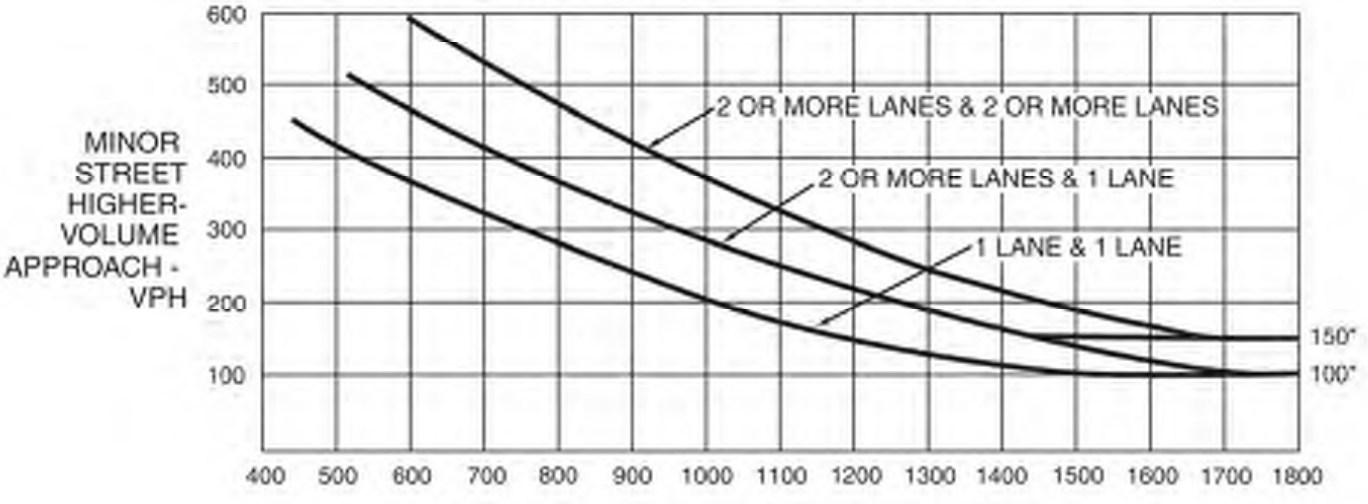
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:00 - 5:00 PM Hour
Both Approaches - Major Street	X		1272
Higher Approach - Minor Street		X	353

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

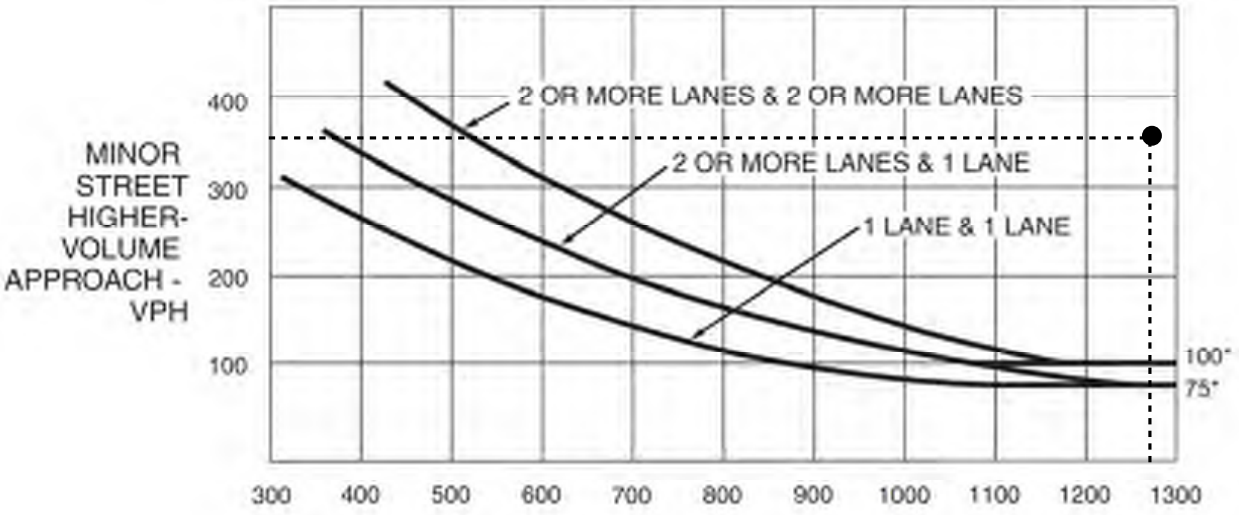
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

PROJECT CONDITIONS
Page 1/2

COUNT DATE 6-28-22

CALC HEAY DATE 3-28-23

CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: OUTER HWY 15 S — Critical Approach Speed 50 mph

Minor St: I-15 NB RAMPS — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒
or
In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

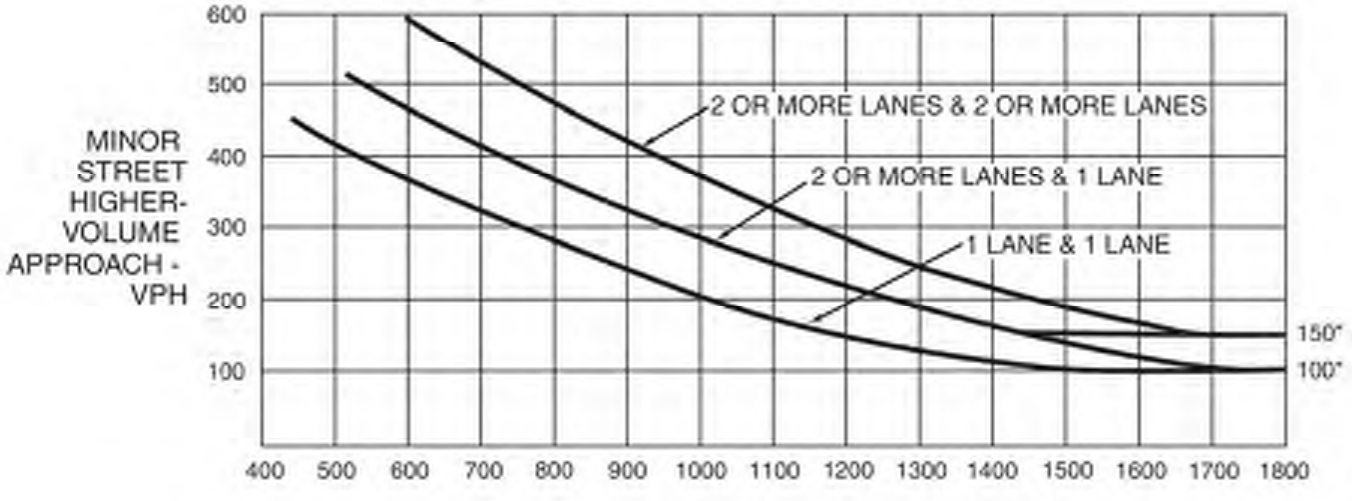
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:00 - 5:00 PM Hour
Both Approaches - Major Street	X		558
Higher Approach - Minor Street		X	498

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

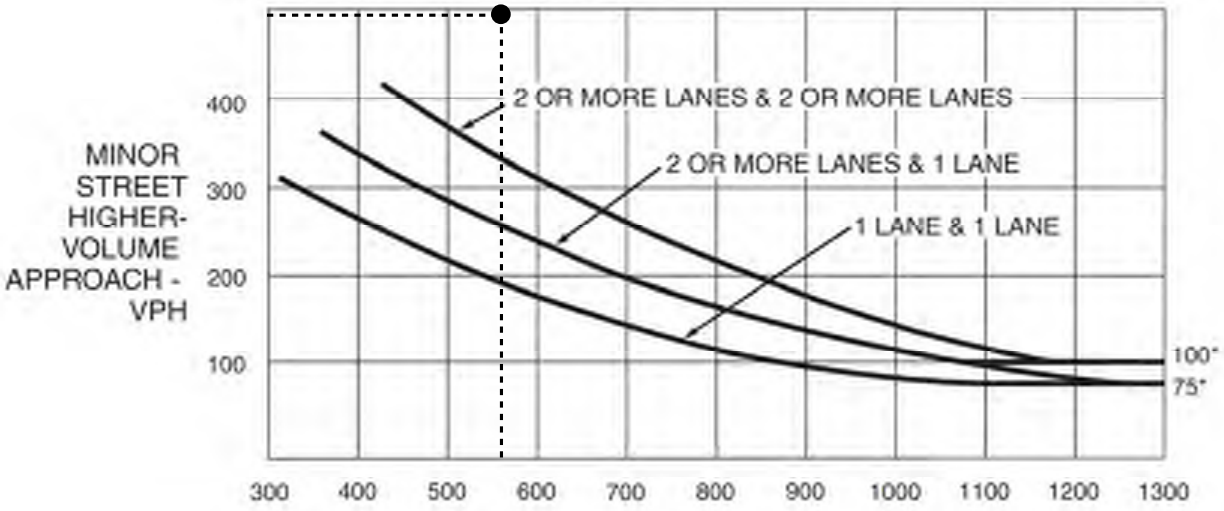
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

FUTURE + PROJECT CONDITIONS
Page 1/2

COUNT DATE 6-28-22
CALC HEAY DATE 3-28-23
CHK _____ DATE _____

DIST CO RTE PM

Major St: OUTER HWY 15 S — Critical Approach Speed 50 mph
Minor St: I-15 NB RAMPS — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒
or
In built up area of isolated community of < 10,000 population..... ☐
} RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

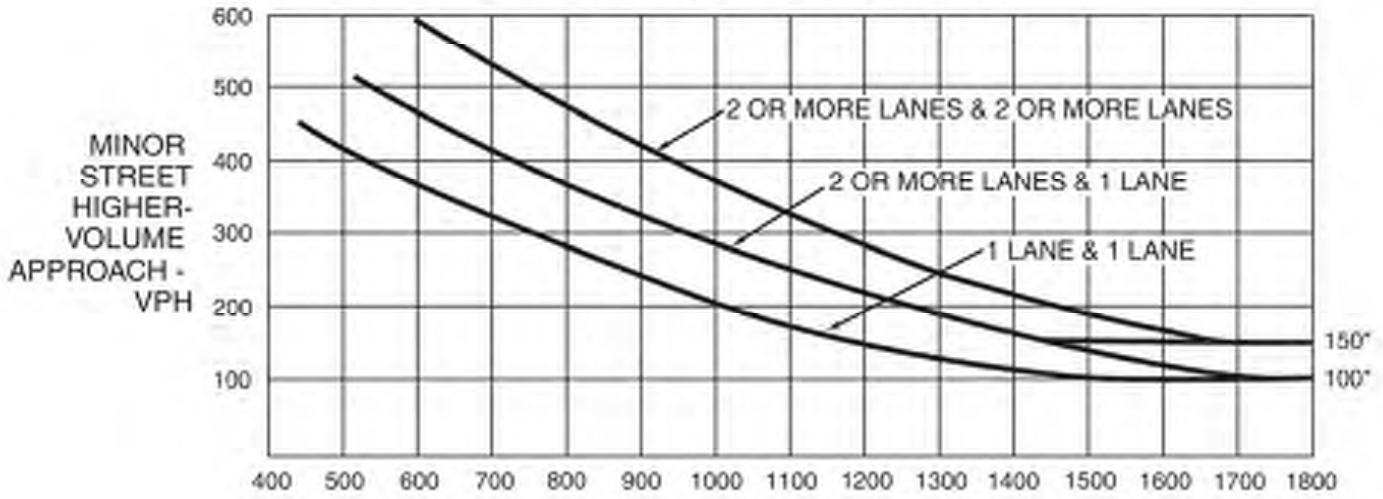
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:00 - 5:00 PM Hour
Both Approaches - Major Street	X		752
Higher Approach - Minor Street		X	635

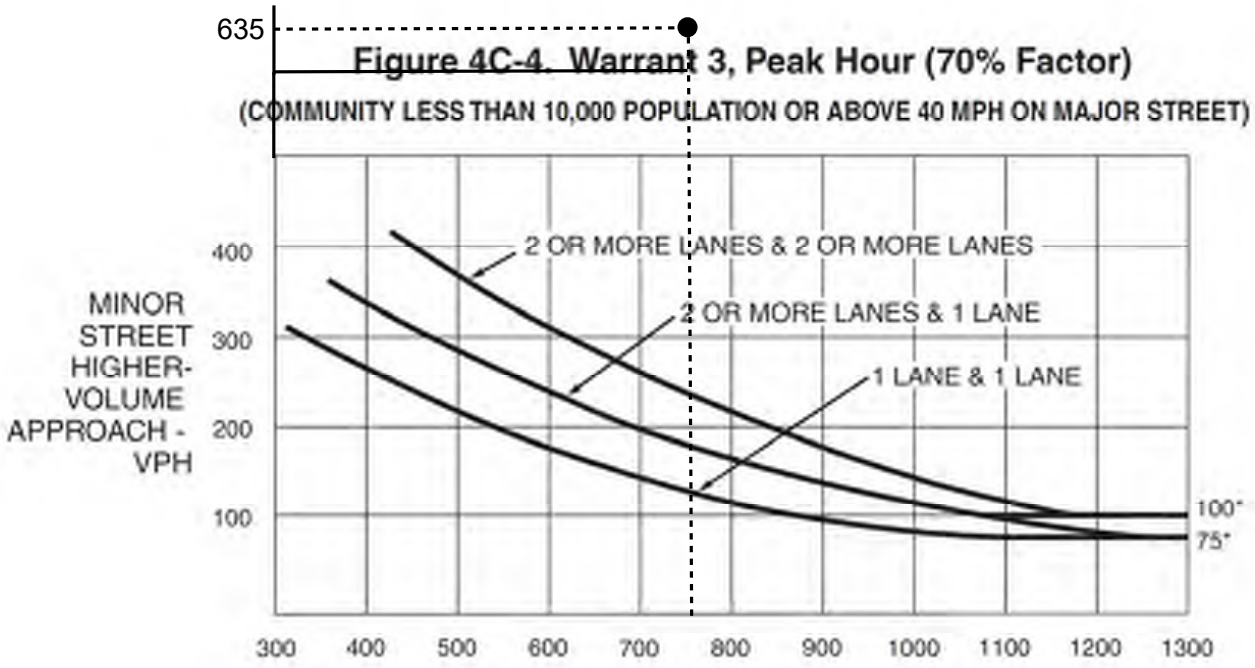
The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

PROJECT CONDITIONS

COUNT DATE 6-29-22

CALC HEAY DATE 3-28-23

CHK _____ DATE _____

DIST	CO	RTE	PM

Major St: W FRONTAGE RD — Critical Approach Speed 45 mph

Minor St: STODDARD WELLS RD — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒

or

In built up area of isolated community of < 10,000 population..... ☐

} RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

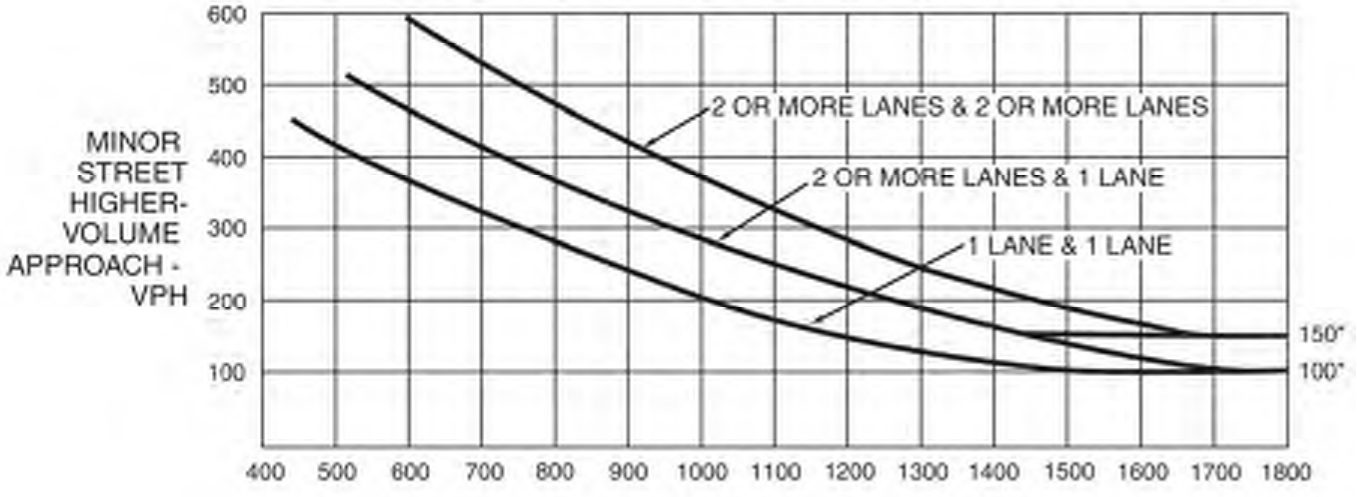
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:15 - 5:15 PM Hour
Both Approaches - Major Street	X		379
Higher Approach - Minor Street		X	560

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

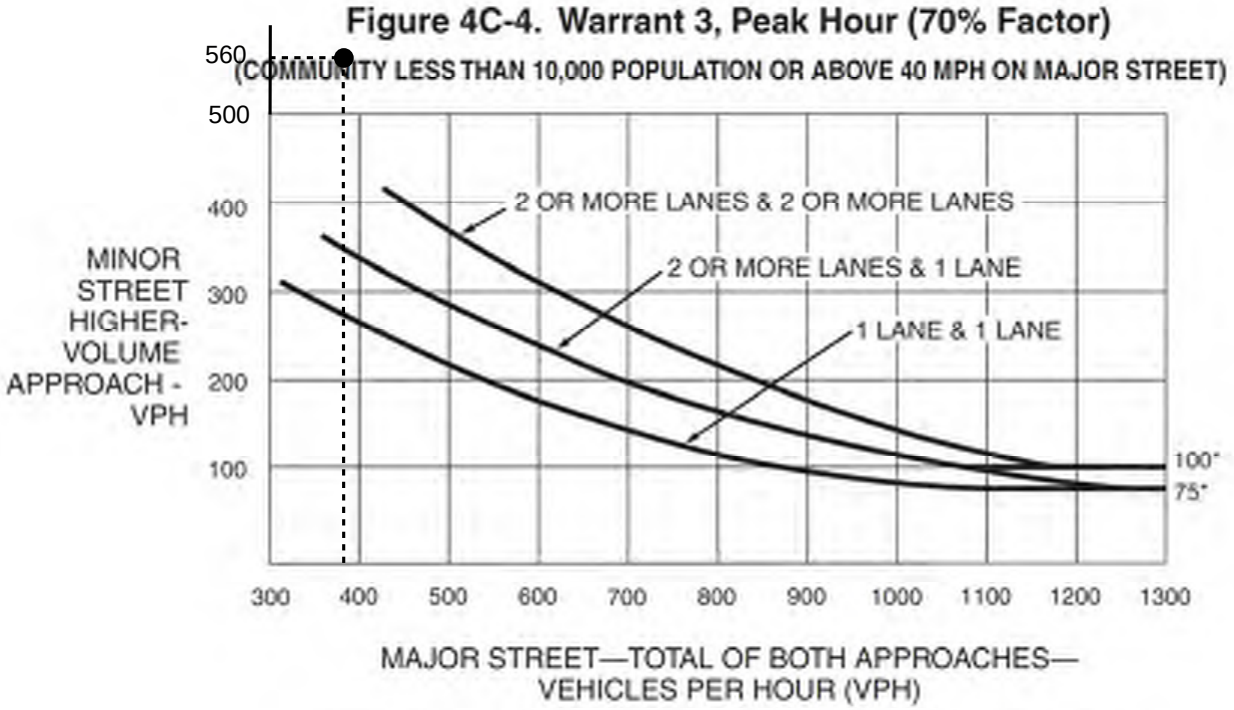
The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

FUTURE + PROJECT CONDITIONS
Page 1/2

COUNT DATE 6-29-22
CALC HEAY DATE 3-28-23
CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

Major St: W FRONTAGE RD
Minor St: STODDARD WELLS RD

Critical Approach Speed 50 mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒
or
In built up area of isolated community of < 10,000 population..... ☐
} RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☒ NO ☐
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☒ NO ☐
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

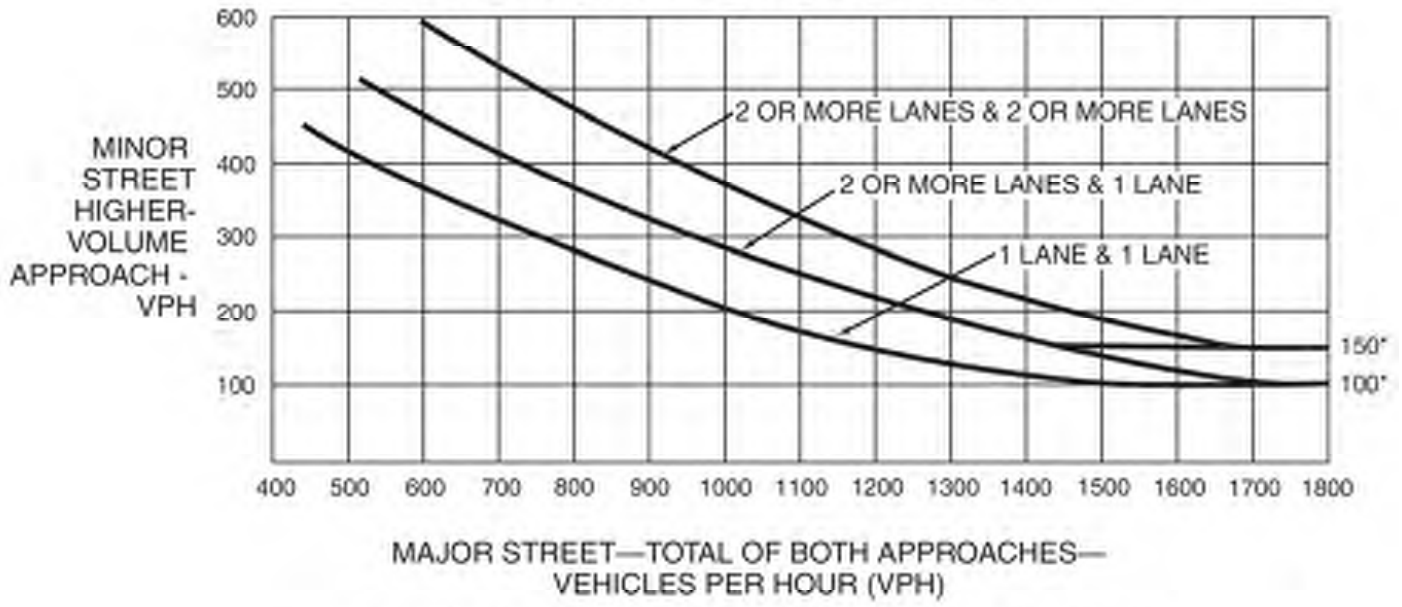
PART B SATISFIED YES ☒ NO ☐

APPROACH LANES	One	2 or More	4:15 - 5:15 PM Hour
Both Approaches - Major Street	X		607
Higher Approach - Minor Street		X	785

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-3. Warrant 3, Peak Hour



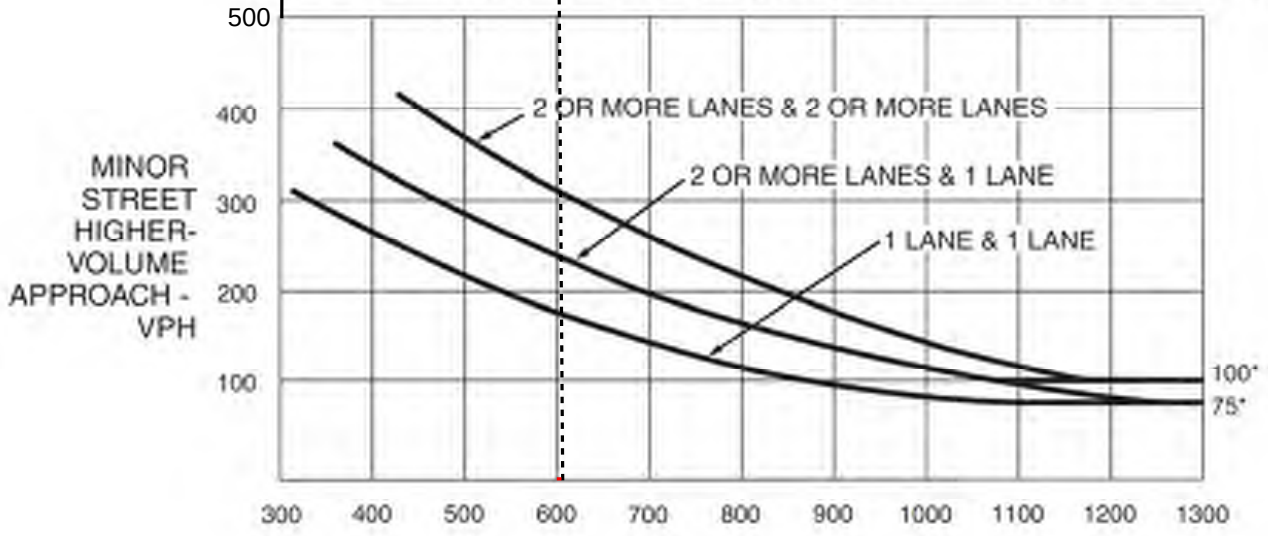
*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

785

500

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

PROJECT CONDITIONS
Page 1/2

COUNT DATE 11-9-22
CALC HEAY DATE 3-28-23
CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: STODDARD WELLS RD — Critical Approach Speed 55 mph
Minor St: OUTER HWY 15 S / I-15 NB RAMPS — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒
or
In built up area of isolated community of < 10,000 population..... ☐
} RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

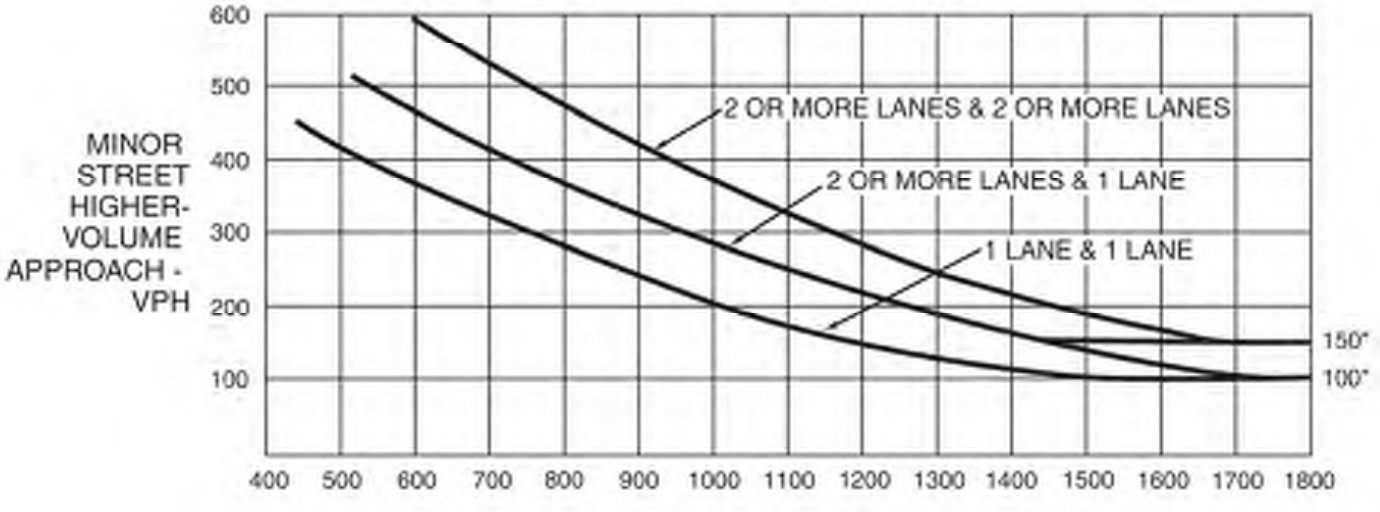
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:30 - 5:30 PM Hour
Both Approaches - Major Street	X		1670
Higher Approach - Minor Street	X		445

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR. The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

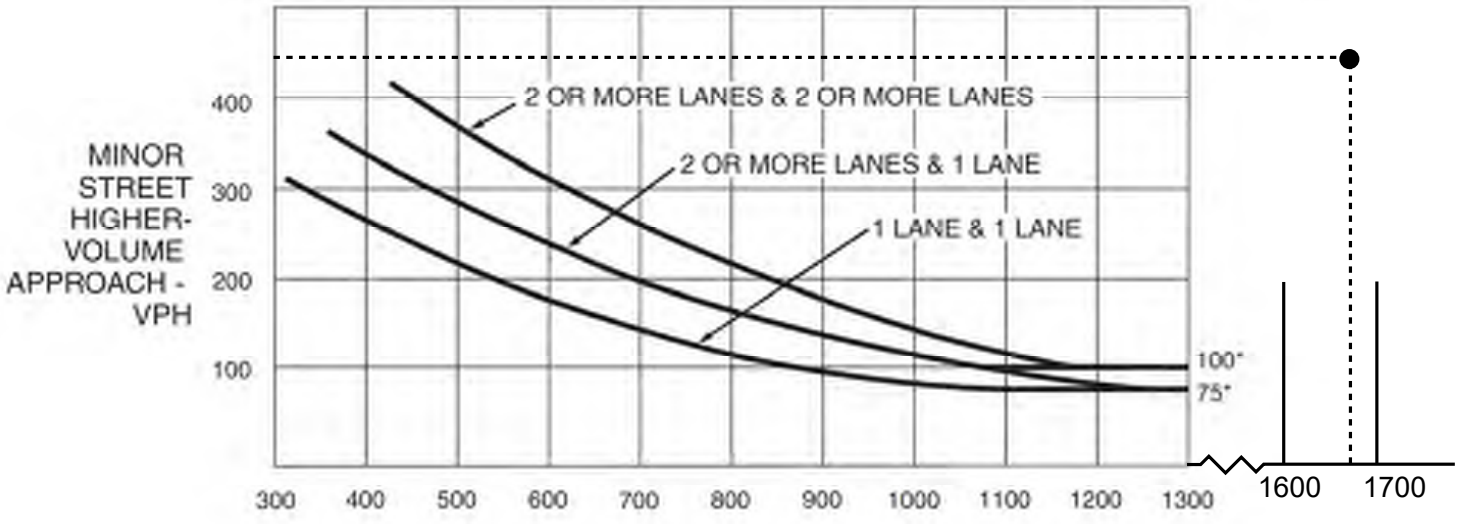
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

FUTURE + PROJECT CONDITIONS
Page 1/2

COUNT DATE 11-9-22

DIST	CO	RTE	PM

CALC HEAY DATE 3-28-23

CHK _____ DATE _____

Major St: STODDARD WELLS RD

Minor St: OUTER HWY 15 S / I-15 NB RAMPS

Critical Approach Speed 55 mph

Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒ } RURAL (R)

In built up area of isolated community of < 10,000 population..... or ☐ }

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

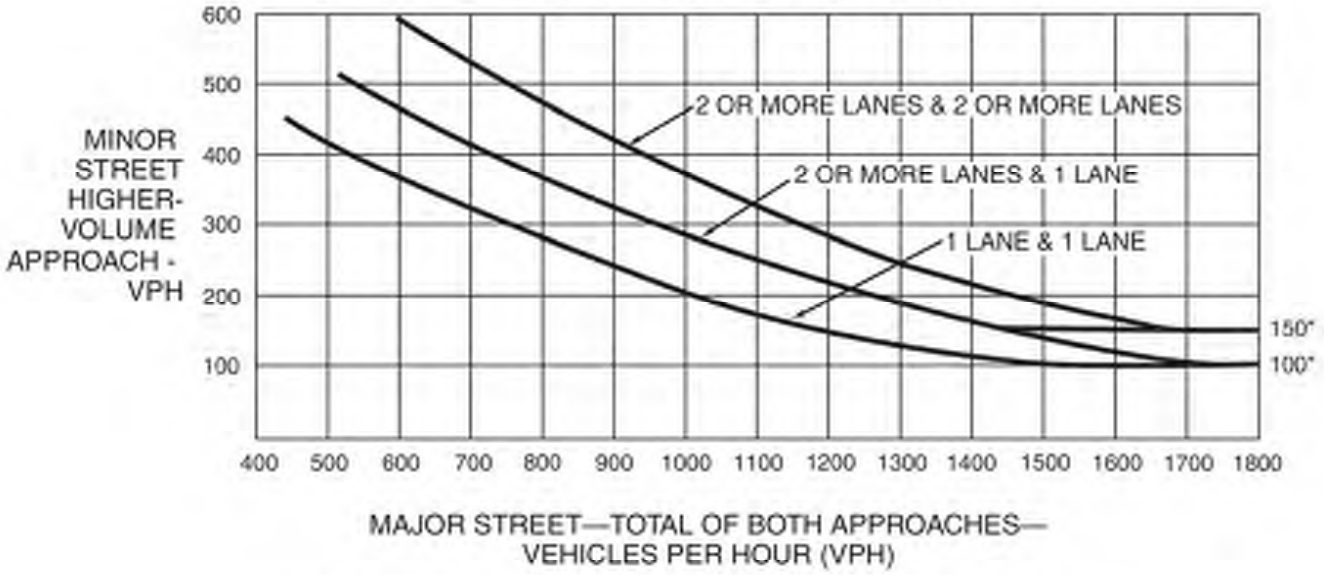
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:30 - 5:30 PM Hour
Both Approaches - Major Street	X		2048
Higher Approach - Minor Street	X		695

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR. The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-3. Warrant 3, Peak Hour

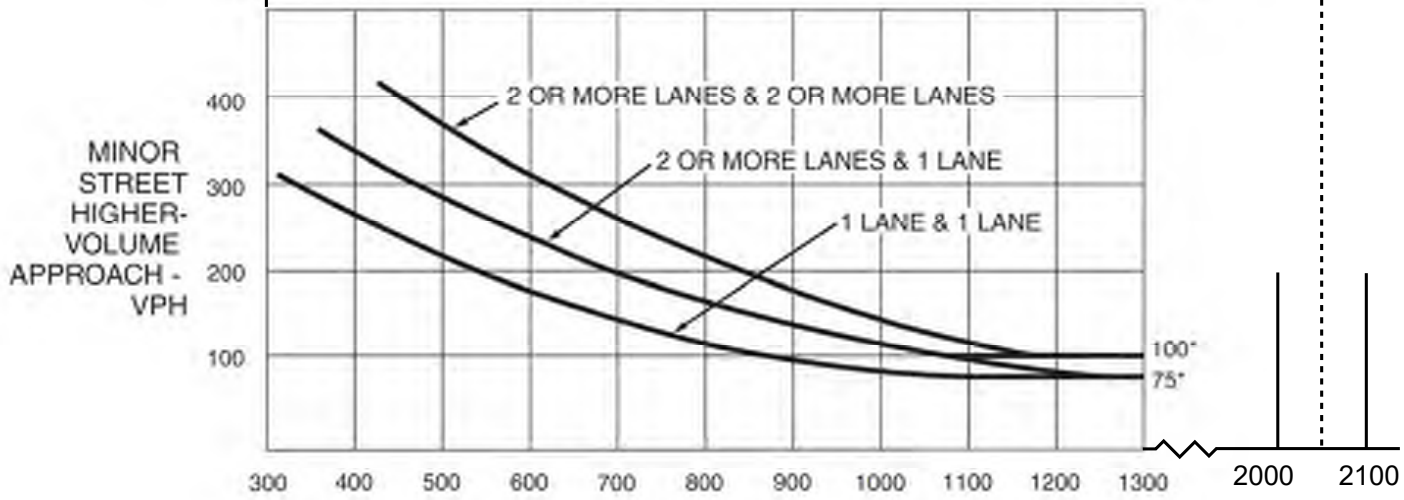


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

695

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

PROJECT CONDITIONS
Page 1/2

COUNT DATE 11-9-22

DIST ____ CO ____ RTE ____ PM ____

CALC HEAY DATE 3-28-23

CHK ____ DATE ____

Major St: STODDARD WELLS RD — Critical Approach Speed 55 mph

Minor St: QUARRY RD — Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒ or ☐ RURAL (R)

In built up area of isolated community of < 10,000 population..... ☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

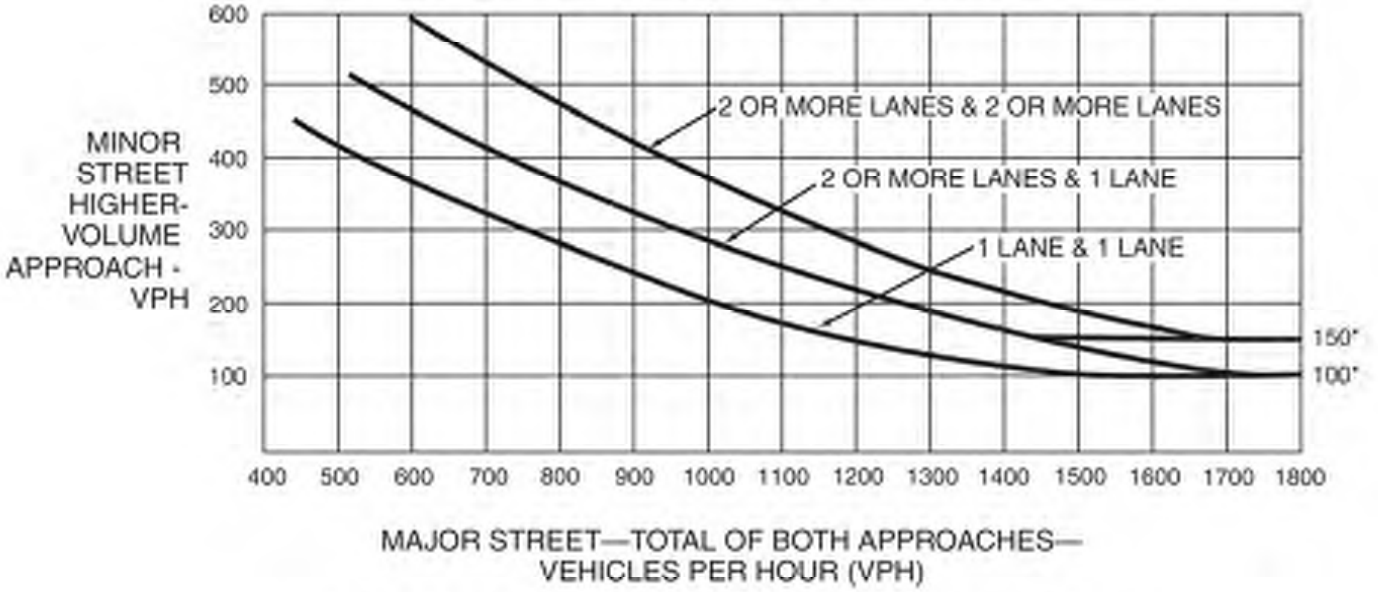
PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:30 - 5:30 PM Hour
Both Approaches - Major Street	X		1331
Higher Approach - Minor Street	X		373

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

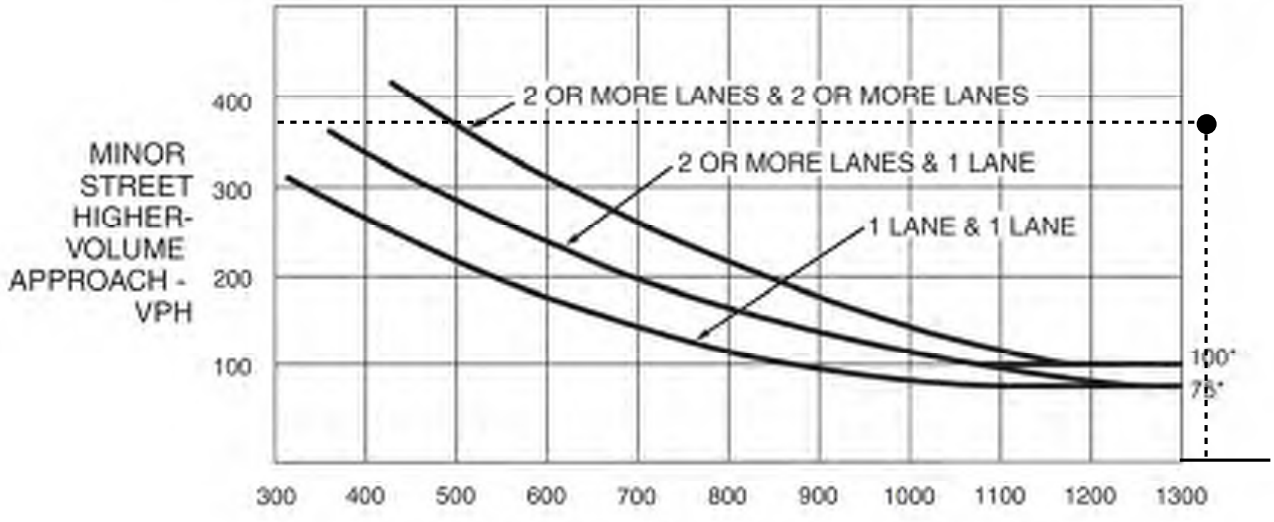
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

FUTURE + PROJECT CONDITIONS

COUNT DATE 11-9-22

CALC HEAY DATE 3-28-23

CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: STODDARD WELLS RD — Critical Approach Speed 55 mph

Minor St: QUARRY RD — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒

or

In built up area of isolated community of < 10,000 population..... ☐ } RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	4:30 - 5:30 PM Hour
Both Approaches - Major Street	X		1683
Higher Approach - Minor Street	X		407

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

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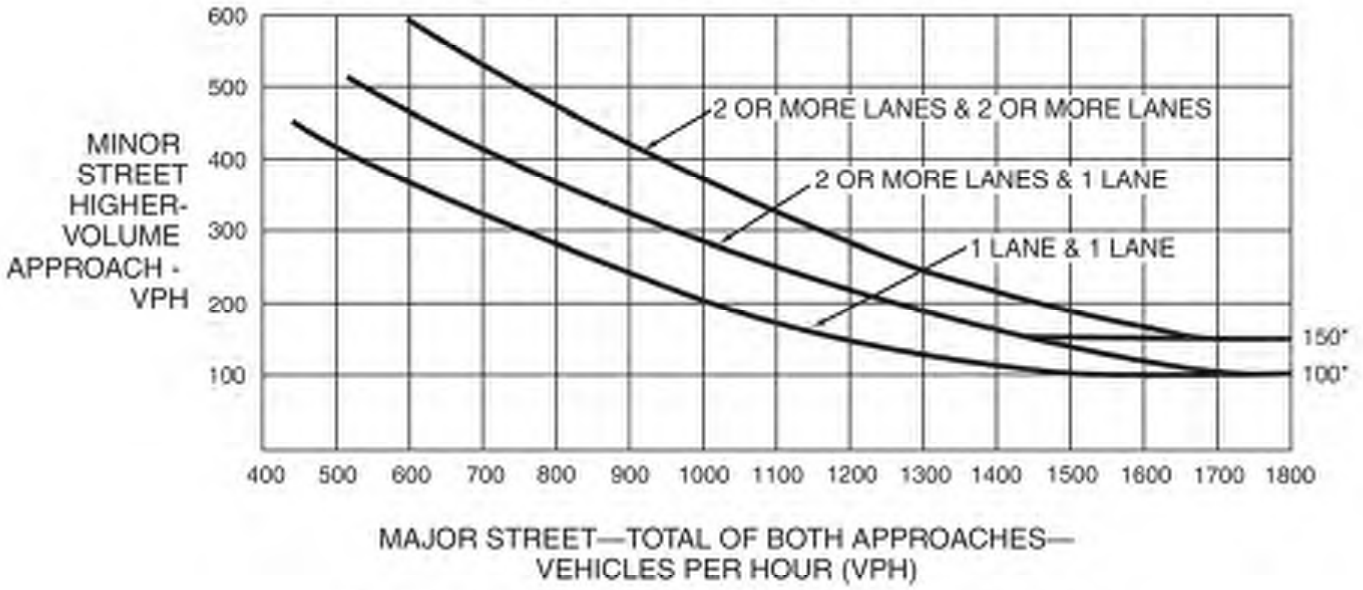
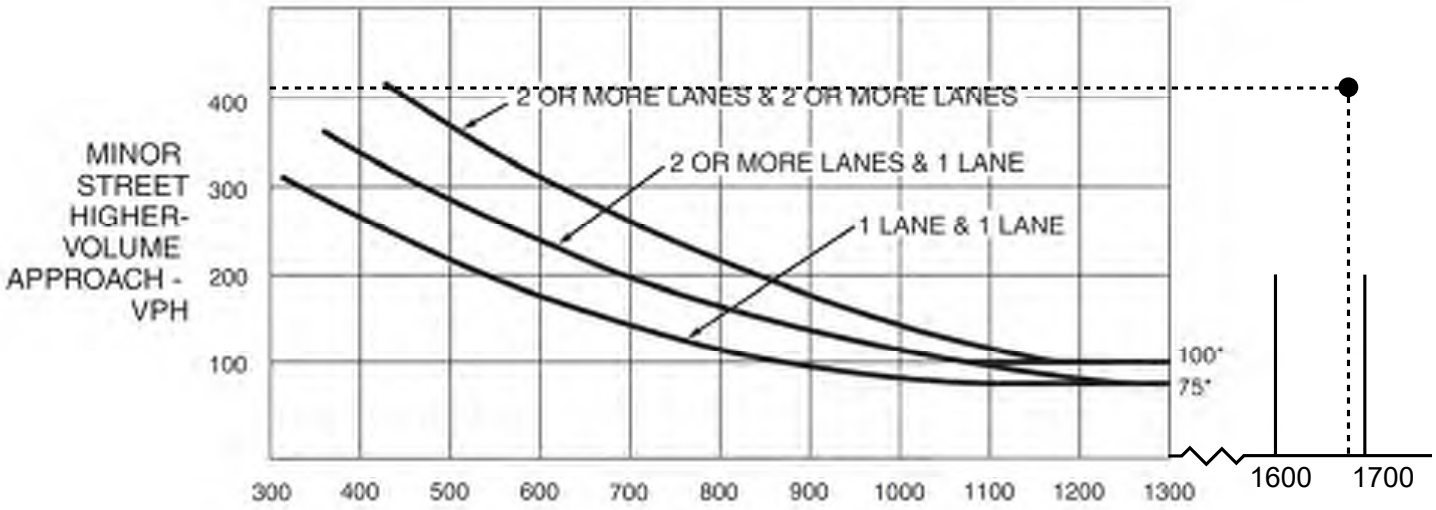
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

PROJECT CONDITIONS
Page 1/2

COUNT DATE 2-22-23

CALC HEAY DATE 3-28-23

CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: OUTER HWY 15 N Critical Approach Speed 50 mph

Minor St: FALCHION RD Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒

or

In built up area of isolated community of < 10,000 population..... ☐

RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)

SATISFIED YES ☐ NO ☒

PART A

SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B

SATISFIED YES ☒ NO ☐

APPROACH LANES	One	2 or More	4:00 - 5:00 PM Hour
Both Approaches - Major Street	X		296
Higher Approach - Minor Street	X		379

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR. The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

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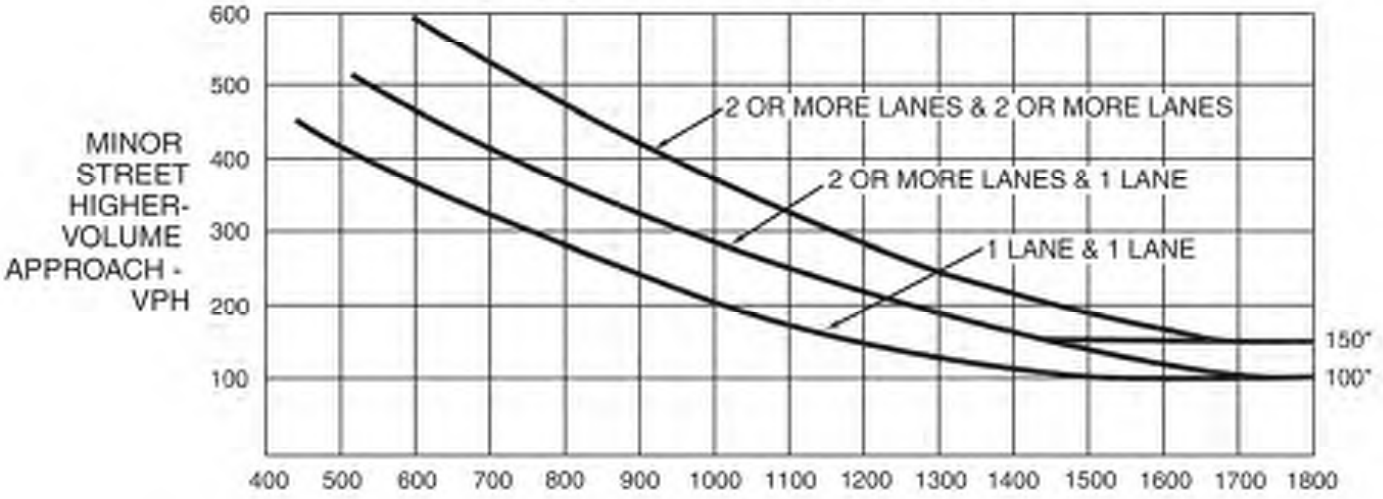
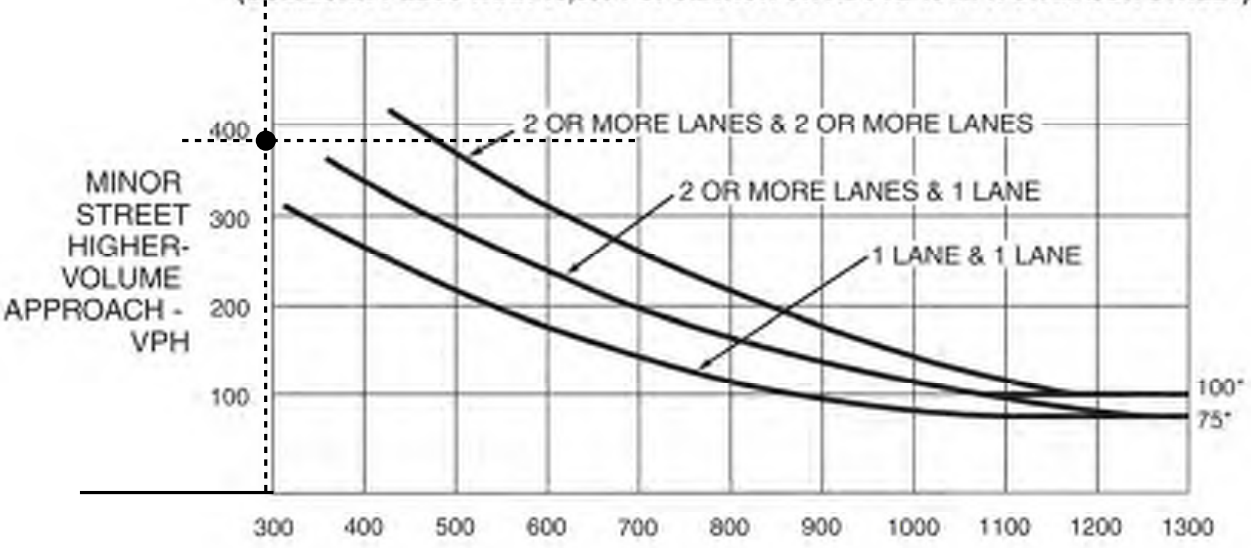
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

FUTURE + PROJECT CONDITIONS
Page 1/2

COUNT DATE 2-22-23

DIST ____ CO ____ RTE ____ PM ____

CALC HEAY DATE 3-28-23

CHK ____ DATE ____

Major St: OUTER HWY 15 N — Critical Approach Speed 50 mph

Minor St: FALCHION RD — Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☒ } RURAL (R)

In built up area of isolated community of < 10,000 population..... ☐ or } RURAL (R)

☐ URBAN (U)

WARRANT 3 - Peak Hour — SATISFIED YES ☒ NO ☐
(Part A or Part B must be satisfied)

PART A — SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B — SATISFIED YES ☒ NO ☐

APPROACH LANES	One	2 or More	4:00 - 5:00 PM Hour
Both Approaches - Major Street	X		396
Higher Approach - Minor Street	X		473

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

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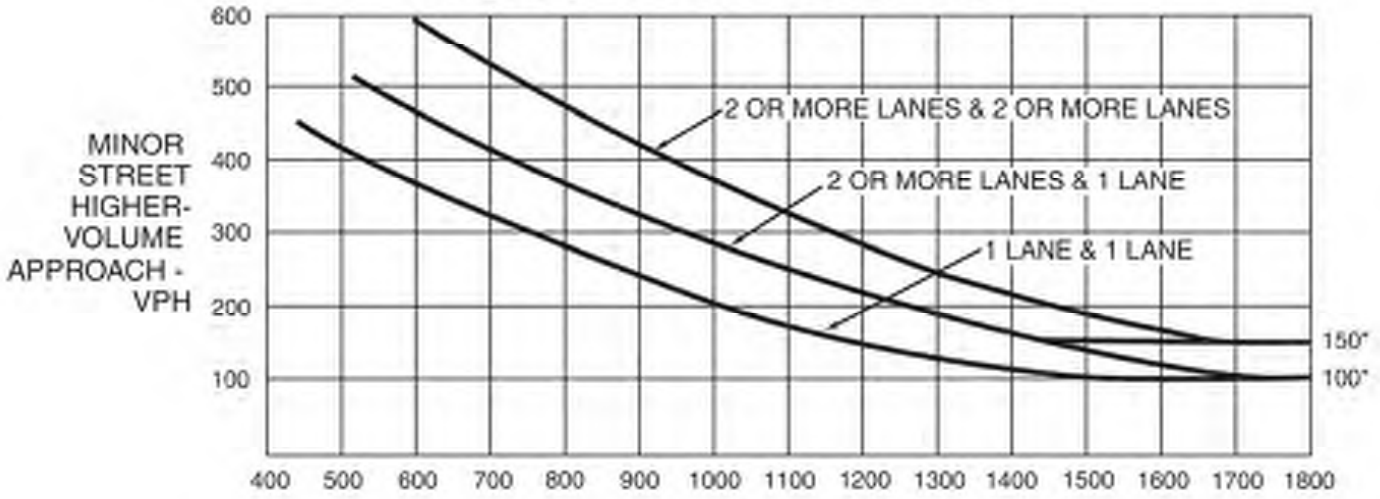
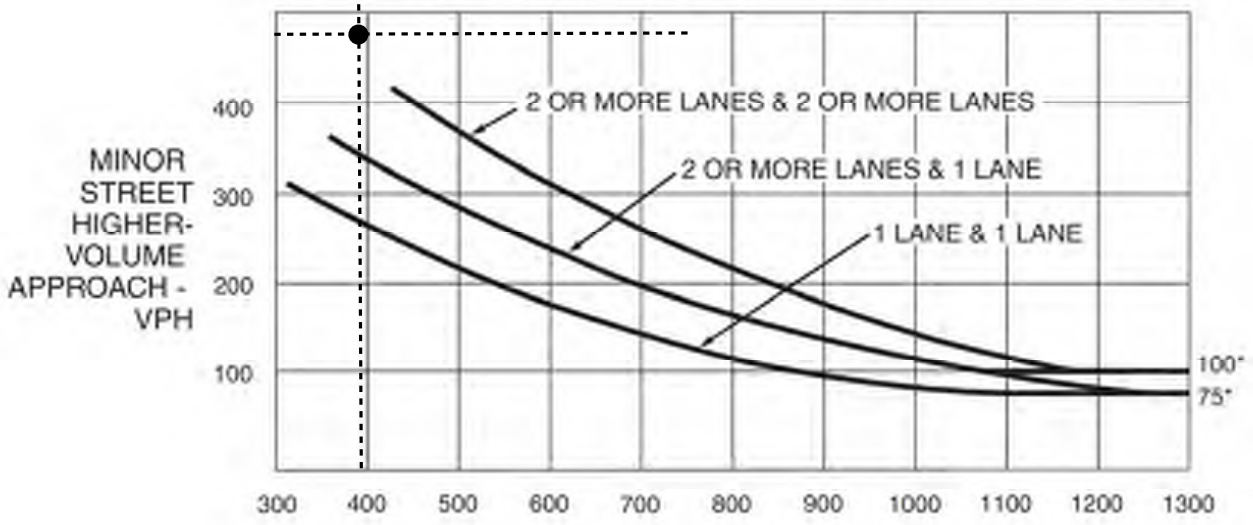
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

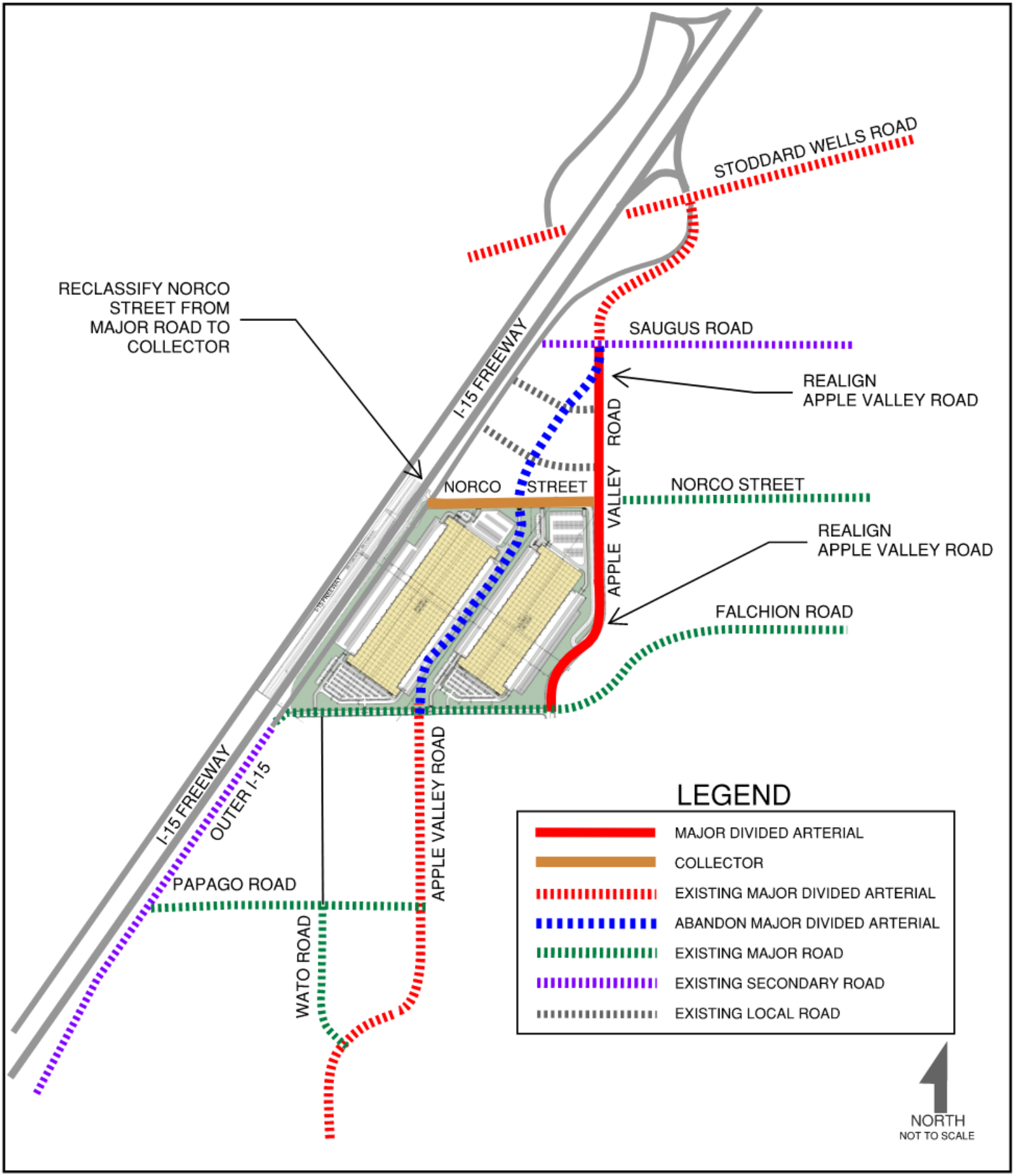
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Appendix G: General Plan Amendment



DAVID EVANS AND ASSOCIATES INC.

PROPOSED AMENDMENTS TO THE TOWN'S GENERL PLAN STREETS AND ROAD PLAN INLAND EMPIRE NORTH LOGISTICS CENTER APPLE VALLEY, CALIFORNIA

Appendix H: VMT Analysis

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GTS | General Technologies and Solutions

MEMORANDUM

Date:	February 28, 2023	**GTS:** 230124
To:	James M. Daisa, DEA	
From:	Rawad Hani, GTS	
Subject:	**Vehicle Miles Traveled (VMT) Analysis** **North Logistics Center, Town of Apple Valley, CA**	

This memorandum describes the development of vehicle miles traveled (VMT) analysis for the proposed North Logistics Center in the Town of Apple Valley (City), CA. The project is located at the northeast corner of Falchion Road and Outer Highway 15 south, in the Town of Apple Valley. The project proposes development of two speculative warehouse buildings. Building 1 is the westernmost building on the site and is proposed to be a 1,507,326 square foot (SF) and building 2 is proposed to be a 1,097,120 SF. This VMT analysis evaluated the project using the 2016 and 2040 model years obtained from the San Bernardino County Transportation Authority (SBCTA).

Background

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled (VMT).

Methodology

The project VMT analysis was conducted using the Town of Apple Valley Resolution "Resolution No. 2021-08, A Resolution of the City of The Town of Apple Valley, California, Adopting Thresholds of Significance for Vehicle Miles Traveled (VMT) Under the California Environmental Quality Act (CEQA)" adopted during the Town Council Meeting, May 11, 2021. A full VMT analysis was conducted using San Bernardino County Transportation Analysis Model (SBTAM). The guidelines recommend use of VMT per service population to evaluate land use projects. The project would have a significant impact if the project VMT per service population is greater than Town of Apple Valley's General Plan Buildout VMT per service population.

SBTAM model is a socioeconomic data based model and so the project land uses were converted into model employment categories using conversion factors from SCAG's "Employment Density Study Summary Report – dated October 31, 2001". The land use conversion yielded a total of 1,234 employees as shown in Table 1 which was used as input for the model runs.

Table 1: North Logistics Center – Employment Estimates

Land Use Type	Square Footage (SF)	SF/Employee *	Total Employees
Warehouse (Building 1 + Building 2)	2,604,446	2,111	**1,234**
Total	**2,604,446**		**1,234**

Source: SCAG Employment Density Study Summary Report, October 31, 2001

VMT Analysis

Both baseline (2016) and horizon year (2040) model runs were used to estimate project's VMT impacts. SBTAM socioeconomic databases for the scenarios were updated with the project land use to calculate project VMT. Typically, project VMT is calculated by isolating the project in a new TAZ or multiple TAZs depending on the diversity of project land uses and project size. Since, SBTAM does not allow addition of new TAZs, one TAZ was borrowed for this project. The project TAZ was utilized to calculate project specific VMT per service population.

No project specific network modifications were conducted for the model scenarios. Full model runs with feedback loops were conducted for all of the project scenarios. It should be noted that the project land use was included in the model as additional land use in the cumulative (2040) scenario and no shifting of land use from other TAZs was used. In that regard, the cumulative VMT analysis can be considered as a conservative estimate.

As indicated previously, project's Origin/Destination (OD) VMT per service population can be used to evaluate project impact according to the guidelines. Origin-destination matrix outputs were used as trips and the trip lengths were derived from the skimming step to estimate OD VMT. OD matrix outputs include vehicle trips and hence no conversion for auto occupancy was applied. The trip length or distance was obtained using the model outputs from the "Skimming" step. The model skim outputs include peak and off-peak skim matrices by mode, similar to trip outputs from the model. OD VMT was estimated for both peak and off-peak periods and added together to estimate the total daily VMT for the project.

Based on the guidelines, the project would constitute a significant impact if the project OD VMT per service population for base or cumulative scenarios is greater than Town of Apple Valley General Plan Buildout OD VMT per service population. The Town of Apple Valley General Plan Buildout OD VMT per service population was obtained from SBCTA VMT Screening Tool (*https://www.gosbcta.com/vmtscreening*).

Table 2 below shows the project VMT metrics for both baseline (2016) and cumulative (2040) conditions along with the regional VMT thresholds.

Table 2: Project VMT Analysis

2016	North Logistics Center (project)	Town of Apple Valley General Plan Buildout (Threshold) *
Population	0	
Employment	1,234	
Service Population	1,234	
OD VMT	27,883	
OD VMT per service population	22.6	33.2

2040	North Logistics Center (project)	Town of Apple Valley General Plan Buildout (Threshold) *
Population	0	
Employment	1,234	
Service Population	1,234	
OD VMT	26,419	
OD VMT per service population	21.4	33.2

** Threshold value obtained from SBCTA VMT Screening Tool: https://www.gosbcta.com/vmtscreening*

Table 3 illustrates the project's effect on VMT. The project's effect on VMT is a comparison of roadway VMT within Town of Apple Valley for both "With project" and "Without project" conditions.

Table 3: Roadway VMT within Town of Apple Valley

2016	With Project	Without Project
Roadway VMT	855,591	847,823
Service population	92,347	91,113
VMT per service population	9.3	9.3

2040	With Project	Without Project
Roadway VMT	1,367,429	1,362,981
Service population	128,040	126,806
VMT per service population	10.7	10.7

Conclusion

Based on the VMT analysis as shown in above Tables 2 and 3, the project doesn't constitute a significant impact for both "project generated VMT" and "project's effect on VMT.