Weber Road Industrial and Construction Yard Project

Initial Study Mitigated Negative Declaration

Lead Agency
City of Vacaville
Community Development Department, Planning Division
650 Merchant Street
Vacaville, California 95688

Technical Assistance:
Stantec Consulting Services Inc.
1340 Treat Boulevard, Suite 300
Walnut Creek, California 94597

August 24, 2023

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ACRONYMS AND ABBREVIATIONS

µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ADT	average daily trips
AFY	acre-feet per year
APN	Assessor's Parcel Number
Applicant	Weber Road Industrial, LLC
bgs	below ground surface
BMP	best management practice
C_2F_6	perfluoroethane
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CF_4	perfluoromethane
CHRIS	California Historical Resources Information System
CH_4	methane
City	City of Vacaville
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CRHR	California Register of Historical Resources
CUP	conditional use permit
CY	cubic yards
dB	decibel
dBA	A-weighted sound level
DOC	California Department of Conservation
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
ECAS	Energy Conservation Action Strategy
EO	Executive Order
EIR	Environmental Impact Report

EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
General Plan	City of Vacaville General Plan
General Plan EIR	General Plan and Energy Conservation Action Strategy Environmental Impact Report
GHG	greenhouse gas
gpd	gallons per day
GWh	one million kilowatt-hours
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
HMBP	Hazardous Materials Business Plan
I	Interstate
in/sec	inches per second
ISMND	Initial Study Mitigated Negative Declaration
L_{dn}	day/night sound level
L_{eq}	equivalent sound level
L_{max}	maximum instantaneous sound level
MEI	Maximally Exposed Individual
mgd	million gallons per day
mg/m^3	milligrams per cubic meter
MLD	most likely descendant
$MTCO_2e$	metric tons of carbon dioxide equivalent
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NF_3	nitrogen trifluoride
NGA	Northeast Growth Area
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center
O_3	ozone
OPR	Governor's Office of Planning and Research
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric

Pb	lead
PM	particulate matter
$PM_{2.5}$	particulate matter (2.5 microns and less in diameter)
PM_{10}	particulate matter (10 microns and less in diameter)
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
proposed project	Weber Road Industrial and Construction Yard Project
RCNM	Roadway Construction Noise Model
ROG	reactive organic gas
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
sec	Seconds
SF_6	sulfur hexafluoride
SID	Solano Irrigation District
SIP	State Implementation Plan
SO_2	sulfur dioxide
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCP	traffic control plan
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
UWMP	Urban Water Management Plan
VFD	Vacaville Fire Department
VMT	vehicle miles travelled
VPD	Vacaville Police Department
WWTP	Wastewater Treatment Plant
YSAQMD	Yolo-Solano Air Quality Management District

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INITIAL STUDY MITIGATED NEGATIVE DECLARATION

Project Title: Weber Road Industrial and Construction Yard Project

Project Description: The proposed Weber Road Industrial and Construction Yard Project (proposed project) would use two parcels, identified as Assessor Parcel Numbers (APNs) 109-027-050 and 109-022-060, as an interim industrial and construction yard for up to 5 to 15 years. The project site is approximately 41-acres and would provide up to six storage yard areas for lease in the City's Northeast Growth Area. The project site would be graded and each of the six storage yard areas would be developed with a bioretention basin to collect and treat stormwater. Additionally, the proposed project would construct a 3-foot-tall earthen berm along the northern, eastern, and southern sides of the project site. A 5-foot-tall, slatted perimeter fence would be placed along the top of the berm at the northern (Interstate-80) side, along a portion of the eastern boundary, and along the project site's southern boundary with gated access provided on Weber Road. A 5-foot-tall chain-link fence would run along the western boundary of the project site adjacent to an elevated gravel access road and along a portion of the eastern boundary. The proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to the existing on-site structures. The project construction activities would include grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving.

There are currently no specific tenants identified with the project application. It is anticipated the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures.

Name of Lead Agency:
City of Vacaville
Community Development Department, Planning Division
650 Merchant Street
Vacaville, California 95688

Lead Agency Contact Information:
Sarah Nolan, Assistant Planner
Phone: (707) 449-5212
Email: Sarah.Nolan@cityofvacaville.com

Determination: The City of Vacaville has determined that a) all potentially significant or significant impacts required to be identified in the Initial Study Mitigated Negative Declaration (ISMND) have been identified and analyzed; and b) with respect to each potentially significant impact on the environment either of the following apply: 1) changes or alterations have been required in or incorporated into the proposed project that avoid or mitigate the potentially significant impacts to a level of less than significant; or 2) those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

The ISMND and supporting documents are available at the City of Vacaville Community Development Department, located at 650 Merchant Street Vacaville, California 95688, and online at the following URL: www.cityofvacaville.com/23-021.

By: _____ Date: 8/23/2023

Sarah Nolan, Assistant Planner

1.0 INTRODUCTION

Weber Road Industrial, LLC (Applicant) is proposing the Weber Road Industrial and Construction Yard Project (proposed project) in the City of Vacaville's (City) Northeast Growth Area (NGA). The project proposes to use two parcels, identified as Assessor Parcel Numbers (APN) 109-270-050 and 109-220-060, as an interim industrial and construction yard for up to 5 to 15 years. The project site is approximately 41 acres and would provide up to six storage yard areas available for lease. The project site would be graded and each of the six storage yard areas would be developed with a bioretention basin to collect and treat stormwater.

Additionally, the proposed project would construct a 3-foot-tall earthen berm along the northern, eastern, and southern sides of the project site. A 5-foot-tall, slatted perimeter fence would be placed along the top of the berm at the northern side, along a portion of the eastern boundary, and along the project site's southern boundary with gated access provided on Weber Road. A 5-foot-tall chain-link fence would run along the western boundary of the project site adjacent to an elevated gravel access road and along a portion of the eastern boundary. The proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to the existing on-site structures. The project construction activities would include grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving.

There are currently no specific tenants identified with the project application. It is anticipated the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures.

1.1 PROJECT TITLE

Weber Road Industrial and Construction Yard Project

1.2 LEAD AGENCY

City of Vacaville
Community Development Department, Planning Division
650 Merchant Street
Vacaville, California 95688

1.3 LEAD AGENCY CONTACT

Sarah Nolan, Assistant Planner
Phone: (707) 449-5212
Email: Sarah.Nolan@cityofvacaville.com

1.4 PURPOSE

The purpose of the proposed project is to allow for the interim use of a 41-acre site in the City's NGA for the storage of industrial and construction materials. This Initial Study/Mitigated Negative Declaration

(ISMND) has been prepared to evaluate the proposed project for potential environmental effects in compliance with the California Environmental Quality Act (CEQA). The City is the Lead Agency under CEQA and has the principal responsibility for carrying out or approving a project that may have a significant effect on the environment within its jurisdiction. This ISMND was prepared to determine whether the proposed project may have a significant effect on the environment and whether an environmental impact report (EIR) would be required, and to document the City's determination that no EIR is required because the Applicant has agreed to revisions in the project proposal that would avoid or mitigate all potentially significant effects to a point where clearly no significant effects would occur. This document has been prepared in accordance with CEQA, Public Resources Code (PRC) Section 21000 et seq., and the State CEQA Guidelines, California Code of Regulations (CCR), Title 14, Section 15000 et seq.

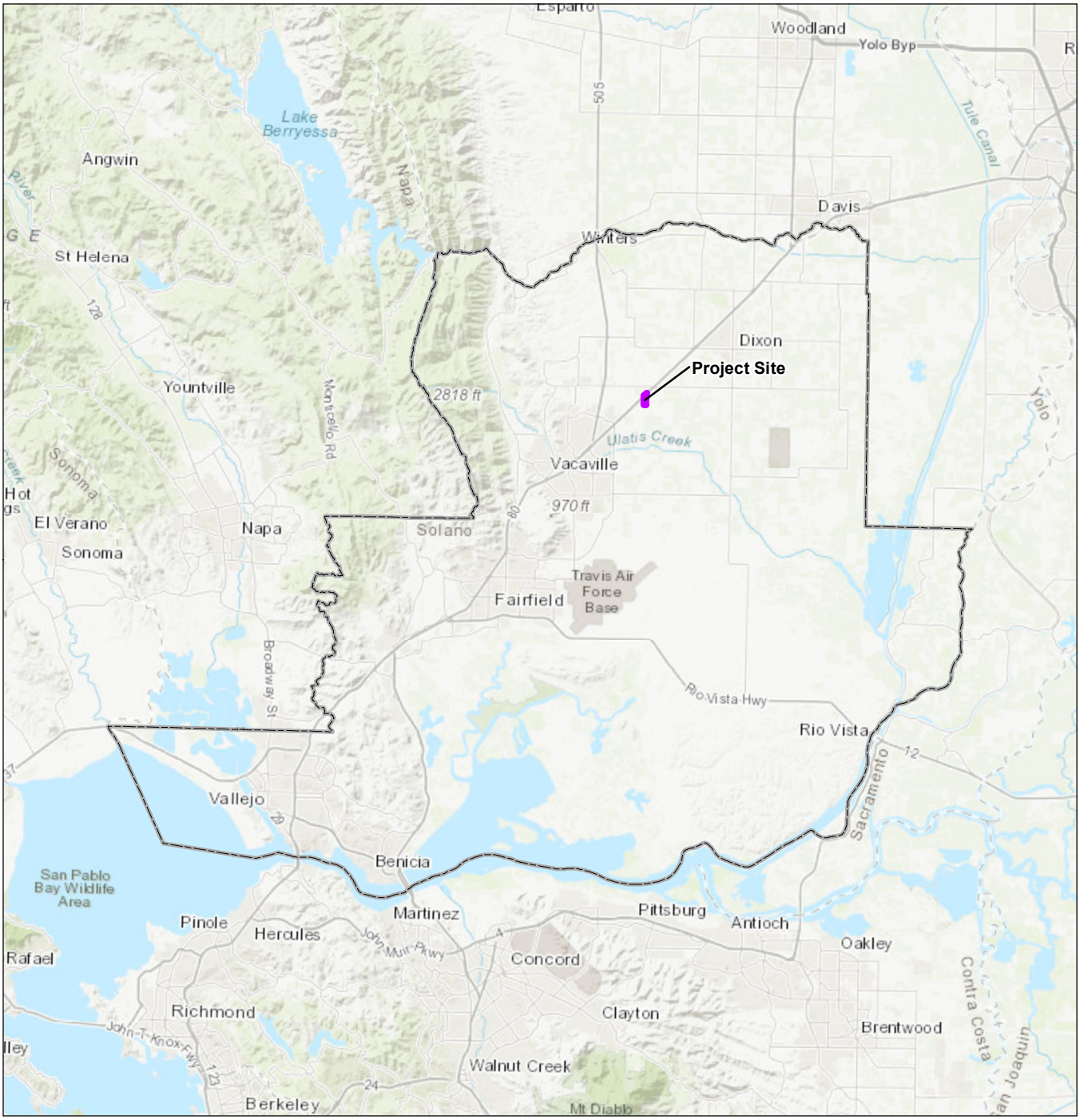
1.5 PROJECT LOCATION

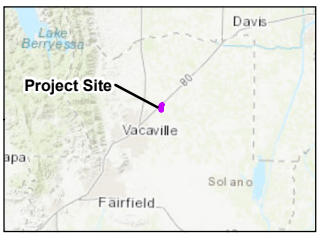
The proposed project is in northeastern Vacaville in Solano County, California (see Figure 1). The project site is approximately 41 acres and is approximately 3.75 miles northeast of the Nut Tree Airport and approximately 9.3 miles northeast of the Travis Airforce Base.

1.6 EXISTING SETTING AND SURROUNDING LAND USES

The 41-acre project site consists of two vacant parcels identified as APNs 109-270-050 and 109-220-060 (see Figure 2). The project site was previously used for cattle grazing and operated as the Vaca-Dixon Airport from 1945 to about 2000. There are two vacant metal hangars (Hangar 1 and Hangar 2), an ancillary compressor shed, and on-site well in the northern portion of the project site. There is also a remnant segment of the Vaca-Dixon airport runway in the center of the project site that is approximately 750 feet long. The site perimeter is surrounded by 3- to 4-foot-tall fencing, except along a portion of the southern frontage where 5-foot-tall chain-link fencing exists. The project site is accessed from a gravel driveway on Weber Road, which connects to an unpaved road in the western side of the project site. The site topography is generally flat with elevations ranging from approximately 75 to 80 feet above mean sea level. A drainage ditch owned by the Solano Irrigation District (SID) is adjacent to the southern and eastern portions of the project site and there is an existing overhead Pacific Gas and Electric (PG&E) line (with easement) which crosses the southeastern corner of the project site.

Land uses surrounding the project site include Interstate (I) 80 to the north, farmlands to the west, the former Vaca Valley Raceway property to the east, and residences and commercial uses to the south along Weber Road. The project site's eastern boundary is bordered by a Solano Irrigation District drainage pond and ditch, which ultimately connect to the drainage ditch adjacent to the site's southern boundary. The Solano Brewing company is about 0.2 miles southeast of the project site.





Notes
1. Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

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Legend

- County Boundary
- Project Site

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Project Location
Vacaville, CA

Client/Project
City of Vacaville
Weber Road Industrial and Construction Yard Project
ISMND

Figure No.
1

Title
Regional Location

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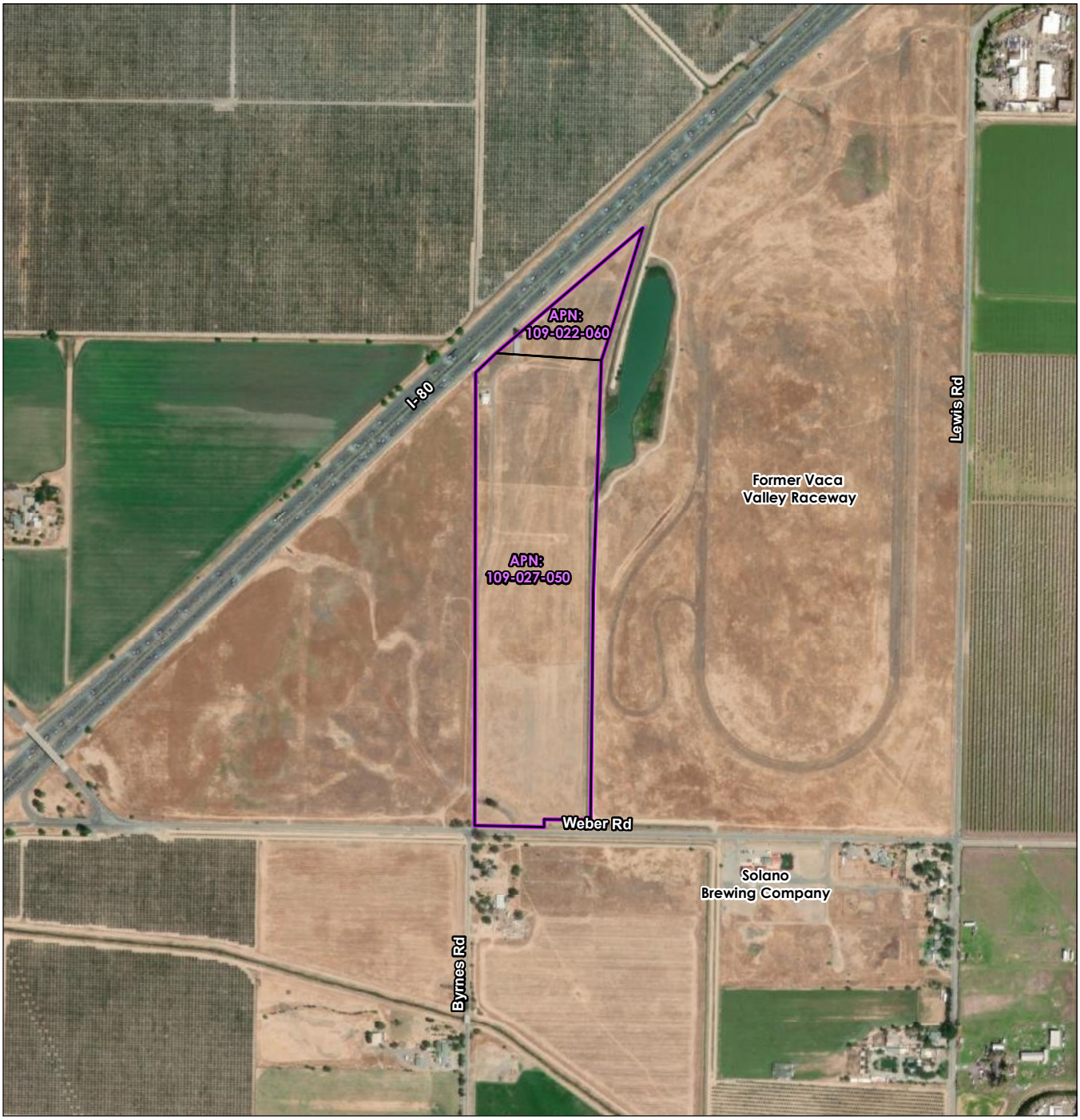

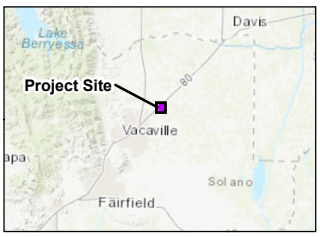

Notes
1. Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Legend

- APN boundary
- Project Site

0 350 700 Feet

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Project Location
Vacaville, CA

Client/Project
City of Vacaville
Weber Road Industrial and Construction Yard Project
ISMND

Figure No.
2

Title
Project Site

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1.7 GENERAL PLAN AND ZONING DESIGNATIONS

1.7.1 General Plan Land Use Designation

The project site is located within the City's NGA. This area is approximately 1,400 acres and identified in the City's General Plan as an economic development area. The project site is designated Technology Park in the General Plan, which is intended to help facilitate a long-term vision for the area as "an area of future opportunity for developing job-generating uses, such as high-quality office, industrial, and technology campus."

1.7.2 Zoning

The zoning for the project site was amended in November 2022 from Industrial Park to Technology Park for consistency between the zoning and Technology Park General Plan land use designation. As part of the rezoning, the Vacaville City Council also included a text amendment to the City's zoning ordinance by adding a new NGA Overlay District under Chapter 14.09.191 and outlining the standards and regulations for interim, temporary development. The purpose of the NGA Overlay District, which applies to the project site, is to limit development to temporary land uses to protect the economic interests of the City and preserve land for future development opportunities consistent with the City's Biotechnology and Advanced Manufacturing Initiative. Pursuant to Chapter 14.09.191.030 of the Vacaville Municipal Code, interim storage yards for off-site construction activities are listed as an interim conditional use in the NGA Overlay District. Therefore, the proposed project would be subject to the approval of a conditional use permit (CUP) and development agreement.

1.8 CEQA AND PUBLIC AGENCY REVIEW

CEQA requires that the Lead Agency disclose the significant impacts to the environment from proposed development applications. The intent of CEQA is to foster good planning and to consider environmental issues during the planning and development application review process. The City is the Lead Agency under CEQA for the preparation of this ISMND. Section 21067 of the CEQA Guidelines defines the Lead Agency as: "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." Approval of the proposed project is considered a public agency discretionary action, and therefore is subject to compliance with CEQA. The City has directed the preparation of this analysis to comply with CEQA.

Stantec Consulting Services Inc. (Stantec) has prepared this document at the direction of the City. The purpose of this document is to disclose the environmental consequences of implementing the proposed project to decision-makers and the public. The public, City residents, and other local and state resource agencies will be given the opportunity to review and comment on this document during a 30-day public-review period. Comments received during the review period will be considered by the City prior to adoption of this ISMND and any City action on the project application.

The public review period will commence on August 24, 2023 and end on September 25, 2023, pursuant to CEQA Guidelines Section 15105. If you wish to send written comments (including via e-mail), they must be received by 5:00 p.m. on September 25, 2023. Written comments should be addressed to the following:

Sarah Nolan, Assistant Planner
Community Development Department, Planning Division
650 Merchant Street
Vacaville, California 95688
Phone: (707) 449-5212
Email: Sarah.Nolan@cityofvacaville.com

The ISMND and supporting documents are available at the City of Vacaville, Community Development Department, located at 650 Merchant Street Vacaville, California 95688, and online at the following URL: www.cityofvacaville.com/23-021.

1.9 REQUIRED PERMITS AND APPROVALS

The City, as the Lead Agency, would use this ISMND to evaluate the potential environmental impacts of the proposed project. Anticipated approvals and actions may include but are not limited to the following:

- Adoption of ISMND: City of Vacaville
- CUP: City of Vacaville
- Development Agreement: City of Vacaville
- National Pollutant Discharge Elimination System Permit (NPDES): Regional Water Quality Control Board (RWQCB)

Other ministerial approvals, such as construction-related permits and City encroachment permits, may also be required. Additionally, the proposed project would be subject to the Vacaville Municipal Code including without limitation the zoning code, building code, and fire code.

1.10 SCOPE OF THIS INITIAL STUDY

As the Lead Agency under CEQA, the City is responsible for compliance with the environmental review process prescribed by the CEQA Guidelines. This ISMND focuses on the environmental issues identified in the CEQA checklist and by the CEQA Guidelines. This ISMND evaluates the potential effects on the environment and, where such effects may be significant, identifies mitigation measures to reduce the effects to a point where clearly no significant effect on the environment would occur.

The following technical studies were conducted and reviewed in preparing this ISMND: air quality modeling outputs and a quantitative health risk assessment, a biological resources assessment, an archeological resources report, a geotechnical exploration report, and phase I environmental site assessment. These studies and supporting data are included as appendices to this document and referred to, where appropriate, throughout this document.

1.11 DOCUMENT ORGANIZATION

This ISMND is organized as follows:

Section 1.0: Introduction. This section introduces the proposed project and describes the purpose and organization of this document.

Section 2.0: Project Description. This section provides an overview of the proposed project, project characteristics, and construction activities.

Section 3.0: Environmental Checklist and Environmental Evaluation. This section presents an analysis of the range of potential environmental issues identified in the CEQA Environmental Checklist and determines whether the proposed project would be anticipated to result in no impact, a less than significant impact, a less than significant impact with mitigation incorporated, or a potentially significant impact for each topic. If impacts are determined to be potentially significant after incorporation of applicable mitigation measures, an EIR would be required. For this proposed project, mitigation measures have been incorporated, where needed, that would reduce all potentially significant impacts to a less than significant level.

Section 4.0: References. This section lists the references used in preparing this ISMND.

Section 5.0: List of Preparers. This section identifies the report preparers.

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2.0 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The project proposes to use two parcels, identified as APNs 109-270-050 and 109-220-060, as an interim industrial and construction yard for up to 5 to 15 years (see Figure 2). The project site is approximately 41 acres and would provide up to six storage yard areas for lease in the City's NGA. The project site would be graded and each of the six storage yard areas would be developed with a bioretention basin to collect and treat stormwater. Additionally, the proposed project would construct a 3-foot-tall earthen berm along the northern, eastern, and southern sides of the project site. A 5-foot-tall, slatted perimeter fence would be placed along the top of the berms at the northern side, along a portion of the eastern boundary, and along the project site's southern boundary with gated access provided on Weber Road. A 5-foot-tall chain-link fence would run along the western boundary of the project site adjacent to an elevated gravel access road and along a portion of the eastern boundary. The proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to the existing on-site structures. The project construction activities would include grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving.

There are currently no specific tenants identified with the project application. It is anticipated the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures.

2.2 PROJECT CHARACTERISTICS

2.2.1 Storage Yard Areas

The 41-acre project site would provide six storage yard areas for individual tenants to lease. The size of the storage yard areas would ultimately depend on leasing demands; however, it is expected there would be five storage yard areas approximately 5 acres each, and one storage yard area approximately 13 acres. The project site would be graded, lime treated, and covered with an aggregate base. The eastern portions of each storage yard area would be developed with a bioretention basin to collect and treat on-site stormwater. A 3-foot-tall earthen berm would be constructed along the northern, eastern, and southern sides of the project site. The existing 3- to 4-foot-tall perimeter fence would be replaced with a 5-foot-tall, slatted fence along the top of the berms at the northern side, along a portion of the eastern boundary, and along the project site's southern boundary with gated access provided on Weber Road. A 5-foot-tall chain-link fence would run along the western boundary of the project site, adjacent to the elevated gravel access road, and along a portion of the eastern boundary. The storage yard areas would not include any permanent habitable structures, restroom facilities, or improvements to the existing metal hangars. The existing metal hangars would remain within the northern portion of the project site. The six storage yard areas and bioretention basins are shown in Figures 3 and Figure 4.

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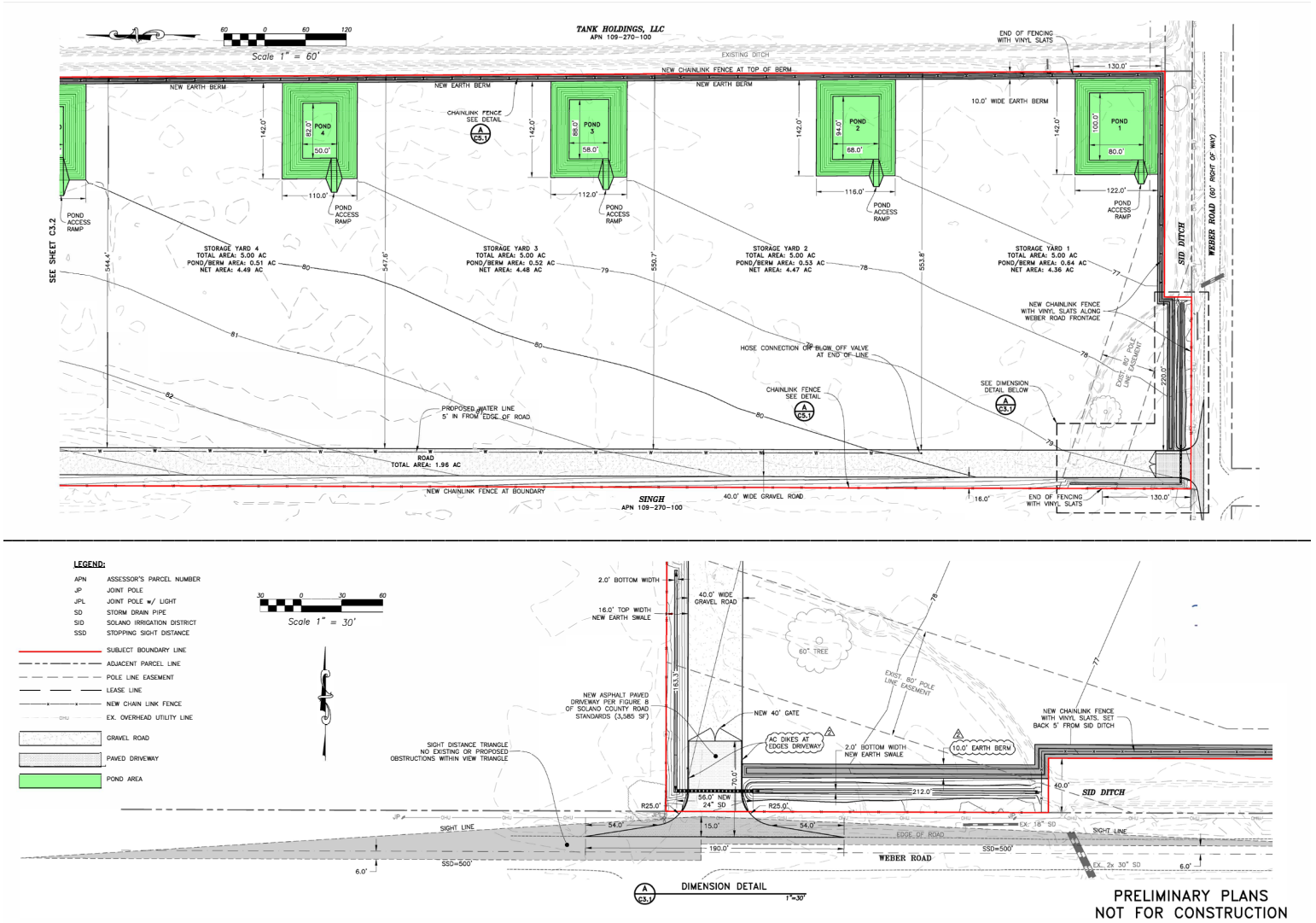

Source: CSA, May 2023

Project Location
Vacaville, CA

Client/Project
City of Vacaville
Weber Road Industrial and Construction Yard Project
ISMND

Figure No.
3

Title
Project Site Plan (South)

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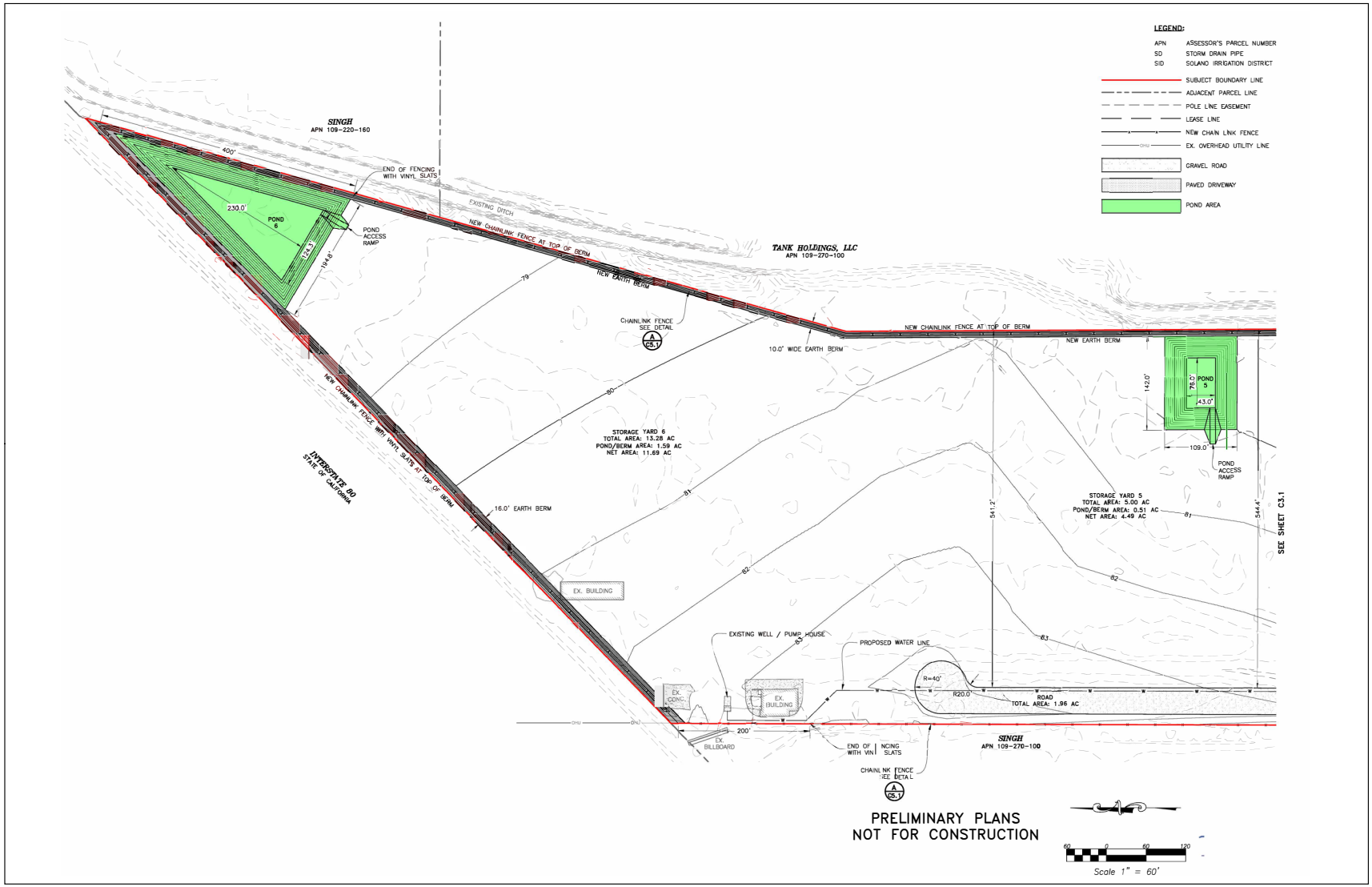

Source: CSA, May 2023

Project Location
Vacaville, CA

Client/Project
City of Vacaville
Weber Road Industrial and Construction Yard Project
ISMND

Figure No.
4

Title
Project Site Plan (North)

Stantec

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2.2.2 Anticipated Tenants and Operations

There are no specific tenants identified with the project application. However, it is anticipated the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures.

Table 2.2-1 describes the types of tenants anticipated to lease the storage yard areas and includes the estimated number of daily trips associated with the use. The anticipated types of tenants and estimated number of daily trips are based on similar interim industrial and construction storage yard areas in the area.

Table 2.2-1: Anticipated Tenants

Potential Tenant	Use Description	Estimated Daily Trips (to and from the Project Site)
Container Storage	Storage containers would be stacked up to 30 feet in height. Operations to include the use of equipment to lift and stack containers.	25
Truck and Fleet Storage	Employees would arrive to the project site in the morning, leave their personal car, and take their route truck. The route truck would be returned to the project site at the end of the day or in the case of longer term truck use, returned at a later day when the employee's personal car would be used. This use would have two to five employees to supervise the operations and unload/load the cars and trucks.	50
Contractor Laydown and Storage Yard	Stockpiling for private and public infrastructure projects, including office trailers and the storage of bulk materials, scaffolds, beams, containers, equipment, and parts.	20
Steel and Rebar Laydown Storage	Bulk storage of steel rebar and related items, including ancillary forklift and/or crane operation.	20
Landscape Companies	Storage of office trailers, fleet vehicles, equipment, and materials.	20
Nurseries	Office trailers and storage of trees and plants. No permanent structures would be constructed. This use could have potential for sale to both the public and wholesale services for registered contractors.	25
Gravel, Mulch, and Composting Storage	Office trailers and storage of gravel, mulch, and composting. On-site equipment would include one to two loaders to move and load the products.	25
Trucking Companies	Truck and trailer storage. Driver would arrive to the project site in personal car and drive truck and trailer off-site. The truck and trailer would be returned to the site at the end of the day or several days later depending upon the trucking companies' routes and destination.	40
Trailer Storage	Overflow trailer storage for trucking companies. It is anticipated at least 5 to 10 trailers would be moved in and out daily. Rolling stock of leased trailers.	15
Boat and Recreational Vehicle Storage	Storage of boats and recreational vehicles.	10
Modular Office Trailer Storage	Storage of modular office trailers. Rolling stock would come in and out the site. There would be at least two to three employees on-site daily.	10

Potential Tenant	Use Description	Estimated Daily Trips (to and from the Project Site)
Autonomous Vehicle Testing	Test track would be built out to test vehicles. Office trailers on-site for employees.	15
Autonomous Equipment Testing	Construction equipment would be tested on-site. Office trailers on-site for employees.	15
Storage, Sales, and Rentals of Equipment	Storage, sales, and rental of equipment, booms, cranes, lifts, etc. The stored equipment would have a maximum height of approximately 30 feet.	20
Public Utility	Storage of equipment, spools of cable, piping, conduit, etc.	40
Drainage Pipe and Related Products	Storage of pipes, stormwater basins and related products.	30
Manufactured Home and Building Material Storage	Storage of manufactured homes, building materials, and related products.	30
Ancillary Structures	Site occupants would have ability to use office trailers, containers for secured storage, etc.	20

The potential tenants would not maintain or refuel the vehicles, equipment, trucks, or trailers stored on-site. The temporary equipment and materials, such as containers, cranes, lifts, and trailers stored on-site would have a maximum height of 30 feet. The maximum number of on-site employees would ultimately depend on the type of tenants leasing the storage yard area. It is anticipated most employees would visit the project site temporarily to obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day.

The project site is expected to operate as an industrial and construction yard for up to 5 to 15 years. It is anticipated the six storage yard areas would operate Monday through Friday, generally from 7 a.m. to 7 p.m. and on weekends from 7 a.m. to 6 p.m. No nighttime operations would be allowed.

The applicable Technology Park zoning district does not require or apply any specific development standards. The proposed project would require discretionary approval of a CUP to ensure tenants comply with the development and performance standards of the Industrial Park zoning district. The CUP would require the City to review each tenant prior to occupancy to ensure the use is consistent with the types of tenants and operations anticipated for the site and that the use complies with applicable federal and state regulations, the Vacaville Municipal Code, and the development and performance standards of the Industrial Park zoning district.

2.2.3 Access and Circulation

The proposed project would pave the existing driveway on Weber Road. The paved driveway would be approximately 40-feet wide and connect to an interior gravel access road. The 40-foot-wide gravel access road would replace the existing unpaved road in the western portion of the project site and be elevated above the existing grade. The road would terminate at the northern end of the project site as a cul-de-sac. The cul-de-sac would have a 40-foot radius to allow trucks and emergency vehicles to turn around and exit at Weber Road. The driveway entrance on Weber Road would be gated and secured outside of

business hours. All trucks, trailers, equipment, and materials associated with the tenants would be stored on-site and within the boundaries of the storage yard areas. There would be no truck queuing or staging of materials along Weber Road or the interior gravel access road.

2.2.4 Utilities

The project site is currently not connected to the City's water or sewer systems as these City systems are not in the proximity of the project site. The following sections describe the proposed utilities for the proposed project, which include connections to the existing on-site well, use of PG&E's electrical facilities, and the construction of six bioretention areas and other drainage improvements.

Water and Sewer

There is an on-site well and ancillary compressor shed located at the northern end of the project site that provides non-potable water. The two existing metal hangars are also each connected to a septic system. The proposed project would not use the existing septic systems or construct new utility connections to the City's water or sewer systems. The tenants would be expected to provide portable restroom facilities and to import potable water for employees and visitors per state and local regulations.

During construction, the on-site well would primarily provide non-potable water for dust suppression. Based upon an estimated 1-inch of water per acre (27,154 gallons per acre) project construction is anticipated to demand approximately 1,088,875 gallons total (Appendix A). The periods of water use would vary slightly with the most intensive activities occurring during earthwork, lime treatment, and aggregate base compaction (66 total days). As such, it is estimated project construction would demand an average of approximately 16,498 gallons per day (1,088,875 gallons / 66 total days). According to the well report prepared by Cal Aqua on June 14, 2022, the on-site well produces approximately 33 gallons per minute, which equates to approximately 47,520 gallons per day or approximately 1,425,600 gallons per month (Appendix A).

With the anticipated +/- 10 hours of daily construction, the average well production per hour (approximately 1,650 gallons) would be slightly less than the average daily production. Therefore, the project construction activities would use temporary storage tanks to hold water as it is produced overnight. In the event project construction activities exceed the on-site well production, the proposed project would temporarily use either a 2,000- or 4,500-gallon water truck to deliver water to the project site. The water truck would be filled at a City hydrant located approximately 0.3-mile west of the project site along Weber Road (Appendix A).

During operation, non-potable water would be provided to the six storage yard areas via a new 4- to 6-inch water line that would connect to the existing well and ancillary compressor shed. The non-potable water would be used for fire suppression and dust control and stored in new water storage tanks to be installed on the property (the location(s) and size(s) of tanks would be determined by the Vacaville Fire Marshall once tenants are located and the applicable fire suppression requirements are determined).

The total water demand during operation would depend on the types of tenants identified as not all tenants are expected to require water for dust control (e.g., container storage). For purposes of this analysis, it is estimated operation would demand 1/10th of 1 inch of water per month (2,715 gallons per acre). Based upon half of the site (20 acres) requiring dust control, it is estimated project operation would

demand approximately 54,444 gallons per month (Appendix A). The remaining portion of the site (20 acres) would include tenants with low water demand, resulting in approximately 27,222 gallons per month. Therefore, it is estimated the total water demand for operation would be approximately 81,666 gallons per month (Appendix A).

Stormwater Drainage

The project site would be covered with a pervious compacted aggregate base. New impervious surface created by the proposed project would consist of the paved driveway entrance, totaling approximately 0.08 acre (3,625 square feet). The proposed project would construct six bioretention areas along the eastern side of the project site, totaling approximately 4.02 acres. The six bioretention areas would collect and treat on-site stormwater from each of the storage yard areas.

Additionally, construction of the new driveway would require replacement of an existing stormwater drainage culvert. The new culvert would be approximately 24-inches wide and 80-feet in length. The proposed project would construct two earthen swales along the southern frontage, between the paved driveway and the SID drainage ditch. The earthen swales would total approximately 0.13 acre (5,600 square feet) and convey stormwater along the site's southern frontage.

Electricity

PG&E currently provides electrical services to the project site via an existing 200-amp electrical meter. In order to provide for any potential future electrical upgrades to the existing electrical facilities, the proposed project would be constructing a new conduit line parallel to the proposed waterline and gravel access road. It is unknown if any tenant(s) would require electrical service or if the existing 200-amp service would need to be upgraded in the future; any future improvements would be confined to the project boundary. Additionally, it is expected tenants would provide on-site diesel generators or self-contained office trailers with generators to provide power to their uses. For purposes of this analysis, it is assumed each of the six storage yard areas would use one 20-kilowatt (kW) diesel generator. It is expected the diesel generators would operate an average of four days a week for up to 8 hours per day.

Project operations would not involve any nighttime activities. However, individual tenants may utilize security systems with temporary lighting and cameras to monitor the storage yard areas. Prior to occupancy, the City would review the proposed lighting fixtures for each tenant as required by the CUP to ensure lighting is pointed downward and away from Weber Road, is motion sensor to dim, and does not create excessive glare to nearby residences or freeway traffic.

2.3 PROJECT CONSTRUCTION

2.3.1 Construction Schedule

The anticipated construction schedule is shown below in Table 2.3-1. It is anticipated construction activities would take approximately four months to complete, starting in November 2023 and ending in February 2024.

Table 2.3-1: Project Construction Schedule

Construction Task	Start Date	End Date	Workdays[1]
Erosion Control	11/11/2023	11/18/2023	6 Days
Earthwork	11/20/2023	1/8/2024	36 Days
Lime Treat Subgrade	1/9/2024	1/22/2024	10 Days
Site Utilities	1/23/2024	1/25/2024	2 Days
Aggregate Base	1/26/2024	2/24/2024	20 Days
Asphalt Paving	2/25/2024	2/26/2024	1 Day

[1]Dates are working days only, excluding holidays/non-workdays.

[2] The air quality modeling included in Appendix B assumes a four month construction schedule beginning September 1, 2023. As such, the emissions calculations included in this analysis represents a more conservative assessment than the proposed project start date shown in Table 2.3-1 as the emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and more stringent regulatory requirements.

Project construction and grading activities would occur Monday through Friday during regular business hours. All construction and grading activities would be consistent with the Vacaville Municipal Code and not occur between dusk (0.5 hour after sunset) and 7:00 a.m. The construction activities would require up to 12 workers per day during peak construction. The construction workforce would be available from nearby areas.

2.3.2 Construction Equipment, Access, and Staging Areas

The project site would be accessed by construction crews from Weber Road. All construction materials and equipment would be stored on-site. Construction activities would generally occur within the project site, and along it's perimeter to construct the driveway and stormwater improvements and the 5-foot-tall fencing. Construction activities are not expected to require any lane closures or staging along Weber Road or I-80. Any construction traffic, lane closures, or street staging would require an approved traffic control plan (TCP) and an encroachment permit from the City.

Construction of the proposed improvements would use typical construction equipment, such as, but not limited to, scrapers, graders, excavators, loaders, crew trucks, water trucks, compactors, mixers, spreaders, and saw trucks.

2.3.3 Construction Activities

The entirety of the project site would be disturbed, with exception of approximately 0.16-acre (7,000 square feet) of existing structure area as all on-site buildings would remain. For purposes of this analysis, we are assuming disturbance to the entire 41-acre site. The proposed activities would include site clearing, grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving. The entire 41-acre site would be cleared of surface vegetation, graded, and compacted. The grading activities would require approximately 41,708 cubic yards (CY) of cut and approximately 38,492 CY of fill, resulting in a "net cut" of approximately 3,216 CY of soil that would be used to balance the site.

The average depth of excavation in the bioretention ponds is approximately 9 feet below ground surface (bgs) with maximum depth of excavation extending to approximately 11 feet bgs for construction of the bioretention areas. With exception to the approximate 50 CY of asphalt concrete to pave the driveway, the remainder of the project site would receive fill and be covered by compacted aggregate base, totaling approximately 30,500 CY in volume.

3.0 ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

The environmental factors checked below would be potentially affected by this project, involving at least one impact that requires mitigation to reduce the impact from "Potentially Significant" to "Less Than Significant" as indicated by the checklist on the following pages.

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

Evaluation of Environmental Impacts

Section 3.0, Environmental Checklist and Environmental Evaluation, presents the environmental checklist form found in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures, if needed.

For the checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant and for which mitigation to reduce the impact to a less than significant level has not been identified. If any potentially significant impacts are identified, an EIR must be prepared. An ISMND cannot be used if there are potentially significant impacts that cannot be mitigated.

Less Than Significant with Mitigation Incorporated: This designation applies when revisions in the project plans or proposals have been made or agreed to by the Applicant that would avoid or mitigate a potentially significant effect to a less than significant level.

Less Than Significant Impact: Any impact that would not be considered significant under CEQA, relative to existing standards.

No Impact: The proposed project would not have any impact.

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3.1 AESTHETICS

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

3.1.1 Environmental Setting

Visual Character of the Project Site

The 41-acre project site is located in the northeastern portion of the City, which mainly consists of farmlands and scattered residential and commercial development. The project site is covered by non-native vegetation. There are two vacant metal hangars, on-site well, and ancillary compressor shed in the northern portion of the project site. The site perimeter is surrounded by 3- to 4-foot-tall fencing, except along a portion of the southern frontage where 5-foot-tall chain-link fencing exists. A drainage ditch owned by SID is adjacent to the southern and eastern portions of the project site and there is an existing overhead PG&E line (with easement) that crosses the southeastern corner of the project site.

Land uses surrounding the project site include I-80 to the north, residences and commercial uses to the south along Weber Road, farmlands to the west, and the former Vaca Valley Raceway property to the east. The project site's eastern boundary is bordered by a drainage pond and ditch, which ultimately connect to the drainage ditch adjacent to the site's southern boundary.

The project site is vacant and does not contain any existing sources of light or glare. Sources of nighttime lighting are primarily generated by vehicles travelling on I-80 and Weber Road, and exterior and interior lighting associated with nearby residences and commercial uses. There is also a billboard adjacent to the northwestern corner of the project site that is lighted at night.

Scenic Resources and Corridors

Most of the City's scenic resources are associated with open space, natural resources, and agricultural uses. Such areas include riparian corridors, views of the rural and undeveloped lands surrounding the

City, hillside areas, and views of the ridgelines such as the Vaca Mountains and English Hills (City of Vacaville 2015). The Vaca Mountains and English Hills are outside of the City limits, about 10 miles west of the project site. Public views of these hillsides are intermittent throughout the City and are partially or fully blocked by intervening buildings and vegetation. The City does not contain any locally or state-designated scenic highways (City of Vacaville 2015).

3.1.2 Methodology

Analysis of the proposed project's visual impacts is based on an evaluation of the changes to the existing visual resources that would result from implementation of the proposed project. In determining the extent and implications of the visual changes, consideration was given to the existing visual quality of the affected environment; specific changes to the visual character and quality of the affected environment resulting from implementation of the proposed project; the extent to which the affected environment contains places or features that provide unique visual experiences or that have been designated in plans and policies for protection or special consideration; and the sensitivity of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities that would be affected by implementation of the proposed project. The existing setting was based on review of documents pertaining to the project site, including the General Plan and Vacaville Municipal Code.

3.1.3 Environmental Impact Analysis

This section discusses the potential impacts on aesthetics associated with the proposed project and provides mitigation measures where necessary.

Impact AES-1 Have a substantial adverse effect on a scenic vista?

Impact Analysis

The General Plan indicates that there are no officially designated scenic vistas in the City but considers westward views of the Vaca Mountains and English Hills as scenic vistas (City of Vacaville 2015). The project site is within northeastern Vacaville, adjacent to I-80 to the north, residences and commercial uses to the south along Weber Road, farmlands to the west, and the former Vaca Valley Raceway property to the east. The Vaca Mountains and English Hills are about 10 miles west of the project site. The project site and surrounding area are generally flat and undeveloped, allowing expansive views of the Vaca Mountains and English Hills from the project site. Existing development, utility infrastructure associated with the Vaca-Dixon substation, and vegetation is present in westward views of the Vaca Mountains and English Hills. The proposed project would temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The temporary equipment and materials, such as containers, cranes, lifts, and trailers stored on-site would have a maximum height of 30 feet. This type of equipment would temporarily be visible on-site and appear above the 5-foot-tall fencing placed along the 3-foot-tall earthen berm. Given the amount of separation between the project site and surrounding uses, westward views of the Vaca Mountains and English Hills would remain. Furthermore, the CUP would require the proposed project to comply with the development and performance standards for the Industrial Park zoning district. The Industrial Park zoning district allows buildings up to 70 feet or up to 90 feet with approval of a CUP. The anticipated equipment would have a maximum height of 30 feet, and therefore would comply with the maximum height requirements for the Industrial Park zoning district. As such, the proposed project would

not limit westward views of the Vaca Mountains or the English Hills and impacts to scenic vistas would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AES-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Impact Analysis
There are no state-designated scenic highways in the City (City of Vacaville 2015). The project site is vacant and does not contain vegetation, rock outcroppings, or historic buildings that are identified as scenic resources by the General Plan. Therefore, the proposed project would have no impact on scenic resources within a state scenic highway.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AES-3 In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact Analysis
The 41-acre project site is in northeastern Vacaville and designated Technology Park by the General Plan and City's zoning code. The project site is vacant and covered with non-native vegetation. There are two vacant metal hangars, on-site well, and ancillary compressor shed in the northern portion of the project site. The site perimeter is surrounded by 3- to 4-foot-tall fencing, except along a portion of the southern frontage where 5-foot-tall chain-link fencing exists. Land uses surrounding the project site primarily consist of farmlands with a few residences and commercial uses located to the south along Weber Road and Byrnes Road. The project proposes a construction and industrial yard to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. A 3-foot-tall earthen berm would be constructed along the northern, eastern, and southern sides of the project site. The existing fencing would be replaced, and a 5-foot-tall, slatted fence would be placed along the top of the berms at the northern side, along a portion

of the eastern boundary, and along the project site's southern boundary with gated access provided on Weber Road. A 5-foot-tall chain-link fence would run along the western boundary of the project site adjacent to the elevated gravel access road and along a portion of the eastern boundary.

The proposed project would not involve the construction of permanent habitable structures or improvements to the existing structures. The temporary equipment and materials would mostly be screened by the perimeter fencing and earthen berms; however, some equipment, such as containers, cranes, lifts, and trailers could extend up to 30 feet and appear above the perimeter fencing. This equipment would primarily be visible from I-80 and Weber Road. There are a few residences located along Byrnes Road; however, the residences are directed to the west, away from the project site, and screened by vegetation along Weber Road. Additionally, views of the project site from I-80 and Weber Road would be intermittent as motorists would be traveling at relatively high speeds (40 to 65 miles per hour). Therefore, the proposed project would not substantially degrade the existing visual character or quality of views of the project site and its surroundings.

The proposed project would be consistent with the Technology Park zoning district and the NGA Overlay District, which allows interim storage yards for off-site construction activities with the approval of a CUP and development agreement. The applicable Technology Park zoning district does not contain any specific development standards related to structure or building height. As such, the CUP would require the project to comply with the development and performance standards of the Industrial Park zoning district. The Industrial Park zoning district allows buildings up to 70 feet or up to 90 feet with approval of a CUP. The anticipated equipment stored on site would have a maximum height of 30 feet, and therefore comply with the height requirements for the Industrial Park zoning district. As required by the CUP, the City would review each tenant prior to occupancy to ensure the use is consistent with the types of tenants and operations anticipated for the site, and that the use complies with applicable federal and state regulations, the Vacaville Municipal Code, and the development and performance standards of the Industrial Park zoning district. The proposed project would be subject to the requirements of the CUP and development agreement to ensure the use is temporary and preserves the land for future development opportunities consistent with the City's Biotechnology and Advanced Manufacturing Initiative. As such, the proposed project would not conflict with applicable zoning or other regulations governing scenic quality, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AES-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact Analysis

The project site is vacant and does not contain any onsite sources of light or glare. Existing sources of nighttime lighting primarily consists of vehicles travelling on I-80 and Weber Road, and exterior and interior lighting associated with nearby residences and commercial uses. There is also a billboard adjacent to the northwestern corner of the project site that is lighted at night. Glare is generated in the project area from passing cars and windows on nearby buildings.

Construction and operation of the proposed project would not involve any nighttime activities; therefore, no permanent lighting fixtures would be installed on-site. However, individual tenants may utilize security systems with temporary lighting and cameras to monitor the storage yard areas. As required by the CUP, the City would review the proposed lighting fixtures for each tenant prior to occupancy to ensure security lighting is pointed downward and away from Weber Road, is motion sensor to dim, and does not create excessive glare to nearby residences or freeway traffic.

The proposed project would store vehicles and equipment that may generate glare. Additionally, vehicles and equipment entering and leaving the project site could generate lighting in the early morning, at night, and during inclement weather. The project site is mostly surrounded by farmlands. The nearest residences are approximately 234 feet south of the project site along Byrnes Road. The residences are further separated from the project site by intervening vegetation, and therefore would not be directly affected by light spillover or glare generated by the proposed project. The light generated by vehicle headlights would be temporary and incrementally add to background light levels currently created by vehicles traveling along I-80 and Weber Road. Therefore, the proposed project would not create a new source of substantial light or glare, and impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

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3.2 AGRICULTURE AND FORESTRY RESOURCES

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

3.2.1 Environmental Setting

The California Department of Conservation (DOC) administers the Farmland Mapping and Monitoring Program (FMMP), California's statewide agricultural land inventory. As discussed in the General Plan, the City traditionally contained land used for grazing, orchards, field, and row crops and has since become urbanized and diversified. Most agricultural land exists immediately outside of the City limits, to the east, west, and south (City of Vacaville 2015).

The 41-acre project site is vacant and within the City's NGA, which is identified in the General Plan as an economic development area for job generating uses such as high-quality offices, industrial uses, and technology campuses. The project site was previously used for cattle grazing and operated as the Vaca-Dixon Airport from the 1945 to about 2000 (Archeological/Historical Consultants 2023). There are two vacant metal hangars, an on-site well, and ancillary compressor shed in the northern portion of the project site. According to the DOC Important Farmland Finder Map, the project site is classified as grazing land (DOC 2022). Grazing land is defined as land on which the existing vegetation is suited to the grazing of livestock (DOC 2022).

3.2.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, and the DOC Important Farmland Map.

3.2.3 Environmental Impact Analysis

This section discusses potential impacts on agriculture and forestry resources associated with the proposed project and provides mitigation measures where necessary.

Impact AG-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Impact Analysis
The project site is in northeastern Vacaville and currently vacant. Land uses surrounding the project site include I-80 to the north, residences and commercial uses to the south along Weber Road, farmlands to the west, and the former Vaca Valley Raceway property to the east. According to the DOC Important Farmland Finder Map, the project site and lands immediately adjacent are classified as grazing land, which contains existing vegetation suited for grazing of livestock (DOC 2022). The project site does not contain prime farmland, unique farmland, or farmland of statewide importance; therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-2 Conflict with existing zoning for agricultural use or a Williamson Act contract?

Impact Analysis
The project site is currently vacant and does not contain any lands contracted under the Williamson Act (City of Vacaville 2013). The project site is zoned Technology Park and within the City's NGA Overlay District, which is intended for the development of job generating uses such as high-quality offices, industrial uses, and technology campuses. The proposed project consists of an interim construction and industrial yard, which is a conditional use in the Technology Park zoning district. Therefore, the proposed project would not conflict with the site's existing zoning or with a Williamson Act contract and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-3 Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?

Impact Analysis

Under PRC Section 12220(g), "Forest land" is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. The project site is currently vacant and classified as grazing land by the DOC Important Farmland Finder Map (DOC 2022). It does not contain any forestry resources, timberland production zones, or active timberland uses, and does not meet the definition of "forest land" as defined by PRC Section 12220(g). Furthermore, the project site is zoned Technology Park, which does not permit timberland production uses. The proposed project would have no impact on forestland, timberland, or timberland zoned Timberland Production.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No Impact.

Impact AG-4 Result in the loss of forestland or conversion of forestland to non-forest use?

Impact Analysis

The 41-acre project site is within the City's NGA. The General Plan does not identify any forestland resources on the project site or within the northeastern portion of the City (City of Vacaville 2013). Therefore, the proposed project would not result in the loss of forestland or conversion of forestland to non-forest use. No impact would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No Impact.

Impact AG-5 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?

Impact Analysis

The project site is classified as grazing land, which contains existing vegetation suited for grazing of

livestock (DOC 2022, City of Vacaville 2015). It does not contain prime, unique, or farmland of statewide importance, or Williamson Act contracted lands. The project site is not zoned for forestland or timberland production and would not be rezoned for agricultural use. The proposed project consists of an interim construction and industrial yard, which is a conditional use in the Technology Park zoning district. Therefore, the proposed project would not involve other changes to the existing environment that would result in the conversion of farmland or forestland to a non-agricultural use and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

3.3 AIR QUALITY

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

The project site lies within a portion of the Sacramento Valley Air Basin (SVAB) which is under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD). The SVAB encompasses eleven counties including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo counties, the westernmost portion of Placer County, and the northeastern half of Solano County. The climate of the SVAB is generally characterized by hot, dry summers and mild, rainy winters. The temperature ranges from 20 to 115 degrees Fahrenheit, with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches, and the rainy season generally occurs from November through March. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

Criteria Air Pollutants

Criteria air pollutants includes ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (measured both in units of smaller than 2.5 microns in diameter [$PM_{2.5}$] and in units of particulate matter smaller than 10 microns in diameter [PM_{10}]), and lead (Pb).

Ozone. Most ground-level ozone is formed as a result of complex photochemical reactions in the atmosphere between reactive organic gases (ROG), nitrogen oxides (NOx), and oxygen. ROG and NOx are considered precursors to the formation of ozone, a highly reactive gas that can damage lung tissue and affect respiratory function. While ozone in the lower atmosphere is considered a damaging air pollutant, ozone in the upper atmosphere is beneficial, as it protects the Earth from harmful ultraviolet radiation. However, atmospheric processes preclude ground-level ozone from reaching the upper atmosphere (USEPA 2022a).

Carbon Monoxide. CO is a colorless, odorless, poisonous gas produced by the incomplete combustion of fossil fuels. Elevated levels of CO can result in harmful health effects, especially for the young and elderly, and can also contribute to global climate change (USEPA 2022a).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas primarily produced as a result of the burning of fossil fuels. NO_2 can also lead to the formation of ozone in the lower atmosphere. NO_2 can cause respiratory ailments, especially in the young and elderly, and can lead to degradations in the health of aquatic and terrestrial ecosystems (USEPA 2022a).

Sulfur Dioxide. SO_2 is primarily emitted from the combustion of coal and oil by steel mills, pulp and paper mills, and non-ferrous smelters. High concentrations of SO_2 can aggravate existing respiratory and cardiovascular diseases in asthmatics and others who suffer from emphysema or bronchitis. SO_2 also contributes to acid rain, which in turn, can lead to the acidification of lakes and streams (USEPA 2022a).

Particulate Matter. Airborne PM is not a single pollutant, but rather is a mixture of many chemical species. PM is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings. Particles vary widely in size, shape, and chemical composition, and may contain inorganic ions, metallic compounds, elemental carbon, organic compounds, and compounds from the earth's crust. Particles are defined by their diameter for air quality regulatory purposes. Those with a diameter of 10 microns or less (PM_{10}) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter ($PM_{2.5}$). Therefore, $PM_{2.5}$ compromises a portion of PM_{10}. Emissions from combustion of gasoline, oil, diesel fuel or wood produce much of the $PM_{2.5}$ pollution found in outdoor air, as well as significant proportion of PM_{10}. PM_{10} also includes dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, wind-blown dust from open lands, pollen, and fragments of bacteria.

PM may be either directly emitted from sources (primarily particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO_2, NOx, and certain organic compounds (USEPA 2022a).

Lead. Sources of Pb include pipes, fuel, and paint, although the use of Pb in these materials has declined dramatically over the years. Historically, a main source of Pb was automobile emissions. Pb can be inhaled directly or ingested by consuming Pb-contaminated food, water, or dust. Fetuses and children are most susceptible to Pb poisoning, which can result in heart disease and nervous system damage (USEPA 2022b). Through regulations, the United States Environmental Protection Agency (USEPA) has gradually reduced the Pb content of gasoline. This program has essentially eliminated violations of the Pb standard in urban areas except those areas with Pb point sources.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air but, due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the Federal Clean Air Act or the California Clean Air Act and are not subject to National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS). Instead, USEPA and the California Air Resources Board (CARB) regulate hazardous air pollutants and TACs, respectively, through statutes and regulations that

generally require the use of the maximum or best available control technology to limit emissions. In conjunction with YSAQMD rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national level, USEPA has established national emission standards for hazardous air pollutants in accordance with the requirements of the Federal Clean Air Act and subsequent amendments. These are technology-based, source-specific regulations that limit allowable emissions of hazardous air pollutants.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects.

Diesel Particulate Matter

Diesel particulate matter (DPM) was identified as a TAC by the CARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 42 percent of the statewide total, with an additional 55 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about three percent of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (CARB 2023).

DPM is typically composed of carbon particles (also called “soot” or “black carbon”) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and NOx. NOx emissions from diesel engines are important because they can undergo chemical reactions in the atmosphere leading to formation of $PM_{2.5}$ and O_3.

In California, diesel exhaust particles have been identified as a carcinogen accounting for an estimated 70 percent of the total known cancer risks in California. DPM is estimated to increase statewide cancer risk by 520 cancer occurrences per million residents exposed over an estimated 70-year lifetime. Non-cancer health effects associated with exposure to DPM include premature death, exacerbated chronic heart and lung disease, including asthma, and decreased lung function in children. Short-term exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks (CARB 2023).

Individuals most vulnerable to non-cancer health effects of DPM are children whose lungs are still developing and the elderly who often have chronic health problems. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to DPM (CARB 2023). In addition to its health effects, DPM significantly contributes to haze and reduced visibility.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals with useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings constructed prior to 1977 when it was banned for use in buildings. Exposure to naturally occurring asbestos can occur during soil disturbing activities in areas with deposits present (USEPA 2023).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The nearest sensitive receptors to the Project site would be the rural residences located approximately 234 feet to the south, across Weber Road. The nearest worker receptors would be the Solano Brewing Company located approximately 1,000 feet to the southeast.

Air Quality Standards

The USEPA and CARB designate air basins where ambient air quality standards are exceeded as “non-attainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National non-attainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Attainment status is based on the NAAQS and the CAAQS. Each standard has a different definition, or “form” of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual standard for $PM_{2.5}$ is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The Federal Clean Air Act identifies two types of NAAQS. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings (USEPA 2022a). The CAAQS are equal to or more stringent than the NAAQS and include pollutants for which national standards do not exist. Table 3.3-1 presents the applicable CAAQS and NAAQS.

Table 3.3-1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	National Standards[2]	
			Primary	Secondary
Ozone (O_3)	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary Standards
	1-hour	0.09 ppm (180 µg/m^3)	--	
Carbon monoxide (CO)	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	--
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	
Sulfur dioxide (SO_2)	Annual arithmetic mean	--	0.030 ppm (80 µg/m^3)	--
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (80 µg/m^3)	--
	3-hour	--	--	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	--	--
Respirable Particulate Matter Smaller than 10 Microns in Diameter (PM_{10})	Annual arithmetic mean	20 µg/m^3	--	Same as Primary Standards
	24-hour	50 µg/m^3	150 µg/m^3	
Respirable Particulate Matter Smaller than 2.5 Microns in Diameter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3	15 µg/m^3
	24-hour	No separate standard	35 µg/m^3	Same as Primary Standards
Sulfates	24-hour	25 µg/m^3	--	--
Lead (Pb)	30-day average	1.5 µg/m^3	--	--
	Calendar quarter	--	1.5 µg/m^3	Same as Primary Standard
	Rolling 3-month average	--	0.15 µg/m^3	
Hydrogen sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	--	--
Vinyl chloride (chloroethene)	24-hour	0.01 ppm (26 µg/m^3)	--	--
Visibility reducing particles	8-hour	In 1989, the Air Resources Board converted the general statewide 10-mile visibility standard to instrumental	--	--

Pollutant	Averaging Time	California Standards[1]	National Standards[2]	
			Primary	Secondary
		equivalents, which are extinction of 0.23 per kilometer.		

Notes:
1. CO, SO_2 (1- and 24-hour), NO_2, O_3, PM_{10}, and visibility reducing particles standards are not to be exceeded.
2. Not to be exceeded more than once a year except for annual standards.
-- = no standard established
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
Source: CARB 2016.

The YSAQMD is designated as nonattainment for the federal and state ozone standards, the state standard for PM_{10}, and the federal standard for $PM_{2.5}$ (YSAQMD 2022). As a non-attainment area for the federal ozone standard, the Sacramento region is required to prepare various planning documents on an ongoing basis. Each time a new standard is adopted by USEPA, local air districts must prepare plans to show how the standard will be achieved by the appropriate deadline. The most recent federal ozone attainment plan is the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 Ozone Plan). The purpose of the 2017 Ozone Plan is to demonstrate how the Sacramento Federal Nonattainment Area will meet the reasonable further progress requirements and demonstrate attainment of the 2008 ozone NAAQS. The plan also includes an updated emissions inventory, sets motor vehicle emissions budgets, demonstrates how it complies with vehicle miles traveled (VMT) emissions offset and reasonably available control measure requirements, and documents the photochemical modeling used to support the attainment demonstration (SMAQMD et al. 2017).

The California Clean Air Act requires the submission of a plan for attaining and maintaining CAAQS for ozone with subsequent updates every three years. The most recently adopted plan, Triennial Assessment and Plan Update (May 2019), covers the years 2015 through 2017. The document summarizes emission trends over this time period, forecasts future emissions, and reviews efforts made by the YSAQMD to improve air quality (YSAQMD 2019).

The Sacramento Federal Nonattainment Area has been identified by the USEPA as an area that is required to develop a mitigation plan to minimize the public exposure from $PM_{2.5}$ emissions generated during wildfire events. The Wildfire Mitigation Plan for Sacramento Federal Nonattainment Area for $PM_{2.5}$ outlines the actions that each air district will take to notify the public and minimize the air quality impacts when emissions from wildfires increase $PM_{2.5}$ concentrations in the region to a level where they exceed or are expected to exceed the 24-hour $PM_{2.5}$ NAAQS (EDCAQMD et al. 2018).

Thresholds of Significance

Nearly all development projects in the SVAB have the potential to generate air pollutants that may increase the difficultly of attaining NAAQS and CAAQS. To help public agencies evaluate air quality impacts, the YSAQMD has developed the Handbook for Assessing and Mitigating Air Quality Impacts, which was adopted July 11, 2007. The YSAQMD's handbook includes the recommended thresholds of significance for project-level emissions, as summarized in Table 3.3-2.

Table 3.3-2: YSAQMD Significance Thresholds

Pollutants	YSAQMD Significance Thresholds
ROG	10 tons per year
NOx	10 tons per year
PM_{10}	80 pounds per day

Source: YSAQMD 2007

The YSAQMD has also established thresholds for development projects that have the potential to expose the public to TACs from stationary sources. If a project were to exceed the following thresholds, it would be considered to have a significant air quality impact. These thresholds are based on the YSAQMD's Risk Management Policy.

- Probability of contracting cancer for the maximally exposed individual (MEI) equals to 10 in one million or more.
- Ground-level concentrations of noncarcinogenic toxic air contaminants would result in a Hazard Index equal to one for the MEI or greater.

3.3.2 Methodology

Construction and operational emissions for the proposed project were modeled using the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.14. The model inputs were based on information from the project design as described in Section 2.0, Project Description, and CalEEMod default values. Vehicle emissions associated with project operations were modeled using emission factors and fleet mix data from CARB's EMFAC2021 (v1.0.2). In addition, USEPA AERMOD Version 11.2.0 dispersion model was used to estimate the concentration of DPM at sensitive receptors locations from potential sources of project generated TACs. The model output and detailed assumptions are provided in Appendix B.

3.3.3 Environmental Impact Analysis

This section discusses potential impacts related to air quality associated with the proposed project and provides mitigation measures where necessary.

Impact AIR-1 Conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis

Air districts are required to prepare air quality plans to identify strategies to bring regional emissions into compliance with federal and state air quality standards. Air districts establish emissions thresholds for individual projects to demonstrate the point at which a project would be considered to increase the air quality violations. A project would conflict with the applicable air quality plan if they exceeded any emissions thresholds for which the region is in nonattainment for.

As noted previously, the YSAQMD region is designated as nonattainment for the federal and state ozone standards, the state standard for PM_{10}, and the federal standard for $PM_{2.5}$ (YSAQMD 2022). Accordingly, YSAQMD has prepared air quality plans, including the 2017 Ozone Plan and the Triennial Assessment

and Plan Update, to achieve attainment of the applicable ozone and PM standards. The YSAQMD's adopted thresholds of significance indicate the levels of emissions that projects may emit while the region still moves towards attainments of the CAAQS and NAAQS. Projects that exceed thresholds would be considered to conflict with the 2017 Ozone Plan.

As described under Impact AIR-2, the proposed project would not exceed the thresholds established by the YSAQMD. As a result, the project would not conflict with or obstruct implementation of the applicable air quality plan.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AIR-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?

Impact Analysis

In developing thresholds of significance for air pollutants, the YSAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Construction Emissions

Construction emissions associated with the proposed project are shown in Table 3.3-3. As shown in the table, the emissions from construction would be below the applicable YSAQMD thresholds.

Table 3.3-3: Construction Criteria Pollutant Emissions

Year	ROG (tons per year)	NOx (tons per year)	PM_{10} (pounds per day)
2023	0.35	0.63	19.0
YSAQMD Thresholds	**10 tons per year**	**10 tons per year**	**80 pounds per day**
Exceed Thresholds?	No	No	No

Source: Stantec Consulting 2023 (Appendix B)

Note: The air quality modeling included in Appendix B assumes a four-month construction schedule beginning September 1, 2023. As such, the emissions calculations included in the analysis represents a more conservative assessment than the proposed project start date shown in Table 2.3-1 as the emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and more stringent regulatory requirements.

Operational Emissions

Emissions during operation of the proposed project would be generated primarily from tenant and employee vehicle trips to and from the site, as well as from operations of off-road equipment. Operational emissions are presented in Table 3.3-4. As shown therein, the emissions would be below the applicable thresholds of significance.

Table 3.3-4: Operational Criteria Pollutant Emissions

Source	ROG (tons per year)	NOx (tons per year)	PM_{10} (pounds per day)
Mobile[1]	0.22	3.44	0.41
Area	0.05	0.00	0.00
Off-Road	0.22	2.12	0.78
Project Total	*0.49*	*5.56*	*1.19*
YSAQMD Thresholds	**10 tons per year**	**10 tons per year**	**80 pounds per day**
Exceed Thresholds?	No	No	No

Notes:
[1]Mobile emissions were calculated using emission factors from EMFAC2021.
Source: Stantec Consulting 2023 (Appendix B)

Conclusion

As shown in Table 3.3-3 and Table 3.3-4, criteria pollutant emissions would not exceed any threshold of significance during project construction or operation. Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard, and the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AIR-3 Expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis
This discussion addresses whether the proposed project would expose sensitive receptors to construction-generated fugitive dust (PM_{10}), naturally occurring asbestos (NOA), construction-generated DPM, or operational related TACs. According to CARB, some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be

sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest residential receptors to the project site are the single-family residences located approximately 234 feet to the south, across Weber Road. The nearest worker receptors are at the Solano Brewing Company, approximately 1,000 feet to the southeast.

Construction Emissions

During construction of the proposed project, the potential exists for emissions of fugitive dust, NOA, and DPM to be released. Each TAC is discussed separately below.

Fugitive Dust

Fugitive dust (PM_{10}) would be generated from site grading and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from the project site. However, YSAQMD Rule 2.11, Particulate Matter Concentration, limits the discharge of PM emissions. In addition, as demonstrated in Table 3.3-3, PM_{10} emissions from construction would not exceed the YSAQMD's threshold of significance.

Naturally Occurring Asbestos

Construction in areas of rock formations that contain NOA could release asbestos to the air and pose a health hazard. A review of the map with areas more likely to have rock formations containing NOA in California indicates that there is no asbestos in the immediate project area (USGS 2011). Therefore, construction of the proposed project would not expose sensitive receptors to NOA.

Diesel Particulate Matter (DPM)

Exposure to DPM from diesel vehicles and off-road construction equipment can result in health risks to nearby sensitive receptors. A quantitative health risk assessment was prepared for the proposed project to assess potential health impacts to nearby receptors from DPM generated during project construction. Results of the analysis are presented in Table 3.3-5.

Table 3.3-5: Unmitigated Health Risk from Project Construction

Receptor	Cancer Risk Per Million	Chronic Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[2]
Residential[1]	0.73	0.003	0.01
Worker[1]	0.01	0.0007	0.003
YSAQMD Thresholds	**10.0**	**1.0**	**0.30**
Exceed Thresholds?	No	No	No

Notes:

[1] The exposure period for the MEI resident and MEI worker is assumed to include the entire construction period (0.3-year), starting with the third trimester phase of life.

[2] PM_{10} annual concentration used as a proxy.

Source: Stantec Consulting 2023 (Appendix B)

As shown in the table, construction of the proposed project would not expose residential receptors to a cancer risk, chronic inhalation hazard index, or concentration of PM that would exceed the applicable

thresholds of significance. In addition, construction of the project would not result in any impacts to worker receptors in excess of the YSAQMD's thresholds.

Operational Emissions

The greatest potential for exposure to TACs during long-term operations is from the use of heavy-duty diesel trucks, off-road equipment, and stationary generators that use diesel fuel.

A quantitative health risk assessment was prepared for the proposed project to assess potential health impacts to nearby receptors from DPM generated during project operations. Results of the analysis are presented in Table 3.3-6. As shown in the table, TACs emitted during project operations would not result in chronic inhalation hazard index or concentration of PM that would exceed the applicable thresholds of significance. In addition, the project would not result in any impacts to worker receptors in excess of the YSAQMD's thresholds. However, operations of the project could expose residential receptors to a cancer risk level that would exceed the YSAQMD threshold of significance. Therefore, Mitigation Measures AIR-1 and AIR-2 are required.

Table 3.3-6: Unmitigated Health Risk from Project Operations

Receptor	Cancer Risk Per Million	Chronic Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[2]
Residential[1]	25.6	0.009	0.043
Worker	1.75	0.002	0.011
YSAQMD Thresholds	**10.0**	**1.0**	**0.30**
Exceed Thresholds?	Yes	No	No

Notes:

[1] The exposure period for the maximally exposed individual receptor is assumed to include the maximum project lifetime (15 years), starting with the third trimester phase of life.

[2] PM_{10} annual concentration used as a proxy.

Source: Stantec Consulting 2023 (Appendix B)

With implementation of Mitigation Measure AIR-1 and AIR-2, health risks would be reduced to the levels presented in Table 3.3-7. For the mitigated model run, the heavy-duty diesel truck trips were not changed from the original assumptions, but all off-road equipment engines greater than 50 horsepower were assumed to be Tier 4, and a 300-foot buffer on the southern boundary of the site was included for on-site diesel equipment.

Table 3.3-7: Mitigated Health Risk from Project Operations

Receptor	Cancer Risk Per Million	Chronic Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[2]
Residential[1] (Operation Only)	7.42	0.002	0.012
Residential (Construction and Operation)	8.15	-	-
YSAQMD Thresholds	**10.0**	**1.0**	**0.30**
Exceed Thresholds?	No	No	No

Notes:

[1] The exposure period for the maximally exposed individual receptor is assumed to include the maximum project lifetime (15 years), starting with the third trimester phase of life.

[2] PM_{10} annual concentration used as a proxy.

Source: Stantec Consulting 2023 (Appendix B)

Conclusion

Based on the analysis above, during operations, the proposed project could expose sensitive receptors to substantial pollutant concentrations and, therefore, the impact would be significant. However, implementation of Mitigation Measures AIR-1 and AIR-2 would reduce the impact to a less-than-significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM AIR-1: **Minimize Exhaust Emissions During Operation.** Exhaust emissions shall be minimized during operational activities with the use of off-road equipment and generator engines that meet or exceed CARB's Tier 4 engine emissions standards for off-road equipment exceeding 50 horsepower (hp). At a minimum, all operational off-road equipment and generators over 50 hp shall be certified as compliant with the Tier 4 engine emissions standards as provided in CCR, Title 13, section 2423(b)(1)(B).

MM AIR-2: **Buffer for Operational Equipment.** A 300-foot buffer from the southern project boundary along Weber Road shall be required. No diesel-powered generators or other diesel-powered off-road construction equipment shall be allowed to operate within this buffer area.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact AIR-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Analysis
While offensive odors rarely cause any physical harm, they can still be unpleasant, leading to distress among the public and often generating citizen complaints. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. The nearest receptors to the project site include the single-family residences located to the south, across Weber Road.

Construction activities associated with the project could result in short-term odorous emissions from diesel exhaust associated with diesel-fueled equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. Project construction would also be required to comply with all applicable YSAQMD rules and regulations, particularly associated with permitting of air pollutant sources. Compliance with the aforementioned regulations would help to minimize emissions, including emissions leading to odors.

The YSAQMD provides a list of common types of facilities that are known to generate odors, including, but not limited to, wastewater treatment facilities, chemical and fiberglass manufacturing, painting operations, agricultural operations, and asphalt plants. The project does not include any land uses that are typically associated with emitting objectionable odors.

Finally, YSAQMD regulates objectionable odors through Rule 2.5, Nuisance, which dictates that emissions that cause nuisance or annoyance to the public are prohibited (YSAQMD 2010). Thus, although not anticipated, if odor complaints are made after the project is developed, the YSAQMD would ensure that such odors are addressed, and any potential odor effects are minimized or eliminated.

In conclusion, the proposed project would not result in other emissions, such as those leading to odors, affecting a substantial number of people. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.4 BIOLOGICAL RESOURCES

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

3.4.1 Environmental Setting

The following information is based on the Biological Resources Assessment prepared for the proposed project by Greg Matuzak Environmental Consulting LLC in January 2023. The complete Biological Resources Assessment is provided in Appendix C.

The 41-acre project site is currently vacant and covered by non-native vegetation. The project site was primarily used for cattle grazing but operated as the Vaca-Dixon Airport from the 1945 to about 2000 (Archeological/Historical Consultants 2023). Existing on-site development includes two vacant metal hangars, an on-site well, and ancillary compressor shed in the northern portion of the project site. The topography is generally flat with elevations ranging from approximately 75 to 80 feet above mean sea level. The site's drainage generally flows north to south, and southeast toward the drainage ditches along Weber Road and the SID canal and drainage basin adjacent to the eastern boundary of the site. Land

uses surrounding the project site include I-80 to the north, residences and commercial uses to the south along Weber Road, farmlands to the west, and the former Vaca Valley Raceway property to the east.

3.4.2 Methodology

This section summarizes the methods of the Biological Resources Assessment prepared by Greg Matuzak Environmental Consulting LLC in January 2023. A more detailed discussion of the methods is provided in the Biological Resources Assessment, which is included as Appendix C.

Background Research

Greg Matuzak Environmental Consulting LLC completed a desktop review of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database search of historical and recent records of special-status plant and animal species known to occur within 3 miles of the project site (CDFW 2022); the California Native Plant Society's online Inventory of Rare and Endangered Plants of California (CNPS 2022); the United States Fish and Wildlife Service (USFWS) Information, Planning, and Consultation System (USFWS 2022a); National Wetland Inventory map (USFWS 2022b); United States Department of Agriculture Soils Mapper (USDA 2022); Natural Resources Conservation Service Hydric Soils List for Solano County (NRCS 2022); the Solano Multi-Species Habitat Conservation Plan (HCP); and the City of Vacaville General Plan and Municipal Code.

Field Survey

Greg Matuzak Environmental Consulting LLC conducted a survey of the project site and surrounding area on December 15, 2022. The entirety of the project site was surveyed on foot to identify habitat and vegetation types and potential impacts to special-status plant and wildlife species identified in the desktop review. Given the biological resources surveys were not conducted during the blooming period for each of the special-status plant species with the potential to occur within the project area, the surveys focused on the identification of suitable habitat for those special-status plant species and to determine whether the project area contained suitable habitat for their potential presence.

Vegetation Communities

The project site is mostly covered by non-native annual grassland vegetation due to the agricultural activities that have occurred. The annual exposed grasslands within the project site are surrounded by disturbed habitats that have undergone extensive grading and development over the decades. This extensive vegetative series is composed of many non-native and native annual species. The most common valley grasses are now annuals, whereas their native counterparts were often perennial grasses. Most of the areas along the edges of the project site contain a mix of fill material, asphalt, and gravel that have created a mix of non-native ruderal grassland vegetation and areas of barren ground. This also occurs within the northwest portion of the project site where the existing structures are located.

The Biological Resources Assessment did not identify and wetland or aquatic features within the project site. There is a man-made drainage ditch adjacent to the southern and southeastern portions of the project site, which connect to the drainage ditches along the northern side of Weber Road. The drainage ditch does not contain any wetland associated vegetation and was dry at the time of the site visit and

survey conducted in December 2022 after heavy rains (Greg Matuzak Environmental Consulting LLC 2023).

The National Wetland Inventory and National Hydrography Database identify aquatic resources to the south and east of the project site, including a pond, drainage, and potential wetlands adjacent to the east of the project site, and a drainage ditch located along the southern side of Weber Road (Greg Matuzak Environmental Consulting LLC 2023).

Special-Status Species

Special-status plant and wildlife species were identified based on a review of pertinent literature, the USFWS species list, California Natural Diversity Database and California Native Plant Society database records, and the reconnaissance-level biological field survey results. CNNDB special-status plant species occurrences were reviewed within 3 miles of the project site. The Biological Resources Assessment indicates the following six special-status plant species and six special-status wildlife species have previously been identified within 3 miles of the project site: bearded popcornflower (*Plagiobothrys hystriculus*), dwarf downingia (*Downingia pusilla*), legenere (*Legenere limosa*), Keck's checkerbloom (*Sidalcea keckii*), Baker's navarretia (*Navarretia leucocephala ssp. bakeri*), two-fork clover (*Trifolium amoenum*), California linderiella (*Linderiella occidentalis*), vernal pool fairy shrimp (*Branchinecta lynchi*), western pond turtle (*Emys marmorata*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and white-tailed kite (*Elanius leucurus*). Additionally, the Biological Resources Assessment considered the potential for the giant garter snake (*Thamnophis gigas*) and tricolored blackbird (*Agelaius tricolor*) to occur as these species are covered under the Solano Multi-Species HCP. For each species, habitat requirements were assessed and compared to the habitats in the project site and immediate vicinity to determine if potential habitat occurs in the project site.

3.4.3 Environmental Impact Analysis

This section discusses potential impacts on biological resources associated with the proposed project and provides mitigation measures where necessary.

Impact BIO-1	**Have a substantial adverse effect, either directly or through habitat modifications on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Impact Analysis

Special-Status Plant Species

As discussed, the following six special-status plant species have been recorded within 3 miles of the project site: bearded popcornflower (*Plagiobothrys hystriculus*), dwarf downingia (*Downingia pusilla*), legenere (*Legenere limosa*), Keck's checkerbloom (*Sidalcea keckii*), Baker's navarretia (*Navarretia leucocephala ssp. bakeri*), and two-fork clover (*Trifolium amoenum*). Although the biological field survey conducted on December 15, 2022 was outside of the bloom period for most of these special-status plant species, the site is heavily disturbed from previous agricultural activities and use as the former Vaca-Dixon Airport, thereby limiting the opportunity for vegetation to establish. Based on the lack of suitable habitat, the Biological Resources Assessment determined the project site does not provide moderate- or

high-potential habitat for special-status plant species to occur. Additionally, the Biological Resources Assessment determined due to the earthen berm along the eastern boundary of the project site, the proposed project would not indirectly affect special-status plant species associated with the pond and drainage ditch to the east and south. Therefore, the proposed project would have no impact to special-status plants.

Special-Status Wildlife Species and Nesting Birds

The following six special-status wildlife species have been recorded within 3 miles of the project site: California linderiella (*Linderiella occidentalis*), vernal pool fairy shrimp (*Branchinecta lynchi*), western pond turtle (*Emys marmorata*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and white-tailed kite (*Elanius leucurus*). Additionally, the Biological Resources Assessment considered the potential for the giant garter snake (*Thamnophis gigas*) and tricolored blackbird *(Agelaius tricolor)* to occur as these species are covered under the Solano Multi-Species HCP. Due to the previous disturbance from agricultural activities, the Biological Resources Assessment determined the project site does not provide suitable habitat for potential special-status wildlife species to occur. Additionally, the Biological Resources Assessment determined due to the earthen berm along the eastern boundary of the project site, the proposed project would not indirectly affect special-status wildlife species associated with the pond and drainage ditch to the east and south.

The project site does not contain any large trees. There is a single medium sized eucalyptus tree within the southwestern portion of the site and two small to medium sized eucalyptus trees along Weber Road. As such, the project site provides limited nesting habitat for nesting raptors, including white-tailed kite, and other migratory birds protected by the Migratory Bird Treaty Act. The Biological Resources Assessment considered potential nesting habitat for Swainson's hawk as this species has been identified nesting in large trees, including eucalyptus trees to the south of the project site. Due to the smaller size of the eucalyptus trees, the Biological Resources Assessment determined no suitable nesting habitat is present for Swainson's hawk. Furthermore, no active or inactive Swainson's hawk nests were observed during the field survey. As the project site and surrounding area consists of agricultural lands, there is suitable foraging habitat for special-status bird species, including the Swainson's hawk. In accordance with Vacaville Municipal Code Chapter 14.28.001, the proposed project would be subject to the City of Vacaville's Avian Species Foraging Habitat Mitigation Fee to offset impacts to agricultural land and/or avian species foraging habitat.

Additionally, if construction activities occur during the typical nesting season (February 1 through August 31) this may cause direct effects (e.g., tree removal and vegetation clearing) and indirect effects (e.g., noise and vibration) to nesting birds, causing adults to abandon active nests and result in nest failure and reduced reproductive success. Prior to construction, the proposed project would implement Mitigation Measure BIO-1, which involves conducting pre-construction nesting bird surveys to document all nests on and adjacent to the project site. Protective buffers would be implemented around all documented nests during construction to minimize disturbance to nesting birds. Therefore, impacts on special-status wildlife and nesting migratory birds would be less than significant with implementation of Mitigation Measure BIO-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM BIO-1: **Avoid Disturbance of Nesting Birds.** If project activities occur during the nesting season for native birds (February 1 to August 31), the following measures shall be implemented to avoid or minimize the potential for adverse impacts on nesting migratory birds and raptors:

- Pre-construction nesting bird survey for species protected by the Migratory Bird Treaty Act and California Fish and Game Code shall be conducted by a qualified biologist within a 100-foot radius of proposed construction activities for passerines and a 300-foot radius for raptors no more than 2 weeks prior to the start of construction activities.
- If active nests are found, a qualified biologist shall determine the size of the buffers based on the nesting species and its sensitivity to disturbance. The size of the buffers may be reduced at the discretion of a qualified biologist, but no construction activities shall be permitted within the buffer if they are demonstrated to be likely to disturb nesting birds. Active nest sites shall be monitored periodically to determine time of fledging.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact BIO-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact Analysis
The Biological Resources Assessment determined the project area does not contain any Clean Water Act regulated "waters of the U.S.," including wetlands, nor does the project area include any streams and associated riparian habitat that would be regulated by CDFW (Greg Matuzak Environmental Consulting LLC 2023).

The National Wetland Inventory and National Hydrography Database identify aquatic resources to the south and east of the project area, including a pond, drainage ditch, and potential wetlands adjacent to the east of the project site, and a drainage ditch located along the southern side of Weber Road (Greg Matuzak Environmental Consulting LLC 2023). The Biological Resources Assessment determined these features would not be identified as jurisdictional "other waters of the U.S." that would be regulated under the Clean Water Act given these features are manmade and do not contain any riparian habitat. Therefore, the proposed project would have no impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies and regulations or by the CDFW or USFWS.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-3	**Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Impact Analysis
As discussed, the Biological Resources Assessment determined the project area does not contain any Clean Water Act regulated "waters of the U.S.," including wetlands, nor does the project area include any streams or associated riparian habitat that would be regulated by CDFW.

The National Wetland Inventory and National Hydrography Database identify aquatic resources to the south and east of the project area, including a pond, drainage ditch, and potential wetlands east of the project site, and a drainage ditch located along the southern side of Weber Road (Greg Matuzak Environmental Consulting LLC 2023). The Biological Resources Assessment determined these features would not be identified as jurisdictional "other waters of the U.S." that would be regulated under the Clean Water Act as these features are manmade. Additionally, project construction activities would not directly impact these features or indirectly impact any special-status species that may occur within these features as they are separated from the project site by an earthen berm and dense vegetation along the eastern and southern boundaries of the project site (Appendix C). Furthermore, as discussed in Impact HYD-1, the proposed project would comply with the NPDES General Construction Permit, which requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would identify BMPs to control sedimentation, erosion, and hazardous materials from contacting stormwater, with the intent of keeping all products of erosion from moving off-site into the drainage ditches to the east and south. As such, with the implementation of Mitigation Measure HYD-1 the proposed project would not result in direct or indirect impacts to the adjacent aquatic features and impacts would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact

Mitigation Measures
Mitigation Measure HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant with Mitigation.

Impact BIO-4	**Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

Impact Analysis
Habitat corridors are segments of land that provide linkages between different habitats while also providing cover. On a broader level, corridors also function as avenues along which wide-ranging animals can travel, plants can propagate, genetic interchange can occur, populations can move in response to environmental changes and natural disasters, and threatened species can be replenished from other areas. Habitat corridors often consist of riparian areas along streams, rivers, or other natural features. Habitat corridors have been recognized by federal agencies such as the USFWS and the State as

important habitats worthy of conservation. In general, movement corridors consist of areas of undisturbed land cover that connect larger, contiguous habitats.

The project site consists of an agricultural property bordered by I-80 to the north, Weber Road to the south, farmlands to the west, and the former Vaca Valley Raceway to the east. It does not act as a corridor for species dispersal or provide migration habitat connectivity to adjacent habitat. Therefore, no impacts on the movement of any native resident, migratory, or wildlife species would occur.

Level of Significance Before Mitigation
No Impact

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Analysis
The proposed project would not remove the on-site trees; therefore, no tree preservation policies apply. As such, there would be no impact with respect to conflicting with local tree policies or ordinances protecting biological resources such as a tree preservation policy or ordinance.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-6 Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?

Impact Analysis
The City falls within the jurisdiction of the Solano Multi-Species HCP, which was released in administrative draft form in 2012 and has not been formally adopted. The project site is within the draft HCP boundaries and designated Valley Floor Grassland (SCWA 2012). The Biological Resources Assessment considered the potential for special-status plant and wildlife species covered by the Solano Multi-Species HCP, including giant garter snake (*Thamnophis gigas*) and tricolored blackbird (*Agelaius tricolor*), to occur on the project site. Due to the lack of suitable habitat and previous cattle grazing activities, the Biological Resources Assessment determined there is very low to low potential for special-status plant and wildlife species to occur on the project site. Therefore, the proposed project would not conflict with any adopted HCPs or other approved local, regional, or state HCP and no impact would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No Impact.

3.5 CULTURAL RESOURCES

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?	☐	☐	☒	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

This section is based on the Archeological Resource Management Report prepared for the proposed project by Archeological Resource Service in February 2023, and the Historic Resource Evaluation prepared by Archaeological/Historical Consultants in August 2023. The Archeological Resource Management Report is provided in Appendix D and the Historic Resource Evaluation is provided in Appendix E.

The 41-acre project site is located in northeastern Vacaville, between I-80 and Weber Road. The project site is currently vacant and covered mostly by non-native vegetation. According to the Archeological Resource Management Report, the project site has been associated with agriculture since at least the mid-19th century. Based on review of topographic maps and aerial imagery from the late 1940s, the project site was used for the Vaca-Dixon Airport, which was installed between 1945 and 1948, and shut down between 1980 and 2000 (Archeological/Historical Consultants 2023). The airport's original facilities included two approximately 40 x 40 foot buildings at the northwestern corner of the project site, one located where an empty concrete pad is visible today and the other at the current location of Hangar 1 that was constructed in the 1970s. Hangar 2 is located northeast of Hangar 1 and was constructed in the 1950s. Two runways were originally present at Vaca-Dixon Airport, which were approximately 2,000 to 2,500 feet long. Other features include an access road spanning the western boundary of the project site and an ancillary compressor shed. No trace of the north-south runway was located during the field visit conducted by Archaeological/Historical Consultants in August 2023. A 750-foot long section of the northeast-southwest runway is still visible, though the asphalt is heavily overgrown with grass and thistles (Archeological/Historical Consultants 2023).

Land uses surrounding the project site include I-80 to the north, farmlands to the west, the former Vaca Valley Raceway property to the east, and residences and commercial uses to the south along Weber Road. The project site's eastern boundary is bordered by a drainage pond and ditch, which ultimately connect to the drainage ditch adjacent to the site's southern boundary.

3.5.2 Methodology

Archeological Resource Management Report

To determine the presence or absence of cultural resources within the project site and vicinity, Archeological Resource Service prepared an Archeological Resource Management Report on February 21, 2023 (Appendix D). The Archeological Resource Management Report included a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), literature review, review of the California Native American Heritage Commission (NAHC) sacred lands file, and a field survey of the project site on February 2, 2023 to identify any cultural resources not previously recorded within the site boundaries.

Records Search and Literature Review

A records search (NWIC File No. 22-1217) was completed at the NWIC of the CHRIS, located in Rohnert Park, California, on February 8, 2023. As an affiliate of the State of California Office of Historic Preservation, the NWIC is the official state repository of cultural resource records and reports for the region that includes Solano County. Information was consulted regarding all previously recorded archaeological sites, historic properties, and previously evaluated properties within a 0.5-mile radius of the project site (referred to as the project area). This research was used to assess the project area's archaeological sensitivity and determine if any known cultural resource might be impacted by the proposed project.

In addition, Archeological Resource Service contacted the NAHC, on February 2, 2023, to request a search of the sacred lands file and a list of Native American contacts that might have knowledge of tribal cultural resources within the project area. The NAHC responded on March 7, 2023, stating that the results of the sacred lands file search were negative. The NAHC also provided a list of Native American individuals and organizations for further consultation. On July 20, 2023, City staff sent notification letters to the Yocha Dehe Wintun Nation to begin the AB 52 consultation process. Pursuant to the statute, tribes are required to respond in writing within 30 days. To date, the City has not received any responses regarding the proposed project.

Records Search Results

The Archeological Resource Management Report indicates at least seven major studies have been conducted within 0.5-mile of the project site. No previously recorded cultural resources were identified within the project site or within the 0.5-mile record search area. The nearest recorded resources are historic-era properties reflective of Vacaville's farming history. No prehistoric resources have been noted, which in addition to the age of the alluvial deposits in the vicinity of the project site, can possibly be attributed to decades of plowing and other farming activities that have disturbed much of the natural soil and any potential archeological or tribal cultural resources (Archeological Resource Service 2023).

Field Survey

Archaeological Resource Service conducted a field survey of the project site on February 2, 2023, to identify historic and prehistoric sites and artifacts. The project site consists of an agricultural property previously used for cattle grazing. Archaeological Resource Service did not find any indications of prehistoric occupation; the only artifactual material observed was modern trash (glass, plastic, metal, etc.).

Buried Site Sensitivity

According to the Archeological Resource Management Report, on-site soils observed largely consist of a light/yellowish to grayish brown sandy loam, although some clay material was apparent. The soil showed heavy levels of disturbance as a result of being trampled by cattle and other livestock over the years. The project site is within an alluvial floodplain largely dating to the Pleistocene era. Generally, buried sites are found within landforms dating to the Holocene era (11,800 calibrated years before the present), during which humans first settled in California, although those dating to the latest Pleistocene may also contain archaeological deposits. Based on review of California Geological Survey maps, the project site is mapped within the Quaternary geologic unit characterized as older alluvium, lake, playa, and terrace deposits. Given this information, the Archaeological Resource Management Report determined it is evident the project area would have a lower potential for yielding buried archaeological sites based on the age of the soils, having been deposited before the point in geologic history when the earliest humans arrived in California (Archaeological Resource Service 2023).

Historic Resource Evaluation

A Historic Resource Evaluation was prepared by Archeological/Historical Consultants in August 2023 to evaluate whether the two metal hangar buildings, access road, ancillary compressor shed, and the 750-foot remnant segment of the runway are eligible for the California Register of Historical Resources (CRHR) (Appendix E).

Under CEQA, local agencies must consider whether projects will cause a substantial adverse change in the significance of a historical resource, which is considered to be a significant effect on the environment (PRC Section 21084.1). A "historical resource" is a resource determined eligible for the National Register of Historic Places, the CRHR, or local registers by a lead agency (14 CCR Section 15064.5). A "substantial adverse change" can include "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings" that impairs the significance of a historical resource in such a way as to impair its eligibility for federal, state, or local registers.

In order for a resource to be eligible for the CRHR, it must satisfy all of the following three conditions:

A. A property must be significant at the local, state, or national level, under one or more of the following four "Criteria of Significance" (these are essentially the same as National Register criteria with more emphasis on California history):
    1. The resource is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history and cultural heritage of California or the United States.
    2. The resource is associated with the lives of persons important to the nation or to California's past.
    3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.
    4. The resource has the potential to yield information important to the prehistory or history of the state or the nation (criterion 4 applies primarily to archaeological sites and not historic buildings).

B. The resource retains historic integrity; and,

C. It is 50 years old or older (except for rare cases of structures of exceptional significance).

The California Register regulations define "integrity" as ". . . the authenticity of a property's physical identity, evidenced by the survival of characteristics that existed during the property's period of significance," that is, it must retain enough of its historic character or appearance to be recognizable as a historical resource. Following the National Register integrity criteria, CRHR regulations specify that integrity is a quality that applies to historic resources in seven ways: location, design, setting, materials, workmanship, feeling and association. A property usually must retain most of these qualities to possess integrity. The retention of specific aspects of integrity is paramount for a property to convey its significance.

According to the Historic Resource Evaluation, Hangar 1 and Hangar 2 are recognizable as airplane hangars. However, as a whole, the project site does not retain historic integrity because major features of the Vaca-Dixon Airport have been removed, and it therefore no longer conveys its original function as an airport (Appendix E).

3.5.3 Environmental Impact Analysis

This section discusses potential impacts on cultural resources associated with the proposed project and provides mitigation measures where necessary.

Impact CUL-1 Cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

Impact Analysis

The proposed project would not demolish or include any improvements to Hangar 1, Hangar 2, or the ancillary compressor shed located in the northern portion of the project site. Additionally, the six staging yard areas and access road would be designed setback from the existing structures to ensure construction and operation activities would not inadvertently demolish the structures. The entire 41-acre site would be cleared of surface vegetation, graded, and compacted, resulting in the removal of the remnant section of the runway in the center of the project site that is approximately 750 feet in length.

A Historic Resource Evaluation was completed by Archeological/Historical Consultants in August 2023 to evaluate whether the two metal hangar buildings, access road, ancillary compressor shed, and the remnant section of the runway are eligible for the CRHR. As discussed in the Historic Resource Evaluation, no important events in local or state aviation history took place at the Vaca-Dixon Airport and it is not associated with any individuals that played an important role in the aviation industry or any other aspect of local, state, or national history. Additionally, the Historic Resource Evaluation determined the hangars were constructed using common materials and techniques during their period of construction, and lack stylistic details. The access road is a common construction type that lacks distinguishing characteristics, and the runway is a simple asphalt strip that is no longer recognizable as a runway and lacks historic integrity (Appendix E). Therefore, the Historic Resource Evaluation determined that none of the structures, access road, or remnant section of the runway are individually eligible for the CRHR as they are not significant under California Register Criteria 1, 2, 3, or 4. Additionally, the Historic Resource Evaluation determined that none of the structures, access road, or the remnant section of the runway are contributing resources to a California Register-eligible historic district (Archeological/Historical

Consultants 2023). As such, the proposed project would not cause a substantial adverse change in the significance of a historical resources and the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact CUL-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact Analysis
A record search and literature review, Native American consultation, and field survey were performed as part of the cultural resources inventory for the project. No archaeological resources were identified within the project area. The proposed project is therefore not anticipated to have an impact on any known or potential archeological resources. However, subsurface construction activities associated with the proposed project could potentially damage or destroy previously undiscovered unique archaeological resources. The proposed project would be required to implement Mitigation Measure CUL-1 in the event previously undiscovered subsurface unique archaeological resources are found at the project site. The implementation of Mitigation Measure CUL-1 would be in accordance with the standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface unique archaeological resources. Therefore, with the implementation of Mitigation Measure CUL-1 potential impacts to undiscovered archaeological resources would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM CUL-1 **Cultural Materials Discovered During Construction.** If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential historical resource shall cease until an archaeologist who meets the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in archaeology and/or history evaluates the resource for its potential significance and determines whether the resource requires further study. If the qualified archaeologist determines that the cultural resource does not appear to be eligible for inclusion on the CRHR, it will be appropriately documented on Department of Parks and Recreation (DPR) 523 series forms and project activity may resume. If the qualified archaeologist determines that the cultural resource appears eligible for inclusion on the CRHR, the archaeologist shall make recommendations to the City of Vacaville on the measures to be implemented to protect the discovered resources. The measures may include avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in PRC Section 21083.2. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate DPR forms and evaluated for significance

in terms of CEQA criteria. The Applicant shall be responsible for the costs of retaining a qualified archaeologist and the recording of resources on DPR forms. No further grading shall occur within a 50-foot radius of the discovery until the City of Vacaville approves the measures to protect these resources. Any archaeological artifacts recovered because of mitigation shall be donated to a qualified scientific institution approved by the City where they would be afforded long-term preservation to allow future scientific study.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact CUL-3 Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Analysis
There are no known human remains within the project site and no indications that it has been used for burial purposes in the past. Therefore, it is unlikely that human remains would be encountered during construction. However, ground disturbance and subsurface construction activities such as trenching and grading associated with the proposed project could potentially disturb previously undiscovered human burial sites. Therefore, Mitigation Measure CUL-2 would be implemented to reduce impacts to a less than significant level by ensuring compliance with Section 7050.5 of the California Health and Safety Code and PRC 5097.98.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM CUL-2 **Human Remains Discovered During Construction.** If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:

There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Solano County Coroner and the appropriate City representative are contacted. Duly authorized representatives of the Coroner and the City shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Sections 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines that the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of the human remains and any associated grave goods with appropriate dignity, as provided in PRC Section 5097.98. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of

the property secure from further disturbance. If the landowner does not accept the MLD's recommendations, the owner or the MLD may request mediation by NAHC.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation.

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3.6 ENERGY

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

3.6.1 Environmental Setting

PG&E is the utility company that provides electricity and natural gas supplies to the City. PG&E is one of the largest combined natural gas and electric energy companies in the United States that provides natural gas and electricity to approximately 16 million people across a 70,000 square mile service area in northern and central California (PG&E 2023).

In February 2018, PG&E announced that it had reached California's 2020 renewable energy goal 3 years ahead of schedule (PG&E 2018). In 2021, approximately 48 percent of PG&E's electricity came from renewable resources including solar, wind, geothermal, biomass and small hydroelectric sources. Additionally, approximately 91 percent of PG&E's total electric power mix is from greenhouse gas (GHG) - free sources, which includes nuclear and large hydroelectric sources of energy (CEC 2023a). In the year 2021, Solano County consumed a total of 3,300.85 million kilowatt-hours (GWh), 2,125.37 GWh of which was from the non-residential sector (CEC 2023b). PG&E currently provides electrical services to the project site via an existing 200-amp electrical meter. PG&E also supplies natural gas to the City; however, the proposed project would not rely on natural gas.

3.6.2 Methodology

Project energy demand during construction and operation was determined based on the modeling that was conducted for the proposed project using CalEEMod and using vehicle and equipment emission factors from the CARB's EMFAC2021 (v1.0.2) and EMFAC OFFROAD2021 (v1.0.4). The energy calculations are included in Appendix B.

3.6.3 Environmental Impact Analysis

This section discusses potential energy impacts associated with the proposed project and provides mitigation measures where necessary.

Impact EN-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis

This impact addresses the energy consumption from both construction and operation, discussed separately below.

Construction Energy Demand

During construction of the proposed project, energy resources would be consumed in the form of diesel and gasoline fuel from the use of off-road equipment (i.e., tractors, excavators, cranes) and on-road vehicles (i.e., construction employee commutes, haul trucks). Construction would take approximately four months to complete and is not anticipated to require significant use of electricity or natural gas.

Off-Road Equipment

Construction activities associated with the proposed project include erosion control, earthwork, lime treating, applying aggregate base, installing site utilities, and asphalt paving. Off-road construction equipment was estimated to consume 4,607 gallons of diesel fuel.

On-Road Vehicles

On-road vehicles for construction workers, vendors, and haulers would require fuel for travel to and from the site during construction. Table 3.6-1 provides an estimate of the total on-road vehicle fuel usage during construction.

Table 3.6-1: Construction On-Road Vehicle Fuel Consumption

Project Component	Average Fuel Economy (miles/gallon)	Total Fuel Consumption (gallons)
Worker Trips	25.84	323
Vendor Trips	8.34	145
Haul Trips	6.01	14,050
	Total Construction On-Road Trips	**14,518**

Notes:
Calculations use unrounded numbers; totals may not appear to sum exactly due to rounding.
Source: Stantec Consulting 2023 (Appendix B)

As shown above, construction of the proposed project was estimated to consume 14,518 gallons of fuel from on-road vehicles.

Conclusion

Overall, construction activities associated with the proposed project would result in the consumption of petroleum-based fuels. However, there are no unusual project characteristics that would necessitate the use of construction equipment or vehicles that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction fuel consumption

associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Operational Energy Demand

As noted previously, the proposed project would not involve construction of any permanent habitable structures or restroom facilities. In addition, project operation would not involve nighttime activities, and lighting fixtures would not be installed on-site. Therefore, energy demand during project operation would be limited to fueling the off-road equipment used on-site and fueling the vehicles travelling to and from the site.

Off-Road Equipment

During project operation, tenants are anticipated to use off-road equipment on the project site. Off-road equipment could include, but is not limited to, generator sets, forklifts, cranes, excavators, and loaders (see Table 2.2-1). In addition, it is expected future tenants would provide on-site diesel generators or self-contained office trailers with generators to provide electricity to the site. The use of off-road equipment was estimated to consume 34,629 gallons of diesel fuel per year.

Transportation Energy

During normal operations, project staff would travel to and from the project site. In addition, potential tenants may include trucking companies/truck fleet storage. In this case, employees would arrive to the project site in the morning, leave their personal car, and take their route truck, which would be returned to the site at the end of the route. Table 3.6-2 provides an estimate of the annual fuel consumed by vehicles traveling to and from the project site. These estimates were derived using the same assumptions used in the air quality analysis for the project.

Table 3.6-2: Operational Vehicle Fuel Consumption

Trip Type	Vehicle Type	Percent of Vehicle Trips	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
Employee Trips	Passenger Cars (LDA)	46.6	29.61	3,928
	Light Trucks and Medium Duty Vehicles (LDT1, LDT2, MDV)	38.6	22.47	4,281
	Light-Heavy to Heavy-Heavy Diesel Trucks (LHD1, LHD2, MHDT, HHDT)	14.1	8.38	4,187
	Motorcycles (MCY)	0.5	40.36	28
	Other (OBUS, UBUS, SBUS, MH)	0.3	5.97	142
	Employee Trip Subtotal	--	--	12,566
Heavy-Duty Truck Trips	Heavy-Heavy Diesel Trucks (HHDT)	--	6.10	54,549
	Total	**--**	**--**	**67,115**

As shown in the table, annual vehicular fuel consumption is estimated to be 67,115 gallons of a combination of gasoline and diesel fuel. The project would not result in vehicle use that is any more inefficient, wasteful, or unnecessary than other vehicle uses in the region.

Conclusion

Based on the analysis above, the proposed project would not result in a potential significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources; therefore, the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact EN-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis
The proposed project is not anticipated to require electricity or natural gas. The primary sources of energy demand during project operation would be associated with (1) the use of off-road equipment and (2) transportation energy associated with both employee commutes and heavy-duty truck use. With implementation of Mitigation Measure AIR-1, all off-road equipment would be equipped with Tier 4 engines and, thus, would not exceed the fuel efficiency requirements established by CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation. Consistent with Senate Bill (SB) 743, and as discussed further in Section 3.17, Transportation, the project would result in a less than significant impact related to VMT. The project would also comply with all federal and state regulations governing vehicle fuel efficiency, including the National Highway Traffic Safety Administration's Corporate Average Fuel Economy standards and the Safer Affordable Fuel-Efficient Vehicles Rule. Furthermore, heavy trucks idling would be limited to a maximum of five minutes, consistent with California's Commercial Vehicle Idling Regulation.

In conclusion, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.7 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.7.1 Environmental Setting

Regional Setting

The City is located at the edge of two geographic provinces: the Sacramento portion of the Central Valley province and the Coast Ranges. Geologic conditions in this area are the result of activity occurring during the Mesozoic and Cenozoic eras. The physiography of the region is varied. Landforms common to the Vacaville area are the low hills and uplands to the west, and the low alluvial plains and flooded basins to the east.

The 1972 Alquist-Priolo Earthquake Fault Zoning Act requires the California Geological Survey to establish regulatory Earthquake Fault Zones around the surface ruptures of active faults to reduce the hazard of surface fault rupture to structures built for human occupancy. There are no Alquist-Priolo Earthquake Fault Zones in the City (City of Vacaville 2013). However, the City is located within a seismically active region, and earthquakes have the potential to cause ground shaking of substantial magnitude. The Vaca-Kirby Hills Fault system is the only fault system that passes through the City. The Vaca Fault has not experienced displacement within the past 11,700 years, and there is no evidence for displacement along the Kirby Hills Fault during the last 700,000 years. A fault is considered active if it has ruptured within the last 11,000 years. The Green Valley Fault system, which lies 12 miles to the southwest of the City, has been active within the past 200 years. The United States Geological Survey estimates there to be a 3 percent probability for a magnitude 6.7 or greater earthquake to occur along this fault prior to 2036. The Rogers Creek Fault, part of the Hayward Fault System, lies roughly 24 miles to the southwest of the City; this fault has an estimated 16 percent probability of producing a magnitude 6.7 or greater earthquake prior to 2036 (City of Vacaville 2015).

Project Site Setting

The 41-acre project site is generally flat with elevations ranging from approximately 75 to 80 feet above mean sea level. Existing on-site development includes two vacant metal hangars, an on-site well, and ancillary compressor shed in the northern portion of the project site. A geotechnical exploration report was prepared for the project site by KC Engineering Company on July 29, 2022 (Appendix F) The geotechnical exploration determined the surface and subsurface soil conditions are generally uniform across the project site. The upper 2 to 3 feet consists of relatively stiff to hard, moderately to highly expansive fat black clay. The clay is underlain by light brown hard sandy clay to approximately 6 feet (KC Engineering Company 2022). The geotechnical exploration did not encounter groundwater; however, groundwater information available for the on-site well indicates groundwater depths of approximately 10 feet bgs (KC Engineering Company 2022).

3.7.2 Methodology

A geotechnical exploration report was prepared for the project site by KC Engineering Company on July 29, 2022. The results of the geotechnical exploration report were reviewed to determine potential geology and soils impacts from the proposed project and are summarized herein. The geotechnical exploration report is provided in Appendix F.

3.7.3 Environmental Impact Analysis

This section discusses potential impacts related to geology and soils associated with the proposed project and provides mitigation measures where necessary.

Impact GEO-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

Impact Analysis

i) Fault Rupture

The project site is not located in a designated Alquist-Priolo earthquake fault zone, and there are no potentially active faults mapped within the project site (KC Engineering Company 2022). The nearest active fault is the Vaca-Kirby Fault located approximately 5.5 miles southwest of the project site (CGS 2015). Due to the lack of Alquist-Priolo fault zones in the project site, the potential for fault rupture of a known earthquake fault at the project site is very low. Furthermore, the proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to the existing on-site buildings that would expose people or structures to adverse effects involving rupture of a known earthquake fault. No impact would occur.

ii) Ground Shaking

The project site is in a seismically active region, and earthquake-related ground shaking is expected to occur during the life of the proposed project. The proposed project consists of an interim industrial and construction yard to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to the existing on-site buildings. It is anticipated most employees would visit the project site temporarily to obtain equipment, vehicles, and materials. As such, the proposed project would not expose people or structures to potential substantial adverse effects involving strong seismic ground shaking. No impact would occur.

iii) Ground Failure, including Liquefaction

The geotechnical exploration determined the surface and subsurface soil conditions are generally uniform across the project site and have relatively low permeability or slow infiltration/percolation rates. The proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to the existing on-site buildings that would expose people or structures to liquefaction. No impact would occur.

iv) Landslides

The project site and the surrounding area are relatively flat and not located near a slope that would result in a landslide hazard. Therefore, the potential for a seismically induced landslide to occur at the project site is very low and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact GEO-2 Result in substantial soil erosion or the loss of topsoil?

Impact Analysis
The entire 41-acre site would be cleared of surface vegetation, graded, and compacted. The grading activities would require approximately 41,708 CY of cut and approximately 38,492 CY of fill, resulting in a "net cut" of approximately 3,216 CY of soil that would be used to balance the site. The site's drainage generally flows north to south, away from the on-site buildings in the northern portion of the project site, and toward the drainage ditches near the site's southern boundary. Construction activities could expose unprotected soils to stormwater runoff, causing erosion and loss of topsoil. Projects that disturb 1 acre or more of soils during construction are required to comply with the NPDES permitting program and implement a SWPPP that identifies best management practices (BMPs) to control the discharge of sediment and other pollutants during construction. As described in Section 3.10, Hydrology and Water Quality, the proposed project would implement a SWPPP and associated BMPs as part of Mitigation Measure HYD-1 to reduce erosion impacts. Therefore, soil erosion impacts associated with construction impacts would be less than significant with implementation of Mitigation Measure HYD-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HYD-1 is required. Refer to Section 3.10, Hydrology and Water Quality, for complete details pertaining to this mitigation measure.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact Analysis
The geotechnical exploration determined the surface and subsurface soil conditions are generally uniform across the project site. The upper 2 to 3 feet consists of relatively stiff to hard, moderately to highly expansive fat black clay. The clay is underlain by light brown, hard sandy clay to approximately 6 feet (KC

Engineering Company 2022). The geotechnical exploration determined that on-site soils have relatively low permeability or slow infiltration/percolation rates. Groundwater was not encountered at the project site; however, the on-site well indicates groundwater at approximately 10 feet bgs (KC Engineering Company 2022). Due to the generally flat topography and low permeability or slow infiltration/percolation rates, the proposed project would not be susceptible to landslides or liquefaction. The proposed project would not construct any permanent habitable structures. However, the geotechnical exploration report determined that the highly expansive soils could result in poor pavement or aggregate base performance under heavy truck traffic or use during the winter season. Accordingly, the geotechnical exploration report recommends that the subgrade soils of the main access road and laydown yard areas be lime treated prior to aggregate base placement. The proposed project would implement the recommendations identified in the geotechnical exploration report as part of Mitigation Measure GEO-1. Therefore, the proposed project would not be located on unstable soils, and impacts would be less than significant with implementation of Mitigation Measure GEO-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM GEO-1: **Implement Geotechnical Design Recommendations.** Prior to issuance of grading permits, the Applicant will incorporate all recommendations contained within the project-specific geotechnical exploration report into relevant project plans and specifications. These specifications pertain to but are not limited to grading, pavement areas, surface drainage, stormwater swales and basins, and underground utility and excavations. The project site plans will be submitted to the City and reviewed as part of the construction permit review process.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-4 Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact Analysis
As discussed in Impact GEO-3, the upper 2 to 3 feet of the project site contains relatively stiff to hard, moderately to highly expansive fat black clay. The proposed project would not construct any permanent habitable structures. The highly expansive soils could result in poor pavement or aggregate base performance under heavy truck traffic or use during the winter season. Therefore, the geotechnical exploration report recommends that the subgrade soils of the main access road and laydown yard areas be lime treated prior to aggregate base placement. The proposed project would be required to implement Mitigation Measure GEO-1 and incorporate the recommendations identified in the geotechnical exploration report. The implementation of Mitigation Measure GEO-1 would reduce impacts related to expansive soils to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure GEO-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-5 Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Impact Analysis
The two existing metal hangars are each connected to a septic system. The proposed project would not use the existing septic systems or construct new connections to the City's sewer system. The anticipated tenants would provide portable restroom facilities for on-site employees and visitors. Wastewater generated by the portable restroom facilities would be minimal and disposed off-site at an appropriate facility in accordance with applicable local and state regulations. As such, the proposed project would not construct new septic tanks or alternative wastewater disposal systems, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Analysis
The geotechnical exploration report indicates the project site consists of Pleistocene-aged alluvial fan deposits comprised of poorly sorted clays, silts, sands, and gravels. The General Plan EIR indicates alluvial deposits are highly sensitive for paleontological resources (City of Vacaville 2013). Due to the heavily disturbed nature of the project site from previous cattle grazing activities, it is unlikely that paleontological or unique geologic resources would be encountered during construction. However, the proposed project would include grading and excavation activities to 11 feet bgs, which could directly or indirectly destroy an unknown unique paleontological or unique geologic feature. If unknown unique paleontological resources are discovered on-site during construction, all activities would be stopped within a 50-foot radius of the identified resource until a qualified paleontologist evaluates the finding as required by Mitigation Measure GEO-2. Therefore, impacts to paleontological or unique geologic features would be less than significant with implementation of Mitigation Measure GEO-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM GEO-2 **Procedures for Paleontological Resources Discovered During Construction.** If any paleontological resources are encountered during ground-disturbing or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot

radius of the identified resource shall cease and the City shall immediately be notified. The Applicant will retain a qualified paleontologist (as approved by the City) to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resource. The appropriate treatment of an inadvertently discovered paleontological resource will be implemented to ensure that impacts to the resource are avoided.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation.

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3.8 GREENHOUSE GASES

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

3.8.1 Environmental Setting

The issue of combating climate change and reducing GHG emissions has been the subject of substantial state legislation (AB 32, AB 1493, AB 398, and SB 375, SB 32, SB 350, SB 100, SB 1368, SB 350, and SB X7-7) and Executive Orders ([EO] B-30-15, EO B-55-18, EO S-01-07, and EO S-13-08). On a local level, in September 2021, the City of Vacaville adopted the Energy and Conservation Action Strategy Update (ECAS), which is a long-range strategy to reduce GHG emissions and achieve greater conservation of resources as the City grows. The ECAS includes both communitywide and municipal GHG emissions reduction measures to decrease the City's contribution to GHG emissions.

Greenhouse Gases

Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and sulfur hexafluoride (SF_6). Primary GHGs attributed to global climate change are discussed in the following subsections.

Carbon Dioxide. CO_2 is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. Several specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (USEPA 2023a).

Methane. CH_4 is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH_4 is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release substantial quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater

bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about 12 years (USEPA 2023a).

Nitrous Oxide. N_2O is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (USEPA 2023a).

Hydrofluorocarbons. HFCs are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only substantial emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (USEPA 2023a).

Perfluorocarbons. PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_{14}). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively (USEPA 2023a).

Nitrogen Trifluoride. NF_3 is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. NF_3 is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. In 2009, NF_3 was listed by California as a potential GHG to be listed and regulated under AB 32 (Section 38505 Health and Safety Code).

Sulfur Hexafluoride. SF_6 is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (USEPA 2023b).

Black Carbon. Black carbon is the most strongly light-absorbing component of PM emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands). California has been an international leader in reducing emissions

of black carbon, including programs that target reducing PM from diesel engines and burning activities (CARB 2013).

Sources of GHG Emissions

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. World-wide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions.

United States

In 2021, GHG emissions in the United States totaled 6,340.2 million metric tons of CO_2e. Within the United States, the largest contributor to GHG emissions is the transportation sector (28 percent). The next largest contributors are from electricity production (25 percent) and industry (23 percent), followed by the commercial and residential sector (13 percent) and the agricultural sector (10 percent). Transportation emissions primarily come from burning fossil fuels for cars, trucks, ships, trains, and planes. Over 90 percent of the fuel used for transportation is petroleum-based, which includes primarily gasoline and diesel. The bulk of emissions generated from energy production come from burning fossil fuels, mostly coal and natural gas. Industry emissions are also primarily generated from fossil fuels burned for heat, the use of certain products that contain GHGs, and the handling of waste. Similar to industry sector emissions, commercial and residential uses arise primarily from fossil fuels for heat, the use of certain products that contain GHGs, and the handling of waste. Agricultural emissions come from livestock such as cows, agricultural soil, and rice production. The land use and forestry sector within the United States serves as a carbon sink. Carbon sinks absorb CO_2 from the atmosphere. Land areas across the United States absorbed approximately 12 percent of the 2021 GHG emissions (USEPA 2023c).

California

In 2020, GHG emissions within California totaled 369.2 million metric tons of CO_2e. Similar to national emissions, in California, the transportation sector is the largest contributor. Transportation emissions account for approximately 37 percent of the total statewide GHG emissions. The majority of transportation emissions are derived from passenger vehicles and heavy-duty trucks. Emissions associated with industrial uses are the second largest contributor, totaling roughly 20 percent. Industrial emissions are driven by fuel combustion from sources that include refineries, oil and gas extraction, cement plants, and the portion of cogeneration emissions attribution to thermal energy output. Electricity generation (in state and imports) totaled roughly 16 percent. Emissions from the electricity generation sector have declined over the years due to the increase in renewable generation that continues to replace fossil power (CARB 2022a).

Effects of Global Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of

storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snowpack is a principal supply of water for the state, providing roughly 50 percent of the state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the state's energy resources. An early exhaustion of the Sierra snowpack may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate would likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.

Regulatory Requirements

California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this legislation establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The governor has also issued several EOs related to the state's evolving climate change policy. Of particular importance are AB 32 and SB 32, which outline the state's GHG reduction goals of achieving 1990 emissions levels by 2020 and a 40 percent reduction below 1990 emissions levels by 2030. Refer to Appendix B for a detailed description of the regulatory setting governing GHG emissions at the federal, state, and local levels.

3.8.2 Methodology

Construction and operational emissions were estimated using CalEEMod. The model output and detailed assumptions are provided in Appendix B.

Thresholds

The YSAQMD has not established a threshold of significance for GHGs. According to the YSAQMD, if the lead agency has adopted a Climate Action Plan or General Plan goals and policies that relate to the reduction of GHG emissions, then the environmental review should consider consistency with such documents. If the lead agency has not adopted a Climate Action Plan or General Plan goals and policies related to GHGs, then YSAQMD recommends that lead agencies consider a project's total emissions in relation to AB 32 Scoping Plan goals, or the thresholds of significance established by other jurisdictions (YSAQMD 2022).

The ECAS serves as the CEQA threshold of significance within the City for GHG emissions (City of Vacaville 2021a). Therefore, the proposed project significance is based on consistency with the City's ECAS.

3.8.3 Environmental Impact Analysis

This section discusses potential greenhouse gas impacts associated with the proposed project and provides mitigation measures where necessary.

Impact GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Analysis

The following GHG emissions inventories are provided for informational purposes. Potential impacts related to GHG emissions resulting from implementation of the proposed project are considered in comparison with the City's ECAS below.

Construction Emission Inventory

Construction GHGs would be emitted by the off-road construction equipment and vehicle travel by workers and material deliveries to the project site. The estimated construction GHG emissions are shown in Table 3.8-1.

Table 3.8-1: Construction Greenhouse Gas Emissions

Construction Year	Emissions ($MTCO_2e$ per year)
2023	206

Source: Stantec Consulting 2023 (Appendix B)

Operational Emission Inventory

Operational, or long-term, emissions occur over the life of the proposed project. Operational activities of the project would generate GHG emissions primarily from mobile sources. Operational GHG emissions are shown in Table 3.8-2.

Table 3.8-2: Operational Greenhouse Gas Emissions

Source	Emissions (MTCO2e per year)
Mobile[1]	1,351.65
Area	0.00
Energy	0.00
Water	0.34
Waste	0.00
Off-Road	393.00
Total	1,744.99

Notes:
Mobile emissions were calculated using emission factors from EMFAC2021.

Source	Emissions (MTCO2e per year)

Source: Stantec Consulting 2023 (Appendix B)

Consistency with City of Vacaville ECAS

Consistency with the City's ECAS serves as the applicable threshold of significance for evaluating GHG emissions in Vacaville. The project's consistency with the GHG reduction measures included in the ECAS is evaluated in Table 3.8-3 below.

Table 3.8-3: Project Consistency with City of Vacaville ECAS

Measure	Consistency Determination
Transportation and Land Use	
T/LU-1. Continue Telecommuting	**Not Applicable.** Given the proposed land use, telecommuting is not a feasible option for the proposed project.
T/LU-2. Improve Capacity for Electric Vehicles	**Not Applicable.** This measure specifically calls for implementation of electric vehicle charging stations in all new multi-family, retail, and office development as well as City-managed parking lots. The project does not include any of the foregoing land uses.
T/LU-3. Implement Transportation Demand Management for New Development	**Not Applicable.** As described further in Section 3.17, Transportation, the proposed project would result in a less than significant impact related to VMT because the project would generate fewer than 110 daily trips from employees. Given the limited number of anticipated employees and the less than significant VMT impact, implementation of a Transportation Demand Management Program to reduce employee VMT is not warranted, and the measure is not applicable to the project.
T/LU-4. Implement Transportation Demand Management for Existing Development	**Not Applicable.** This measure is intended for existing development in the City.
T/LU-5. Improve Bus Electrification	**Not Applicable.** This measure is intended for implementation at the City level.
T/LU-6. Improve City Fleet	**Not Applicable.** This measure is intended for implementation at the City level.
T/LU-7. Increase Land Use Diversification	**Not Applicable.** This measure focuses on created mixed neighborhoods where parks, schools, and grocery stores are located within 0.25-mile of residences. This is not applicable to the proposed project.
T/LU-8. Transit Oriented Development	**Not Applicable.** This measure focuses on providing neighborhoods within 0.25-mile of high-quality transit stops. This is not applicable to the proposed project.
Energy	
E-1. Become an MCE Member Community	**Not Applicable.** Marin Clean Energy is a local community choice energy provider that offers renewable energy options for customers while using PG&E infrastructure. The proposed project would not include construction of any permanent structures and is not anticipated to require electrical connections.
E-2. Require Energy Audits for Sales of Existing Residential Units	**Not Applicable.** The proposed project does not involve existing residential units.

Measure	Consistency Determination
E-3. Adopt an All-Electric New Construction Preferred Ordinance	**Not Applicable.** The measure is intended for implementation at the City level. Furthermore, the proposed project would not include any permanent structure that would be eligible for all-electric building requirements. However, the site is not expected to require any natural gas during construction or operation.
E-4. Develop an Existing Building Electrification Plan.	**Not Applicable.** The proposed project does not include existing buildings that would be eligible for electrification. The small structures that exist on the Project site does not include natural gas hook-ups.
Solid Waste	
S-1. Implement Organic Waste Reduction Requirements	**Not Applicable.** Given the proposed industrial/construction yard land use, the amount of organic waste generated at the project site would be negligible.
Off-Road Equipment	
O-1. Increase Renewable and Alternative Fuel for Construction	**Not Applicable.** This measure is focused on achieving a 20 percent reduction in conventional fuel use in construction fleets by the year 2035. Project construction would be complete prior to 2035, and implementation of the project would not impede the City's ability to achieve this goal.
Carbon Sequestration	
C-1. Plant Trees	**Consistent.** As required by Vacaville Municipal Code Section 14.09.200.070, Landscaping, the stormwater treatment areas would be landscaped.
C-2. Farm Carbon	**Not Applicable.** This measure calls for carbon farming and the application of compost on City-owned green spaces.

Source: City of Vacaville 2021a

Based on the above, most of the measures included in the ECAS are not applicable to the proposed project. However, the proposed project would be consistent with ECAS Measure C-1 and would not conflict with the overall implementation of the ECAS.

Conclusion

The proposed project would not generate GHG emissions that may have a significant impact on the environment, and the impact would be less than significant.

Level of Significance Before Mitigation
Less than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis

The proposed project would involve the use of the project site as an interim industrial and construction yard for up to 5 to 15 years. The proposed project would not include any permanent structures.

Pursuant to Appendix G of the CEQA Guidelines, a significant GHG impact is identified if the project could conflict with applicable GHG reduction plans, policies, or regulations. The project would be subject to complying with the City's ECAS, as well as SB 32 and AB 1279. SB 32 is a statewide reduction goal aimed at reducing emissions to 40 percent below 1990 levels by 2030 and AB 1279 is another reduction goal to meet carbon neutrality across the state by 2045. The CARB's 2022 Scoping Plan sets a framework for California to meet the reduction targets of SB 32 and AB 1279 (CARB 2022b). Project consistency with the City's ECAS and the 2022 Scoping Plan is discussed below.

Consistency with City of Vacaville ECAS

Project consistency with the City of Vacaville ECAS was evaluated in detail under Impact GHG-1. As presented in Table 3.8-3, many of the measures included in the ECAS are not applicable to the proposed project. However, the proposed project would comply with all applicable ECAS measures.

Consistency with 2022 Scoping Plan

CARB approved the 2022 Scoping Plan in December 2022. The 2022 Scoping Plan builds upon previous iterations of state scoping plans to achieve carbon neutrality and reduce anthropogenic GHG emissions 85 percent below 1990 levels no later than 2045, as directed by AB 1279. Table 3.8-4 identifies the Scoping Plan policies that are applicable to the proposed project.

Table 3.8-4: Project Consistency with 2022 Scoping Plan Greenhouse Gas Reduction Strategies

Measure	Consistency Determination
Deploy Zero Emission Vehicles and reduce driving demand	**Consistent.** The proposed project would not deploy Zero Emission Vehicles. However, as discussed in Section 3.17, Transportation, the project would result in a less than significant impact related to VMT and would be generally consistent with the goal to reduce driving demand.
Coordinate supply of liquid fossil fuels with declining CA fuel demand	**Not Applicable.** This measure is aimed at petroleum refineries and fossil fuel extraction operations. The proposed project would not interfere with this goal.
Generate clean electricity	**Not Applicable.** The proposed project would not include any permanent structures and is not anticipated to consume electricity during construction or operations. Thus, implementation of the proposed project would not increase regional electrical demand and would not interfere with this goal.
Decarbonize Buildings	**Not Applicable.** The proposed project would not include any permanent buildings.

Measure	Consistency Determination
Decarbonize Industrial Energy Supply	**Consistent.** The proposed project would not include any natural gas use. As required by Mitigation Measure AIR-1, the proposed project would be required to use Tier 4 off-road equipment during operations. Implementation of Mitigation Measure AIR-1 would result in a reduction in GHG emissions associated with fuel consumption and would contribute to decarbonizing industrial energy supply.
Reduce non-combustion emissions (Methane)	**Consistent.** The proposed project would not include any land uses that generate significant levels of methane, such as landfills or dairy farms.
Reduce non-combustion emissions (HFCs)	**Consistent.** The proposed project would comply with all state regulations governing short-lived climate pollutants, including HFCs.
Compensate for remaining emissions	**Not Applicable.** This measure is aimed at the state government to reduce statewide emissions to meet AB 1279 goals for the year 2045. The proposed project would only operate for up to 5 to 15 years, and therefore would no longer be in operation by 2045.

Source: CARB 2022b

This analysis finds the proposed project would be consistent with the applicable strategies recommended in the 2022 Scoping Plan Update.

Conclusion

The proposed project would not conflict with an applicable plan adopted for the purpose of reducing GHG emissions; therefore, impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.9 HAZARDS AND HAZARDOUS MATERIALS

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

3.9.1 Environmental Setting

Hazardous materials, as defined by CCR, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed of, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic: Causes human health effects
- Ignitable: Has the ability to burn
- Corrosive: Causes severe burns or damage to materials
- Reactive: Causes explosions or generates toxic gases

Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust.

California Government Code Section 65962.5 requires the California EPA to compile, maintain, and update specified lists of hazardous material release sites. The required lists of hazardous material release sites are commonly referred to as the "Cortese List," which are contained on internet websites, including the online EnviroStor database from the Department of Toxic Substances Control (DTSC) and the online GeoTracker database from the State Water Resources Control Board (SWRCB). These two databases include hazardous material release sites along with other categories of sites or facilities specific to each agency's jurisdiction. A Phase I Environmental Site Assessment (ESA) was prepared for the project site by Geologic and Environmental Consulting Services on May 28, 2022, which included review of several hazardous materials databases and a site reconnaissance to identify potential on-site and off-site sources that could pose a hazard to the proposed project. The Phase I ESA did not identify any significant recognized environmental condition of the project site relative to current or past on-site or off-site activities. The Phase I ESA noted that the project site is vacant and previously used for cattle grazing. The project site operated as the Vaca-Dixon Airport from the late 1940s to about 1992. Three underground storage tanks (USTs) were previously placed on the northwestern side of the project site and removed in the mid-1980s. The Phase I ESA determined it is unlikely that substantial fuel releases occurred from the USTs as they were not heavily used and removed from the site more than 45 years ago. Additionally, soil sampling was completed at the suspected UST locations by Ramcon in April 2020 which did not detect the presence of hydrocarbons (Geologic and Environmental Consulting Services 2022).

The project site is approximately 3.75 miles northeast of the Nut Tree Airport and approximately 9.3 miles northeast of the Travis Airforce Base. Based on review of Fire Hazard Severity Zone maps developed by the California Department of Forestry and Fire Protection (CAL FIRE), the project site is not within or near a state responsibility area and does not contain lands classified as very high fire hazard severity zones (CAL FIRE 2023). The United States Forest Service has also developed a Wildfire Hazard Potential Map to inform evaluations of wildfire risk and prioritize fuels management across very large landscapes. According to the United States Forest Service Wildfire Hazard Potential Map, the risk of wildfire at the project site and in the surrounding area is low to very low (USFS 2020).

3.9.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, the Phase I ESA prepared by Geologic and Environmental Consulting Services on May 28, 2022, CAL FIRE Hazard Severity Zone maps, and the United States Forest Service Wildfire Hazard Potential Map. The Phase I ESA is provided in Appendix H.

3.9.3 Environmental Impact Analysis

This section discusses potential impacts related to hazards and hazardous materials associated with the proposed project and provides mitigation measures where necessary.

Impact HAZ-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

AND

Impact HAZ-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Analysis

The proposed project consists of an industrial and construction yard on a 41-acre vacant site. Project construction activities would include site clearing, grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving. The proposed project would not demolish the vacant metal hangars, or any other structures constructed prior to 1980 that would potentially contain asbestos containing materials or lead-based paints.

During construction, small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used and transported to and from the project site as needed. Accidental releases of small quantities of hazardous materials or toxic substances could contaminate soils and degrade the quality of surface water and groundwater, resulting in a public safety hazard. However, contractors would be required to transport, store, and handle hazardous materials and toxic substances related to construction activities in accordance with relevant regulations and guidelines, including California Health and Safety Codes and City ordinances. Regulatory requirements for the transport of hazardous wastes in California are specified in Title 22 of CCR, Division 4.5, Chapters 13 and 29. In accordance with these regulations, the transport of hazardous materials must comply with the California Vehicle Code, California Highway Patrol regulations (contained in CCR, Title 13); the California State Fire Marshal regulations (contained in CCR, Title 19); United States Department of Transportation regulations (CFR, Title 49); and USEPA regulations (contained in CFR, Title 40). The use of hazardous materials is also regulated by DTSC (CCR, Title 22, Division 4.5). Therefore, construction of the proposed project would result in a less than significant impact related to the routine transport, use, disposal of, or accidental release of hazardous materials or toxic substances.

It is anticipated the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The anticipated tenants would not maintain or refuel the vehicles, trucks, or equipment stored on-site. Furthermore, the tenants are not expected to transport or dispose any substantive quantities of hazardous materials or wastes. The anticipated tenants could store equipment, vehicles, and equipment containing hazardous substances (e.g., fuels, oils, solvents). Pursuant Title 40 of the CFR, sites that handle any individual hazardous material or mixture in excess of the following quantities: 55 gallons (liquid); 500 pounds (solid); or 200 cubic feet (gases) are required to prepare a Hazardous Materials Business Plan (HMBP). The Applicant and individual tenants would implement a HMBP as required by Mitigation Measure HAZ-1. The HMBP would include measures for the storage, transportation, use, and handling of hazardous materials. Additionally, the HMBP would include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release. The HMBP would be submitted to Solano County Environmental Health Services Division, which is the Certified Unified

Agency. Therefore, impacts related to the routine transport, use, and disposal of hazardous materials during project construction and operation would be less than significant with implementation of Mitigation Measure HAZ-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM HAZ-1: **Prepare and Implement a Hazardous Materials Business Plan.** The Applicant and individual tenants shall prepare a HMBP in accordance with CFR, Title 40. The HMBP will include inventory of any individual hazardous material or mixture in excess of any of the following quantities: 55 gallons (liquid); 500 pounds (solid); or 200 cubic feet (gases). The HMBP would include measures for safe storage, transportation, use, and handling of hazardous materials. The HMBP will also include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release. The HMBP shall be submitted to the Solano County Environmental Health Services Division prior to occupancy.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HAZ-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Analysis
The project site is not located within 0.25-mile of an existing or proposed school. The nearest school is Cooper Elementary, located about 4.3 miles southwest of the project site. In addition, Solano Community College, Vacaville Center, is located approximately 2.2 miles southwest of the project site. The proposed project does not involve the development of a use that would emit hazardous materials, substances, or waste during operation. The construction and operation of the proposed project would comply with all applicable federal, state and local laws and regulations pertaining to the transport, use, disposal, handling and storage of hazardous materials. Additionally, the Applicant and individual tenants would implement Mitigation Measure HAZ-1, which requires implementation of a HMBP that identifies measures for the storage, transportation, use, and handling of hazardous materials within the storage yard areas. Any hazardous material handling associated with the operation of the proposed project would be limited in both quantity and concentration to the smallest possible limits. Pursuant to California Occupational Safety and Health regulations, all hazardous materials stored on-site would be accompanied by a Material Safety Data Sheet, which would inform onsite operators of necessary remediation processes in the event of accidental release. Therefore, with adherence to the required applicable regulations and implementation of Mitigation Measure HAZ-1, the proposed project would have a less than significant impact related to the emission or handling of hazardous materials near a school.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HAZ-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HAZ-4 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact Analysis
The project site is not included on a list of hazardous materials sites pursuant to Government Code Section 65962.5 (DTSC 2023, SWRCB 2023). As discussed, the Phase I ESA did not identify any significant recognized environmental condition relative to current or past on-site or off-site activities. The Phase I ESA noted that the project site is vacant and previously used for cattle grazing. The project site operated as the Vaca-Dixon Airport from 1945 to approximately 2000. Three underground storage tanks were previously placed on the northwestern side of the project site and removed in the mid-1980s. The Phase I ESA determined it is unlikely that substantial fuel releases occurred from the USTs as they were not heavily used and were removed from the site more than 45 years ago. Additionally, soil sampling was completed at the suspected UST locations by Ramcon in April 2020 and no hydrocarbons were detected (Geologic and Environmental Consulting Services 2022). As such, the proposed project would not be located on a hazardous materials site that would create a significant hazard to the public or the environment, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Impact Analysis
The project site is not located within 2 miles of a public airport. The nearest public airport is the Nut Tree Airport, located approximately 3.75 miles southwest of the project site. Additionally, the Travis Air Force Base is approximately 9.3 miles southwest of the project site. The project site is not within the Nut Tree Airport's Area of Influence; however, the Travis Air Force Base Land Use Compatibility Plan identifies the southern portion of the project site within the Travis Air Force Base Area of Influence. The southern portion of the project site is within Compatibility Zone D, which does not place any restrictions on the types of land uses allowed, except for land uses that could cause hazard to flight, such as physical, visual, and electric forms of interference and land uses that attract birds. A review by the Solano County Airport Land Use Commission is only required in Compatibility Zone D for objects over 200 feet tall (Solano County ALUC 2002). The proposed project consists of an industrial and construction yard to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The temporary equipment

and materials, such as containers, cranes, lifts, and trailers stored on-site would have a maximum height of 30 feet. Therefore, the proposed project would not require review by the Solano County Airport Land Use Commission or result in a safety hazard for people residing or working in the project area. The impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Analysis
The proposed project does not involve permanent modification to the existing roadways. Construction and operation of the project are not expected to require any lane closures or staging along Weber Road, I-80, or the interior gravel access road. All trucks, trailers, equipment, and materials associated with the tenants would be stored on-site and within the boundaries of the storage yard areas. There would be no truck queuing or staging of materials along Weber Road. Any construction traffic, lane closures, or street staging would require an approved TCP and an encroachment permit from the City. The TCP would identify all detours, appropriate traffic controls, and ensure adequate circulation and emergency access are provided during the construction phase. Therefore, project construction and operation activities would not interfere with an emergency evacuation or response plan, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-7 Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Impact Analysis
The project site is in northeastern Vacaville, between I-80 and Weber Road. Land uses surrounding the project site primarily consist of farmlands. There are a few residences and commercial uses to the south along Weber Road. According to the General Plan, highly flammable vegetation and warm dry summers create the potential for wildland fires in the City. High hazard areas in the City include outlying residential parcels and open lands adjacent to residential areas. Open agricultural lands in the eastern portion of the City also pose a threat related to grass fires as they can travel very fast and threaten nearby residential areas (City of Vacaville 2015). Based on review of Fire Hazard Severity Zone maps developed by CAL

FIRE, the project site is not within or near a state responsibility area and does not contain lands classified as very high fire hazard severity zones (CAL FIRE 2023). The United States Forest Service Wildfire Hazard Potential Map identifies the risk of wildfire at the project site and in the surrounding area to be low to very low (USFS 2020).

The proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to the existing on-site metal hangars. It is anticipated most employees would visit the project site temporarily to obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day. The proposed project would be required to comply with the California Fire Code and all applicable fire safety standards set forth by the City regarding fire protection. A new 4- to 6-inch water line would be constructed and connect to the existing well and compressor shed to provide non-potable water to the six storage yard areas for fire suppression and dust control. Non-potable water would also be stored in new water storage tanks to be installed on the property (the Vacaville Fire Marshall would determine the location(s) and size(s) of tanks once tenants are located, and the applicable fire suppression requirements are determined). As such, the proposed project would not expose people or structures either directly or indirectly to wildland fires and the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.10 HYDROLOGY AND WATER QUALITY

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i) Result in substantial erosion or siltation on- or offsite;	☐	☒	☐	☐
	ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
	iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	☐	☒	☐	☐
	iv) Impede or redirect flood flows	☐	☐	☐	☒
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

3.10.1 Environmental Setting

Watershed and Regional Drainage

The City contains four sub-watershed areas (the Alamo Creek, Ulatis Creek, Horse Creek, and Gibson Canyon Creek watersheds), all of which are part of the larger, 150-square-mile Ulatis Creek watershed. In general, the creeks flow in an east-southeasterly direction and ultimately drain into the Sacramento River via Cache Slough (City of Vacaville 2013). A man-made drainage ditch owned by SID is adjacent to the southern and eastern portions of the project site. The site's drainage generally flows north to south, and

southeast toward the drainage ditches along Weber Road and the SID canal and drainage basin adjacent to the eastern boundary of the site.

Groundwater

The City owns and operates nine active municipal groundwater wells that withdraw water from the deep aquifer in the Tehama Formation, underlying the Solano Subbasin, and one active municipal groundwater well that withdraws from a shallower aquifer. Annual groundwater pumping has varied substantially from a low of 2,862 acre-feet per year (AFY) in 1968 to a high of 8,156 AFY in 1983. In 2020, the City withdrew approximately 4,984 AFY of groundwater (City of Vacaville 2021b). There is an on-site well and compressor shed in the northern portion of the project site. The well provides non-potable water to the project site and produces approximately 45,000 gallons per day (31.5 gallons per minute).

Flooding

Flood hazard zones are identified on official Flood Insurance Rate Maps (FIRM) issued by the Federal Emergency Management Agency (FEMA). The project site is designated as Zone X according to FIRM #06095C0167F and FIRM #06095C0169E, which are areas having minimal flood hazards (FEMA 2009, FEMA 2012).

3.10.2 Methodology

The evaluation of potential hydrologic and water quality impacts was based on a review of City documents, including the General Plan, General Plan EIR, and 2020 Urban Water Management Plan (UWMP). Mapping tools provided by FEMA were also reviewed. The information obtained from these sources are summarized to establish existing conditions and to identify potential environmental effects.

3.10.3 Environmental Impact Analysis

This section discusses potential impacts related to hydrology and water quality associated with the proposed project and provides mitigation measures where necessary.

Impact HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Impact Analysis

Construction

Construction activities would include site clearing, grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving. The entire 41-acre site would be cleared of surface vegetation, graded, and compacted. The grading activities would require approximately 41,708 CY of cut and approximately 38,492 CY of fill, resulting in a “net cut” of approximately 3,216 CY of soil that would be used to balance the site.

These activities have the potential to generate stormwater runoff and to discharge pollutants, such as fuel, solvents, oil, paints, and trash. The proposed project would comply with the NPDES General Construction Permit, which requires the preparation of a SWPPP and the incorporation of BMPs to control sedimentation, erosion, and hazardous materials from contacting stormwater, with the intent of keeping

all products of erosion from moving off-site into the adjacent drainage ditches. The SWPPP and applicable BMPs have been incorporated into Mitigation Measure HYD-1 to reduce potential water quality impacts to a less than significant level. Additionally, the proposed project would comply with the provisions of the City's Grading Ordinance (Chapter 14.19) and the City's urban stormwater quality management and discharge control regulations (Chapter 14.26). The City's urban stormwater quality management and discharge control regulations implement the requirements of the Central Valley RWQCB Order 2013-0001-DWQ to reduce pollutants in stormwater discharges. As such, with implementation of Mitigation Measure HYD-1 and compliance with the City's Grading Ordinance and discharge control regulations, construction impacts to water quality would be less than significant.

Operation

Operation of the proposed project would involve the interim storage of equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The tenants are not anticipated to maintain or refuel the vehicles, trucks, equipment stored on-site. In the event such activities occur, the Applicant individual tenants would be required to obtain coverage under the NPDES Industrial General Permit as part of Mitigation Measure HYD-2. The implementation of Mitigation Measure HYD-2 would require the Applicant and individual tenants to eliminate unauthorized non-stormwater discharges, develop and implement an operational SWPPP, and perform monitoring of stormwater discharges and authorized non-stormwater discharges.

Additionally, the anticipated tenants would store equipment, vehicles, and equipment containing hazardous substances (e.g., fuels, oils, solvents) that could release pollutants into stormwater. As discussed in Impact HAZ-1, sites that handle any individual hazardous material or mixture in excess of the following quantities: 55 gallons (liquid); 500 pounds (solid); or 200 cubic feet (gases) are required to prepare a HMBP. The Applicant and individual tenants would implement the HMBP as required by Mitigation Measure HAZ-1 and include measures for the storage, transportation, use, and handling of hazardous materials to prevent release into stormwater and drainage areas during operation.

With exception to the approximate 50 CY of asphalt concrete to pave the driveway and bioretention areas, the remainder of the project site would receive fill and be covered by compacted aggregate base, totaling approximately 30,500 CY in volume. As required by Chapter 14.26.030 of the Vacaville Municipal Code, new development and redevelopment projects are required to implement appropriate post-construction BMPs to prevent, control, and reduce the volume of pollutants in stormwater runoff. The proposed project would construct six bioretention areas along the eastern side of the project site, totaling approximately 4.02 acres, to collect and treat on-site stormwater. Additionally, two earthen swales would be constructed along the southern frontage, between the paved driveway and the SID drainage ditch to convey stormwater along the site's southern frontage. The bioretention areas would be designed and maintained in accordance with the requirements of Chapter 14.26.030 of the Vacaville Municipal Code. As such, operation of the proposed project would have a less than significant impact related to water quality degradation with implementation of Mitigation Measures, HYD-1, HYD-2 and HAZ-1, and compliance with the City's stormwater regulations.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM HYD-1 **Prepare and Implement a SWPPP.** Coverage shall be obtained for the project under the Construction General Permit (Order No. 2009-009-DWQ). Per the requirements of the SWRCB, a SWPPP shall be prepared for the project to reduce the potential for water pollution and sedimentation from proposed project activities. The SWPPP shall address site runoff, assuring that project runoff shall not affect or alter the drainage patterns on the project site. The SWPPP shall comply with the City's Grading Ordinance, as specified in Chapter 14.19 of the Vacaville Municipal Code, as well as the Waste Discharge Requirements of the Central Valley RWQCB Permit.

MM HYD-2 **Obtain Industrial General Permit.** Per the requirements of the State Water Resources Control Board, industrial activities involving vehicle maintenance, cleaning equipment, mechanical repairs, painting, or fueling shall obtain coverage under the NPDES Industrial General Permit (Order No. 2014-0057-DWQ). The Applicant and individual tenants would be required to prepare an operational SWPPP, eliminate unauthorized non-stormwater discharges, and perform monitoring of stormwater discharges and authorized non-stormwater discharges. The post-operational SWPPP shall also include a spill prevention and countermeasure plan that identifies the proper storage, collection, and disposal measures for potential pollutants used onsite.

Mitigation Measure HAZ-1 is also required. Refer to Section 3.9, Hazards and Hazardous Materials, for complete details pertaining to this mitigation measure.

Level of Significance After Mitigation
Less Than Significant with Mitigation.

Impact HYD-2 **Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

Impact Analysis

The proposed project would rely on the on-site well to provide water for dust control and fire suppression during construction and operation. During construction, temporary water storage tanks would be provided to supply dust control required water from the on-site well. Based upon an estimated 1-inch of water per acre (27,154 gallons per acre), project construction is anticipated to demand approximately 1,088,875 gallons total (Appendix A). The periods of water use would vary slightly with the most intensive activities occurring during earthwork, lime treatment, and aggregate base compaction (66 total days). As such, it is estimated project construction would demand an average of approximately 16,498 gallons per day (1,088,875 gallons / 66 total days). According to the well report prepared by Cal Aqua on June 14, 2022, the on-site well produces approximately 33 gallons per minute, which equates to approximately 47,520 gallons per day or approximately 1,425,600 gallons per month (Appendix A). As such, the on-site well is expected to provide sufficient water supplies for project construction. In the event project construction activities exceed the on-site well production, the proposed project would temporarily use either a 2,000- or 4,500-gallon water truck to deliver water to the project site. The water truck would be filled at a City hydrant located approximately 0.3 mile west of the project site along Weber Road (Appendix A).

Project operation would involve the interim storage of equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The interim storage of equipment, vehicles, and materials would not require potable water. Any potable water required would be minimal and primarily associated with the portable restroom facilities that anticipated tenants would provide for employees and visitors per state and local regulations.

The proposed project would construct a 4- to 6-inch water line to the existing well to serve the six storage yard areas for fire suppression and dust control. Non-potable water would also be stored in new water storage tanks to be installed on the project site (the Vacaville Fire Marshall would determine the location(s) and size(s) of tanks once tenants are located, and the applicable fire suppression requirements are determined). The total water demand would depend on the types of tenants identified as not all tenants are expected to require water for dust control (e.g., container storage). For purposes of this analysis, it is estimated operation would demand 1/10th of 1 inch of water per month (2,715 gallons per acre) (Appendix A). Based upon half of the site (20 acres) requiring dust control, it is estimated project operation would demand approximately 54,444 gallons per month. The remaining portion of the site (20 acres) would include tenants with low water demand, resulting in approximately 27,222 gallons per month. It is estimated the total water demand for operation would be approximately 81,666 gallons per month (Appendix A). The on-site well produces approximately 1,425,600 gallons per month, and therefore would provide sufficient water supplies for project operation.

The use of non-potable water for fire suppression and dust control would be intermittent and not substantially deplete on-site groundwater supplies. Additionally, the 41-acre project site would be mostly covered with a pervious compacted aggregate base and include six bioretention areas to allow groundwater recharge to continue. Therefore, the proposed project would not substantially decrease groundwater supplies or interfere with groundwater recharge and the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or offsite;

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

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

iv) Impede or redirect flood flows

Impact Analysis

i) Result in substantial erosion or siltation on- or offsite;

Construction of the proposed project would include site clearing, grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving. The site's drainage generally flows north to south, away from the on-site buildings in the northern portion of the project site, and toward the drainage ditches near the site's southern boundary. Construction activities could expose unprotected soils to stormwater runoff, causing erosion-related impacts. However, the proposed project would implement Mitigation Measure HYD-1 and prepare a SWPPP in accordance with the NPDES General Construction Permit. The SWPPP would include BMPs, which would be implemented during construction activities to reduce the potential of erosion. Any industrial activities involving vehicle maintenance, cleaning equipment, mechanical repairs, painting, or fueling would obtain coverage under the NPDES Industrial General Permit as required by Mitigation Measure HYD-2. Compliance with these regulations would require the proposed project to prepare a construction SWPPP and post-operation SWPPP that includes BMPs that meet the requirements of the Central Valley RWQCB's Water Quality Control Plan. Once construction activities are complete, the project site would be mostly covered with compacted aggregate base, totaling approximately 30,500 CY in volume. The proposed project would also construct six bioretention areas, totaling approximately 4.02 acres, to reduce the volume of stormwater runoff and erosion impacts. As such, the construction and operation of the proposed project would not result in substantial erosion or siltation, and impacts would be less than significant with implementation of Mitigation Measures HYD-1 and HYD-2.

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

The proposed project consists of an interim industrial and construction yard to store equipment and vehicles, and therefore would not substantially increase the amount of on-site impervious surface. The 41-acre project site would mostly be covered with a pervious compacted aggregate base, totaling approximately 30,500 CY in volume. New impervious surface created by the proposed project would be limited to the paved driveway entrance of approximately 0.08 acre (3,625 square feet). As most of the project site would remain pervious, the proposed project would not substantially increase the rate or amount of surface runoff on- or off-site. Furthermore, the proposed project would construct six

bioretention areas along the eastern side of the site, totaling approximately 4.02 acres, and two earthen swales along the site's southern frontage of approximately 0.13 acre (5,600 square feet). The bioretention areas and earthen swales would control the volume of stormwater at the project site to reduce the potential for flooding. Therefore, the proposed project would not result in on- or offsite flooding, and the impact would be less than significant.

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

As described above, construction and operation of the project would have the potential to generate stormwater runoff and to discharge pollutants, such as fuel, solvents, oil, paints, and trash. Construction activities would conform to the requirements of the NPDES General Construction Permit, which involves the preparation and implementation of a SWPPP. The SWPPP would be implemented as required by Mitigation Measure HYD-1 and specify BMPs to incorporate during construction to prevent, control, and reduce polluted runoff.

The tenants are not anticipated to maintain or refuel the vehicles, trucks, equipment stored on-site. In the event such activities occur, the Applicant and individual tenants would be required to obtain coverage under the NPDES Industrial General Permit as part of Mitigation Measure HYD-2. The implementation of Mitigation Measure HYD-2 would require the Applicant and individual tenants to eliminate unauthorized non-stormwater discharges, develop and implement an operational SWPPP, and perform monitoring of stormwater discharges and authorized non-stormwater discharges.

The project site would be covered by a pervious compacted base, and therefore would not substantially increase stormwater runoff that would exceed the capacity of existing stormwater drainage systems. As required by Chapter 14.26.030 of the Vacaville Municipal Code, the proposed project would construct approximately 4.02-acres of bioretention areas to prevent, control, and reduce the volume of pollutants in stormwater runoff. Additionally, two earthen swales would be constructed along the southern frontage, between the paved driveway and the SID drainage ditch to convey stormwater along the site's southern frontage. The bioretention areas would be designed and maintained in accordance with the requirements of Chapter 14.26.030 of the Vacaville Municipal Code. Therefore, stormwater generated by the proposed project would not exceed the capacity of existing or planned stormwater drainage systems, and impacts would be less than significant with Mitigation Measures HYD-1 and HYD-2 incorporated.

iv) Impede or redirect flood flows

According to FEMA FIRM #06095C0167F and FIRM #06095C0169E, the project site and the surrounding area are located in Zone X (FEMA 2009, FEMA 2012). Zone X is defined as areas not within either a 100-year or 500-year flood hazard zone. Therefore, the project site is not located within a FEMA flood zone and would not impede or redirect flood flows. No impact would occur.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures HYD-1 and HYD-2 are required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact Analysis
The project site would not be susceptible to seiche, tsunami, or mudflow. Seiches affect locations adjacent to larger water bodies such as lakes or reservoirs; the project site is not located near any such water body. The project site is located more than 45 miles from the Pacific Ocean and more than 10 miles from Suisun Bay, substantially reducing the potential for impacts from tsunamis. As noted above, the project site is not located within a flood hazard zone. As a result, there would be no impact.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis
The State Department of Water Resources identifies the Solano Sub-basin as a medium-priority basin. The Groundwater Sustainability Plan for the Solano Sub-basin was approved and adopted by Vacaville City Council on December 14, 2021. As discussed in Impact HYD-2, there is an on-site well and ancillary compressor shed located at the northern end of the project site that provides non-potable water. Project construction and operation activities would not require the use of potable water. Any potable water required would be minimal and primarily associated with the portable restroom facilities that anticipated tenants would provide for employees and visitors per state and local regulations. Project construction and operation activities would use non-potable water for dust control and fire suppression purposes; however, these activities would be temporary and not substantially deplete groundwater supplies. The 41-acre project site would also be mostly covered with a pervious compacted aggregate base and include six bioretention areas to allow groundwater recharge to continue.

Additionally, project construction activities would be required to comply with the policies and objectives of the Central Valley RWQCB's Water Quality Control Plan (Basin Plan), which includes water quality objectives for surface water and groundwater (City of Vacaville 2013). The proposed project would be required to implement Mitigation Measure HYD-1 and obtain coverage under the NPDES Construction General Permit requiring preparation of a SWPPP. Additionally, any industrial activities involving vehicle maintenance, cleaning equipment, mechanical repairs, painting, or fueling would obtain coverage under the NPDES Industrial General Permit as required by Mitigation Measure HYD-2. Compliance with these regulations would require the proposed project to prepare a construction SWPPP and post-operation SWPPP that includes BMPs that meet the requirements of the Central Valley RWQCB's Water Quality Control Plan. Therefore, the proposed project would not conflict with or obstruct implementation of the

Water Quality Control Plan for the Central Valley RWQCB or the Groundwater Sustainability Plan for the Solano Sub-basin. Impacts would be less than significant with implementation of Mitigation Measures HYD-1 and HYD-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures HYD-1 and HYD-2 are required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

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3.11 LAND USE AND PLANNING

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

3.11.1 Environmental Setting

The 41-acre project site consists of two vacant parcels within the City's NGA. Existing on-site development includes two vacant metal hangars, on-site well, and an ancillary compressor shed in the northern portion of the project site. The site topography is generally flat with elevations ranging from approximately 75 to 80 feet above mean sea level. A drainage ditch owned by SID is adjacent to the southern and eastern portions of the project site and there is an existing overhead PG&E line (with easement) that crosses the southeastern corner of the project site.

Land uses surrounding the project site include I-80 to the north, residences and commercial uses to the south along Weber Road, farmlands to the west, and the former Vaca Valley Raceway property to the east. The project site is approximately 3.75 miles northeast of the Nut Tree Airport and approximately 9.3 miles northeast of the Travis Airforce Base.

The City's NGA is approximately 1,400 acres and identified in the General Plan as an economic development area. The project site is designated Technology Park in the General Plan, which is intended to help facilitate a long-term vision for the area as an area of future opportunity for developing job-generating uses, such as high-quality office, industrial, and technology campus. The zoning for the project site was amended in November 2022 from Industrial Park to Technology Park for consistency between the zoning and Technology Park General Plan land use designation. As part of the rezoning, the Vacaville City Council also included a text amendment to the City's zoning code by adding a new NGA Overlay District under Chapter 14.09.191 and outlining the standards and regulations for interim, temporary development. The purpose of the NGA Overlay District is to limit development to temporary land uses to protect the economic interests of the City and preserve land for future development opportunities consistent with the City's Biotechnology and Advanced Manufacturing Initiative.

3.11.2 Methodology

The evaluation of potential land use impacts was based on a review of applicable land use documents, including the City's General Plan and the Vacaville Municipal Code. This analysis examined the consistency of the proposed project with applicable General Plan policies.

3.11.3 Environmental Impact Analysis

This section discusses potential impacts related to land use and planning associated with the proposed project and provides mitigation measures where necessary.

Impact LU-1 Physically divide an established community?

Impact Analysis

The project is proposing an interim construction and industrial yard within the City's NGA. The project site is vacant and bordered by I-80 to the north, residences and commercial uses to the south along Weber Road, farmlands to the west, and the former Vaca Valley Raceway property to the east. The proposed project would be accommodated by existing roadways and would not require construction of new roadways. All trucks, trailers, equipment, and materials associated with the tenants would be stored on-site and within the boundaries of the storage yard areas. Additionally, there would be no truck queuing or staging of materials along Weber Road, which would preclude access to the surrounding area. Therefore, the proposed project would not physically divide an established community, and no impact would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No Impact.

Impact LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Analysis

General Plan and Zoning Consistency

The 41-acre project site is within the City's NGA and designated Technology Park in the General Plan. The intent of the Technology Park land use designation is to facilitate the long-term vision of providing future opportunity for job-generating uses, such as high-quality office, industrial, and technology campuses. As discussed, the zoning for the project site was amended in November 2022 from Industrial Park to Technology Park for consistency between the zoning and Technology Park General Plan land use designation. As part of the rezoning, the Vacaville City Council included a text amendment to the City's zoning ordinance by adding a new NGA Overlay District under Chapter 14.09.191 and outlining the standards and regulations for interim, temporary development. The NGA Overlay District is to limit development to temporary land uses to protect the economic interests of the City and preserve land for future development opportunities consistent with the City's Biotechnology and Advanced Manufacturing Initiative.

The proposed project consists of an interim construction and industrial yard that would operate up to 5 to 15 years. The proposed project would provide up to six storage yard areas for lease. There are currently

no specific tenants identified with the project application. It is anticipated the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. Pursuant to Vacaville Municipal Code Chapter 14.09.191.030, interim storage yards for off-site construction activities are listed as an interim conditional use in the NGA Overlay District. The proposed project would require approval of a CUP and development agreement to ensure that the proposed uses provide public benefits and are designed and developed to be temporary in nature such that they are not inconsistent with the City's long-term goals for the area.

The applicable Technology Park zoning district does not contain any specific development standards related to structure or building height. The CUP would require the proposed project to comply with the development and performance standards of the Industrial Park zoning district. The anticipated equipment would have a maximum height of 30 feet, and therefore comply with the development standards for the Industrial Park zoning district which allows buildings up to 70 feet or up to 90 feet with approval of a CUP. As required by the CUP, the City would review each tenant prior to occupancy to ensure the use is consistent with the types of tenants and operations anticipated for the site and that the use complies with applicable federal and state regulations, the Vacaville Municipal Code, and the development and performance standards of the Industrial Park zoning district. Therefore, with the approval of a CUP and development agreement, the proposed project would not conflict with the City's General Plan or zoning code.

Nut Tree Airport and Travis Air Force Base Compatibility

The project site is approximately 3.75 miles northeast of the Nut Tree Airport and approximately 9.3 miles northeast of the Travis Airforce Base. The project site is not within the Nut Tree Airport's Area of Influence; however, the Travis Air Force Base Land Use Compatibility Plan identifies the southern portion of the project site within the Area of Influence for the Travis Air Force Base. The southern portion of the project site is within Compatibility Zone D, which does not place any restrictions on the types of land uses allowed, except for land uses that could cause hazard to flight, such as physical, visual, and electric forms of interference and land uses that attract birds. A review by the Solano County Airport Land Use Commission is only required in Compatibility Zone D for objects over 200 feet tall (Solano County ALUC 2002).

The proposed project would store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The equipment, materials, storage containers, or vehicles anticipated on-site would have a maximum height of 30 feet. Therefore, the proposed project would be consistent with the Travis Air Force Base Land Use Compatibility Plan and would not require review by the Solano County Airport Land Use Commission.

Overall, the proposed project would not conflict with the General Plan, zoning code, or the Travis Air Force Base Land Use Compatibility Plan, and this impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

3.12 MINERAL RESOURCES

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

3.12.1 Environmental Setting

The City contains limited mineral resources that are being extracted. Limestone deposits located near the southern boundary of the City, in the vicinity of Cement Hill, show evidence of some historic use. The western hills contain sandstone and conglomerates that may be used for sands, gravel, and stone; however, none of these resources are currently being mined (City of Vacaville 2013). There are no areas within the City mapped as Mineral Resource Zone-2 (MRZ-2), which are defined as areas where significant mineral resources (aggregate) deposits are present or where there is a high likelihood for their presence (City of Vacaville 2013, DOC 2018).

3.12.2 Methodology

The following analysis is based on a review of the General Plan and the DOC's Mineral Land Classification map (DOC 2018).

3.12.3 Environmental Impact Analysis

This section discusses potential impacts on mineral resources associated with the proposed project and provides mitigation measures where necessary.

Impact MIN-1 Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

Impact Analysis
The 41-acre project site consists of two vacant parcels that are covered with non-native vegetation and used previously for cattle grazing. The project site is within an area mapped as MRZ-1, which is defined as areas that contain no significant mineral deposits (DOC 2018). No mineral extraction activities exist on or the near the site, and mineral extraction is not included as part of the proposed project. Furthermore, mineral extraction uses are not permitted or conditionally permitted in the NGA Overlay District or the Technology Park zoning district. The proposed project would not result in the loss of availability of a known mineral resource, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact MIN-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Impact Analysis
The project site is within an area mapped as MRZ-1, and therefore does not contain significant mineral deposits (DOC 2019). The project site is within the City's NGA, which is identified in the General Plan as an economic development area primarily containing job generating uses such as high-quality offices, industrial uses, and technology campuses. The project site has not been delineated as a locally important mineral resource recovery site by the General Plan, General Plan EIR, or any specific plan or other land use plan. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

3.13 NOISE

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

3.13.1 Environmental Setting

Noise Fundamentals and Terminology

Noise is generally defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written as dBA and referred to as A-weighted decibels. There is a strong correlation between dBA and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Table 3.13-1 defines sound measurements and other terminology used in this report, and Table 3.13-2 summarizes typical A-weighted sound levels for different noise sources.

With respect to how humans perceive and react to changes in noise levels, a 1-dBA increase is imperceptible, a 3-dBA increase is barely perceptible, a 5-dBA increase is clearly noticeable, and a 10-

dBA increase is subjectively perceived as approximately twice as loud (Egan 2007). These subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broadband noise and to changes in levels of a given noise source. These statistical indicators are thought to be most applicable to noise levels in the range of 50 to 70 dBA, as this is the usual range of voice and interior noise levels. Numbers of agencies and municipalities have developed or adopted noise level standards consistent with these and other similar studies to help prevent annoyance and to protect against the degradation of the existing noise environment.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (Leq), the minimum and maximum sound levels (Lmin and Lmax), percentile-exceeded sound levels (such as L10, L20), the day-night sound level (Ldn), and the community noise equivalent level (CNEL). Ldn and CNEL values differ by less than 1 dB. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment.

For a point source, such as a stationary compressor or construction equipment, sound attenuates based on geometry at a rate of 6 dB per doubling of distance. For a line source, such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance (FHWA 2011a, FHWA 2011b). Atmospheric conditions, including wind, temperature gradients, and humidity, can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1-2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.

Table 3.13-1: Definition of Sound Measurement

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
C-Weighted Decibel (dBC)	The sound pressure level in decibels as measured using the C- weighting filter network. The C-weighting is very close to an unweighted or flat response. C-weighting is only used in special cases when low-frequency noise is of particular importance. A comparison of measured A- and C-weighted level gives an indication of low frequency content.
Maximum Sound Level (Lmax)	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.
Equivalent Sound Level (Leq)	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.

Sound Measurements	Definition
Percentile-Exceeded Sound Level (Lxx)	The sound level exceeded xx % of a specific time period. L10 is the sound level exceeded 10% of the time. L90 is the sound level exceeded 90% of the time. L90 is often considered to be representative of the background noise level in a given area.
Day-Night Level (Ldn)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Peak Particle Velocity (Peak Velocity or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Source: Federal Highway Administration Construction Noise Handbook 2006

Table 3.13-2: Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	-110-	Rock band
Jet flyover at 1,000 feet		
	-100-	
Gas lawnmower at 3 feet		
	-90-	
Diesel truck at 50 feet at 50 MPH		Food blender at 3 feet
Noisy urban area, daytime	-80-	Garbage disposal at 3 feet
Gas lawnmower, 100 feet		
Commercial area	-70-	Vacuum cleaner at 10 feet
Heavy traffic at 300 feet		Normal speech at 3 feet
	-60-	
Quiet urban daytime		Large business office
	-50-	Dishwasher in next room
Quiet urban nighttime		
Quiet suburban nighttime	-40-	Theater, large conference room (Background)
Quiet rural nighttime	-30-	Library
	-20-	Bedroom at night, concert hall (Background)
	-10-	Broadcast/recording studio
	-0-	

Notes:
dBA = A-weighted decibels
MPH = miles per hour

Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one source produces a sound pressure level of 70 dBA, two identical sources would combine to produce 73 dBA. The cumulative sound level of any number of sources can be determined using decibel addition.

Vibration Standards

Vibration is like noise such that noise involves a source, a transmission path, and a receiver. While related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise,

vibration consists of an amplitude and frequency. A person's perception to vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system that is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception, as well as damage to structures, have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.13-3 notes the general threshold at which human annoyance could occur is 0.1 inches per second (in/sec) PPV. Table 3.13-4 indicates the threshold for damage to structures ranges from 0.12 to 2.0 in/sec PPV.

Table 3.13-3: Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

Notes:
Transient sources create a single isolated vibration event such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seal equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inches per second
PPV = peak particle velocity
Source: California Department of Transportation 2004

Table 3.13-4: Guideline Vibration Damage Potential Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structure	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation 2004

Operation of heavy construction equipment, particularly pile driving and other impact devices, such as pavement breakers, create seismic waves that radiate along the surface of the earth and downward into the earth. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance would result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes would decrease with increasing distance.

Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they excite the particles of rock and soil through which they pass and cause them to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as PPV. Table 3.13-5 summarizes typical vibration source levels generated by various construction equipment.

Table 3.13-5: Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet
Large bulldozer	0.089
Loaded trucks	0.076
Small bulldozer	0.003

Notes: PPV = peak particle velocity
Source: Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual, September 2018

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation can be

used to estimate the vibration level at a given distance for typical soil conditions (FTA 2018). PPVref is the reference PPV from Table 3.13-5:

PPV = PPVref x (25/Distance)^1.5

Noise Regulatory Framework

Federal, state, and local agencies regulate different aspects of environmental noise. Generally, the federal government sets noise standards for transportation-related noise sources closely linked to interstate commerce. These include aircraft, locomotives, and trucks. No federal noise standards are directly applicable to this project. The state government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies. Local general plans identify general principles intended to guide and influence development plans.

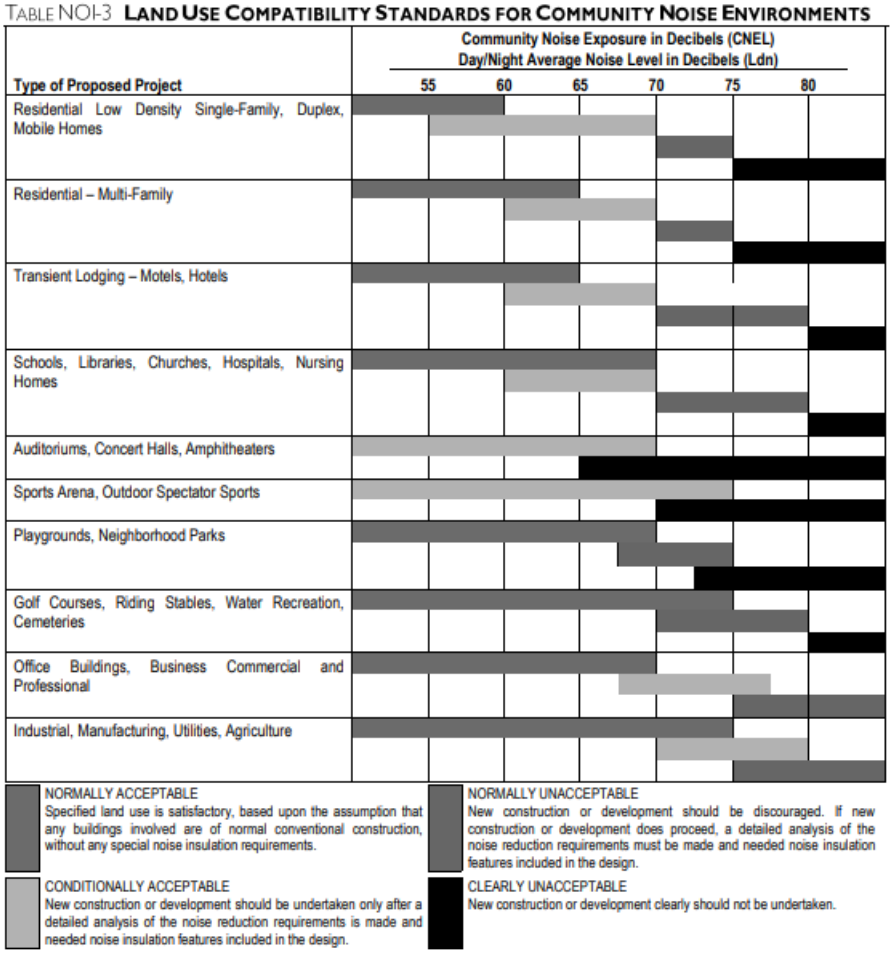
Local Regulations

City of Vacaville General Plan

Table NOI-3 in the Noise Element (Chapter 8) of the City of Vacaville General Plan identifies land use compatibility noise standards for noise-sensitive land uses affected by all noise sources. For industrial, manufacturing, utilities, and agriculture lands, “normally acceptable” exterior noise levels extend to 75 dBA Ldn/CNEL. Exterior noise levels up to 80 dBA Ldn/CNEL are considered “conditionally acceptable” and noise levels between 80 and 85 dBA Ldn/CNEL are “normally unacceptable”.

For noise sensitive land uses, including single-family homes, which are affected by noise sources, the “normally acceptable” exterior noise level ranged up to 60 dBA Ldn/CNEL. Exterior noise levels of up to 70 dBA Ldn/CNEL for residential land uses are considered “conditionally acceptable” provided needed noise mitigation measures have been incorporated and interior noise levels are maintained within “normally acceptable” levels.

TABLE NOI-3 **LAND USE COMPATIBILITY STANDARDS FOR COMMUNITY NOISE ENVIRONMENTS**



Note: This table provides land use compatibility standards for all noise sources. While the prior General Plan established different standards for different noise sources, it has since become common practice to establish one set of land use compatibility standards for all noise sources because it is often difficult to definitively determine which portion of ambient noise levels are attributable to a particular noise source.
Source: State of California General Plan Guidelines, 2003.

Listed below are relevant policies from the City of Vacaville General Plan:

- ***Policy NOI-P1.2:*** *Require that noise created by new transportation and non-transportation noise sources be mitigated, to the extent that is technically and economically feasible, to comply with the noise level standards of Table NOI-3.*
- ***Policy NOI-P1.3:*** *Allow minor exceptions to the noise level design standards in Table NOI-3 in circumstances where mitigation requirements are not technically or economically feasible and not consistent with other City goals, standards, and policies.*
- ***Policy NOI-P2.1:*** *Reduce outdoor noise levels in existing residential areas, where economically and aesthetically feasible.*
- ***Policy NOI-P2.5:*** *Encourage the use of open space, earthen berms, parking, accessory buildings, and landscaping to buffer new and existing development from noise. Use sound walls*

only when other methods are not practical or when recommended by an acoustical expert as part of a mitigation program.

- ***Policy NOI-P3.1****: Limit truck traffic to designated truck routes.*
- ***Policy NOI-P4.1:*** *Preclude the generation of annoying or harmful noise through conditions of approval on stationary noise sources, such as construction and property maintenance activity and mechanical equipment.*
- ***Policy NOI-P4.2:*** *Require the following construction noise control measures:*
    - *Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.*
    - *Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.*
    - *Utilize "quiet" air compressors and other stationary noise sources where technology exists.*
    - *Limit hours of operation of outdoor noise sources through conditions of approval* (City of Vacaville 2015)*.*

City of Vacaville Municipal Code Chapter 14.09.240 "Performance Standards" Paragraph 14.09.240.140 "Noise"

This section of the code implements the Noise Element of the General Plan. It is applicable to the land use determinations approved through the General Plan amendment and the zone change process. This section also applies to any project approvals granted in accordance with the Zoning Code and the Subdivisions Ordinance. The standards identify the maximum noise levels to which sensitive land uses may be exposed and the maximum noise standards related to non-transportation sources. A sensitive land use is a use which is sensitive to noise impacts and for which this section establishes maximum noise exposure standards.

Table 14.09.240.D addresses maximum noise exposure and generation levels for non-transportation sources, defined as elements such as industrial operations, outdoor recreational facilities, loading docks, and construction equipment. This table lists the following:

Table 14.09.240.D: Maximum Noise Exposure and Generation Levels for Non-Transportation Sources					
Land Use Category	Noise Level Descriptor	Exterior Noise Levels		Interior Noise Levels	
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Residential	Hourly Leq, dBA	50	45	45	35
Maximum Level, dBA	70	65	--	--	--
Transient Lodging	Hourly Leq, dBA	--	--	45	35
Hospitals, Nursing Homes	Hourly Leq, dBA	50	45	45	35
Other	Hourly Leq, dBA	--	--	--	--
	Maximum Level, dBA	--	--	--	--

The Municipal Code also states the noise standards for non-transportation sources shall not apply in the following situations:

a) To new uses if the ambient noise levels exceed the hourly Leq or the maximum level of the proposed noise generator, unless the additional noise generated would increase the projected, combined noise levels a minimum of three decibels

b) To public parks or public playgrounds upon a finding by the decision-maker that the location of the facilities within the park or playground reasonable limits the noise impacts upon other land uses

c) For nuisance abatement related to residential generated noise sources including, but not limited to, children playing, lawn mowers, barking dogs, and musical equipment

d) To residential caretaker units established in conjunction with non-residential units

e) To construction activity related to public improvement projects where the Director has determined that full compliance with these standards cannot be practically achieved

Paragraph 14.09.240.160 "Vibration" states the following:

No use, activity, or process shall cause vibration to be apparent to a reasonable person of normal sensitivity beyond the boundaries of the subject site, or to an adjacent use on the subject site. The ground vibration caused by moving vehicles or temporary construction activities is exempted from this prohibition.

City of Vacaville Municipal Code Section 8.10.060 "Abatement of Public Nuisance"

The Municipal Code states the following related to construction:

Construction, repair work or grading within 500 feet from any occupied residence between the hours of 7:00 p.m. and 7:00 a.m. Monday through Saturday. No such construction, repair work or grading activities shall be allowed on Sundays or holidays. These restrictions do not apply to:

1. City projects;

2. An exception granted by the department of public works for emergency work, to offset project delays due to inclement weather, for 24-hour projects, or other similar occurrences; or

3. Interior work, construction, repair work or grading activities that are performed by or under the direction of the homeowner at his or her residence on a Sunday or holiday, provided such work shall only be allowed between the hours of 8:00 a.m. and 7:00 p.m.

Identification of Sensitive Receptors and Existing Ambient Noise Levels

Sensitive Receptors

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are considered to be more sensitive to noise intrusion than commercial or industrial activities. Ambient noise levels can also affect the perceived desirability or livability of a development.

The 41-acre project site is in northeast Vacaville along Weber Road, between Lewis Road and the I-80 freeway. Land uses surrounding the project site include I-80 to the north, farmlands to the west, the former Vaca Valley Raceway property to the east, and residences and commercial uses to the south along Weber Road and Byrnes Road. The closest noise-sensitive receptor to the project site is a residential home along Byrnes Road, located approximately 234 feet south of the project boundary.

Ambient Noise Levels

The existing noise environment in a project area is characterized by the area's general level of development, due to the high correlation between the level of development and ambient noise levels. Areas that are not urbanized are relatively quiet, while areas that are more urbanized are noisier as a result of roadway traffic, industrial activities, and other human activities.

The City and the project site are exposed to noise generated by traffic on I-80. To a lesser extent, noise is also generated along local roads such as Weber Road. Existing roadway contours are shown in Figure NOI-1 in the Vacaville General Plan Noise Element. According to the contours, noise levels at the north end of the project site closest to I-80 could be at or above 70 dBA Ldn. Noise levels are reduced as one moves away from I-80, with the noise levels at the southern edge of the project site along Weber Road expected to be below 60 dBA Ldn.

3.13.2 Methodology

In accordance with the requirements of CEQA, the noise analysis evaluates the project's noise sources to determine the impact of the proposed project on the existing ambient noise environment. The City noise

contours were used to provide baseline noise conditions at nearby sensitive receptors and within the project site vicinity. For the purpose of this analysis, potentially sensitive receptors were determined by reviewing current aerial photography.

The Federal Highway Administration Roadway Construction Noise Model (RCNM) was used to determine noise generated from construction activities. The RCNM is used as the Federal Highway Administration's national standard for predicting noise generated from construction activities. The RCNM analysis includes the calculation of noise levels (Lmax and Leq) at incremental distances for a variety of construction equipment. The spreadsheet inputs include acoustical use factors, Lmax values, and Leq values at various distances, depending on the ambient noise measurement location. Construction noise levels were calculated for each phase of construction based on the equipment list provided by the Applicant. The construction noise calculations are provided in Appendix H.

Vibration from construction equipment is analyzed at the surrounding buildings and compared to the applicable California Department of Transportation building damage criteria to determine whether construction activities would generate vibration at levels that could result in building damage.

Impacts from future project-related traffic were estimated using predicted traffic counts for the project prepared by Stantec.

Noise from the proposed project's mechanical and heating, ventilation, and air conditioning systems would operate regularly and are therefore required to comply with the maximum noise limits listed in Table 14.09.127.04 of the City's Municipal Code (refer to regulatory discussion above).

3.13.3 Environmental Impact Analysis

This section discusses potential impacts related to noise associated with the proposed project and provides mitigation measures where necessary.

Impact NOI-1	**Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Impact Analysis

Exterior Traffic Noise Level Impacts

Traffic noise depends primarily on traffic speed (tire noise increases with speed) and the proportion of truck traffic (trucks generate engine, exhaust, and wind noise in addition to tire noise). Changes in traffic volumes can also have an impact on overall traffic noise levels. For example, it takes 25 percent more traffic volume to produce an increase of only 1 dBA in the ambient noise level. For roads already heavy with traffic volume, an increase in traffic numbers could even reduce noise because the heavier volumes could slow down the average speed of the vehicles. A doubling of traffic volume results in a 3 dBA increase in noise levels.

The potential tenants for the project would generate a worst case of 160 total daily trips, including both staff and truck trips. A worst-case assumption would be that all 80 vehicles enter the site during the same

hour of the day. The addition of only 80 vehicles per hour is not a volume of traffic sufficient to increase traffic noise, even if the existing ambient noise environment were quiet. Therefore, the proposed project would not cause increased traffic noise levels over the baseline conditions at the neighboring sensitive receptors, and this impact would be less than significant.

Proposed Project Operational and Fixed-Source Noise

There are currently no specific tenants identified with the project application, however, it is anticipated that various industrial and construction contractors would lease the six storage yard areas to temporarily store equipment including, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. Activities, such as autonomous equipment testing could also potentially take place at the project site.

Equipment used to temperature control office trailers, such as condensing units and exhaust fans, and equipment used for equipment testing would generate noise that would radiate to neighboring properties. The noise from this equipment would be required to comply with the maximum noise level limits listed in Table 14.09.240.D of the Vacaville Municipal Code. The proposed project would comply with the requirements of the Vacaville Municipal Code with implementation of Mitigation Measure NOI-1 by incorporating design measures for the equipment, such as shielding, to reduce noise levels that may affect nearby properties. The nighttime noise levels in the Vacaville Municipal Code would not be applicable since no nighttime activities would be allowed on the project site. With the implementation of Mitigation Measure NOI-1, the impact of fixed-source noise to the neighboring properties would be less than significant.

Short-Term Construction Noise Impacts

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. This increased traffic would be comprised of vehicles, medium trucks, and heavy trucks.

It is anticipated that construction activities would only take approximately four months to complete. Project construction and grading activities would occur Monday through Friday during regular business hours. All construction and grading activities would be consistent with the Vacaville Municipal Code and not occur between dusk (0.5-hour after sunset) and 7:00 a.m. The construction activities would require up to only 12 workers per day during peak construction. Therefore, the impact of construction traffic noise to the neighboring noise-sensitive receptors would be less than significant.

The second type of short-term noise impact is related to noise generated during construction. Construction activities would include erosion control, earthwork, lime treatment, utility installation, aggregate base compaction, and asphalt paving.

Each construction stage has its own mix of equipment and, consequently, its own noise characteristics. These various construction operations would change the character of the noise generated at the project site, and therefore, the exterior noise level as construction progresses. The loudest phases of construction typically involve earthmoving and grading equipment. Table 3.13-5 lists the types of construction equipment that may be used throughout construction and the maximum and average

operational noise level as measured at 234 feet from the operating equipment. The 234-foot distance represents the approximate distance between the project site and the closest noise-sensitive single-family residence near the intersection of Weber Road and Byrnes Road.

Table 3.13-5: Federal Highway Administration Roadway Construction Noise Model Noise Sources

Construction Equipment Source	Distance to Nearest Sensitive Receptor, feet	Estimated Sound Level at Receptor		
		Lmax, dBA	Acoustical Use Factor (%)	Leq, dBA
Compactor	234	69.8	20	62.8
Dozer	234	68.3	40	64.3
Excavator	234	67.3	40	63.3
Front-End Loader	234	65.7	40	61.7
Grader	234	71.6	40	67.6
Mixer	234	65.4	40	61.4
Paver	234	63.8	50	60.8
Pickup (Crew) Truck	234	61.6	40	57.6
Scraper	234	70.2	40	66.2
Spreader[1]	234	63.1	40	59.1
Water Truck[2]	234	63.1	40	59.1

Notes:
Leq = equivalent sound level
Lmax = maximum sound level
Source: Stantec 2023, Federal Highway Administration RCNM, v1.1, 2008
[1]The RCNM program does not have specific source levels for a spreader truck. The noise levels for a spreader truck were estimated using a dump truck
[2]The RCNM program does not have specific source levels for a water truck. The noise levels for a water truck were also estimated using a dump truck.

The construction of the entire project would be conducted in six sequential stages, and each stage would use different pieces of construction equipment. The main noise-producing equipment for each construction stage is shown in Table 3.13-6.

Table 3.13-6: Construction Stage Equipment

Construction Stage	Planned Equipment	
Erosion Control	• Front-End Loader	• Crew Truck
Earthwork	• Dozer • Grader • Water Truck	• Scraper • Compactor • Crew Truck
Lime Treat Subgrade	• Mixer • Compactor • Crew Truck	• Spreader • Water Truck
Site Utilities	• Excavator • Front-End Loader • Water Truck	• Compactor • Crew Truck
Aggregate Base	• Grader • Compactor • Water Truck	• Front-End Loader • Crew Truck
Asphalt Paving	• Paver • Compactor • Crew Truck	• Water Truck • Front-End Loader

A worst-case condition for construction activity would assume that all noise-generating equipment was operating at the same time and at the same distance away from the closest noise-sensitive receptor. Using this assumption, the RCNM program calculated the following combined Leq and Lmax noise levels from each stage of construction as shown in Table 3.13-7.

Table 3.13-7: Calculated Noise Level from Each Construction Stage

Construction Stage	Distance to Closest Noise Sensitive Receptor, feet	Calculated Leq, dBA	Calculated Lmax, dBA
Erosion Control	234	63.2	67.1
Earthwork	234	72.0	76.5
Lime Treat Subgrade	234	67.4	72.7
Site Utilities	234	68.4	73.4
Aggregate Base	234	70.2	74.9
Asphalt Paving	234	67.8	72.8

Notes:
dBA = A-weighted decibel
Leq = equivalent sound level
Lmax = maximum sound level

Although noise levels could range into the conditionally acceptable to normally unacceptable ranges, as defined by Table NOI-3 in the Noise Element (Chapter 8) of the General Plan, increases in noise levels from construction activities would be temporary. In addition to the hours restrictions on construction noise contained within the General Plan and the Vacaville Municipal Code, the Federal Transit Administration offers construction mitigation measures, listed in Section 12.1.3 “Mitigation of Construction Noise,” in the Transit Noise and Vibration Impact Assessment document (FTA-VA-90-1003-06 September 2018). Some of the applicable measures below are included in Mitigation Measure NOI-2.

“Design Considerations and Project Layout:

- Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.
- Re-route truck traffic away from residential streets, if possible. Select streets with the fewest homes, if no alternatives are available.
- Site equipment on the construction lot as far away from noise-sensitive sites as possible.
- Construct walled enclosures around especially noisy activities or clusters of noisy equipment. For example, shields can be used around pavement breakers, and loaded vinyl curtains can be draped under elevated structures.

Sequence of Operations:

- Combine noisy operations to occur in the same time period. The total noise level produced would not be significantly greater than the level produced if the operations were performed separately.
- Avoid nighttime activities. Sensitivity to noise increases during the nighttime hours in residential neighborhoods.

Alternative Construction Methods:

- Use specially quieted equipment, such as quieted and enclosed air compressors and mufflers, on all engines."

In conclusion, construction noise would be short-term and intermittent. Furthermore, implementation of Mitigation Measure NOI-2 would follow the recommendations in the City's General Plan and Municipal Code requirements; therefore, impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM NOI-1: **Project Operational and Fixed-Source Noise.** The noise from all equipment associated with the proposed project shall comply with the maximum noise level limits listed in Table 14.09.127.04 of the Vacaville Municipal Code. Uses with potential to exceed city noise standards, will be restricted to the northern portion of the site and away from sensitive receptors along Weber Road.

MM NOI-2: **Construction Noise Reduction Plan.** Prior to construction, the Applicant shall submit a Construction Noise Reduction Plan to the City that includes, but is not limited to the following measures to reduce construction noise impacts:

- Use a comprehensive program of noise prevention through planning and mitigation and consider noise impacts as a crucial factor in project approval.
- Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.
- Site equipment on the construction lot as far away from noise-sensitive sites as possible.
- Construct walled enclosures around especially noisy activities or clusters of noisy equipment. For example, shields can be used around pavement breakers, and loaded vinyl curtains can be draped under elevated structures.
- Combine noisy operations to occur in the same time period. The total noise level produced will not be significantly greater than the level produced if the operations were performed separately.
- Avoid nighttime activities. Sensitivity to noise increases during the nighttime hours in residential neighborhoods.
- Use specially quieted equipment, such as quieted and enclosed air compressors and mufflers, on all engines.
- Post a construction site notice that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval

for the project site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public and approved by the City.

Level of Significance After Mitigation
Less Than Significant with Mitigation.

Impact NOI-2 Generation of excessive groundborne vibration or groundborne noise levels?

Impact Analysis
During construction and operation of the proposed project, equipment such as bulldozers, and trucks may be used no closer than 234 feet from the nearest sensitive single-family residence at the corner of Weber Road and Byrnes Road. Construction equipment that would be used during project construction would generate vibration levels between 0.0001 PPV and 0.003 PPV at a distance of 234 feet, as shown in Table 3.13-8. All the groundborne vibration levels are below the Federal Transit Administration vibration threshold at which human annoyance could occur of 0.10 PPV. Additionally, construction activities would be temporary in nature and both construction and operation activity would occur during normal daytime working hours. Therefore, equipment vibration is not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. As such, implementation of the proposed project would have a less than significant impact related to vibration.

Table 3.13-8: Vibration Source Levels for Construction Equipment

Type of Equipment	Peak Particle Velocity at 25 Feet	Peak Particle Velocity at 50 Feet	Peak Particle Velocity at 234 Feet	Threshold at which Human Annoyance Could Occur	Potential for Proposed Project to Exceed Threshold
Large bulldozer	0.089	0.032	0.003	0.10	None
Loaded trucks	0.076	0.027	0.003	0.10	None
Small bulldozer	0.003	0.001	0.0001	0.10	None

Source: Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual, September 2018

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact NOI-3	**For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

Impact Analysis

Figures NOI-2 and NOI-3 in the General Plan Noise Element show the CNEL airport noise contours from the Nut Tree Airport. The project site lies outside the 55-60 CNEL contour for the Nut Tree Airport. No portion of the city lies within the 60 dBA CNEL noise contour of the Travis Air Force Base. A private helipad, the Kaiser Permanente Medical Center helipad, is located approximately 2.4 miles southwest of the project site, as measured from available maps. Therefore, the proposed project would not expose persons staying or working in the project vicinity to excessive aviation noise, and the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

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3.14 POPULATION AND HOUSING

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

3.14.1 Environmental Setting

Over the past several decades, the City has grown from a small, rural town to a moderate-sized city, with its industry, ease of access, and proximity to the Bay Area. In July 2022, the City had a population of 101,918 (United States Census Bureau 2022). The City's General Plan projected that its population would grow to a total of 112,000 by 2035, with 42,700 dwelling units, 9.6 million square feet of commercial space, 3.1 million square feet of office space, and 13.1 square feet of industrial space (City of Vacaville 2013).

3.14.2 Methodology

The following evaluation of potential population, housing, and employment impacts associated with the proposed project was based on data obtained from the United States Census Bureau and applicable planning documents from the City. The following impact discussions consider the impacts of the proposed project related to employment, population, and housing in the City.

3.14.3 Environmental Impact Analysis

This section discusses potential impacts related to population and housing associated with the proposed project and provides mitigation measures where necessary.

Impact POP-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Analysis

The project is proposing an interim industrial and construction yard in the City's NGA. The proposed project does not include any residential development that would directly increase the City's population. Construction activities would take approximately four months to complete and temporarily require up to 12 workers per day during peak construction. It is expected the construction workforce would be available

from nearby areas. Furthermore, due to the limited construction duration the construction workforce would not be expected to relocate and increase the demand for housing.

There are currently no specific tenants identified with the project application. The maximum number of on-site employees would ultimately depend on the type of tenants leasing the storage yard areas. It is anticipated most employees would visit the project site temporarily to obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day. Due to the temporary use of the project site, it is expected the on-site employees would already reside in Vacaville or be within commuting distance to access the project site. Therefore, the proposed project would not directly or indirectly induce the City's population, and this impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact Analysis
The 41-acre project site is vacant and does not contain any residential dwellings or residences on-site. Therefore, the proposed project would not result in the displacement of people or housing that would necessitate the construction of replacement housing elsewhere. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

3.15 PUBLIC SERVICES

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

3.15.1 Environmental Setting

Fire Protection

The Vacaville Fire Department (VFD) provides fire and emergency medical services to 28 square miles of the City, as well as emergency medical services to 160 square miles of unincorporated county land surrounding the City. The VFD responds to calls for fires, hazardous materials emergencies, certain technical emergencies, vehicle accidents and extrication incidents, and first responder and transport services (City of Vacaville 2015). The VFD also responds to mass-casualty incidents within its larger response area as part of a countywide mutual aid system for ambulances. The VFD response time goal is to be on scene within 7 minutes or less starting from receipt of a 911 call 90 percent of the time (City of Vacaville 2013). According to the VFD 2022 annual report, the VFD maintained an average response time of 5 minutes and 14 seconds to arrive at the scene once called for service (VFD 2022). VFD Station 73, located at 650 Eubanks Court, is the nearest fire station and located about 3 miles to the west.

Police Protection

The Vacaville Police Department (VPD) provides law enforcement services to the City. Responsibilities of the VPD include a 24/7 communication center, crime suppression and prevention, investigations, traffic patrol, and emergency services. For Priority I calls, the adopted average response time standard is 6 minutes and 1 second. For Priority II calls, the adopted average response time standard is 16 minutes and 28 seconds. There is one main VPD police station located at 660 Merchant Street, which is approximately 6.3 miles southwest of the project site.

Schools

The following four school districts serve students in the City: Vacaville Unified School District, Travis Unified School District, Dixon Unified School District, and Fairfield-Suisun Unified School District. The nearest school is Cooper Elementary, located about 4.3 miles southwest of the project site. In addition, Solano Community College, Vacaville Center, is located approximately 2.2 miles southwest of the project site.

Parks

The City owns and operates three categories of parks: neighborhood, community, and regional. The City also owns and operates accessible open space, special purpose facilities and trails (City of Vacaville 2015). The nearest park, Corderos Park, is a neighborhood park approximately 1.8 miles southwest of the project site.

Other Facilities

The Solano County Library operates and maintains the Vacaville Cultural Center Library and the Vacaville Town Square Library in cooperation with the Vacaville Unified School District. These libraries are at least 5 miles southwest of the project site in downtown Vacaville.

3.15.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the Public Facilities and Services Element of the General Plan, Parks and Recreation Element of the General Plan, the General Plan EIR, the Vacaville Municipal Code, and Section 2.0, Project Description, of this ISMND.

3.15.3 Environmental Impact Analysis

This section discusses potential impacts on public services associated with the proposed project and provides mitigation measures where necessary.

Impact PUB-1 **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

Fire protection?
Police protection?
Schools?
Parks?
Other public facilities?

Impact Analysis

Fire Protection

The proposed project does not involve a residential component. It is anticipated most employees would visit the storage yard areas to temporarily obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day. The VFD response time goal is to be on scene within 7 minutes or less starting from receipt of a 911 call 90 percent of the time (City of Vacaville 2013). According to the VFD 2022 annual report, the VFD is meeting this goal with an average response time of 5 minutes and 14 seconds to arrive at the scene once called for service (VFD 2022). Due to the limited number of on-site employees and temporary use of the project site, the proposed project would not impact VFD response times that would require the construction of new or physically altered fire protection facilities. Additionally, the proposed project would comply with the California Fire Code and include site-specific design features, such as providing water for fire suppression and adequate emergency access via Weber Road. Conformance with the requirements of the California Fire Code would minimize risks associated with fire hazards. Therefore, the impact to fire protection services would be less than significant.

Police Protection

As discussed, the proposed project does not include a residential component. It is anticipated most employees would visit the project site temporarily to obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day. As the on-site employees would temporarily visit the project site, the proposed project would not increase demand for police protection services requiring the construction of new or physically altered police protection facilities. Individual tenants are expected to install any additional security measures, such as temporary lighting and cameras to monitor the storage yard areas and minimize potential for burglaries. Additionally, the proposed project would install perimeter fencing and the driveway entrance on Weber Road would be gated and secured outside of business hours. Therefore, the impact to police protection services would be less than significant.

Schools

The proposed project consists of an interim industrial and construction yard. No residential uses are proposed; therefore, the proposed project would not directly increase the demand on school facilities. IT is anticipated employees generated by the proposed project would already reside in or near the City and

would not directly or indirectly increase demand for new or expanded school facilities. As such, the proposed project would have no impact on school facilities.

Parks

The proposed project would not involve a residential component or introduce a new population that would directly create additional demand on existing or planned park facilities. It is expected employees generated by the proposed project would already reside in or near Vacaville, and therefore would not directly or indirectly increase the use of nearby park facilities. Therefore, the proposed project would not significantly affect the City's parkland ratios or result in the need for new or expanded park facilities. No impact would occur.

Other Public Facilities

As discussed, the proposed project would not generate a residential population that would substantially increase the demand for libraries or other public facilities. It is expected employees generated by the proposed project would already reside in or near the City and would not directly or indirectly increase the demand on other public facilities. No impact would occur.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.16 RECREATION

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

3.16.1 Environmental Setting

The City's Parks and Recreation Department owns and operates 25 neighborhood parks, 8 community parks, and 1 regional park (City of Vacaville 2015). The City also manages accessible open space areas, eight special purpose facilities, and trails. The project site is located within the City's NGA, which is identified in the General Plan as an economic development area and primarily contains job generating uses such as high-quality offices, industrial uses, and technology campuses. The nearest park is Corderos Park, located about 1.8 miles southwest of the project site.

3.16.2 Methodology

The following analysis is based on a review of the Parks and Recreation Element of the General Plan and the Vacaville Municipal Code.

3.16.3 Environmental Impact Analysis

This section discusses potential impacts to recreation associated with the proposed project and provides mitigation measures where necessary.

Impact REC-1 Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Impact Analysis

The proposed project would not include a residential component that would directly increase the City's population growth. While the maximum number of on-site employees would ultimately depend on the type of tenants leasing the storage yard areas, it is anticipated there would be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day. It is expected the on-site employees would already reside in or near Vacaville. Therefore, due to the limited number of on-site employees and temporary use of the project site, the proposed project would not be expected to

directly or indirectly increase the use of any existing recreation facilities or result in the need for new or expanded recreation facilities. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact REC-2 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Analysis
The proposed project consists of an interim construction and industrial storage yard on a 41-acre vacant site. The scope of the proposed project would not include the construction or expansion of recreational facilities. Therefore, the proposed project would not result in an adverse physical effect on the environment related to the construction or expansion of recreation facilities. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

3.17 TRANSPORTATION

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

3.17.1 Environmental Setting

Roadway System

Freeways

The City is served by two freeways, I-80 and I-505, which are part of the interstate highway network. I-80 is closest to the project site, has three to four travel lanes in each direction and extends southwest through Fairfield and Vallejo and northeast through Davis and Sacramento. I-505 has two travel lanes in each direction and links I-80 with I-5.

Arterials

The City's road system is composed of a hierarchy of streets with varying functions. Arterial roads range from two-lane arterials to six-lane arterials that link residential and commercial districts with the freeway network and provide intercity connections. The nearest arterial road to the project site is N. Meridian Road, just west of I-80, which is classified as a two-lane arterial. (City of Vacaville 2021a).

Collectors and Local Streets

Collectors and local streets are designed to connect local uses with the overall transportation network and have two travel lanes. Weber Road is an east-west two-lane street that provides access to the project site and is classified as a two-lane collector. Byrnes Street is a two-lane street that runs north-south and intersects with Weber Road near the southwest corner of the project site and is also classified as a two-lane collector. A future extension of Byrnes Street north of Weber Road, which would generally parallel the westerly edge of the project site, is depicted in the General Plan Transportation Element as a two-lane collector. An unnamed future street that would intersect with Weber Road and run north-south generally parallel to the easterly edge of the project site and loop east-west to connect with Lewis Road is also depicted in the City General Plan Transportation Element as a two-lane collector (City of Vacaville 2021a).

While Weber Road is classified as a two-lane collector, the General Plan Transportation Element identifies where additional right-of-way should be preserved to accommodate buildout of the General

Plan. Weber Road along the project frontage is recommended to preserve right-of-way to ultimately accommodate a four-lane arterial. (City of Vacaville 2021a).

Truck Routes

The City has established a truck route network on which trucks (defined as vehicles exceeding a gross vehicle weight rating of 5 tons) must travel unless they are destined for, or originated from, points within the City. The shortest and most direct routes must be used to and from the truck routes and/or between locations within the City. The closest truck route to the project site is N. Meridian Road at the I-80 interchange. Therefore, trucks traveling to/from the project site would primarily access the site via I-80 at the N. Meridian Road interchange.

Bicycle Facilities

There are no existing bicycle facilities in the vicinity of the project site. According to the General Plan, proposed future bicycle facilities near the project site include a Class I bicycle path along the west side of I-80 between N. Meridian Road and Leisure Town Road, as well as a proposed future bicycle route along Lewis Road to the east of the project site (City of Vacaville 2021).

Bus System

Vacaville City Coach provides public transit service throughout the City. Additionally, Fairfield and Suisun Transit and the Yolobus, which are administered by the Yolo County Transportation District, provide additional transit service to the City. There are currently no bus stops near the project site (City Coach 2023).

3.17.2 Methodology

Originally signed by the Governor in 2013, SB 743 requires the Governor's Office of Planning and Research (OPR) to identify new metrics for the identification of transportation related impacts within CEQA. On December 28, 2018, regulatory changes to the CEQA Guidelines that implement SB 743 were approved, establishing VMT as the new metric for transportation analysis. Within CEQA, a project's effect on vehicle delay shall not constitute a significant transportation impact (Section 15064.3[a]). Thresholds for determining a project's significant transportation impact shall be pursuant to Section 15064.3 of the State CEQA Guidelines. OPR released a Technical Advisory that contains recommendations for assessing VMT, thresholds of significance, and mitigation measures (OPR 2018). On July 1, 2020, statewide implementation occurred.

Listed below are relevant policies from the City of Vacaville General Plan Transportation Element adopted in September 2021 (City of Vacaville 2021a):

- **Policy TR-P4.6:** Require all roads to comply with the City's Standard Specifications for Public Improvements document for the City's roadway network.
- **Policy TR-P4.8:** Require roadway improvements implemented by development projects to be designed based on the level of service operating goals prescribed in Policies TR-P4.2 and TR-P4.3.

- **Policy TR-P5.1:** As part of development approvals, require (through conditions of approvals) that necessary traffic improvements be constructed in time to accommodate trips generated by the project.
- **Policy TR-P5.2:** In order to ensure that adequate roadway capacity is provided for the buildout of the General Plan and that new development does not preclude the construction of adequate circulation facilities, require all new development to provide right-of-way dedications consistent with this Transportation Element (Figure TR-6).
- **Policy TR-P7.2:** Design new collector roadways and implement traffic-control measures where feasible and warranted to maintain level of service operating goals at intersections on collector roadways. Direct residential access on collectors shall be evaluated as part of subdivision design.
- **Policy TR-P8.3:** Require new development applications include transit amenities, such as bus stops, bus bays, transit shelters, benches, and on-site drop-off locations, as appropriate, or explain why these features are infeasible or unnecessary.
- **Policy TR-P8.6:** Require that new development applications design roadway networks to accommodate on-street bicycle lanes, and only allow bicycle routes with sharrows when on-street bicycle lanes are impractical or infeasible.

3.17.3 Environmental Impact Analysis

Impact TRANS-1	**Conflict with program, plan, ordinance or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities?**

Impact Analysis

The project site would provide up to six storage yard areas for lease within the approximately 41-acre site. The proposed project would not construct any permanent habitable structures, restroom facilities, or improvements to existing on-site structures. There are currently no specific tenants identified with the project application. It is anticipated the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures.

During construction, the proposed project would generate traffic through the transport of workers, equipment, and materials to and from the project site. It is anticipated that construction activities would take approximately four months to complete. Project construction and grading activities would occur Monday through Friday during regular business hours. All construction and grading activities would be consistent with the Vacaville Municipal Code and not occur between dusk (0.5-hour after sunset) and 7:00 a.m. The construction activities would require up to 12 workers per day during peak construction. Since construction traffic would be temporary and would be spread across the duration of construction, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Therefore, the project construction activities would not conflict with a program, plan, ordinance or policy addressing the circulation system and this impact would be less than significant.

Table 2-1 in Section 2.2.2, Anticipated Tenants and Operations, describes the types of tenants anticipated to lease the storage yard areas and shows the estimated number of average daily trips (ADT) associated with the use. The anticipated types of tenants and estimated ADT are based on the City's experience with similar interim industrial and construction storage yards in the area.

The potential tenants would each generate between 10 and 50 ADT, with an average of 23 ADT per site. While 20 various types of potential tenants are listed, only 6 individual storage yard areas would be available for use. Based on an average of 23 ADT per site, 6 tenants would generate approximately 140 ADT on a typical weekday.

The maximum number of on-site employees would ultimately depend on the type of tenants leasing the storage yard area. It is anticipated most employees would visit the project site temporarily to obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day, which would equate to approximately 30 to 40 ADT associated with on-site employees.

The project would obtain access from a driveway on Weber Road and driveway improvements would be constructed in accordance with City standards. There are no existing or planned bicycle facilities along Weber Road, and there are no public transit facilities in the vicinity of the project site. Therefore, operation of the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. This impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRANS-2	**Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision(b)?**

Impact Analysis

CEQA Guidelines Section 15064.3(b) indicates that land use projects would have a significant impact if the project resulted in VMT exceeding an applicable threshold of significance. OPR's *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, published in December 2018 (OPR 2018), recommends methodologies for quantifying VMT, significance thresholds for identifying a transportation impact, and screening criteria to quickly identify if a project can be presumed to have a less than significant impact without conducting a full VMT analysis. Lead agencies are to adopt local guidelines appropriate for their jurisdiction. In August 2021, the City's planning commission adopted an amendment to the City's General Plan Transportation Element to implement VMT as the primary metric used to identify potential transportation impacts in CEQA documents.

When certifying the Supplemental EIR for the 2021 General Plan Transportation Element and ECAS, the City determined that projects that are consistent with the General Plan will not require further VMT analysis pursuant to CEQA (City of Vacaville 2021a). In accordance with Vacaville Municipal Code Chapter 14.09.191.030, interim storage yards for off-site construction activities are listed as an interim conditional use in the NGA Overlay District. Therefore, the project is consistent with the current General Plan and the required VMT analysis is addressed by the 2021 General Plan Transportation Element Supplemental EIR.

Proposed development projects that could have a potentially significant VMT impact are required to consider reasonable and feasible project modifications and other measures that would reduce VMT effects in accordance with the 2021 General Plan Transportation Element Supplemental EIR mitigation. Because the allowable uses for the site primarily consist of materials storage and the number of on-site employees is expected to generate only 30 to 40 ADT, the proposed project would meet the criteria for a small project (i.e., a project that generates less than 110 ADT) according to the OPR Guidelines (OPR 2018). As such, the proposed project would be presumed to have a less than significant VMT impact.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRANS-3	**Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

Impact Analysis
During construction, the proposed project would use heavy construction equipment on local roadways and major arterials. The use of roadways by heavy construction equipment can increase the risk to drivers, cyclists, and pedestrians in the project area. Construction activities would generally be anticipated to occur within the project site; however, work may extend into Weber Road to connect to existing utility lines and other necessary improvements. The proposed project includes preparation of a TCP that would include detours, emergency access, and appropriate traffic controls during construction. An encroachment permit would be obtained from the City for any staging/construction-vehicle parking on adjacent streets, if necessary. Notices regarding closure to the public of street parking would be posted in compliance with City regulations in advance of use. Therefore, project construction would not create a transportation hazard, and the impact would be less than significant.

Operation of the proposed project would not result in changes to a roadway that would create road hazards or alter design features developed to mitigate such hazards. The proposed project would pave the existing driveway on Weber Road. The paved driveway would be approximately 40-feet wide and connect to an interior gravel access road. The 40-foot-wide gravel access road would replace the existing unpaved road in the western portion of the project site and be elevated above the existing grade. The road would terminate at the northern end of the project site as a cul-de-sac. The cul-de-sac would have a

40-foot radius to allow trucks and emergency vehicles to turn around and exit at Weber Road. The driveway entrance on Weber Road would be gated and secured outside of business hours. All trucks, trailers, equipment, and materials associated with the tenants would be stored on-site and within the boundaries of the storage yard areas. There would be no truck queuing or staging of materials along Weber Road, I-80, or the interior gravel access road. The City would review all site plans to ensure that the project driveway would provide clear sight lines, adequate access for emergency vehicles, and pedestrian safety features. Therefore, operation of the proposed project would not substantially increase hazards due to a design feature, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRANS-4 Result in inadequate emergency access?

Impact Analysis
As described, the proposed project would generate traffic through the transport of workers, equipment, and materials to and from the project site. However, construction activities are anticipated to be confined to the project site, and no road closures or detours are anticipated. The proposed project would be designed to incorporate all required VFD and VPD standards to ensure that implementation of the proposed project would not result in inadequate emergency access to the project site or areas surrounding the project site. The project's on-site driveway would terminate at the northern end of the project site as a cul-de-sac with a 40-foot radius to allow emergency vehicles to turn around and exit at Weber Road. Furthermore, the proposed project would not generate significant traffic volumes during operation that would interfere with emergency vehicle travel within the project area. Therefore, the proposed project would not result in inadequate emergency access and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.18 TRIBAL CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined by Public Resources Code section 21047 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.18.1 Environmental Setting

This section describes potential tribal cultural resources within 0.5-mile of the project site and evaluates potential impacts to these resources from the construction and operation of the project.

AB 52 mandates consideration of tribal cultural resources as part of the CEQA process. The goal of AB 52 is to promote involvement of California Native American tribes in the decision-making process when it comes to identifying resources important to their cultures and developing mitigation for impacts to these resources. To reach this goal, AB 52 establishes a formal role for tribes in the CEQA process. CEQA lead agencies are required to consult with tribes about potential tribal cultural resources in the project area, the potential significance of project impacts, the development of project alternatives, and the type of environmental document that should be prepared. AB 52 specifically states that a project that may cause a substantial adverse change in the significance of a tribal cultural resource may have a significant effect on the environment.

3.18.2 Methodology

Archeological Resource Service completed an Archeological Resource Management Report for the project on February 21, 2023. The Archeological Resource Management Report included a records search and literature review at the NWIC of the CHRIS to determine the presence or absence of previously recorded historic or prehistoric cultural resources within 0.5-mile of the project site, a search of the NAHC sacred lands file on February 2, 2023, and a field survey of the project site on February 2, 2023 to identify any cultural resources not previously recorded within the site boundaries (Appendix D). The NAHC responded on March 7, 2023, stating that the results of the sacred lands file search were negative.

Under AB 52, the City is responsible for conducting AB 52 tribal outreach by sending a letter to tribes that have previously expressed an interest in participation by written request. Pursuant to the statute, tribes are required to respond in writing within 30 days. On July 20, 2023, staff sent the Yocha Dehe Wintun Nation the AB 52 required information about the proposed project. To date, the City has not received any responses regarding the proposed project.

3.18.3 Environmental Impact Analysis

This section discusses potential impacts on tribal cultural resources associated with the proposed project and provides mitigation measures where necessary.

Impact TRIB-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to California Native American tribe, and that is:

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

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

Impact Analysis

No known tribal cultural resources were identified at the project site or within 0.5-mile of the project site during the archival records search and literature review performed as part of the Archeological Resource Management Report. Additionally, Archeological Resource Service did not identify any on-site tribal cultural resources during the field survey and noted that the project site has been heavily disturbed as a result of previous cattle grazing activities.

However, project construction activities would involve grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving. The proposed project would construct six on-site bioretention areas, which would have a maximum depth of 11 feet bgs. The project construction activities could potentially damage or destroy previously undiscovered unique tribal cultural resources. In the event undiscovered unique tribal cultural resources are identified, the proposed project would be required to implement Mitigation Measures CUL-1 and CUL-2. These mitigation measures would require implementation of standard inadvertent discovery procedures to reduce potential impacts on previously undiscovered subsurface unique tribal cultural resources. Therefore, impacts on tribal cultural resources would be less than significant with implementation of Mitigation Measures CUL-1 and CUL-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

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3.19 UTILITIES AND SERVICE SYSTEMS

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

3.19.1 Environmental Setting

Water Supply

The City provides potable water service from three water supply sources, including the Solano Project, State Water Project (SWP), settlement water from the North Bay Aqueduct, and groundwater sources (City of Vacaville 2013). The City provides potable water to users within the City limits via a network of water mains, transmission mains, reservoirs, groundwater wells, booster pump stations, and treatment plants. According to the 2020 Urban Water Management Plan (UWMP), in 2020, the actual water supplied to the City was 18,295 acre feet (City of Vacaville 2023). The actual water supplied to the City is from groundwater, and purchased or imported water from the Solano Project, SWP, and settlement water.

The City's 2020 UWMP calculates the past, current, and projected water use and water supply through 2045. The 2020 UWMP calculated the projected water supply available in 2045 to be 30.8 million gallons per day (mgd). The City's future water demand (20.9 mgd) would be below the City's future (30.8 mgd) water supply allocations. Therefore, the 2020 UWMP determined the City's water supply would be adequate to offset future water demands projected for buildout of the General Plan (City of Vacaville 2023).

Two water treatment plants produce water for the City: North Bay Regional Water Treatment Plant (NBR Plant) and the Diatomaceous Earth Water Treatment Plant. The NBR Plant, co-owned by both the City of Vacaville and the City of Fairfield, is operated by the City of Fairfield and has a design capacity of 40 mgd, of which the City of Vacaville is dedicated 13.3 mgd of the design capacity. The Diatomaceous Earth Treatment Plant owned and operated by the City has a capacity of 12 mgd and a firm capacity of 10 mgd (City of Vacaville 2016).

Wastewater Collection/Treatment

The City owns and operates the wastewater collection system in Vacaville, which consists of gravity and pressure sewers, lift stations, and associated facilities. Treatment of wastewater from the City's collection system takes place at the Easterly Wastewater Treatment Plant (WWTP), located east of the City near the unincorporated community of Elmira. The Easterly WWTP provides treatment of wastewater discharged from residential, commercial, and industrial development in the City. The Easterly WWTP has an average dry-weather flow capacity of 15 mgd and 55 mgd for peak hour wet weather flow. The average flows have ranged from 5.9 mgd to 8.5 mgd over the last twenty years. The Easterly WWTP has undergone a number of improvements and expansions over the last sixty years to either comply with the waste discharge requirements or to accommodate the growth of the City. The Easterly WWTP currently has the available capacity to serve the buildout of the 2035 General Plan (City of Vacaville 2021b).

Stormwater Management

The City's drainage systems include creeks, constructed channels, and an extensive network of storm drainpipes that collect and convey runoff from the streets and adjacent land. In addition, the City has constructed several detention basins to reduce flooding in the City and to store increased runoff resulting from new development.

The City is located within four sub-watersheds, Gibson Canyon Creek, Ulatis Creek, Horse Creek and Alamo Creek, all of which are part of the larger 150 square mile Ulatis Creek watershed (City of Vacaville 2013). The natural, unaltered portions of the creeks generally do not have adequate flow capacity to convey a 100-year storm event, which the modified natural channels were designed to provide a 10-year or 50-year level of protection (City of Vacaville 2013). The City has several regional detention basins, both natural and constructed, that reduce the flow in the creeks before reaching the City to reduce flooding. Storm drains within the City are required to convey the 10-year design flows and to accommodate surface drainage, the City requires that streets and public right-of-way be designed to provide overland release of runoff for the 100-year storm (City of Vacaville 2013).

Solid Waste

The City contracts with a private waste collection company to provide weekly solid waste, green waste, and recyclable materials collection for Vacaville residents and commercial businesses. Solid waste collected in the City is disposed of at the Recology Hay Road Landfill located at 6426 Hay Road in unincorporated Solano County, approximately 7.1 miles southeast of the project site.

According to CalRecycle, the maximum permitted throughput at the Recology Hay Road Landfill is 2,400 tons per day. The total capacity of the landfill is 37 million cubic yards. As of 2023, it was projected that the landfill would reach capacity in 2077 (CalRecycle 2023). The City has established several recycling

programs to reduce the amount of waste disposed at the Recology Hay Road Landfill and therefore extend its expected operation. Division 8.08 (Solid Waste, Yard Waste, and Household Hazardous Waste) of the Vacaville Municipal Code regulates the collection and disposal of solid waste, yard waste, and household hazardous materials.

Electric Power, Natural Gas, and Telecommunications

PG&E provides electric power and natural gas services to the City. According to the General Plan, 52 percent of the City's energy use is for the residential sector (23 percent electricity and 29 percent natural gas), and 47 percent of the City's energy use is for the commercial/industrial sector (25 percent electricity and 23 percent natural gas) (City of Vacaville 2015). AT&T provides telecommunication services to the City.

3.19.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, the General Plan EIR, 2020 UWMP, and Section 2.0, Project Description, of this ISMND. The following impact discussions consider the impacts of the proposed project related to utilities and service systems in the City.

3.19.3 Environmental Impact Analysis

This section discusses potential impacts related to utilities and service systems associated with the proposed project and provides mitigation measures where necessary.

Impact UTIL-1	**Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Impact Analysis

Water

The project site is not connected to or in proximity to the City's water system. The proposed project would not construct new water mains to the City's water system. There is an on-site well and ancillary compressor shed located at the northern end of the project site that would provide non-potable water for project construction and operation. Based upon an estimated 1-inch of water per acre (27,154 gallons per acre), project construction is anticipated to demand approximately 1,088,875 gallons total (Appendix A). The periods of water use would vary slightly with the most intensive activities occurring during earthwork, lime treatment, and aggregate base compaction (66 total days). As such, it is estimated project construction would demand an average of approximately 16,498 gallons per day (1,088,875 gallons / 66 total days). According to the well report prepared by Cal Aqua on June 14, 2022, the on-site well produces approximately 33 gallons per minute, which equates to approximately 47,520 gallons per day or approximately 1,425,600 gallons per month (Appendix A). While the on-site well is expected to provide sufficient water supplies for project construction, the average well production per hour (approximately 1,650 gallons) would be slightly less than the average daily production with the anticipated +/- 10 hours of

daily construction. Therefore, the project construction activities would use temporary storage tanks to hold water as it is produced overnight. In the event project construction activities exceed the on-site well production, the proposed project would temporarily use either a 2,000- or 4,500-gallon water truck to deliver water to the project site. The water truck would be filled at a City hydrant located approximately 0.3 mile west of the project site along Weber Road. Therefore, the project construction would not result in the construction or relocation of new or expanded water and the impact would be less than significant.

During operation, any potable water required would be minimal and primarily associated with the portable restroom facilities that anticipated tenants would provide for employees and visitors per state and local regulations. The proposed project would construct a new 4- to 6-inch water line from the existing well and ancillary compressor shed to provide non-potable water to the six storage yard areas for fire suppression and dust control. Non-potable water would also be stored in new water storage tanks to be installed on the property (the Vacaville Fire Marshall would determine the location(s) and size(s) of tanks once tenants are located, and the applicable fire suppression requirements are determined).

The total water demand during operation would depend on the types of tenants identified as not all tenants are expected to require water for dust control (e.g., container storage). For purposes of this analysis, it is estimated operation would demand 1/10th of 1 inch of water per month (2,715 gallons per acre) (Appendix A). Based upon half of the site (20 acres) requiring dust control, it is estimated project operation would demand approximately 54,444 gallons per month. The remaining portion of the site (20 acres) would include tenants with low water demand, resulting in approximately 27,222 gallons per month. Therefore, it is estimated the total water demand for operation would be approximately 81,666 gallons per month. The on-site well produces approximately 1,425,600 gallons per month and would provide sufficient water supplies for project operation. Therefore, operation of the proposed project would not result in the construction or relocation of new or expanded water facilities and the impact would be less than significant.

Wastewater

The project site is not in proximity to the City's sewer system. The proposed project would not construct new sewer mains or use the existing on-site septic systems. The anticipated tenants would provide portable restroom facilities for on-site employees and visitors. Wastewater generated by the portable restroom facilities would be minimal and disposed off-site at an appropriate facility in accordance with applicable local and state regulations. As the proposed project would not connect to the City's sewer system, the proposed project would not result in the relocation or construction of new wastewater treatment facilities. No impact would occur.

Stormwater Drainage

The 41-acre project site would be covered with a pervious compacted aggregate base. New impervious surface created by the proposed project would consist of the paved driveway entrance, totaling approximately 0.08 acre (3,625 square feet). The proposed project would construct six bioretention areas along the eastern side of the project site, totaling approximately 4.02 acres. The six bioretention areas would collect and treat on-site stormwater. Construction of the driveway would require replacement of an existing stormwater drainage culvert, which would be approximately 24-inches wide and 80-feet in length. Additionally, two earthen swales would be constructed along the southern frontage, between the paved driveway and the SID drainage ditch. The earthen swales would total approximately 0.13 acre (5,600 square feet) and convey stormwater along the site's southern frontage. The bioretention areas and

earthen swales would be constructed in accordance with Section 14.26.030.020 of the Vacaville Municipal Code, which requires implementation and maintenance of post-construction BMPs to control the volume, rate, and potential pollutant load of stormwater runoff. As such, impacts related to the construction of the on-site stormwater facilities would be less than significant.

Electric Power, Natural Gas, and Telecommunications

PG&E currently provides electrical services to the project site via an existing 200-amp electrical meter. It is expected tenants would provide on-site diesel generators or self-contained office trailers with generators to provide power to the project site. It is unknown if any tenant(s) would require electrical service. However, to address the tenant's potential electrical needs, the proposed project would construct a new conduit line along the western side of the project site, adjacent to the main internal access road. The proposed conduit would be contained within the project site boundary and would not require the expansion of existing electrical service. Additionally, the proposed project would not connect to existing natural gas lines or telecommunication systems, which would expand capacity. Impacts related to electric power, natural gas facilities, and telecommunications would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact UTIL-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact Analysis
The City's 2020 UWMP calculates the past, current, and projected water use and water supply through 2045. The 2020 UWMP calculated the projected water supply available in 2045 to be 30.8 mgd. The City's future water demand (20.9 mgd) would be below the City's future (30.8 mgd) water supply allocations. Therefore, the 2020 UWMP determined the City's water supply would be adequate to offset future water demands projected for buildout of the General Plan (City of Vacaville 2023).

As discussed in Impact UTIL-1, the project site is not connected to or in proximity to the City's water system. Project construction and operation would rely on non-potable water, and therefore would not require the construction of new water connections to the City's water system. Any potable water required would be minimal and primarily associated with the portable restroom facilities that anticipated tenants would provide for employees and visitors per state and local regulations. It is estimated project construction activities would demand an average of approximately 16,498 gallons per day (Appendix A). According to the well report prepared by Cal Aqua on June 14, 2022, the on-site well produces approximately 33 gallons per minute, which equates to approximately 47,520 gallons per day or approximately 1,425,600 gallons per month. While the on-site well is expected to provide sufficient water supplies for project construction, the average well production per hour (approximately 1,650 gallons) would be slightly less than the average daily production with the anticipated +/- 10 hours of daily construction. Therefore, the project construction activities would use temporary storage tanks to hold

water as it is produced overnight. In the event project construction activities exceed the on-site well production, the proposed project would temporarily use either a 2,000- or 4,500-gallon water truck to deliver water to the project site. The water truck would be filled at a City hydrant located approximately 0.3 mile west of the project site along Weber Road.

The proposed project would construct a new 4- to 6-inch water line from the existing well to provide non-potable water to the six storage yard areas for fire suppression and dust control during operation. Non-potable water would also be stored in new water storage tanks to be installed on the property (the Vacaville Fire Marshall would determine the location(s) and size(s) of tanks once tenants are located, and the applicable fire suppression requirements are determined). It is estimated the total water demand for operation would be approximately 81,666 gallons per month (Appendix A). The on-site well produces approximately 1,425,600 gallons per month and would provide sufficient water supplies for project operation. As such, project construction and operation activities would be satisfied by existing water entitlements and resources, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact UTIL-3 Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact Analysis
As discussed, the project site is not in proximity to the City's sewer system. The proposed project would not construct new sewer mains or use the existing on-site septic system. The anticipated tenants would provide portable restroom facilities for on-site employees. The portable restroom facilities would generate minimal wastewater, which would be hauled off-site and disposed at an appropriate facility in accordance with applicable local and state regulations. Therefore, the proposed project would not connect to the City's sewer system, which would impact the capacity of the Easterly WWTP. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact UTIL-4 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Impact Analysis

The proposed project consists of an industrial and construction yard, which would temporarily store equipment such as, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures. The proposed project would not demolish the existing on-site metal hangars. Any construction waste generated would be minimal and disposed by the project contractor in accordance with the City's established programs that facilitate the diversion and disposal of construction waste. As the proposed project involves the temporary storage of equipment, vehicles, and materials, it is expected that solid waste generated during operation would be minimal. The maximum number of on-site employees would ultimately depend on the type of tenants leasing the storage yard area. It is anticipated most employees would visit the project site temporarily to obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day.

Any solid waste generated from the proposed project would be collect and deposited at the Recology Hay Road Landfill located about 7.1 miles southwest of the project site. The Recology Hay Road Landfill is approximately 640 acres in size, and its total capacity is 37 million cubic yards. The landfill is listed as having a remaining capacity of approximately 30 million cubic yards and is expected to operate until 2077 (CalRecycle 2023). The Hay Road Landfill has approximately 80 percent remaining capacity, and therefore sufficient capacity would be available to accommodate the proposed project's solid waste disposal needs. The proposed project would also include recycling and green waste services as required by state and local objectives to reduce solid waste. Therefore, the proposed project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure and impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact UTIL-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact Analysis

The construction and operation of the proposed project would generate very limited solid waste. Any solid waste generated from the proposed project would comply with all applicable statutes and regulations, including Chapter 8.08 of the Vacaville Municipal Code which implements the approved Source Reduction and Recycling Element required by AB 939, and regulates the collection and disposal of solid waste, yard waste, and household hazardous materials. Therefore, the proposed project would not

conflict with federal, state, or local statutes or regulations related to solid waste. Impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.20 WILDFIRE

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

3.20.1 Environmental Setting

Highly flammable vegetation and warm dry summers create the potential for wildland fires in the City. High hazard areas in the City include outlying residential parcels and open lands adjacent to residential areas. Open agricultural lands in eastern Vacaville also pose a threat related to grass fires, which can travel very fast and threaten nearby residential areas (City of Vacaville 2015). The project site is in northeastern Vacaville and primarily surrounded by farmlands with a few residences and commercial uses. Based on review of Fire Hazard Severity Zone maps developed by CAL FIRE, the project site is not within or near a state responsibility area and does not contain lands classified as very high fire hazard severity zones (CAL FIRE 2023). The United States Forest Service has also developed a Wildfire Hazard Potential Map to inform evaluations of wildfire risk and prioritize fuel management across very large landscapes. According to the United States Forest Service Wildfire Hazard Potential Map, the risk of wildfire at the project site and in the surrounding area is low to very low (USFS 2020).

3.20.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, CAL FIRE's Fire Hazard Severity Zone Map, and the United States Forest Service Wildfire Hazard Potential Map.

3.20.3 Environmental Impact Analysis

This section discusses potential wildfire impacts on the proposed project and provides mitigation measures where necessary.

Impact WF-1 Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact Analysis
The project site is not in a state responsibility area and does not contain lands classified as being within a very high fire hazard severity zone (CAL FIRE 2023). The proposed project does not involve permanent modification to the existing roadways. The project construction and operation activities are not expected to require any lane closures, staging, or truck queuing along Weber Road, I-80, or the interior gravel access road. Any construction traffic, lane closures, or street staging would require an approved TCP and an encroachment permit from the City. The TCP would identify all detours, appropriate traffic controls, and ensure adequate circulation and emergency access are provided during the construction phase. All trucks, trailers, equipment, and materials associated with the tenants would be stored on-site and within the boundaries of the storage yard areas. Therefore, project construction and operation activities would not interfere with an emergency evacuation or response plan, and this impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact WF-2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Impact Analysis
The proposed project would not construct any permanent habitable structures. It is anticipated that employees would temporarily visit the storage yard areas to obtain equipment, vehicles, and materials. However, there could be at least two to three on-site employees per storage yard area, resulting in an average of 15 on-site employees per day. The project site and the surrounding area are relatively flat, and the risk of wildfire is classified as low to very low (USFS 2020). Due to the low potential for wildfire to occur and the temporary use of the project site, the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact WF-3	**Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

Impact Analysis
The project site is not in a state responsibility area and does not contain lands classified as being within a very high fire hazard severity zone (CAL FIRE 2023). The proposed project consists of an interim construction and industrial yard along Weber Road. Access to the project site would be provided via a new paved driveway on Weber Road. The entrance would be approximately 40-feet wide and connect to an interior gravel access road. The 40-foot-wide gravel access road would replace the existing unpaved road in the western portion of the project site and be elevated above the existing grade. The road would terminate at the northern end of the project site as a cul-de-sac, which would have a 40-foot radius to allow trucks and emergency vehicles to turn around and exit at Weber Road.

The project site is not currently connected to the City's water or sewer systems as these City systems are not in proximity of the project site. The proposed project would not construct new utility connections to the City's water or sewer systems. Non-potable water would be provided to the six storage yard areas via a new 4- to 6-inch water line that connects to the existing well and ancillary compressor shed. The non-potable water would be used for fire suppression and dust control and stored in new water storage tanks to be installed on the property (the Vacaville Fire Marshall would determine the location(s) and size(s) of tanks once tenants are located, and the applicable fire suppression requirements are determined). Construction of the proposed project would be required to comply with all applicable building and safety codes, including the California Fire Code, and all applicable fire safety standards set forth by the City. Therefore, the proposed project would not require the installation or maintenance of associated infrastructure that would exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact WF-4	**Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

Impact Analysis
The project site is not in a state responsibility area and does not contain lands classified as being within a very high fire hazard severity zone (CAL FIRE 2023). Furthermore, the project site and surrounding area is relatively flat and not in an area subject to landslides or flooding. The proposed project would not

expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

MFS-1 Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Impact Analysis

As evaluated in this ISMND, the proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation Measures BIO-1, CUL-1, and CUL-2 have been included herein to reduce the significance of potential impacts to special-status species and habitats, and inadvertent discovery of cultural and tribal cultural resources to a less than significant level.

MFS-2 Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental impacts of a project are considerable when viewed in connection with the effects of past projects, the impacts of other current projects, and the impacts of probable future projects)?

Impact Analysis

The 2013 General Plan and ECAS EIR and the Supplemental EIR for the 2021 General Plan Transportation Element and ECAS Update evaluated the cumulative effects associated with growth and development in the City. The proposed project would not result in any new cumulative impacts not previously identified in the General Plan EIR or Supplemental EIR. All cumulative impacts resulting from the proposed project related to air quality, geology and soils, hydrology and water quality, and noise would be mitigated with implementation of Mitigation Measures AIR-1, AIR-2, GEO-1, HAZ-1, HYD-1, HYD-2, NOI-1, and NOI-2. Projects completed in the past have also implemented mitigation, as necessary. Future projects would similarly be required to mitigate potential impacts. Accordingly, the proposed project would not otherwise combine with impacts of related projects to add considerably to any cumulative impacts in the region, and impacts would be considered less than significant with mitigation.

MFS-3 Does the project have environmental impacts which will cause substantial adverse impacts on human beings, either directly or indirectly?

Impact Analysis

The proposed project would not directly or indirectly cause substantial adverse effects on human beings. Air quality, GHG, hazardous materials, and noise would have the only potential effects through which the proposed project could have a substantial effect on human beings. However, all potential effects of the proposed project related to air quality, GHG, hazardous materials, and noise are identified as less than significant or less than significant with the implementation of mitigation. The impact analysis included in this ISMND indicates that for all other resource areas, the proposed project would either have no impact, no significant impact, or—for impacts that would not affect human beings—less than significant impact with mitigation incorporated.

4.0 REFERENCES

Section 1.0: Introduction

Geologic and Environmental Consulting Services. 2022. Phase I Environmental Site Assessment. May 28, 2022.

Section 3.1: Aesthetics

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Section 3.2: Agriculture and Forestry Resources

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City of Vacaville. 2013. City of Vacaville General Plan Environmental Impact Report and Energy and Conservation Action Strategy. https://www.ci.vacaville.ca.us/government/community-development/advanced-planning/adopted-plans/general-plan/general-plan-and-energy-and-conservation-action-strategy-eir/general-plan-and-ecas-eir-documents. Accessed July 20, 2023.

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5.0 LIST OF PREPARERS

Principal in Charge ..... Trevor Macenski

Project Manager ..... Anna Radonich

Air Quality Specialist ..... Kaitlyn Heck

Air Quality and Climate Change Consultant ..... Briette Shea

Senior Environmental Noise Analyst ..... Tracie Ferguson

Environmental Planner ..... Kaela Johnson

Principal Traffic Engineer ..... Daryl Zerfass

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Appendix A WATER CONSUMPTION CALCULATIONS AND WELL FLOW TEST REPORT

Weber Road Industrial, LLC
C/O Brian Griggs, Manager
935 Moraga Road, Suite 200, Lafayette, Ca. 94549
brian@griggsgroup.com 925 580 4902 (cell)

MEMORANDUM

Dated: August 7, 2023

To: Kaela Johnson, via email Kaela.Johnson@stantec.com

Cc: Sarah Nolan, via email Sarah.Nolan@cityofvacaville.com
Albert Enault, via email Albert.Enault@cityofvacaville.com

Re: Water Consumption for Weber Road Industrial Project

Dear Kaela

As a follow up to your request and our discussion, the following was provided by my grading contractor and can be used regarding the use of water both during the construction and post construction activities on my property.

CONSTRUCTION:
As previously indicated, over the +/- 2 ½ month (75 day) anticipated construction period for the project, it is anticipated that the maximum total water use will be 1 inch per acre (27,154 gallons per acre). This is calculated as follows (source: https://extension.okstate.edu/fact-sheets/water-measurement-units-and-conversion-factors.html#volume-units)

- *One acre-inch*
  = 3,630 cubic feet
  = 27,154 gallons (27,200 for ordinary calculations)

Given the site area is 40.1 acres (and for now I've assumed 100% of the site will be graded despite the area around the buildings staying at existing grade), the total anticipated maximum water use would be 27,154 gallons x 40.1 acres = 1,088,875 gallons

Based upon the well report, the well production is approximately 33 gallons per minute. This equates to 1,980 gallons per hour, 47,520 gallons per day and 3,564,000 gallons for the 75-day construction period. The periods of water use will vary slightly during the construction with the most intensive use being during the 66 days from the schedule below during which the earthwork, lime treating, and aggregate base compaction will occur. Based upon the 1,088,875 gallons divided by these 66 "high uses" days, the average per day is 16,498 gallons thus the daily overall well production will far exceed the anticipated consumption. Notwithstanding, with the anticipated +/- 10 hours of daily construction, the average well production per hour (1,650 gallons) is only slightly less than the average daily production so the contractor will be using storage tanks to hold water as it is produced overnight and during times when they are actively spreading water.

Construction Task	Start Date	End Date	Workdays
Erosion Control	TBD	TBD	6 Days
Earthwork	TBD	TBD	36 Days

Construction Task	Start Date	End Date	Workdays
Lime Treat Subgrade	TBD	TBD	10 Days
Site Utilities	TBD	TBD	2 Day
Aggregate Base	TBD	TBD	20 Days
Asphalt Paving	TBD	TBD	1 Day

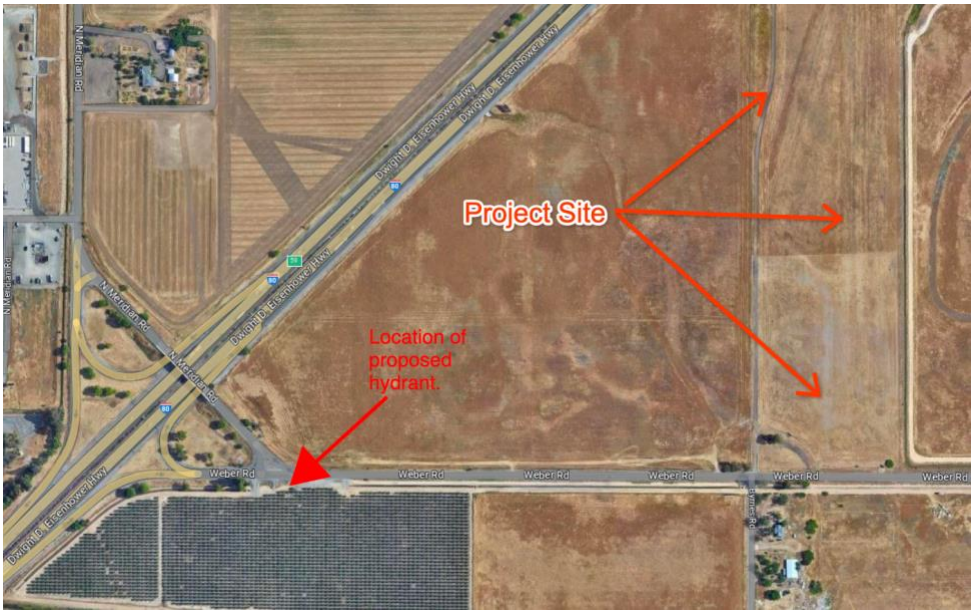
With the current schedule to start in late November/early December, the contractor has stated that the above water usage is likely high as depending upon weather, natural rainfall will materially reduce the usage. While it is impossible to forecast the rain during construction, historically rainfall in Vacaville is substantial as shown below (source: (https://www.usclimatedata.com/climate/vacaville/california/united-states/usca1181)

Climate Vacaville - California

	Jan	Feb	Mar	Apr	May	Jun
Average high in °F	56	62	67	74	82	91
Average low in °F	39	42	45	47	52	56
Av. precipitation in inch	5.47	5.04	3.74	1.14	0.59	0.08

	Jul	Aug	Sep	Oct	Nov	Dec
Average high in °F	96	95	90	80	65	56
Average low in °F	59	58	56	50	43	38
Av. precipitation in inch	0.04	0.04	0.28	1.18	3.27	3.66

In the unlikely event that water consumption exceeds the stored onsite production, the contractor would use either their 2000 or 4500-gallon water truck to fill at the hydrant located at the north bound offramp from Interstate 80 at Weber Road (shown below). These hydrants have substantial volume and would fill the truck(s) at a rate of approximately 18,000 gallons per hour (so an estimated 15- minute period to fill the 4,500-gallon truck and 7 minutes for the 2,000-gallon truck).



Your final question is on the ongoing anticipated consumption by future tenants is tough. If we find tenants who have no real need for dust control (those who store things more so that move in and out) they might only need dust control on an infrequent basis (monthly/quarterly). Tenants who disturb the aggregate base may want to do weekly control but that control will typically be in the non-rainy season (so say 8 months a year worst case). The contractor stated that we can assume dust control will be approximately 1/10th of one inch of water per month so the following would be a fairly conservative estimate:

Acreage	40.1	
1 inch/acre foot	27,154	Gallons
1/10th acre foot/month	2,715	Gallons
Assumed high use %	50%	Percent
Acre for high use	20.05	Acres
Acre for low use (1/20th)	20.05	
High Usage Consumption/month	54,444	Gallons
Low Usage Consumption/month	27,222	Gallons
TOTAL Consumption Monthly	**81,666**	Gallons
Summer Month %	66%	8 of 12 months
Total Monthly Consumption	53,899	Gallons
Total Daily Well Production	47,520	Gallons
Total Monthly Well Production	1,425,600	Gallons

Please let me know if you need more information

WELL FLOW TEST REPORT

Well Owner/Agent: Chris Burns **Performed by:** Ohmark Ortega

Well Address: 7028 Byrnes Road, Vacaville, CA 95688

Duration of Test: 2hr (4hr) 8hr **Date of Flow Test:** 06/14/2022

Flow Test Results:

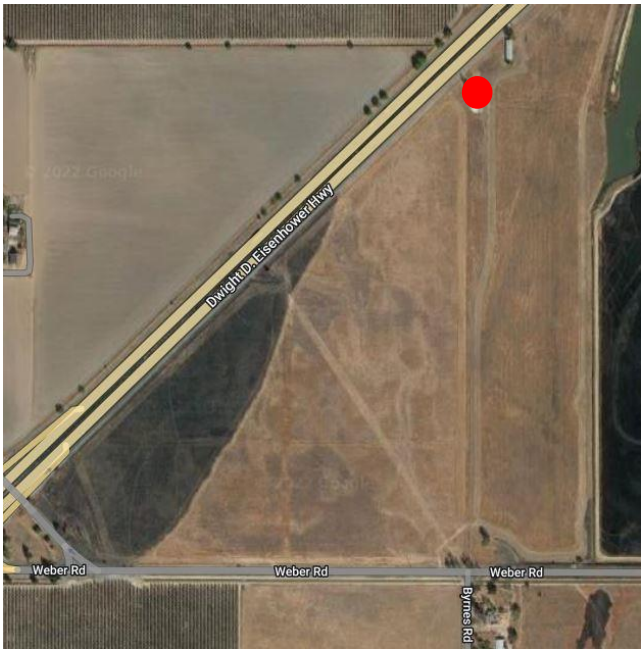
TIME	GPM	PSI	WATER LEVEL
0	0	0	11.0’
15	31.5	30	14’
30	31.5	30	15’
45	32.5	20	15’
60	33.8	0	15
75	33.8	0	15’
90	33.8	0	15’
105	33.8	0	15’
120	33.8	0	15’
135	33.8	5	15’
150	33.8	0	15’
165	33.8	0	15’
180	33.8	0	15’
195	33.8	0	15’
210	33.8	0	15’
225	33.8	0	15’
240	33.8	0	15’
TOTAL GAL.	**8,023.5**		

Static Water Level: 11’

Test Summary:

Static water level was 11’ at the time of the test. Well pump did not break suction for duration of test at 30psi or open flow (0 psi). Well recharged 4’ in 2 minutes. Pumping rate and recharge rate are balanced at 31.5GPM at 30psi where water level does not continue to drop (33.8GPM at 0 psi). Increasing pump size for additional water volume may be possible based upon total well depth and desired pumping flow rate. Total gallons pumped during 4-hour test was 8,023.5.

Well Location: *(red dot indicates well location)*



896 Aldridge Road, Suite D, Vacaville, California 95688
Ph (707) 469-9576 Fax (707) 469-9420 website www.CalAqua.com
CCL# 669206 / CWTO-T2# 26218 / CWDO-D2# 31624

TESTING PERFORMED

Testing Requested: Advanced Well Water Test
Matrix: Drinking Water
Testing / Report ID: Y8YICE

SAMPLE INFORMATION

Collection Date: Jun 14, 2022
Collected By: O. Ortega
Received Date: Jun 20, 2022
Sample Location: Well head
Sample Address: 7028 Brynes Rd., Vacaville, CA 95688, United States

TESTING NOTES

There were no problems with analytical events associated with this report unless noted. Quality control data is within laboratory defined or method specified acceptance limits except where noted. If you have any questions regarding these test results, please contact info@calaqua.com

SUMMARY ANALYSIS

ANALYTE	UNIT	RESULT	METHOD	EVALUATION
pH	pH	**7.3**	EPA 150.1	OK
Total Dissolved Solids	mg/L	**485**	SM 2510B	
Turbidity	NTU	NOT DETECTED	SM 2130 B	
Conductivity	umhos/cm	**832**	SM 2510B	
Hardness (Ca,Mg)	mg/L	**356.52**	2340 B	
Hardness (Total)	mg/L	**357.26**	2340 C	
Grains per gallon	Grains	**20.89**	Conversion	
Alkalinity (as CaCO3)	mg/L	**236**	SM 2320 B	
Langelier Saturation Index		**0.08**		NORMAL
Sodium Adsorption Ratio		**5.85**	Equation	

TEST RESULTS

ANALYTE	UNIT	RESULT	MDL	METHOD	EVALUATION
1,1,1,2 Tetrachloroethane	µg/L	NOT DETECTED	0.4997	EPA 524.2	
1,1,1 Trichloroethane	µg/L	NOT DETECTED	0.4965	EPA 524.2	
1,1,2,2 Tetrachloroethane	µg/L	NOT DETECTED	0.54997	EPA 524.2	

1,1,2 Trichloroethane	µg/L	NOT DETECTED	0.52168	EPA 524.2	
1,1 Dichloroethane	µg/L	NOT DETECTED	0.5154	EPA 524.2	
1,1 Dichloroethylene	µg/L	NOT DETECTED	0.52483	EPA 524.2	
1,1 Dichloropropene	µg/L	NOT DETECTED	0.46197	EPA 524.2	
1,2,3 Trichlorobenzene	µg/L	NOT DETECTED	0.39912	EPA 524.2	
1,2,3 Trichloropropane	µg/L	NOT DETECTED	0.59082	EPA 524.2	
1,2,4 Trichlorobenzene	µg/L	NOT DETECTED	0.54054	EPA 524.2	
1,2,4 Trimethylbenzene	µg/L	NOT DETECTED	0.4054	EPA 524.2	
1,2 Dichlorobenzene	µg/L	NOT DETECTED	0.46826	EPA 524.2	
1,2 Dichloroethane	µg/L	NOT DETECTED	0.68196	EPA 524.2	
1,2 Dichloropropane	µg/L	NOT DETECTED	0.54682	EPA 524.2	
1,3,5 Trimethylbenzene	µg/L	NOT DETECTED	0.41797	EPA 524.2	
1,3 Dichlorobenzene	µg/L	NOT DETECTED	0.46197	EPA 524.2	
1,3 Dichloropropane	µg/L	NOT DETECTED	0.51225	EPA 524.2	
1,4 Dichlorobenzene	µg/L	NOT DETECTED	0.4494	EPA 524.2	
2,2 Dichloropropane	µg/L	NOT DETECTED	0.49654	EPA 524.2	
Aluminum	mg/L	NOT DETECTED	0.0384	EPA 200.7	
Antimony	mg/L	NOT DETECTED	2.0E-5	EPA 200.8	
Arsenic	mg/L	**0.0019**	0.00012	EPA 200.8	> SLR (0)
Barium	mg/L	**0.148**	2.0E-5	EPA 200.8	< SLR
Benzene	µg/L	NOT DETECTED	0.46197	EPA 524.2	
Beryllium	mg/L	NOT DETECTED	2.0E-5	EPA 200.8	
Boron	mg/L	NOT DETECTED	0.0558	EPA 200.7	
Bromobenzene	µg/L	NOT DETECTED	0.56568	EPA 524.2	
Bromochloromethane	µg/L	NOT DETECTED	0.60654	EPA 524.2	
Bromodichloromethane	µg/L	NOT DETECTED	0.49968	EPA 524.2	
Bromoform	µg/L	NOT DETECTED	0.47769	EPA 524.2	
Bromomethane	µg/L	NOT DETECTED	2	EPA 524.2	
Cadmium	mg/L	NOT DETECTED	1.0E-5	EPA 200.8	
Calcium	mg/L	**75**	0.09183	EPA 200.7	
Carbon Tetrachloride	µg/L	NOT DETECTED	0.52483	EPA 524.2	
Chloride	mg/L	**61.5**	0.34038	EPA 300.0	
Chlorobenzene	µg/L	NOT DETECTED	0.50911	EPA 524.2	
Chloroethane	µg/L	NOT DETECTED	0.59711	EPA 524.2	
Chloroform	µg/L	NOT DETECTED	0.56254	EPA 524.2	
Chloromethane	µg/L	NOT DETECTED	0.4274	EPA 524.2	
Chlorotoluene 2	µg/L	NOT DETECTED	0.40855	EPA 524.2	
Chlorotoluene 4	µg/L	NOT DETECTED	0.38969	EPA 524.2	
Chromium (Total)	mg/L	**0.0046**	0.00014	EPA 200.8	< SLR
cis 1,2 Dichloroethylene	µg/L	NOT DETECTED	0.51854	EPA 524.2	

cis 1,3 Dichloropropene	µg/L	NOT DETECTED	0.48397	EPA 524.2	
Cobalt	mg/L	NOT DETECTED	0.00013	EPA 200.8	
Copper	mg/L	NOT DETECTED	0.00012	EPA 200.8	
Dibromochloromethane	µg/L	NOT DETECTED	0.52168	EPA 524.2	
Dibromochloropropane	µg/L	NOT DETECTED	0.58454	EPA 524.2	
Dibromomethane	µg/L	NOT DETECTED	0.51854	EPA 524.2	
Dichlorodifluoromethane	µg/L	NOT DETECTED	0.45569	EPA 524.2	
Dichloromethane	µg/L	NOT DETECTED	0.94594	EPA 524.2	
E. coli	P/A	NOT DETECTED		SM 9223B	
Ethylbenzene	µg/L	NOT DETECTED	0.44312	EPA 524.2	
Ethylene dibromide	µg/L	NOT DETECTED	0.48083	EPA 524.2	
Fluoride	mg/L	**0.1**	0.02352	EPA 300.0	< SLR
Hexachlorobutadiene	µg/L	NOT DETECTED	0.43683	EPA 524.2	
Iron	mg/L	NOT DETECTED	0.0466	EPA 200.7	
Isopropylbenzene	µg/L	NOT DETECTED	0.42426	EPA 524.2	
Lead	mg/L	NOT DETECTED	1.0E-5	EPA 200.8	
Lithium	mg/L	NOT DETECTED	0.01105	EPA 200.7	
Magnesium	mg/L	**41.1**	0.05837	EPA 200.7	
Manganese	mg/L	**0.0018**	3.0E-5	EPA 200.8	< SLR
Mercury	mg/L	NOT DETECTED	0.0005	EPA 200.8	
Methyl Tertiary Butyl Ether	µg/L	NOT DETECTED	1.11879	EPA 524.2	
Molybdenum	mg/L	NOT DETECTED	1.0E-5	EPA 200.8	
m,p Xylene	µg/L	NOT DETECTED	1.34506	EPA 524.2	
Naphthalene	µg/L	NOT DETECTED	0.51854	EPA 524.2	
n Butylbenzene	µg/L	NOT DETECTED	0.4714	EPA 524.2	
Nickel	mg/L	NOT DETECTED	3.0E-5	EPA 200.8	
Nitrate (as N)	mg/L	**17.4**	0.07646	EPA 300.0	> SLR (10)
Nitrite (as N)	mg/L	NOT DETECTED	0.03547	EPA 300.0	
n Propylbenzene	µg/L	NOT DETECTED	0.36141	EPA 524.2	
o Xylene	µg/L	NOT DETECTED	1.34506	EPA 524.2	
Phosphorus	mg/L	NOT DETECTED	0.134	EPA 200.7	
p Isopropyltoluene	µg/L	NOT DETECTED	0.4054	EPA 524.2	
Potassium	mg/L	NOT DETECTED	0.67779	EPA 200.7	
sec Butylbenzene	µg/L	NOT DETECTED	0.38655	EPA 524.2	
Selenium	mg/L	NOT DETECTED	0.00013	EPA 200.8	
Silica	mg/L	**69.1**	0.032	EPA 200.7	
Silver	mg/L	NOT DETECTED	0.0002	EPA 200.8	
Sodium	mg/L	**44.6**	0.90289	EPA 200.7	
Strontium	mg/L	**0.549**	0.00645	EPA 200.7	< SLR
Styrene	µg/L	NOT DETECTED	0.47454	EPA 524.2	

Sulfate	mg/L	**76.1**	0.36456	EPA 300.0	< SLR
tert Butylbenzene	µg/L	NOT DETECTED	0.34884	EPA 524.2	
Tetrachloroethylene	µg/L	NOT DETECTED	0.4714	EPA 524.2	
Thallium	mg/L	NOT DETECTED	1.0E-5	EPA 200.8	
Tin	mg/L	NOT DETECTED	0.00035	EPA 200.8	
Titanium	mg/L	NOT DETECTED	0.0011	EPA 200.7	
Toluene	µg/L	NOT DETECTED	0.50911	EPA 524.2	
Total Coliform	P/A	NOT DETECTED		SM 9223B	
trans 1,3 Dichloropropene	µg/L	NOT DETECTED	0.43683	EPA 524.2	
Trichloroethylene	µg/L	NOT DETECTED	0.45254	EPA 524.2	
Trichlorofluoromethane	µg/L	NOT DETECTED	1.19736	EPA 524.2	
Uranium	mg/L	NOT DETECTED	0.001	EPA 200.8	
Vanadium	mg/L	**0.0097**	0.00012	EPA 200.8	< SLR
Vinyl Chloride	µg/L	NOT DETECTED	0.30484	EPA 524.2	
Zinc	mg/L	NOT DETECTED	0.01782	EPA 200.7	

How To Read Your SimpleLab PDF Report

Your results are being evaluated with the SimpleLab Recommendation.
This is a health protective, non-enforceable drinking water benchmark. SLR is based on the most protective human health benchmark used among public health agencies for a contaminant. Drinking water at or near the SLR over the course of your lifetime is thought to be safe.

MDL: Method Detection Limit. MDL is the lowest concentration of an analyte which testing instrumentation and the analysis team is configured to measure.

Appendix B AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

Air Quality, Greenhouse Gas, and Energy Impact Assessment

Weber Road Industrial and Construction Yard Project

July 28, 2023

Prepared for:

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ABBREVIATIONS

$\mu g/m^3$	Micrograms Per Cubic Meter
AB	Assembly Bill
ACBMs	Asbestos-Containing Building Materials
APN	Assessor's Parcel Number
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CPUC	California Public Utilities Commission
CY	Cubic Yards
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
ECAS	Energy and Conservation Action Strategy
EISA	Energy Independence and Security Act
EO	Executive Order
EPCA	Energy Policy and Conservation Act
FCAA	Federal Clean Air Act
GHG	Greenhouse Gases
GWP	Global Warming Potential
HAP	Hazardous Air Pollutants
HFCs	Hydrofluorocarbons
ISMND	Initial Study/Mitigated Negative Declaration
LCFS	Low Carbon Fuel Standard
LEV	Low-Emission Vehicle
MMT	Million Metric Tons
$MMTCO_2e$	Million Metric Tons of Carbon Dioxide Equivalents
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalents
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NGA	Northeast Growth Area
NHTSA	National Highway Traffic Safety Administration
NOA	Naturally Occurring Asbestos
NF_3	Nitrogen Trifluoride
NO_X	Oxides of Nitrogen
NO_2	Nitrogen Dioxide

O_3	Ozone
Pb	Lead
PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter
$PM_{2.5}$	Fine particulate matter; particulate matter 2.5 microns or smaller
PM_{10}	Particulate matter; particulate matter 10 microns or smaller
ppb	parts per billion
ppm	parts per million
Project	Weber Road Industrial and Construction Yard Project
RFS	Renewable Fuel Standard
ROG	Reactive Organic Gases
RPS	Renewable Portfolio Standard
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SF_6	Sulfur Hexafluoride
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SVAB	Sacramento Valley Air Basin
TAC	Toxic Air Contaminant
TDM	Transportation Demand Management
USEPA	United States Environmental Protection Agency
USC	United States Code
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled
YSAQMD	Yolo-Solano Air Quality Management District
ZEV	Zero Emission Vehicle

1.0 EXECUTIVE SUMMARY

This purpose of the Air Quality, Greenhouse Gas, and Energy Impact Assessment is to evaluate the existing conditions and potential impacts to air quality, greenhouse gas (GHG) emissions, and energy resource areas from the Weber Road Industrial and Construction Yard Project (Project). This analysis is intended to support preparation of a California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declaration (ISMND).

1.1 PROJECT UNDERSTANDING

The 41-acre Project site consists of two parcels (Assessor's Parcel Numbers [APN] 109-270-050 and 109-220-060) in northeastern Vacaville in Solano County, California. The Project would create an interim industrial and construction yard for up to 15 years with up to six storage yard areas available for lease.

1.2 SUMMARY OF ANALYSIS

Impact AIR-1: The Project would not conflict with or obstruct implementation of the applicable air quality plan. **Less Than Significant Impact.**

Impact AIR-2: The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. **Less Than Significant Impact.**

Impact AIR-3: The Project would not expose sensitive receptors to substantial pollutant concentrations. **Less Than Significant Impact with Mitigation.**

Impact AIR-4: The Project would not result in other emissions (such as those leading to odors) affecting a substantial number of people. **Less Than Significant Impact.**

Impact GHG-1: The Project would not generate direct and indirect greenhouse gas emissions that would result in a significant impact on the environment. **Less Than Significant Impact.**

Impact GHG-2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases. **Less Than Significant Impact.**

Impact ENR-1: The Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. **Less Than Significant Impact.**

Impact ENR-2: The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **Less Than Significant Impact.**

1.3 MITIGATION MEASURES

MM AIR-1: **Minimize Exhaust Emissions During Operation.** Exhaust emissions shall be minimized during operational activities with the use of off-road equipment and generator engines that meet or exceed CARB's Tier 4 engine emissions standards for off-road equipment exceeding 50 horsepower (hp). At a minimum, all operational off-road equipment and generators over 50 hp shall be certified as compliant with the Tier 4 engine emissions standards as provided in CCR, Title 13, section 2423(b)(1)(B).

MM AIR-2: **Buffer for Operational Equipment.** A 300-foot buffer from the southern Project boundary along Weber Road shall be required. No diesel powered generators or other diesel powered off-road construction equipment shall be allowed to operate within this buffer area.

2.0 INTRODUCTION

2.1 PURPOSE OF ANALYSIS

The purpose of this Air Quality, Greenhouse Gas, and Energy Impact Assessment is to analyze potential air quality, GHG, and energy impacts that could occur from the construction and operation of the Project. This assessment was conducted within the context of CEQA, in order to support preparation of an ISMND. This evaluation relies on guidance and thresholds established by the United States Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), and the Yolo-Solano Air Quality Management District (YSAQMD).

2.2 PROJECT DESCRIPTION

The Project would involve use of two parcels, identified as APN 109-270-050 and 109-220-060, as an interim industrial and construction yard for up to 5 to 15 years. The Project site would provide up to six storage yard areas for individual tenants to lease. The size of the storage yard areas would ultimately depend on leasing demands; however, it is expected there would be five storage yard areas approximately 5 acres each, and one storage yard area approximately 13 acres. There are currently no specific tenants identified with the Project application. It is anticipated that the six storage yard areas would be leased by various industrial and construction contractors to temporarily store equipment including, but not limited to, trucks, trailers, fleet vehicles, gravel, landscape plantings, containers, office trailers, building materials, and ancillary structures.

The Project site would be graded, lime treated, and covered with an aggregate base. Each of the six storage yard areas would be developed with a bioretention basin to collect and treat stormwater.

Additionally, the Project would construct a 3-foot-tall earthen berm along the northern, eastern, and southern sides of the site. A 5-foot-tall, slatted perimeter fence would be placed along the top of the berms at the northern side, along a portion of the eastern boundary, and along the site's southern boundary with gated access provided on Weber Road. A 5-foot-tall chain-link fence would run along the western boundary of the Project site, adjacent to an elevated gravel access road, and along a portion of the eastern boundary. The Project would not construct any permanent habitable structures, restroom facilities, or improvements to existing on-site structures.

As part of the Project, a new conduit line would be installed parallel to the proposed waterline and gravel access road. In addition, the existing gravel driveway on Weber Road would be paved. The paved driveway would be approximately 40-feet wide and connect to an interior gravel access road. The driveway entrance on Weber Road would be gated and accessible to tenants.

Project construction activities would include grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving. Construction is anticipated to begin in September 2023 and end in December 2023, resulting in a construction duration of 4 months. The construction phase is estimated to require up to 12 workers during peak periods.

For purposes of this analysis, it is assumed that the entire 41-acre site would be disturbed. The grading activities would require approximately 41,708 cubic yards (CY) of cut and approximately 38,492 CY of fill, resulting in a net cut of approximately 3,216 CY of soil that would be exported. The Project would import approximately 30,500 CY of compacted aggregate base to cover the site and 50 CY of asphalt concrete to pave the driveway.

2.2.1 Surrounding Land Uses and Existing Conditions

The Project site is bordered by Weber Road to the south, Interstate 80 (I-80) to the north. The Project site's eastern boundary is bordered by a drainage pond and ditch, which connects to the drainage ditch immediately south of the site's southern boundary. Land uses surrounding the Project site include farmlands to the east and west, and rural residences and commercial uses to the south, along Weber Road.

The Project site is currently covered with non-native vegetation and was previously used for cattle grazing. Existing on-site development includes two vacant barn structures and an on-site well with pumphouse in the northern portion of the Project site. The site perimeter is surrounded by 3- to 4-foot-tall chain-link fencing, except along a portion of the southern frontage where 5-foot-tall chain-link fencing exists. The site topography is generally flat with elevations ranging from approximately 75 to 80 feet above mean sea level. There is an existing overhead PG&E line within an existing easement which crosses the southeastern corner of the Project site.

The Project site is located within the City's Northeast Growth Area (NGA). The current General Plan designation for the Project site is Technology Park, and the site is zoned Technology Park with an NGA Overlay. The Technology Park land use designation is intended to help facilitate a long-term vision for the

area as “an area of future opportunity for developing job-generating uses, such as high-quality office, industrial, and technology campus.” The purpose of the NGA Overlay zoning district is to limit development to temporary land uses to protect the economic interests of the City and preserve land for future development opportunities consistent with the City’s Biotechnology and Advanced Manufacturing Initiative. Pursuant to Vacaville Municipal Code Chapter 14.09.191.030, interim storage yards for off-site construction activities are listed as an interim conditional use in the NGA Overlay District.

Figure 1: Project Site

3.0 AIR QUALITY

3.1 ENVIRONMENTAL SETTING

The Project site lies within a portion of the Sacramento Valley Air Basin (SVAB) which is under the jurisdiction of the YSAQMD. The SVAB encompasses eleven counties including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo counties, the westernmost portion of Placer County, and the northeastern half of Solano County. Air quality in this area is determined by natural factors including topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.

3.1.1 Climate and Meteorology

Climate and meteorology are important considerations for air quality. Local dispersion and regional transport of air pollutants directly relate to prevailing meteorological factors. Wind directions and speeds, and vertical temperature structure (inversions) are the primary determinants of transport and dispersion effects.

The climate of the SVAB is generally characterized by hot, dry summers and mild, rainy winters. The temperature ranges from 20 to 115 degrees Fahrenheit, with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches, and the rainy season generally occurs from November through March. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants under certain meteorological conditions. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells collect over the Sacramento Valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap pollutants near the ground.

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. The evening breeze typically transports the airborne pollutants to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the “Schultz Eddy” prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out, the Schultz Eddy causes the wind pattern to circle back to the south. This phenomenon causes the air pollutants to be blown south, toward the YSAQMD. This phenomenon has the effect of exacerbating the pollution levels in the area and increases the likelihood of violating federal or state standards. The eddy normally dissipates around noon when the delta sea breeze arrives (YSAQMD 2007).

3.1.2 Criteria Air Pollutants

Criteria air pollutants includes ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (measured both in units of smaller than 2.5 microns in diameter [$PM_{2.5}$] and in units of particulate matter smaller than 10 microns in diameter [PM_{10}]), and lead (Pb).

Ozone. Most ground-level ozone is formed as a result of complex photochemical reactions in the atmosphere between reactive organic gases (ROG), nitrogen oxides (NOx), and oxygen. ROG and NOx are considered precursors to the formation of ozone, a highly reactive gas that can damage lung tissue and affect respiratory function. While ozone in the lower atmosphere is considered a damaging air pollutant, ozone in the upper atmosphere is beneficial, as it protects the Earth from harmful ultraviolet radiation. However, atmospheric processes preclude ground-level ozone from reaching the upper atmosphere (USEPA 2022a).

Carbon Monoxide. CO is a colorless, odorless, poisonous gas produced by the incomplete combustion of fossil fuels. Elevated levels of CO can result in harmful health effects, especially for the young and elderly, and can also contribute to global climate change (USEPA 2022a).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas primarily produced as a result of the burning of fossil fuels. NO_2 can also lead to the formation of ozone in the lower atmosphere. NO_2 can cause respiratory ailments, especially in the young and elderly, and can lead to degradations in the health of aquatic and terrestrial ecosystems (USEPA 2022a).

Sulfur Dioxide. SO_2 is primarily emitted from the combustion of coal and oil by steel mills, pulp and paper mills, and non-ferrous smelters. High concentrations of SO_2 can aggravate existing respiratory and cardiovascular diseases in asthmatics and others who suffer from emphysema or bronchitis. SO_2 also contributes to acid rain, which in turn, can lead to the acidification of lakes and streams (USEPA 2022a).

Particulate Matter. Airborne PM is not a single pollutant, but rather is a mixture of many chemical species. PM is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings. Particles vary widely in size, shape, and chemical composition, and may contain inorganic ions, metallic compounds, elemental carbon, organic compounds, and compounds from the earth's crust. Particles are defined by their diameter for air quality regulatory purposes. Those with a diameter of 10 microns or less (PM_{10}) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter ($PM_{2.5}$). Therefore, $PM_{2.5}$ compromises a portion of PM_{10}. Emissions from combustion of gasoline, oil, diesel fuel or wood produce much of the $PM_{2.5}$ pollution found in outdoor air, as well as significant proportion of PM_{10}. PM_{10} also includes dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, wind-blown dust from open lands, pollen, and fragments of bacteria.

PM may be either directly emitted from sources (primarily particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO_2, NOx, and certain organic compounds (USEPA 2022a).

Lead. Sources of Pb include pipes, fuel, and paint, although the use of Pb in these materials has declined dramatically over the years. Historically, a main source of Pb was automobile emissions. Pb can be inhaled directly or ingested by consuming Pb-contaminated food, water, or dust. Fetuses and children are most susceptible to Pb poisoning, which can result in heart disease and nervous system damage (USEPA 2022b). Through regulations, USEPA has gradually reduced the Pb content of gasoline. This program has essentially eliminated violations of the Pb standard in urban areas except those areas with Pb point sources.

3.1.3 Attainment Status

The USEPA and CARB designate air basins where ambient air quality standards are exceeded as "non-attainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National non-attainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Attainment status is based on the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual standard for $PM_{2.5}$ is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The Federal Clean Air Act (FCAA) identifies two types of NAAQS. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings (USEPA 2022a). The CAAQS are equal to or more stringent than the NAAQS and include pollutants for which national standards do not exist. The YSAQMD is designated as nonattainment for the federal and state ozone standards, the state standard for PM_{10}, and the federal standard for $PM_{2.5}$ (YSAQMD 2022a). Table 1 presents the applicable CAAQS and NAAQS.

Table 1. California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	National Standards[2]	
			Primary	Secondary
Ozone (O_3)	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary Standards
	1-hour	0.09 ppm (180 µg/m^3)	--	
Carbon monoxide (CO)	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	--
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
Nitrogen dioxide	Annual arithmetic	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary

Pollutant	Averaging Time	California Standards[1]	National Standards[2]	
			Primary	Secondary
(NO_2)	mean			Standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	
Sulfur dioxide (SO_2)	Annual arithmetic mean	--	0.030 ppm (80 µg/m^3)	--
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (80 µg/m^3)	--
	3-hour	--	--	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	--	--
Respirable Particulate Matter Smaller than 10 Microns in Diameter (PM_{10})	Annual arithmetic mean	20 µg/m^3	--	Same as Primary Standards
	24-hour	50 µg/m^3	150 µg/m^3	
Respirable Particulate Matter Smaller than 2.5 Microns in Diameter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3	15 µg/m^3
	24-hour	No separate standard	35 µg/m^3	Same as Primary Standards
Sulfates	24-hour	25 µg/m^3	--	--
Lead (Pb)	30-day average	1.5 µg/m^3	--	--
	Calendar quarter	--	1.5 µg/m^3	Same as Primary Standard
	Rolling 3-month average	--	0.15 µg/m^3	
Hydrogen sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	--	--
Vinyl chloride (chloroethene)	24-hour	0.01 ppm (26 µg/m^3)	--	--
Visibility reducing particles	8-hour	In 1989, the Air Resources Board converted the general statewide 10-mile visibility standard to instrumental equivalents, which are extinction of 0.23 per kilometer.	--	--

Notes:
1. CO, SO_2 (1- and 24-hour), NO_2, O_3, PM_{10}, and visibility reducing particles standards are not to be exceeded.
2. Not to be exceeded more than once a year except for annual standards.

Pollutant	Averaging Time	California Standards[1]	National Standards[2]	
			Primary	Secondary

-- = no standard established
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
Source: CARB 2016.

3.1.4 Ambient Air Quality

The nearest air quality monitoring station to the Project site is the Vacaville – Ulatis Drive Monitoring Station located at 2012 Ulatis Drive, approximately four miles southwest of the Project site. The Vacaville – Ulatis Drive Monitoring Station exclusively monitors O_3. Data for NO_2 and $PM_{2.5}$ is presented from the Davis – UCD Campus Monitoring Station, which is also located within the YSAQMD. The Davis – UCD Campus Monitoring Station is located approximately 11.5 miles northeast of the Project site. Table 2 includes a summary of the air quality monitoring data for the years 2019 through 2021.

The table shows the number of times the station recorded pollutant concentrations above federal and state air quality standards and the highest annual reading for each pollutant. Based on the monitoring results, the Project area has exceeded the state 1-hour ozone standard, and both the state and federal 8-hour ozone standard.

Table 2. Monitoring Station Data (2019-2021)

Pollutant	Air Pollutant, Averaging Time (Units)	2019	2020	2021
Ozone[1] (ppm)	Maximum 1-hour	0.079	0.082	0.095
	California 1-hour number of days over standard	0	0	1
	Maximum 8-hour	0.070	0.073	0.078
	National 8-hour number of days over standard	0	2	2
	California 8-hour number of days over standard	0	2	2
Nitrogen Dioxide[2] (ppb)	Maximum 1-hour	31.4	32.7	24.0
	Annual average	4	4	3
	National 1-hour number of days over standard	0	0	0
	California 1-hour number of days over standard	0	0	0
$PM_{2.5}$[2] ($\mu g/m^3$)	Maximum 24-hour	49.6	132.3	66.2
	National 24-hour number of days over standard	*	*	*
	Annual average	6.7	13.0	7.8

Source: CARB 2023a.
Notes: ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per liter; $PM_{2.5}$ = particulate matter less than 2.5 microns in aerodynamic diameter
[1] Data from Vacaville – Ulatis Drive Monitoring Station.
[2] Data from Davis – UCD Campus Monitoring Station.
* indicates that insufficient data was available to determine the value.

3.1.5 Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e., irritation, anger, or anxiety) to the physiological (i.e., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and is subjective. Some individuals can smell very minute quantities of specific substances; others have varying sensitivities to odors; and people may have different reactions to the same odor (e.g., bakery, gasoline). It is important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience (e.g., a description of flowery or sweet). Intensity refers to the strength of the odor and depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases, the odor intensity weakens, and it eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant drops below a human's detection threshold.

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. Potential odors would be subject to YSAQMD Rule 2.5, Nuisance (YSAQMD 2022b).

3.1.6 Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air but, due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the California Clean Air Act (CCAA) and are not subject to NAAQS or CAAQS ambient air quality standards. Instead, USEPA and CARB regulate hazardous air pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with YSAQMD rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national level, USEPA has established national emission standards for hazardous air pollutants (NESHAP) in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based, source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 1807 sets

forth a formal procedure for CARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects.

Diesel Particulate Matter

Diesel particulate matter (DPM) was identified as a TAC by the CARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 42 percent of the statewide total, with an additional 55 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about three percent of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (CARB 2023b).

In October 2000, CARB issued a report entitled *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, which is commonly referred to as the Diesel Risk Reduction Plan (DRRP). The DRRP provides a mechanism for combating the DPM problem. The goal of the DRRP is to reduce concentrations of DPM. The key elements of the DRRP are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, and to lower the sulfur content of diesel fuel through advanced technology emission control devices on diesel engines. When fully implemented, the DRRP will significantly reduce emissions from both old and new diesel-fueled motor vehicles and from stationary sources that burn diesel fuel. In addition to these strategies, CARB continues to promote the use of alternative fuels and electrification. As a result of these actions, DPM concentrations and associated health risks in future years are projected to decline (CARB 2023b). In comparison to year 2010 inventory of statewide DPM emissions, CARB estimates that emissions of DPM in 2035 will be reduced by more than 50 percent.

DPM is typically composed of carbon particles (also called “soot” or “black carbon”) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and NOx. NOx emissions from diesel engines are important because they can undergo chemical reactions in the atmosphere leading to formation of $PM_{2.5}$ and O_3.

In California, diesel exhaust particles have been identified as a carcinogen accounting for an estimated 70 percent of the total known cancer risks in California. DPM is estimated to increase statewide cancer risk by 520 cancer occurrences per million residents exposed over an estimated 70-year lifetime. Non-cancer health effects associated with exposure to DPM include premature death, exacerbated chronic heart and lung disease, including asthma, and decreased lung function in children. Short-term exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials

to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks (CARB 2023b).

Individuals most vulnerable to non-cancer health effects of DPM are children whose lungs are still developing and the elderly who often have chronic health problems. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to DPM (CARB 2023b). In addition to its health effects, DPM significantly contributes to haze and reduced visibility.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals with useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings constructed prior to 1977 when it was banned for use in buildings. Exposure to naturally occurring asbestos can occur during soil disturbing activities in areas with deposits present (USEPA 2023d).

3.1.7 Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The nearest sensitive receptors to the Project site would be the rural residences located approximately 234 feet to the south, across Weber Road. The nearest worker receptors would be the brewery located approximately 1,000 feet to the southeast.

3.2 REGULATORY SETTING

Air quality within the Project area is regulated by several jurisdictions, including the USEPA, CARB, and YSAQMD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, both state and local regulations may be more stringent.

3.2.1 Federal

U.S. Environmental Protection Agency

At the federal level, the USEPA has been charged with implementing national air quality programs. The USEPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the USEPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 1.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the USEPA established the National Emission Standards for Hazardous Air Pollutants (NESHAPs). These are technology-based source-specific regulations that limit allowable emissions of HAPs. Among these sources include asbestos-containing building materials (ACBMs). NESHAPs include requirements pertaining to the inspection, notification, handling, and disposal of ACBMs associated with the demolition and renovation of structures.

Non-Road Diesel Rule

The USEPA has established a series of increasingly strict emissions standards for new off-road diesel equipment, on-road diesel trucks, and locomotives. New construction equipment used for the Project, including heavy-duty trucks and off-road construction equipment, would be required to comply with the emissions standards.

3.2.2 State

California Air Resources Board

The CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts), establishing CAAQS, which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used. The CAAQS are summarized in Table 1.

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for O_3, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC.

Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

Assembly Bill 617

In response to AB 617 (C. Garcia, Chapter 136, Statutes of 2017), the CARB established the Community Air Protection Program. The Community Air Protection Program includes community air monitoring and community emissions reduction program's focus is to reduce exposure in communities most impacted by air pollution. The Legislature has appropriated funding to support early actions to address localized air pollution through targeted incentive funding to deploy cleaner technologies in these communities, as well as grants to support community participation in the AB 617 process. AB 617 also includes new requirements for accelerated retrofit of pollution controls on industrial sources, increased penalty fees, and greater transparency and availability of air quality and emissions data, which will help advance air pollution control efforts throughout the State.

Regulatory Attainment Designations

Under the CCAA, CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or

extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, CARB terminology of attainment, nonattainment, and unclassified is more frequently used. The USEPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, USEPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

As noted previously, the YSAQMD region is designated as nonattainment for the federal and state ozone standards, the state standard for PM_{10}, and the federal standard for $PM_{2.5}$ (YSAQMD 2022a).

Low-Emission Vehicle Program

The CARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, CARB adopted the LEV III amendments to California's LEV regulations. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles.

On-Road Heavy-Duty Vehicle Program

The CARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. CARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.

In addition, the CARB's Truck and Bus regulation was established to meet federal attainment standards. This regulation requires heavy-duty diesel vehicles that operate in California to reduce TAC emissions from their exhaust. Diesel exhaust is responsible for 70 percent of the cancer risk from airborne toxics. Therefore, by January 1, 2023, nearly all trucks and buses will be required to have 2010 or newer model year engines to reduce PM and NOx emissions. To help ensure that the benefits of this regulation are

achieved, starting in 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles.

3.2.3 Regional

Yolo-Solano Air Quality Management District

The YSAQMD is the public agency entrusted with regulating stationary sources of air pollution in a portion of the SVAB consisting of the following eleven counties: all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo Counties, the westernmost portion of Placer County and the northeastern half of Solano County. The YSAQMD has prepared their own guidance document to provide procedures for addressing air quality impacts in environmental documents (YSAQMD 2007). The YSAQMD Handbook for Assessing and Mitigating Air Quality Impacts (YSAQMD Handbook) includes thresholds of significance and project screening levels for criteria pollutants (ROG, NO_X, PM_{10}, and CO), TACs, cumulative impacts, odors, as well as methods for assessing and mitigating impacts.

Current Air Quality Plans

The YSAQMD is designated as nonattainment for the federal and state ozone standards, the state standard for PM_{10}, and the federal standard for $PM_{2.5}$ (YSAQMD 2022a). As a non-attainment area for the federal ozone standard, the Sacramento region is required to prepare various planning documents on an ongoing basis. Each time a new standard is adopted by USEPA, local air districts must prepare plans to show how the standard will be achieved by the appropriate deadline. The most recent federal ozone attainment plan is the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 Ozone Plan). The purpose of the 2017 Ozone Plan is to demonstrate how the Sacramento Federal Nonattainment Area (SFNA) will meet CAA reasonable further progress requirements and demonstrate attainment of the 2008 ozone NAAQS. The plan also includes an updated emissions inventory, sets motor vehicle emissions budgets, demonstrates how it complies with vehicle miles traveled (VMT) emissions offset and reasonably available control measure requirements, and documents the photochemical modeling used to support the attainment demonstration (SMAQMD et al. 2017).

The California CAA requires the submission of a plan for attaining and maintaining state AAQS for ozone with subsequent updates every three years. The most recently adopted plan, Triennial Assessment and Plan Update (May 2019), covers the years 2015 through 2017. The document summarizes emission trends over this time period, forecasts future emissions, and reviews efforts made by the YSAQMD to improve air quality (YSAQMD 2019).

The SFNA has been identified by the USEPA as an area that is required to develop a mitigation plan to minimize the public exposure from $PM_{2.5}$ emissions generated during wildfire events. The Wildfire Mitigation Plan for Sacramento Federal Nonattainment Area for $PM_{2.5}$ outlines the actions that each air district will take to notify the public and minimize the air quality impacts when emissions from wildfires increase $PM_{2.5}$ concentrations in the region to a level where they exceed or are expected to exceed the 24-hour $PM_{2.5}$ NAAQS (EDCAQMD et al. 2018).

Rules and Regulations

All projects under the jurisdiction of the YSAQMD are required to comply with all applicable YSAQMD rules and regulations. Applicable YSAQMD regulations and rules include, but are not limited to, the following (YSAQMD 2022b):

- Regulation II: Prohibition, Exceptions
  - Rule 2.1: Control of Emissions
  - Rule 2.5: Nuisance
  - Rule 2.11: Particulate Matter Concentration
- Regulation III: Permit System
  - Rule 3.1: General Permit Requirements
  - Rule 3.4: New Source Review
  - Rule 3.13: Toxics New Source Review

3.2.4 Local

City of Vacaville General Plan

The City of Vacaville General Plan, approved by the Vacaville City Council on August 11, 2015, is a long-range planning document intended to guide future conservation, enhancement, and development within the City through the year 2035. The Conservation and Open Space Element of the City of Vacaville General Plan contains the following goals and policies related to air quality that are applicable to the Project (City of Vacaville 2015):

- **Goal COS-12.** Maintain and improve air quality.
  - **Policy COS-P12.1.** Cooperate with regional agencies in developing and implementing air quality management plans.
  - **Policy COS-P12.3.** Encourage project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips and promote energy efficiency.
  - **Policy COS-P12.4.** Require that development projects implement best management practices to reduce air pollutant emissions associated with the construction and operation of the project.
  - **Policy COS-P12.5.** Require dust control measures as a condition of approval for subdivision maps, site plans, and all grading permits.
  - **Policy COS-P12.7.** Require that sources of stationary air pollutants of concern, such as factories, be located more than 500 feet and/or downwind from residential areas and other sensitive receptors.

- **Policy COS-P12.8.** Evaluate residential development or other projects with sensitive receptors proposed within the buffer distances identified by the California Air Resources Board's Air Quality and Land Use Handbook to ensure sensitive receptors would not be exposed to an increased cancer risk or to ground-level concentrations of non-carcinogenic toxic air contaminants. Permitted stationary air pollutant sources can be identified through the Yolo Solano Air Quality Management District.
- **Policy COS-P12.9.** Use the results of the Health Risk Assessments required by the California Air Toxics "Hot Spots" Act to establish appropriate land use buffer zones around any new sources of toxic air pollutants that pose substantial health risks.
- **Policy COS-P12.10.** Encourage the use of roadway materials that minimize particulate emissions.

4.0 GREENHOUSE GAS

4.1 ENVIRONMENTAL SETTING

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the GHGs that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

4.1.1 Greenhouse Gases

Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and sulfur hexafluoride (SF_6). Primary GHGs attributed to global climate change are discussed in the following subsections.

Carbon Dioxide. CO_2 is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (USEPA 2023a).

Methane. CH_4 is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH_4 is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about 12 years (USEPA 2023a).

Nitrous Oxide. N_2O is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (USEPA 2023a).

Hydrofluorocarbons. HFCs are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (USEPA 2023a).

Perfluorocarbons. PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F_{14}). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively (USEPA 2023a).

Nitrogen Trifluoride. NF_3 is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. NF_3 is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. In 2009, NF_3 was listed by California as a potential GHG to be listed and regulated under AB 32 (Section 38505 Health and Safety Code).

Sulfur Hexafluoride. SF_6 is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging

equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (USEPA 2023b).

Black Carbon. Black carbon is the most strongly light-absorbing component of PM emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands). California has been an international leader in reducing emissions of black carbon, including programs that target reducing PM from diesel engines and burning activities (CARB 2013).

4.1.2 Global Warming Potential

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential (GWP).

Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Based on a 100-year time horizon, Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHGs with high GWP include NF_3, SF_6, PFCs, and black carbon.

4.1.3 Sources of Greenhouse Gas Emissions

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. World-wide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions.

United States of America

In 2021, GHG emissions in the U.S. totaled 6,340.2 million metric tons (MMT) of CO_2e. Within the U.S., the largest contributor to GHG emissions is the transportation sector (28 percent). The next largest contributors are from electricity production (25 percent) and industry (23 percent), followed by the commercial and residential sector (13 percent) and the agricultural sector (10 percent). Transportation emissions primarily come from burning fossil fuels for our cars, trucks, ships, trains, and planes. Over 90 percent of the fuel used for transportation is petroleum-based, which includes primarily gasoline and diesel. The bulk of emissions generated from energy production come from burning fossil fuels, mostly coal and natural gas. Industry emissions are also primarily generated from fossil fuels burned for heat, the

use of certain products that contain GHGs, and the handling of waste. Similar to industry sector emissions, commercial and residential uses arise primarily from fossil fuels for heat, the use of certain products that contain GHGs, and the handling of waste. Agricultural emissions come from livestock such as cows, agricultural soil, and rice production. The land use and forestry sector within the U.S. serves as a carbon sink. Carbon sinks absorb CO_2 from the atmosphere. Land areas across the U.S. absorbed approximately 12 percent of the 2021 GHG emissions (USEPA 2023c).

California

In 2020, GHG emissions within California totaled 369.2 MMT of CO_2e. Similar to national emissions, in California, the transportation sector is the largest contributor. Transportation emissions account for approximately 37 percent of the total statewide GHG emissions. The majority of transportation emissions are derived from passenger vehicles and heavy-duty trucks. Emissions associated with industrial uses are the second largest contributor, totaling roughly 20 percent. Industrial emissions are driven by fuel combustion from sources that include refineries, oil and gas extraction, cement plants, and the portion of cogeneration emissions attribution to thermal energy output. Electricity generation (in state and imports) totaled roughly 16 percent. Emissions from the electricity generation sector have declined over the years due to the increase in renewable generation that continues to replace fossil power (CARB 2022a).

4.1.4 Effects of Global Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snowpack is a principal supply of water for the state, providing roughly 50 percent of state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the state's energy resources. An early exhaustion of the Sierra snowpack may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.

4.2 REGULATORY SETTING

There are considerable regulatory actions regarding GHGs and climate change at the state and local level. The following includes the key state and regional regulations applicable to the Project.

4.2.1 State

Assembly Bill 32 and Senate Bill 32

AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. GHGs, as defined under AB 32, include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, NF_3, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.*

CARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007. Therefore, to meet the state's target, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. In order to set a framework for the state to meet this target, CARB was tasked with creating a Scoping Plan (as described below). California announced in July 2018 that the state emitted 427 $MMTCO_2e$ in 2016 and achieved AB 32 goals (CARB 2018a).

Senate Bill (SB) 32 was signed into law on September 8, 2016. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide GHG emissions are reduced to at least 40 percent below the statewide GHG emissions limit no later than December 31, 2030."

Assembly Bill 1279: The California Climate Crisis

AB 1279 was signed into law in 2022 and establishes the policy of the State to achieve carbon neutrality as soon as possible, but no later than 2045 and maintain net negative GHG emissions thereafter. AB 1279 would also ensure that by 2045 the statewide anthropogenic GHG emissions are reduced by at least 85percent below 1990 levels. The bill would require CARB to ensure that an updated Scoping Plan identifies and recommends measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable carbon dioxide removal and carbon capture, utilization, and storage technologies to complement AB 1279's emissions reduction requirements.

2022 Climate Change Scoping Plan

The 2022 Scoping Plan was approved in December 2022 and assesses progress toward achieving the SB 32 2030 target and laying out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022b).

Cap-and-Trade Program

CARB administers the state's cap-and-trade program, which covers GHG sources that emit more than 25,000 metric tons of carbon dioxide equivalent per year ($MTCO_2e$/year), such as refineries, power plants, and industrial facilities. This market-based approach to reducing GHG emissions provides economic incentives for achieving GHG emission reductions.

Senate Bill 375: The Sustainable Communities and Climate Protection Act of 2008

SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits more than 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

CARB has prepared a Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets in 2018 which set updated GHG reduction targets for metropolitan planning organizations for 2020 and 2035 (CARB 2023c). Pursuant to SB 375, the Central Valley/San Joaquin reduction targets for per capita vehicular emissions were 6 to 13 percent by 2020 and are 13 to 16 percent by 2035.

Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations and fuel efficiency standards that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by USEPA's denial of an implementation waiver. USEPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.

The standards were phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards resulted in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards resulted in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation, rather than relying on

fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for AB 1493 was incorporated into Amendments to the Low-Emission Vehicle Program, referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Cars program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation would reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The rules would reduce pollutants from gasoline and diesel-powered cars and would deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles, and hydrogen fuel cell cars. The regulations would also provide adequate fueling infrastructure for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

Senate Bill 1368: Emission Performance Standards

Enacted in 2006, SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant.

Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the state. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds of CO_2 per megawatt-hour.

Senate Bill 1078: Renewable Electricity Standards

SB 1078 (September 12, 2002) required California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, the governor signed Executive Order (EO) S-14-08, which established the Renewable Portfolio Standard (RPS) target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. EO S-21-09 directed CARB to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010, by Resolution 10-23. In 2011, the state legislature adopted this higher standard in SB X1-2. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

SB 350 (October 7, 2015) reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations.

Senate Bill 100: California Renewables Portfolio Standard Program

SB 100 (September 10, 2018) revised the RPS goals to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. The bill requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order S-01-07: Low Carbon Fuel Standard

EO S-01-07 was signed on January 18, 2007. The EO mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the EO established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in an implementation plan for the State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007, and was submitted to CARB for consideration as an "early action" item under AB 32. CARB adopted the LCFS on April 23, 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, CARB was required to bring a new LCFS regulation for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS and new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The Office of Administrative Law approved the regulation on November 16, 2015. The regulation was last amended in 2018. The 2018 amendments strengthen the carbon intensive fuel reduction targets beyond 2020 to support SB 32. Other major changes to the 2018 amendments include expanding the fuel types and eligible activities to participate in the LCFS (CARB 2018b).

Executive Order S-13-08: Climate Adaptation Strategy

EO S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in this EO, the 2009 California Climate Adaptation Strategy was adopted, which is the "… first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-48-18

In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the electric-vehicle charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all state entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS Program and recommend how to ensure affordability and accessibility for all drivers.

Executive Order N-79-20

In September 2020, Governor Newsom signed EO N-79-20, which sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

4.2.2 Regional

Yolo-Solano Air Quality Management District

The YSAQMD notes that GHG impacts are cumulative in nature, and lead agencies should evaluate whether a project's incremental direct and indirect GHG emissions are cumulatively considerable (YSAQMD 2022c). The YSAQMD does not have adopted regulations specifically for the purpose of reducing GHG emissions, although several existing regulations related to air quality have co-benefits that would affect GHG emissions, see Section 3.2.3.

4.2.3 Local

City of Vacaville General Plan

The City of Vacaville General Plan, approved by the Vacaville City Council on August 11, 2015, is a long-range planning document intended to guide future conservation, enhancement, and development within the City through the year 2035. The Conservation and Open Space Element of the City of Vacaville General Plan includes the following goals or policies related to GHG emissions that may be applicable to the Project (City of Vacaville 2015):

- **Goal COS-9.** Reduce greenhouse gas emissions and improve the sustainability of actions by City government, residents, and businesses in Vacaville.
    - **Policy COS-P9.1.** Maintain the Energy and Conservation Action Strategy.
    - **Policy COS-P9.2.** Promote land use patterns that reduce the number and length of motor vehicle trips.
    - **Policy COS-P9.3.** To the extent feasible, encourage a balance and match between jobs and housing.
    - **Policy COS-P9.5.** Encourage employment areas to include a mix of support services to minimize the number of employee trips.
    - **Policy COS-P9.7.** Continue to work with the Solano Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.
    - **Policy COS-P9.8.** Promote green building practices in new development.

City of Vacaville Energy and Conservation Action Strategy

In September 2021, the City of Vacaville adopted the Energy and Conservation Action Strategy Update (ECAS), which is a long-range strategy to reduce GHG emissions and achieve greater conservation of resources as the City grows. The ECAS includes both communitywide and municipal GHG emissions reduction measures to decrease the City's contribution to GHG emissions.

The ECAS is qualified for reducing GHG emissions pursuant to CEQA Guidelines Section 15183.5(b)(1). Pursuant to CEQA Guidelines Sections 15064(h)(3) and 15130(d), if a proposed project is consistent with the requirements of an adopted plan, such as a qualified GHG reduction plan that is prepared consistent with CEQA Guidelines Section 15183.5(b), as described in 15183.5(b)(2), the lead agency may determine that the project GHG impacts are less than significant if the project incorporates the applicable GHG reduction measures in the plan or the measures are otherwise required as mitigation measures.

5.0 ENERGY

5.1 ENVIRONMENTAL SETTING

Pacific Gas and Electric (PG&E) is the utility company that provides electricity and natural gas supplies to the City. PG&E is one of the largest combined natural gas and electric energy companies in the United States that provides natural gas and electricity to approximately 16 million people across a 70,000 square mile service area in northern and central California (PG&E 2023).

In February 2018, PG&E announced that it had reached California's 2020 renewable energy goal 3 years ahead of schedule (PG&E 2018). In 2021, approximately 48 percent of PG&E's electricity came from renewable resources including solar, wind, geothermal, biomass and small hydroelectric sources. Additionally, approximately 91 percent of PG&E's total electric power mix is from GHG-free sources, which includes nuclear and large hydroelectric sources of energy (CEC 2023a). In the year 2021, Solano County consumed a total of 3,300.85 million kWh (GWh), 2,125.37 GWh of which was from the non-residential sector (CEC 2023b). PG&E currently provides electrical services to the Project site via an existing 200-amp electrical meter. PG&E also supplies natural gas to the City; however, the Project would not construct any natural gas hookups.

5.2 REGULATORY SETTING

The following includes the key federal, state, and local regulations related to energy resources that are applicable to the Project.

5.2.1 Federal

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. The Federal Energy Regulatory Commission also reviews proposals to build liquefied natural gas terminals and interstate natural gas pipelines as well as licensing hydropower projects. Licensing of hydroelectric facilities under the authority of the Federal Energy Regulatory Commission includes input from state and federal energy and power generation, environmental protection, fish and wildlife, and water quality agencies.

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (42 U.S. Code [USC] §8201 et seq.) serves as the underlying authority for federal energy management goals and requirements and is the foundation of most federal energy requirements. The National Energy Conservation Policy Act also established fuel economy standards for on-road motor vehicles in the United States. The National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards and for revising

existing standards. NHTSA and the USEPA are taking coordinated steps to enable the production of clean energy vehicles with improved fuel efficiency. NHTSA sets the Corporate Average Fuel Economy (CAFE) levels, which are rapidly increasing over the next several years to improve energy security and reduce fuel consumption. In March 2022, the NHTSA finalized CAFE standards for model years 2024 to 2026. The standards require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks by model year 2026. The NHTSA projects that the foregoing standards will avoid the consumption of approximately 234 billion gallons of gasoline between model years 2030 to 2050 (NHTSA 2022).

Energy Independence and Security Act of 2007

The Energy Independence and Security Act (EISA) aimed to increase U.S. energy security, increased CAFE standards for motor vehicles, and included provisions related to energy efficiency, such as renewable fuel standards (RFS), appliance and lighting efficiency standards; and building energy efficiency standards. The EISA required increasing levels of renewable fuels to replace petroleum. The USEPA is responsible for developing and implementing regulations to ensure transportation fuel sold into the U.S. contains a minimum volume of renewable fuel.

The RFS programs regulations were developed in collaboration with refiners, renewable fuel products, and other stakeholders and were created under the Energy Policy Act of 2005. The RFS program established the first renewable fuel volume mandate in the U.S. As required under the EISA, the original RFS program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. The RFS program was expanded in several ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of the nation's renewable fuels sector. The updated program is referred to as RFS2, and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel and set separate volume requirements for each one; and
- EISA required by the USEPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternate energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Federal Vehicle Standards

The Energy Policy and Conservation Act of 1975 (EPCA) mandated that the NHTSA establish and implement a regulatory program for motor vehicle fuel economy, known as the CAFE program, to reduce national energy consumption. As codified in Chapter 329 of Title 49 of the USC, as amended by the

Energy

EISA, EPCA sets forth specific requirements concerning the establishment of average fuel economy standards for passenger cars and light trucks. The EISA, discussed above, amended the EPCA CAFE program requirements by providing the Department of Transportation additional rulemaking authority and responsibilities.

Consistent with its statutory authority in rulemaking to establish CAFE standards for model year 2017 and beyond, NHTSA developed two phases of standards. The first phase included final standards for model years 2017–2021. The second phase, covering model years 2022–2025, included standards that were not final, due to the statutory requirement that NHTSA set average fuel economy standards not more than five model years at a time. Rather, NHTSA wrote that those standards were augural, meaning that they represented its best estimate, based on the information available at that time, of what levels of stringency might be maximum feasible in those model years. In 2012, the agencies jointly adopted more stringent Phase 2 standards for light duty cars and trucks, which would cover model years 2017 through 2025. In August of 2016, the agencies adopted more stringent Phase 2 standards for medium- and heavy-duty vehicles, which would cover model years 2018 through 2027 for certain trailers and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks.

On March 31, 2020, NHTSA and the USEPA released a new rule, the final Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, setting CAFE and carbon dioxide emissions standards for model years 2021 through 2026 passenger cars and light trucks. The rule rolls back the 2012 standards for model years 2021 through 2026 for passenger cars and light trucks, which had required an average fleetwide fuel economy equivalent of 54.5 miles per gallon in model year 2025 with a 5 percent annual increase to an average fuel economy of about 40 miles per gallon in model year 2025 with annual increases of 1.5 percent starting in 2021. As a part of issuing the new SAFE rule, NHTSA issued a Final Environmental Impact Statement which found that the relaxed standards would result in increased petroleum consumption which in turn would result in increases to GHG and criteria pollutant emissions known to contribute to adverse health impacts (NHTSA 2020). The estimated increases from the roll back of the 2012 standards are expected to result in more than a billion metric tons additional climate pollution through 2040 as determined by calculating the difference from the reduction of 2 billion metric tons the 2012 rule was expected to accomplish compared to the standards of the 2020 rule (NHTSA 2020). On January 20, 2021, an EO was issued on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which includes review of the Part One Rule by April 2021 and review of the Part Two Rule by July 2021. In response to the Part One Rule, in December 2021, the Department of Transportation withdrew its portions of the SAFE rule. As a result, states are now allowed to issue their own GHG emissions standards and zero-emissions vehicle mandates. In addition, the Part Two Rule was adopted to revise the existing national GHG emission standards for passenger cars and light trucks through model year 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and will result in avoiding more than three billion tons of GHG emissions through 2050.

5.2.2 State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is a state agency created by a constitutional amendment to regulate privately-owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services and in-state moving companies. The CPUC is responsible for ensuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, or distribution facilities, and local distribution pipelines of natural gas.

California Energy Code

Compliance with the California Energy Code (CCR Title 24, Part 6, California's Energy Efficiency Standards) and Title 20, Public Utilities and Energy, standards must occur for all new buildings constructed in California. These efficiency standards apply to new construction of both residential and nonresidential (i.e., maintenance buildings and pump station buildings associated with the Program) buildings, and they regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit processes, and local government agencies may adopt and enforce energy standards for new buildings provided that these standards meet or exceed those provided in the Title 24 guidelines.

Warren-Alquist Energy Resources Conservation and Development Act

Initially passed in 1974 and amended since, the Warren-Alquist Energy Resources Conservation and Development Act (Warren-Alquist Act) created the California Energy Commission (CEC), California's primary energy and planning agency. The seven responsibilities of the CEC are forecasting future energy needs, promoting energy efficiency and conservation through setting standards, supporting energy-related research, developing renewable energy resources, advancing alternative and renewable transportation fuels and technologies, certifying thermal power plants 50 megawatts or larger, and planning for and directing state response to energy emergencies. The CEC regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption. Additionally, the Warren-Alquist Act acknowledges the need for renewable energy resources and encourages the CEC to explore renewable energy options that would be in line with environmental and public safety goals (Warren-Alquist Act Public Resources Code (PRC) section 25000 et seq.)

California Integrated Energy Policy

SB 1389 requires the CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and

safety." (PRC Section 25301(a)). The CEC adopts an Integrated Energy Policy Report every two years and an update every other year. The most recent version is the 2022 Integrated Energy Policy Report Update (CEC 2022).

California Renewables Portfolio Standard

California's RPS was initially established in 2002 by SB 1078, with the initial requirement that 20 percent of electricity retail sales be served by renewable resources by 2017. The program was accelerated in 2006 under SB 107, which required that the 20 percent mandate be met by 2010. In April 2011, SB 2 was signed into law, requiring electricity retailers in the state to procure 33 percent of their energy sources from renewable energy sources by the end of 2020 (CPUC 2021). In addition, SB 350, passed in 2015, directs California utilities to further increase the amount of renewable energy delivered to customers to 50 percent by 2030.

CPUC implements and administers RPS compliance rules for California's retail sellers of electricity, which include large and small investor-owned utilities, publicly owned utilities, electric service providers, and community choice aggregators. The CEC is responsible for the certification of electrical generation facilities as eligible renewable energy resources and adopting regulations for the enforcement of RPS procurement requirements of public owned utilities.

5.2.1 Local

City of Vacaville General Plan

The City of Vacaville General Plan contains the following goals and policies related to energy that are applicable to the Project (City of Vacaville 2015):

- **Goal COS-10**. Promote a sustainable energy supply.
    - **Policy COS-P10.1.** Encourage the development of energy generated by renewable fuel sources within the city, provided that significant adverse environmental impacts associated with such development can be successfully mitigated.
    - **Policy COS-P10.2.** Encourage solar-oriented and renewable design and grid-neutral development – development that generates enough energy to off-set its demands – by encouraging streets that are oriented east-west to facilitate the maximization of south-facing roofs that best accommodate solar panels.
    - **Policy COS-P10.3.** Encourage the installation of solar voltaic panels on new homes and businesses through reduced building permit fees or other incentives.
- **Goal COS-11.** Conserve energy and fuel resources by increasing energy efficiency.
    - **Policy COS-P11.1.** Require that new development incorporate energy-efficient design features for HVAC, lighting systems, and insulation that exceed Title 24.

- **Policy COS-P11.2.** Require that site and structure designs for new development promote energy efficiency.
- **Policy COS-P11.3**. Promote and reward the energy efficiency efforts of local businesses through recognition on the City's website and other outreach.

City of Vacaville Energy and Conservation Action Strategy

The City of Vacaville ECAS includes several municipal and community-wide measures that are intended to increase energy efficiency, including measures directed at the transportation section, towards green building practices, and the use of renewable energy and low carbon fuels.

6.0 METHODOLOGY AND MODELING PARAMETERS

The following discussion explains the methodology and modeling parameters that will be used to estimate air quality and GHG emissions, potential health risks, and energy demand associated with construction and operations of the Project.

6.1 CRITERIA POLLUTANT AND GHG EMISSION METHODS

The California Emissions Estimator Model (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod quantifies direct GHG emissions, such as construction and operational activities and vehicle use, and indirect emissions, such as energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, CalEEMod identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user.

CalEEMod was developed for the California Air Pollution Control Officers Association in collaboration with the California Air Districts. Default data (e.g., emission factors, trip lengths, meteorology, source inventory) have been provided by the various California Air Districts to account for local requirements and conditions. CalEEMod is a comprehensive tool for quantifying air quality impacts from land use projects located throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable, such as preparing CEQA or National Environmental Policy Act documents, conducting pre-project planning, and, verifying compliance with local air quality rules and regulations, etc.

CalEEMod Version 2022.1.1.14 was used to estimate construction and operational impacts of the Project.

6.1.1 Modeling Assumptions

Construction

Project construction is anticipated to include site clearing, grading, earthwork, stormwater and drainage improvements, utility connections, and driveway paving. The entire 41-acre Project site would be cleared of surface vegetation, graded, and compacted. The grading activities would require approximately 41,708 CY of cut and approximately 38,492 CY of fill, resulting in a net cut of approximately 3,216 CY of soil that would be exported. The Project would import approximately 30,500 CY of compacted aggregate base to cover the site and 50 CY of asphalt concrete to pave the driveway.

Construction would occur five days per week (Monday through Friday) over an approximately four-month period. Table 3 shows the anticipated construction schedule.

Table 3. Construction Schedule

Construction Task	Start Date	End Date	Workdays
Erosion Control	9/1/2023	9/8/2023	6 Days
Earthwork	9/11/2023	10/30/2023	36 Days
Lime Treat Subgrade	10/31/2023	11/13/2023	10 Days
Site Utilities	11/14/2023	11/15/2023	2 Days
Aggregate Base	11/16/2023	12/15/2023	20 Days
Asphalt Paving	12/18/2023	12/18/2023	1 Day

Note: Workdays refers to working days only, excluding holidays and weekends.

The off-road equipment fleet for construction was developed in coordination with the Project applicant. Construction equipment for each construction activity by phase is shown in Table 4.

Table 4. Construction Off-Road Equipment

Construction Task	Equipment Type	Pieces of Equipment	Usage (hours/day)	Horsepower	Load Factor	Fuel Type
Erosion Control	Tractors/Loaders/Backhoes	1	4	84	0.37	Diesel
Earthwork	Rubber Tired Dozers	1	7	367	0.4	Diesel
	Plate Compactors	1	7	36	0.38	Diesel
	Graders	2	7	148	0.41	Diesel
Lime Treat Subgrade	Plate Compactors	1	7	367	0.4	Diesel
	Cement and Mortar Mixers	1	7	84	0.37	Diesel
	Surfacing Equipment	1	7	399	0.3	Diesel
Site Utilities	Excavators	1	7	36	0.38	Diesel
	Plate Compactors	1	7	8	0.43	Diesel

Construction Task	Equipment Type	Pieces of Equipment	Usage (hours/day)	Horsepower	Load Factor	Fuel Type
	Tractors/Loaders/Backhoes	1	7	84	0.37	Diesel
Aggregate Base	Graders	1	7	148	0.41	Diesel
	Tractors/Loaders/Backhoes	1	7	84	0.37	Diesel
	Plate Compactors	1	7	8	0.43	Diesel
Asphalt Paving	Pavers	1	7	81	0.42	Diesel
	Plate Compactors	1	7	36	0.38	Diesel
	Tractors/Loaders/Backhoes	1	7	84	0.37	Diesel

Off-site construction emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$). Table 5 provides a summary of the construction-related vehicle trips.

Table 5. Construction Vehicle Trips

Construction Task	Worker Trips per Day	Vendor Trips per Day	On-Site Truck Trips per Day	Haul Truck Trips per Day
Erosion Control	3	1	0	0
Earthwork	8	1	1	0
Lime Treat Subgrade	12	1	1	11
Site Utilities	8	1	1	7
Aggregate Base	8	1	1	191
Asphalt Paving	8	1	1	0

Source: CalEEMod (Attachment A).

CalEEMod default values were used to estimate the number of worker and haul truck trips. Vendor trips were added to each phase to account for water trucks. It was assumed that 100 percent of off-site trips would occur on paved roadways, and on-site truck trips would be 0 percent paved. The CalEEMod results are included in Appendix A.

Operations

Operations of the Project would vary depending on the future tenants of the site. This analysis conservatively assumes a combination of tenants that would result in the most emissions-intensive operations. The six tenants and the associated off-road equipment that would be used by each tenant are presented in Table 6. Off-road equipment emissions were modeled using CalEEMod. Operational emissions from all sources were estimated for the year 2024.

Table 6. Operational Off-Road Equipment

Potential Tenant	Use Description	Off-Road Equipment Use
Truck and Fleet Storage	Employees would arrive to the project site in the morning, leave their personal car, and take their route truck. The route truck would be returned to the project site at the end of the day. This use would have two to five employees to supervise the operations and unload/load the cars and trucks.	• **1 Generator Set:** 30 HP; 8 hours per day; 208 days per year
Steel and Rebar Laydown Storage	Bulk storage of steel rebar and related items, including ancillary forklift and/or crane operation.	• **1 Generator Set:** 30 HP; 8 hours per day; 208 days per year • **1 Forklift:** 8 hours per day; 260 days per year • **1 Crane:** 8 hours per day; 260 days per year
Tree and Bark Companies	Storage of trees, bark, and equipment, such as excavators, loaders, and bark grinders. This use would potentially debark tree logs up to 10 times a month.	• **1 Generator:** 30 HP; 8 hours per day; 208 days per year • **1 Tractor/Loader/Backhoe:** 8 hours per day; 120 days per year • **1 Excavator:** 8 hours per day; 120 days per year • **1 Other Material Handling Equipment (Grinder):** 8 hours per day; 120 days per year
Gravel, Mulch, and Composting Storage	Office trailers and storage of gravel, mulch, and composting. On-site equipment would include one to two loaders to move and load the products.	• **1 Generator Set:** 30 HP; 8 hours per day; 208 days per year • **2 Tractors/Loaders/Backhoes:** 8 hours per day; 260 days per year
Trucking Companies	Truck and trailer storage. Driver would arrive to the project site in personal car and drive truck and trailer off-site. The truck and trailer would be returned to the site at the end of the day or several days later.	• **1 Generator Set:** 30 HP; 8 hours per day; 208 days per year
Gravel Crush Operation	Stockpiling of bulk concrete and construction material. It is anticipated gravel crushing operations would occur twice a week and generate up to 300 tons of gravel per week. The materials would be delivered to the project site five days a week with daily deliveries estimated at six to eight trucks a day. There would be approximately five trucks a day to export materials from the site.	• **1 Generator Set:** 30 HP; 8 hours per day; 208 days per year • **1 Tractor/Loader/Backhoe:** 8 hours per day; 104 days per year • **1 Excavator:** 8 hours per day; 104 days per year • **1 Crushing/Processing Equipment:** 8 hours per day; 104 days per year

The modeled vehicle trips are presented in **Error! Not a valid bookmark self-reference.**. The total daily trips per tenant were provided by the Applicant, and the breakdown of staff trips versus truck trips was estimated to assume the maximum number of truck trips. Each trip is one-way (i.e., a round-trip visit to the site consists of two trips with one trip to the site and then one trip away from the site). For this analysis, vehicle emissions associated with Project operations were modeled using emission factors and fleet mix data from CARB's EMFAC2021 (v1.0.2). An average one-way trip length of 10 miles was applied

to staff trips, and an average one-way trip length of 20 miles was applied for haul truck trips. Trip lengths were based on CalEEMod default data. The CalEEMod results and vehicle emissions calculations are included in Appendix A.

Table 7. Operational Vehicle Trips

Potential Tenant	Daily Trips for Staff	Daily Truck Trips	Total Daily Trips
Truck and Fleet Storage	27	23	50
Steel and Rebar Laydown Storage	18	2	20
Tree and Bark Companies	8	2	10
Gravel, Mulch, and Composting Storage	23	2	25
Trucking Companies	20	20	40
Gravel Crush Operation	--	15	15

6.2 HEALTH RISK ASSESSMENT METHODS

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the USEPA AERMOD (Version 11.2.0) air dispersion model. Specifically, the AERMOD model was used to estimate the concentration of DPM at sensitive receptor locations from potential sources of project-generated TACs. The estimated concentration of PM_{10} was used as a proxy to represent emissions of DPM. The use of the AERMOD model provides a refined methodology for estimating health impacts by utilizing long-term, measured representative meteorological data for the project site.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. Direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. Terrain elevations were obtained for the project site using the AERMAP model, which is the AERMOD terrain data pre-processor. The air dispersion model assessment used meteorological data recorded from the Nut Tree Airport, located in Vacaville. The meteorological data used was preprocessed for use with AERMOD and included data for the years 2017 to 2021; all years were used in the assessment.

After using AERMOD to determine the concentration of DPM at sensitive receptor locations, the associated health risks were calculated using the CARB's Hotspot Analysis Reporting Program Version 2 (HARP 2) Risk Assessment Standalone Tool (RAST), which calculates the cancer and non-cancer health impacts using the Office of Environmental Health Hazard Assessment's (OEHHA) Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015).

6.2.1 Construction HRA Assumptions

The PM_{10} exhaust emissions from construction were determined using the results of the CalEEMod modeling and based on the assumptions presented in Section 6.1.1. The Project site was modeled as an

area source with emissions uniformly distributed over the Project site. The concentration of PM_{10} was found at the maximally exposed individual resident (MEIR) and maximally exposed individual worker (MEIW). Health risks for the receptors were calculated based on an exposure duration of 4 months (0.3 years). Detailed parameters and complete calculations are contained in Appendix B.

6.2.2 Operational HRA Assumptions

The highest potential for exposure to TACs during long-term operations is from the use of heavy-duty diesel trucks, off-road equipment, and stationary generators that use diesel fuel. PM_{10} exhaust emissions from off-road equipment and stationary generators were determined from the CalEEMod modeling and based on the assumptions presented in Section 6.1.1. To calculate the concentration of PM_{10} exhaust from off-road equipment and generators, the Project site was modeled as an area source with emissions uniformly distributed across the site.

PM_{10} exhaust emissions from heavy-duty diesel trucks were calculated through EMFAC2021, see Section 6.1.1. The emissions from heavy-duty diesel truck running exhaust were applied in AERMOD as a line volume source along Weber Road, from the southeastern corner of the Project site to I-80. The emissions from truck idling were applied in AERMOD as an area source distributed over the Project site. The health risk associated with exposure to DPM from the operational sources of emissions was calculated over 15 years for the MEIR and the MEIW. Detailed parameters and complete calculations are contained in Appendix B.

6.3 ENERGY CALCULATION METHODS

Project energy demand during construction and operations was determined based on the modeling that was conducted for the Project using CalEEMod and using vehicle and equipment emission factors from the CARB's EMFAC2021 (v1.0.2) and EMFAC OFFROAD2021 (v1.0.4). The energy calculations are included as Appendix C.

7.0 AIR QUALITY IMPACT ANALYSIS

7.1 CEQA GUIDELINES

According to the CEQA Guidelines' Appendix G Environmental Checklist, the following questions are analyzed and evaluated to determine whether impacts related to air quality are considered to be significant environmental effects.

Where available, the significance criteria established by the applicable air quality management or air pollution district may be relied upon to make the following determinations.

Where the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

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

c) Expose sensitive receptors to substantial pollutant concentrations?

d) Result in other emissions (such as those leading to odors) affecting a substantial number of people?

7.1.1 Thresholds of Significance

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, the YSAQMD has adopted thresholds of significance for individual development projects, as presented in Table 8 (YSAQMD 2007).

Table 8. YSAQMD Significance Thresholds for Criteria Pollutants

Pollutant	Threshold of Significance
ROG	10 tons per year
NO_X	10 tons per year
PM_{10}	80 pounds per day

Source: YSAQMD 2007.

The thresholds apply to both construction and operational impacts. If the Lead Agency finds that a project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts.

7.2 AIR IMPACT ANALYSIS

Impact AIR-1 Conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis

Air districts are required to prepared air quality plans to identify strategies to bring regional emissions into compliance with federal and state air quality standards. Air districts establish emissions thresholds for individual projects to demonstrate the point at which a project would be considered to increase the air quality violations. A project would conflict with the applicable air quality plan if they exceeded any emissions thresholds for which the region is in nonattainment for.

As noted previously, the YSAQMD region is designated as nonattainment for the federal and state ozone standards, the state standard for PM_{10}, and the federal standard for $PM_{2.5}$ (YSAQMD 2022a). Accordingly, YSAQMD has prepared air quality plans, including the 2017 Ozone Plan and the Triennial Assessment and Plan Update, to achieve attainment of the applicable ozone and PM standards. The YSAQMD's

adopted thresholds of significance indicate the levels of emissions that projects may emit while the region still moves towards attainments of the CAAQS and NAAQS. Projects that exceed thresholds would be considered to conflict with the 2017 Ozone Plan.

As described under Impact AIR-2, the Project would not exceed the thresholds established by the YSAQMD. As a result, the Project would not conflict with or obstruct implementation of the applicable air quality plan.

Conclusion

The Project would not conflict with or obstruct implementation of the applicable air quality plan, and the impact is less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None are required.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact AIR-2	**Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?**

Impact Analysis

In developing thresholds of significance for air pollutants, the YSAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Construction Emissions

Construction emissions associated with the Project are shown in Table 9. As shown in the table, the emissions from construction would be below the applicable YSAQMD thresholds.

Table 9. Construction Criteria Pollutant Emissions

Year	ROG (tons per year)	NOx (tons per year)	PM_{10} (pounds per day)
2023	0.35	0.63	19.0
YSAQMD Thresholds	**10 tons per year**	**10 tons per year**	**80 pounds per day**
Exceed Thresholds?	No	No	No

Source: Appendix A.

Operational Emissions

Emissions during operation of the Project would be generated primarily from tenant and employee vehicle trips to and from the site, as well as from operations of off-road equipment. Operational emissions are presented in Table 10. As shown therein, the emissions would be below the applicable thresholds of significance.

Table 10. Operational Criteria Pollutant Emissions

Source	ROG (tons per year)	NOx (tons per year)	PM_{10} (pounds per day)
Mobile[1]	0.22	3.44	0.41
Area	0.05	0.00	0.00
Off-Road	0.22	2.12	0.78
Project Total	*0.49*	*5.56*	*1.19*
YSAQMD Thresholds	**10 tons per year**	**10 tons per year**	**80 pounds per day**
Exceed Thresholds?	No	No	No

Notes:

1. Mobile emissions were calculated using emission factors from EMFAC2021.

Source: Appendix A.

Conclusion

As shown in Table 9 and Table 10, criteria pollutant emissions would not exceed any threshold of significance during Project construction or operation. Therefore, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard, and the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None are required.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact AIR-3 Expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis

This discussion addresses whether the Project would expose sensitive receptors to construction-generated fugitive dust (PM_{10}), naturally occurring asbestos (NOA), construction-generated DPM, operational related TACs, or operational CO hotspots. According to CARB, some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest residential receptors to the Project site are the single-family residences located approximately 234 feet to the south, across Weber Road. The nearest worker receptors are at the brewery located approximately 1,000 feet to the southeast.

Construction Emissions

During construction associated with the Project, the potential exists for emissions of fugitive dust, NOA, and DPM to be released. Each TAC is discussed separately below.

Fugitive Dust

Fugitive dust (PM_{10}) would be generated from site grading and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the Project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from the Project site. However, YSAQMD Rule 2.11, Particulate Matter Concentration, limits the discharge of PM emissions. In addition, as demonstrated in Table 9, PM_{10} emissions from construction would not exceed the YSAQMD's threshold of significance.

Naturally Occurring Asbestos

Construction in areas of rock formations that contain NOA could release asbestos to the air and pose a health hazard. A review of the map with areas more likely to have rock formations containing NOA in

California indicates that there is no asbestos in the immediate Project area (USGS 2011). Therefore, construction of the Project would not expose sensitive receptors to NOA.

Diesel Particulate Matter (DPM)

Exposure to DPM from diesel vehicles and off-road construction equipment can result in health risks to nearby sensitive receptors. An HRA was prepared for the Project to assess potential health impacts to nearby receptors from DPM generated during Project construction.

Results of the analysis are presented in Table 11.

Table 11. Unmitigated Health Risk from Project Construction

Receptor	Cancer Risk Per Million	Chronic Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[2]
Residential[1]	0.73	0.003	0.01
Worker[1]	0.01	0.0007	0.003
YSAQMD Thresholds	**10.0**	**1.0**	**0.30**
Exceed Thresholds?	No	No	No

Notes:

[1] The exposure period for the MEIR and MEIW is assumed to include the entire construction period (0.3-year), starting with the third trimester phase of life.

[2] PM_{10} annual concentration used as a proxy.

Source: Attachment B

As shown in the table, construction of the Project would not expose residential receptors to a cancer risk, chronic inhalation hazard index, or concentration of PM that would exceed the applicable thresholds of significance. In addition, construction of the Project would not result in any impacts to worker receptors in excess of the YSAQMD's thresholds. Model input and output data used in the construction HRA are available in Attachment B.

Operational Emissions

The greatest potential for exposure to TACs during long-term operations is from the use of heavy-duty diesel trucks, off-road equipment, and stationary generators that use diesel fuel.

An HRA was prepared for the Project to assess potential health impacts to nearby receptors from DPM generated during Project operations. Results of the analysis are presented in Table 12. As shown in the table, TACs emitted during Project operations would not result in chronic inhalation hazard index or concentration of PM that would exceed the applicable thresholds of significance. In addition, the Project would not result in any impacts to worker receptors in excess of the YSAQMD's thresholds. However, operations of the Project could expose residential receptors to a cancer risk level that would exceed the YSAQMD threshold of significance. Therefore, Mitigation Measure AIR-1 is required.

Model input and output data used in the construction HRA are available in Attachment B.

Table 12. Unmitigated Health Risk from Project Operations

Receptor	Cancer Risk Per Million	Chronic Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[2]
Residential[1]	25.6	0.009	0.043
Worker	1.75	0.002	0.011
YSAQMD Thresholds	**10.0**	**1.0**	**0.30**
Exceed Thresholds?	Yes	No	No

Notes:

[1] The exposure period for the maximally exposed individual receptor is assumed to include the maximum project lifetime (15 years), starting with the third trimester phase of life.

[2] PM_{10} annual concentration used as a proxy.

Source: Attachment B

With implementation of Mitigation Measure AIR-1 and Mitigation Measure AIR-2, health risks would be reduced to the levels presented in Table 13. For the mitigated model run, the heavy-duty diesel truck trips were not changed from the original assumptions (see Table 7), but all off-road equipment engines were assumed to be Tier 4 and a 300 foot buffer on the southern boundary of the site was included for on-site diesel equipment (see Table 6 for unmitigated off-road equipment assumptions).

Table 13. Mitigated Health Risk from Project Operations

Receptor	Cancer Risk Per Million	Chronic Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)[2]
Residential[1] (Operation Only)	7.42	0.002	0.012
Residential (Construction + Operation)	8.15	-	-
YSAQMD Thresholds	**10.0**	**1.0**	**0.30**
Exceed Thresholds?	No	No	No

Notes:

[1] The exposure period for the maximally exposed individual receptor is assumed to include the maximum project lifetime (15 years), starting with the third trimester phase of life.

[2] PM_{10} annual concentration used as a proxy.

Source: Attachment B

Conclusion

Based on the analysis above, during operations, the Project could expose sensitive receptors to substantial pollutant concentrations and, therefore, the impact would be significant. However, implementation of Mitigation Measures AIR-1 and AIR-2 would reduce the impact to a less-than-significant level.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM AIR-1: **Minimize Exhaust Emissions During Operation.** Exhaust emissions shall be minimized during operational activities with the use of off-road equipment and generator engines that meet or exceed CARB's Tier 4 engine emissions standards for off-road equipment exceeding 50 horsepower (hp). At a minimum, all operational off-road equipment and generators over 50 hp shall be certified as compliant with the Tier 4 engine emissions standards as provided in CCR, Title 13, section 2423(b)(1)(B).

MM AIR-2: **Buffer for Operational Equipment.** A 300-foot buffer from the southern Project boundary along Weber Road shall be required. No diesel powered generators or other diesel powered off-road construction equipment shall be allowed to operate within this buffer area.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation.

Impact AIR-4 Result in other emissions (such as those leading to odors) affecting a substantial number of people?

Impact Analysis

While offensive odors rarely cause any physical harm, they can still be unpleasant, leading to distress among the public and often generating citizen complaints. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. The nearest receptors to the Project site include the single-family residences located to the south, across Weber Road.

Construction activities associated with the Project could result in short-term odorous emissions from diesel exhaust associated with diesel-fueled equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. Project construction would also be required to comply with all applicable YSAQMD rules and regulations, particularly associated with permitting of air pollutant sources. Compliance with the aforementioned regulations would help to minimize emissions, including emissions leading to odors.

The YSAQMD provides a list of common types of facilities that are known to generate odors, including, but not limited to, wastewater treatment facilities, chemical and fiberglass manufacturing, painting operations, agricultural operations, and asphalt plants. The Project does not include any land uses that are typically associated with emitting objectionable odors.

Finally, YSAQMD regulates objectionable odors through Rule 2.5, Nuisance, which dictates that emissions that cause nuisance or annoyance to the public are prohibited (YSAQMD 2010). Thus,

although not anticipated, if odor complaints are made after the Project is developed, the YSAQMD would ensure that such odors are addressed, and any potential odor effects are minimized or eliminated.

Conclusion

The Project would not result in other emissions, such as those leading to odors, affecting a substantial number of people. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

8.0 GREENHOUSE GAS IMPACT ANALYSIS

8.1 CEQA GUIDELINES

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on GHGs, the type, level, and impact of emissions generated by the project must be evaluated.

The following GHG significance thresholds are contained in Appendix G of the CEQA Guidelines:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

8.1.1 Thresholds of Significance

The YSAQMD has not established a threshold of significance for GHGs. According to the YSAQMD, if the lead agency has adopted a Climate Action Plan (CAP) or General Plan goals and policies that relate to the reduction of GHG emissions, then the environmental review should consider consistency with such documents. If the lead agency has not adopted a CAP or General Plan goals and policies related to GHGs, then YSAQMD recommends that lead agencies consider a project's total emissions in relation to

the AB 32 and AB 32 Scoping Plan goals, or the thresholds of significance established by other jurisdictions (YSAQMD 2022c).

The ECAS will also be utilized for tiering and streamlining future development within Vacaville, pursuant to CEQA Guideline Sections 15152 and 15183.5. It serves as the CEQA threshold of significance within the City for GHG emissions, by which all applicable developments within the City will be reviewed (City of Vacaville 2021). Therefore, Project significance will be based on consistency with the City's ECAS.

8.2 GHG IMPACT ANALYSIS

Impact GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Analysis

The following GHG emissions inventories are provided for informational purposes. Potential impacts related to GHG emissions resulting from implementation of the Project are considered in comparison with the City's ECAS below.

Construction Emission Inventory

Construction GHGs would be emitted by the off-road construction equipment and vehicle travel by workers and material deliveries to the Project site. The estimated construction GHG emissions are shown in Table 14.

Table 14. Construction Greenhouse Gas Emissions

Construction Year	Emissions ($MTCO_2e$ per year)
2023	206

Source: Appendix A.

Operational Emission Inventory

Operational, or long-term, emissions occur over the life of the Project. Operational activities of the Project would generate GHG emissions primarily from mobile sources. Operational GHG emissions are shown in Table 15.

Table 15. Operational Greenhouse Gas Emissions

Source	Emissions ($MTCO_2e$ per year)
Mobile[1]	1,351.65
Area	0.00
Energy	0.00

Source	Emissions ($MTCO_2e$ per year)
Water	0.34
Waste	0.00
Off-Road	393.00
Total	**1,744.99**

Notes:
1. Mobile emissions were calculated using emission factors from EMFAC2021.
Source: Appendix A.

Consistency with City of Vacaville ECAS

Consistency with the City's ECAS serves as the applicable threshold of significance for evaluating GHG emissions in Vacaville. The Project's consistency with the GHG reduction measures included in the ECAS is evaluated in **Error! Reference source not found.** below.

Table 16. Project Consistency with City of Vacaville ECAS

Measure	Consistency Determination
Transportation and Land Use	
T/LU-1. Continue Telecommuting	**Not Applicable.** Given the proposed land use, telecommuting is not a feasible option for the Project.
T/LU-2. Improve Capacity for Electric Vehicles	**Not Applicable.** This measure specifically calls for implementation of EV charging stations in all new multi-family, retail, and office development as well as City-managed parking lots. The Project does not include any of the foregoing land uses.
T/LU-3. Implement Transportation Demand Management for New Development	**Not Applicable.** The Project would result in a less-than-significant impact related to VMT because the project would generate fewer than 110 daily trips from employees. Given the limited number of anticipated employees and the less-than-significant VMT impact, implementation of a Transportation Demand Management Program to reduce employee VMT is not warranted, and the measure is not applicable to the Project.
T/LU-4. Implement Transportation Demand Management for Existing Development	**Not Applicable.** This measure is intended for existing development in the City.
T/LU-5. Improve Bus Electrification	**Not Applicable.** This measure is intended for implementation at the City level.
T/LU-6. Improve City Fleet	**Not Applicable.** This measure is intended for implementation at the City level.
T/LU-7. Increase Land Use Diversification	**Not Applicable.** This measure focuses on created mixed neighborhoods where parks, schools, and grocery stores are located within 0.25-mile of residences. This is not applicable to the proposed industrial Project.
T/LU-8. Transit Oriented Development	**Not Applicable.** This measure focuses on providing neighborhoods within 0.25-mile of high-quality transit stops. This is not applicable to the proposed industrial Project.
Energy	

Measure	Consistency Determination
E-1. Become an MCE Member Community	**Not Applicable.** Marin Clean Energy (MCE) is a local community choice energy provider that offers renewable energy options for customers while using PG&E infrastructure. The Project would not include construction of any permanent structures and is not anticipated to require electrical connections.
E-2. Require Energy Audits for Sales of Existing Residential Units	**Not Applicable.** The Project does not involve existing residential units.
E-3. Adopt an All-Electric New Construction Preferred Ordinance	**Not Applicable.** The measure is intended for implementation at the City level. Furthermore, the Project would not include any permanent structure that would be eligible for all-electric building requirements. However, the site is not expected to require any natural gas during construction or operation.
E-4. Develop an Existing Building Electrification Plan.	**Not Applicable.** The Project does not include existing buildings that would be eligible for electrification. The small structures that exist on the Project site does not include natural gas hook-ups.
Solid Waste	
S-1. Implement Organic Waste Reduction Requirements	**Not Applicable.** Given the proposed industrial/construction yard land use, the amount of organic waste generated at the Project site would be negligible.
Off-Road Equipment	
O-1. Increase Renewable and Alternative Fuel for Construction	**Not Applicable.** This measure is focused on achieving a 20 percent reduction in conventional fuel use in construction fleets by the year 2035. Project construction would be complete prior to 2035, and implementation of the Project would not impede the City's ability to achieve this goal.
Carbon Sequestration	
C-1. Plant Trees	**Consistent.** As required by Vacaville Municipal Code Section 14.09.200.070, Landscaping, the Project site perimeters, setback areas, parking areas, and stormwater treatment areas would be landscaped. Although Project-specific landscaping plans are not available at this time, the Project is anticipated to include planting trees.
C-2. Farm Carbon	**Not Applicable.** This measure calls for carbon farming and the application of compost on City-owned green spaces.

Source: City of Vacaville 2021.

Based on the above, many of the measures included in the ECAS are not applicable to the Project. However, the Project would be consistent with ECAS Measure C-1 and would not conflict with the overall implementation of the ECAS.

Conclusion

The Project would not generate GHG emissions that may have a significant impact on the environment, and the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis

The Project would involve the use of the Project site as an interim industrial and construction yard for use up to 15 years. The Project would not include any permanent structures.

A project would have a significant impact with respect to GHG emissions and global climate change if it would substantially conflict with the provisions of Section 15064.4(b) of the CEQA Guidelines. Pursuant to Appendix G of the CEQA Guidelines, a significant GHG impact is identified if the project could conflict with applicable GHG reduction plans, policies, or regulations. The Project would be subject to complying with the City's ECAS as well as SB 32 and AB 1279. SB 32 is a statewide reduction goal aimed at reducing emissions to 40 percent below 1990 levels by 2030 and AB 1279 is another reduction goal to meet carbon neutrality across the state by 2045. The CARB's 2022 Scoping Plan sets a framework for California to meet the reduction targets of SB 32 and AB 1279 (CARB 2022). Project consistency with the City's ECAS and the 2022 Scoping Plan is discussed below.

Consistency with City of Vacaville ECAS

Project consistency with the City of Vacaville ECAS was evaluated in detail under Impact GHG-1. As presented in Table 16, many of the measures included in the ECAS are not applicable to the Project. However, the Project would comply with all applicable ECAS measures.

Consistency with 2022 Scoping Plan

CARB approved the 2022 Scoping Plan in December 2022. The 2022 Scoping Plan builds upon previous iterations of state scoping plans to achieve carbon neutrality and reduce anthropogenic GHG emissions below 85 percent below 1990 no later than 2045, as directed by AB 1279. Table 17 identifies the Scoping Plan policies that are applicable to the proposed Project.

Table 17. Project Consistency with 2022 Scoping Plan Greenhouse Gas Reduction Strategies

Measure	Consistency Determination
Deploy ZEVs and reduce driving demand	**Consistent.** The Project would not deploy ZEVs. However, the Project would result in a less-than-significant impact related to VMT and would be generally consistent with the goal to reduce driving demand.

Measure	Consistency Determination
Coordinate supply of liquid fossil fuels with declining CA fuel demand	**Not Applicable.** This measure is aimed at petroleum refineries and fossil fuel extraction operations. The Project would not interfere with this goal.
Generate clean electricity	**Not Applicable.** The Project would not include any permanent structures and is not anticipated to consume electricity during construction or operations. Thus, implementation of the Project would not increase regional electrical demand and would not interfere with this goal.
Decarbonize Buildings	**Not Applicable.** The Project would not include any permanent buildings.
Decarbonize Industrial Energy Supply	**Consistent.** The Project would not include any natural gas use. In addition, consistent with Mitigation Measure AIR-1, the Project would be required to use Tier 4 off-road equipment during operations. Implementation of Mitigation Measure AIR-1 would result in a reduction in GHG emissions associated with fuel consumption and would contribute to decarbonizing industrial energy supply.
Reduce non-combustion emissions (Methane)	**Consistent.** The Project would not include any land uses that generate significant levels of methane, such as landfills or dairy farms.
Reduce non-combustion emissions (Hydrofluorocarbons [HFCs])	**Consistent.** The Project will comply with all state regulations governing SLCPs, including HFCs.
Compensate for remaining emissions	**Not Applicable.** This measure is aimed at the state government to reduce statewide emissions to meet AB 1279 goals for the year 2045. The Project would only operate for 15 years and, therefore, would no longer be in operation by 2045.

Source: CARB 2022.

This analysis finds the Project would be consistent with the applicable strategies recommended in the 2022 Scoping Plan Update.

Conclusion

The Project would not conflict with an applicable plan adopted for the purpose of reducing GHG emissions; therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

9.0 ENERGY IMPACT ANALYSIS

9.1 CEQA GUIDELINES

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine whether a project would have a significant impact on energy the following must be evaluated.

Would the project:

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

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

9.2 ENERGY IMPACT ANALYSIS

Impact ENR-1 Result in potential significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis

The energy requirements for the Project were determined using the construction and operational estimates generated from the calculation worksheets for energy consumption (Appendix C). This impact addresses the energy consumption from both construction and operations, discussed separately below.

Construction Energy Demand

During construction of the Project, energy resources would be consumed in the form of diesel and gasoline fuel from the use of off-road equipment (i.e., tractors, excavators, cranes) and on-road vehicles (i.e., construction employee commutes, haul trucks). Construction is not anticipated to require electricity or natural gas. Construction was assumed to occur over an approximately four-month period, starting in September 2023 and ending in December 2023.

Off-Road Equipment

Construction activities associated with the Project include erosion control, earthwork, lime treating, applying aggregate base, installing site utilities, and asphalt paving. Off-road construction equipment was estimated to consume 4,607 gallons of diesel fuel.

On-Road Vehicles

On-road vehicles for construction workers, vendors, and haulers would require fuel for travel to and from the site during construction. Table 18 provides an estimate of the total on-road vehicle fuel usage during construction.

Table 18. Construction On-Road Vehicle Fuel Consumption

Project Component	Average Fuel Economy (miles/gallon)	Total Fuel Consumption (gallons)
Worker Trips	25.84	323
Vendor Trips	8.34	145
Haul Trips	6.01	14,050
Total Construction On-Road Trips		**14,518**

Notes:
Calculations use unrounded numbers; totals may not appear to sum exactly due to rounding.
VMT = vehicle miles traveled
Source: Appendix C.

As shown above, construction of the Project was estimated to consume 14,518 gallons of fuel from on-road vehicles.

Conclusion

Overall, construction activities associated with the proposed Project would result in the consumption of petroleum-based fuels. However, there are no unusual Project characteristics that would necessitate the use of construction equipment or vehicles that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Operational Energy Demand

As noted previously, the Project would not involve construction of any permanent habitable structures or restroom facilities. In addition, Project operations would not involve nighttime activities, and lighting fixtures would not be installed on-site. Therefore, energy demand during Project operations would be limited to fueling the off-road equipment used on-site, and fueling the vehicles travelling to and from the site.

Off-Road Equipment

During Project operations, tenants are anticipated to use off-road equipment on the Project site. Off-road equipment could include, but is not limited to, generator sets, forklifts, cranes, excavators, and loaders (see Table 6). In addition, it is expected future tenants would provide on-site diesel generators or self-

contained office trailers with generators to provide electricity to the site. The use of off-road equipment was estimated to consume 34,629 gallons of diesel fuel per year.

Transportation Energy

During normal operations, Project staff would travel to and from the Project site. In addition, potential tenants may include trucking companies/truck fleet storage. In this case, employees would arrive to the Project site in the morning, leave their personal car, and take their route truck, which would be returned to the site at the end of the day. Table 19 provides an estimate of the annual fuel consumed by vehicles traveling to and from the Project site. These estimates were derived using the same assumptions used in the operational criteria pollutant and GHG analysis for the Project.

Table 19. Operational Vehicle Fuel Consumption

Trip Type	Vehicle Type	Percent of Vehicle Trips	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
Employee Trips	Passenger Cars (LDA)	46.6	29.61	3,928
	Light Trucks and Medium Duty Vehicles (LDT1, LDT2, MDV)	38.6	22.47	4,281
	Light-Heavy to Heavy-Heavy Diesel Trucks (LHD1, LHD2, MHDT, HHDT)	14.1	8.38	4,187
	Motorcycles (MCY)	0.5	40.36	28
	Other (OBUS, UBUS, SBUS, MH)	0.3	5.97	142
	Employee Trip Subtotal	--	--	*12,566*
Heavy-Duty Truck Trips	Heavy-Heavy Diesel Trucks (HHDT)	--	6.10	54,549
Total		**--**	**--**	**67,115**

As shown in the table, annual vehicular fuel consumption is estimated to be 67,115 gallons of a combination of gasoline and diesel fuel. The Project would not result in vehicle use that is any more inefficient, wasteful, or unnecessary than other vehicle uses in the region.

Conclusion

Based on the analysis above, the Project would not result in a potential significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources; therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact ENR-2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis

The Project is not anticipated to require electricity or natural gas. The primary sources of energy demand during Project operations would be associated with (1) the use of off-road equipment and (2) transportation energy associated with both employee commutes and heavy-duty truck use. With implementation of Mitigation Measure AIR-1, all off-road equipment would be equipped with Tier 4 engines and, thus, would exceed the fuel efficiency requirements established by the CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation. Consistent with SB 743, the Project would result in a less-than-significant impact related to VMT. The Project would also comply with all federal and state regulations governing vehicle fuel efficiency, including the NHTSA's CAFE standards and the SAFE Vehicles Rule. Furthermore, heavy trucks idling would be limited to a maximum of five minutes, consistent with California's Commercial Vehicle Idling Regulation.

Conclusion

The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

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APPENDIX A

CALEEMOD MODELING RESULTS AND VEHICLE EMISSIONS CALCULATIONS

Weber Road Industrial and Construction Yard Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Weber Road Industrial and Construction Yard
Construction Start Date	9/1/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	34.8
Location	38.40712197373236, -121.90781232181737
County	Solano-Sacramento
City	Unincorporated
Air District	Yolo/Solano AQMD
Air Basin	Sacramento Valley
TAZ	837
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.14

1.2. Land Use Types

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

Other Asphalt Surfaces	41.0	Acre	41.0	0.00	175,111	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.26	1.89	18.5	16.3	0.03	0.86	18.2	19.0	0.79	4.25	5.04	—	3,292	3,292	0.11	0.16	2.23	3,344
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.25	108	22.3	16.2	0.10	0.86	18.2	19.0	0.79	4.25	5.04	—	14,535	14,535	0.15	2.19	0.72	15,191
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.33	1.93	3.44	2.48	0.01	0.13	3.03	3.16	0.12	0.58	0.70	—	1,200	1,200	0.02	0.14	0.76	1,242
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.35	0.63	0.45	< 0.005	0.02	0.55	0.58	0.02	0.11	0.13	—	199	199	< 0.005	0.02	0.13	206

2.2. Construction Emissions by Year, Unmitigated

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

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

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.26	1.89	18.5	16.3	0.03	0.86	18.2	19.0	0.79	4.25	5.04	—	3,292	3,292	0.11	0.16	2.23	3,344
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.25	108	22.3	16.2	0.10	0.86	18.2	19.0	0.79	4.25	5.04	—	14,535	14,535	0.15	2.19	0.72	15,191
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.33	1.93	3.44	2.48	0.01	0.13	3.03	3.16	0.12	0.58	0.70	—	1,200	1,200	0.02	0.14	0.76	1,242
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	0.35	0.63	0.45	< 0.005	0.02	0.55	0.58	0.02	0.11	0.13	—	199	199	< 0.005	0.02	0.13	206

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.63	2.47	21.0	25.0	0.04	0.78	0.00	0.78	0.72	0.00	0.72	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.63	2.47	21.0	25.0	0.04	0.78	0.00	0.78	0.72	0.00	0.72	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45	1.48	11.6	13.3	0.02	0.43	0.00	0.43	0.40	0.00	0.40	0.00	2,370	2,370	0.10	0.02	0.00	2,378
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	0.27	2.12	2.43	< 0.005	0.08	0.00	0.08	0.07	0.00	0.07	0.00	392	392	0.02	< 0.005	0.00	394

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.28	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	2.63	2.19	21.0	25.0	0.04	0.78	—	0.78	0.72	—	0.72	—	4,270	4,270	0.17	0.03	—	4,285
Total	2.63	2.47	21.0	25.0	0.04	0.78	0.00	0.78	0.72	0.00	0.72	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	2.63	2.19	21.0	25.0	0.04	0.78	—	0.78	0.72	—	0.72	—	4,270	4,270	0.17	0.03	—	4,285
Total	2.63	2.47	21.0	25.0	0.04	0.78	0.00	0.78	0.72	0.00	0.72	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.28	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08

Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	1.45	1.21	11.6	13.3	0.02	0.43	—	0.43	0.40	—	0.40	—	2,368	2,368	0.10	0.02	—	2,376
Total	1.45	1.48	11.6	13.3	0.02	0.43	0.00	0.43	0.40	0.00	0.40	0.00	2,370	2,370	0.10	0.02	0.00	2,378
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.05	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.34
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	0.26	0.22	2.12	2.43	< 0.005	0.08	—	0.08	0.07	—	0.07	—	392	392	0.02	< 0.005	—	393
Total	0.26	0.27	2.12	2.43	< 0.005	0.08	0.00	0.08	0.07	0.00	0.07	0.00	392	392	0.02	< 0.005	0.00	394

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.64	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.39	2.39	< 0.005	< 0.005	—	2.39
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	23.4	23.4	< 0.005	< 0.005	0.10	23.8
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	0.07	29.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	13.5	11.8	0.02	0.59	—	0.59	0.55	—	0.55	—	2,435	2,435	0.10	0.02	—	2,443
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.37	0.32	< 0.005	0.02	—	0.02	0.01	—	0.01	—	66.7	66.7	< 0.005	< 0.005	—	66.9
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.1
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.77	1.77	< 0.005	< 0.005	< 0.005	1.80
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	17.4	15.4	0.02	0.85	—	0.85	0.78	—	0.78	—	2,322	2,322	0.09	0.02	—	2,330
Dust From Material Movement	—	—	—	—	—	—	6.67	6.67	—	3.05	3.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.2	31.2	< 0.005	< 0.005	0.06	32.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	17.4	15.4	0.02	0.85	—	0.85	0.78	—	0.78	—	2,322	2,322	0.09	0.02	—	2,330

Dust From Material Movement	—	—	—	—	—	—	6.67	6.67	—	3.05	3.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.72	1.52	< 0.005	0.08	—	0.08	0.08	—	0.08	—	229	229	0.01	< 0.005	—	230
Dust From Material Movement	—	—	—	—	—	—	0.66	0.66	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.10	1.10	< 0.005	0.11	0.11	—	3.08	3.08	< 0.005	< 0.005	< 0.005	3.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.28	< 0.005	0.02	—	0.02	0.01	—	0.01	—	37.9	37.9	< 0.005	< 0.005	—	38.1
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	—	0.51	0.51	< 0.005	< 0.005	< 0.005	0.53
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.59	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	112	112	0.01	< 0.005	0.49	114
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	0.07	29.6
Hauling	0.03	0.02	0.96	0.22	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	798	798	0.01	0.13	1.61	837
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.05	0.05	0.49	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.01	103
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.03	0.01	1.03	0.23	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	798	798	0.01	0.13	0.04	836
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.02	10.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.92
Hauling	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.7	78.7	< 0.005	0.01	0.07	82.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.72
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.01	13.7

3.7. Paving (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.36	4.35	0.01	0.17	—	0.17	0.16	—	0.16	—	654	654	0.03	0.01	—	656
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	107	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.79	1.79	< 0.005	< 0.005	—	1.80
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.30	0.30	< 0.005	< 0.005	—	0.30
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.02	0.01	0.64	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	500	500	< 0.005	0.08	0.03	524

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.18
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.44
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.24

3.9. Trenching (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.61	5.06	0.01	0.24	—	0.24	0.22	—	0.22	—	781	781	0.03	0.01	—	783
Dust From Material Movement	—	—	—	—	—	—	0.55	0.55	—	0.06	0.06	—	—	—	—	—	—	—
Architectural Coatings	—	24.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.8	42.8	< 0.005	< 0.005	—	42.9
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Architectural Coatings	—	1.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.61	0.61	< 0.005	0.06	0.06	—	1.71	1.71	< 0.005	< 0.005	< 0.005	1.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.11
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Architectural Coatings	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.30
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.45	0.24	17.6	3.90	0.09	0.25	3.53	3.79	0.25	0.97	1.22	—	13,631	13,631	0.12	2.17	0.71	14,281

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.55	3.55	< 0.005	< 0.005	0.01	3.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.62
Hauling	0.03	0.01	0.94	0.21	< 0.005	0.01	0.19	0.20	0.01	0.05	0.07	—	747	747	0.01	0.12	0.65	783
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	< 0.005	< 0.005	0.17	0.04	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	124	124	< 0.005	0.02	0.11	130

3.11. Trenching (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.09	2.75	< 0.005	0.09	—	0.09	0.08	—	0.08	—	408	408	0.02	< 0.005	—	410
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.24	2.24	< 0.005	< 0.005	—	2.24
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.18
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.37	0.37	< 0.005	< 0.005	—	0.37
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.28	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.05	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.34
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.34

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

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

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

Generato Sets	1.12	0.92	8.42	8.90	0.02	0.25	—	0.25	0.23	—	0.23	—	1,335	1,335	0.05	0.01	—	1,340
Forklifts	0.10	0.08	0.80	1.05	< 0.005	0.05	—	0.05	0.04	—	0.04	—	152	152	0.01	< 0.005	—	153
Tractors/ Loaders/ Backhoe s	0.56	0.47	4.81	7.66	0.01	0.21	—	0.21	0.20	—	0.20	—	1,162	1,162	0.05	0.01	—	1,166
Excavato rs	0.24	0.20	1.69	2.03	< 0.005	0.06	—	0.06	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Other Material Handling Equipment	0.14	0.12	1.30	2.25	< 0.005	0.05	—	0.05	0.04	—	0.04	—	347	347	0.01	< 0.005	—	348
Cranes	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994
Total	2.63	2.19	21.0	25.0	0.04	0.78	—	0.78	0.72	—	0.72	—	4,270	4,270	0.17	0.03	—	4,285
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Generato r Sets	1.12	0.92	8.42	8.90	0.02	0.25	—	0.25	0.23	—	0.23	—	1,335	1,335	0.05	0.01	—	1,340
Forklifts	0.10	0.08	0.80	1.05	< 0.005	0.05	—	0.05	0.04	—	0.04	—	152	152	0.01	< 0.005	—	153
Tractors/ Loaders/ Backhoe s	0.56	0.47	4.81	7.66	0.01	0.21	—	0.21	0.20	—	0.20	—	1,162	1,162	0.05	0.01	—	1,166
Excavato rs	0.24	0.20	1.69	2.03	< 0.005	0.06	—	0.06	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Other Material Handling Equipment	0.14	0.12	1.30	2.25	< 0.005	0.05	—	0.05	0.04	—	0.04	—	347	347	0.01	< 0.005	—	348
Cranes	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994
Total	2.63	2.19	21.0	25.0	0.04	0.78	—	0.78	0.72	—	0.72	—	4,270	4,270	0.17	0.03	—	4,285
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Generator Sets	0.12	0.10	0.88	0.93	< 0.005	0.03	—	0.03	0.02	—	0.02	—	126	126	0.01	< 0.005	—	126
Forklifts	0.01	0.01	0.10	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	18.0	18.0	< 0.005	< 0.005	—	18.0
Tractors/ Loaders/ Backhoes	0.05	0.04	0.45	0.71	< 0.005	0.02	—	0.02	0.02	—	0.02	—	98.0	98.0	< 0.005	< 0.005	—	98.4
Excavators	0.01	0.01	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.4
Other Material Handling Equipment	0.01	0.01	0.08	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.9	18.9	< 0.005	< 0.005	—	18.9
Cranes	0.06	0.05	0.52	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	117	117	< 0.005	< 0.005	—	117
Total	0.26	0.22	2.12	2.43	< 0.005	0.08	—	0.08	0.07	—	0.07	—	392	392	0.02	< 0.005	—	393

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Erosion Control	Site Preparation	9/1/2023	9/8/2023	5.00	6.00	—
Lime Treat Subgrade	Site Preparation	10/31/2023	11/13/2023	5.00	10.0	—
Earthwork	Grading	9/11/2023	10/30/2023	5.00	36.0	—
Asphalt Paving	Paving	12/18/2023	12/18/2023	5.00	1.00	—
Aggregate Base	Trenching	11/16/2023	12/13/2023	5.00	20.0	—
Site Utilities	Trenching	11/14/2023	11/15/2023	5.00	2.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Erosion Control	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	84.0	0.37
Lime Treat Subgrade	Plate Compactors	Diesel	Average	1.00	7.00	367	0.40
Lime Treat Subgrade	Cement and Mortar Mixers	Diesel	Average	1.00	7.00	84.0	0.37
Lime Treat Subgrade	Surfacing Equipment	Diesel	Average	1.00	7.00	399	0.30
Earthwork	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Earthwork	Plate Compactors	Diesel	Average	1.00	7.00	36.0	0.38
Earthwork	Graders	Diesel	Average	2.00	7.00	148	0.41
Asphalt Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Asphalt Paving	Plate Compactors	Diesel	Average	1.00	7.00	36.0	0.38
Asphalt Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Aggregate Base	Graders	Diesel	Average	1.00	7.00	148	0.41
Aggregate Base	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Aggregate Base	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43

Site Utilities	Excavators	Diesel	Average	1.00	7.00	36.0	0.38
Site Utilities	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43
Site Utilities	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Erosion Control	—	—	—	—
Erosion Control	Worker	2.50	11.7	LDA,LDT1,LDT2
Erosion Control	Vendor	1.00	8.40	HHDT,MHDT
Erosion Control	Hauling	0.00	20.0	HHDT
Erosion Control	Onsite truck	0.00	—	HHDT
Earthwork	—	—	—	—
Earthwork	Worker	12.0	11.7	LDA,LDT1,LDT2
Earthwork	Vendor	1.00	8.40	HHDT,MHDT
Earthwork	Hauling	11.2	20.0	HHDT
Earthwork	Onsite truck	1.00	8.40	HHDT
Lime Treat Subgrade	—	—	—	—
Lime Treat Subgrade	Worker	7.50	11.7	LDA,LDT1,LDT2
Lime Treat Subgrade	Vendor	1.00	8.40	HHDT,MHDT
Lime Treat Subgrade	Hauling	0.00	20.0	HHDT
Lime Treat Subgrade	Onsite truck	1.00	8.40	HHDT
Site Utilities	—	—	—	—
Site Utilities	Worker	7.50	11.7	LDA,LDT1,LDT2
Site Utilities	Vendor	1.00	8.40	HHDT,MHDT
Site Utilities	Hauling	0.00	20.0	HHDT

Site Utilities	Onsite truck	1.00	8.40	HHDT
Asphalt Paving	—	—	—	—
Asphalt Paving	Worker	7.50	11.7	LDA,LDT1,LDT2
Asphalt Paving	Vendor	1.00	8.40	HHDT,MHDT
Asphalt Paving	Hauling	7.00	20.0	HHDT
Asphalt Paving	Onsite truck	1.00	8.40	HHDT
Aggregate Base	—	—	—	—
Aggregate Base	Worker	7.50	11.7	LDA,LDT1,LDT2
Aggregate Base	Vendor	1.00	8.40	HHDT,MHDT
Aggregate Base	Hauling	191	20.0	HHDT
Aggregate Base	Onsite truck	1.00	8.40	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Aggregate Base	0.00	0.00	0.00	0.00	107,158

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Earthwork	—	3,216	63.0	0.00	—
Asphalt Paving	50.0	—	1.00	0.00	41.0

Aggregate Base	30,500	—	8.75	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	41.0	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	107,158

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	2,282,754

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Generator Sets	Diesel	Average	6.00	8.00	30.0	0.74
Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Other Material Handling Equipment	Diesel	Average	1.00	8.00	93.0	0.40
Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Crushing/Proc. Equipment	Diesel	Average	1.00	8.00	12.0	0.85
Cranes	Diesel	Average	1.00	8.00	367	0.29

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.5	annual days of extreme heat
Extreme Precipitation	6.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	37.6
AQ-PM	12.7
AQ-DPM	31.5

Drinking Water	37.5
Lead Risk Housing	9.17
Pesticides	80.8
Toxic Releases	42.7
Traffic	50.5
Effect Indicators	—
CleanUp Sites	86.8
Groundwater	87.8
Haz Waste Facilities/Generators	93.6
Impaired Water Bodies	43.8
Solid Waste	77.6
Sensitive Population	—
Asthma	86.8
Cardio-vascular	67.5
Low Birth Weights	20.9
Socioeconomic Factor Indicators	—
Education	46.2
Housing	17.9
Linguistic	25.6
Poverty	10.9
Unemployment	48.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	94.26408315

Employed	49.30065443
Median HI	79.84088284
Education	—
Bachelor's or higher	45.52803798
High school enrollment	100
Preschool enrollment	37.79032465
Transportation	—
Auto Access	93.63531374
Active commuting	3.772616451
Social	—
2-parent households	88.50250225
Voting	54.13832927
Neighborhood	—
Alcohol availability	81.95816759
Park access	4.619530348
Retail density	10.04747851
Supermarket access	9.790837931
Tree canopy	17.28474272
Housing	—
Homeownership	66.77787758
Housing habitability	86.03875273
Low-inc homeowner severe housing cost burden	84.11394842
Low-inc renter severe housing cost burden	87.5914282
Uncrowded housing	56.30694213
Health Outcomes	—
Insured adults	83.11305017
Arthritis	60.6

Asthma ER Admissions	18.3
High Blood Pressure	76.3
Cancer (excluding skin)	45.0
Asthma	55.1
Coronary Heart Disease	81.5
Chronic Obstructive Pulmonary Disease	76.7
Diagnosed Diabetes	82.1
Life Expectancy at Birth	50.8
Cognitively Disabled	24.2
Physically Disabled	37.2
Heart Attack ER Admissions	32.3
Mental Health Not Good	64.8
Chronic Kidney Disease	79.8
Obesity	59.2
Pedestrian Injuries	19.6
Physical Health Not Good	79.7
Stroke	84.7
Health Risk Behaviors	—
Binge Drinking	8.9
Current Smoker	56.8
No Leisure Time for Physical Activity	74.2
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	48.8
Elderly	37.4
English Speaking	87.9

Foreign-born	26.8
Outdoor Workers	23.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	91.2
Traffic Density	51.7
Traffic Access	23.0
Other Indices	—
Hardship	32.8
Other Decision Support	—
2016 Voting	69.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	56.0
Healthy Places Index Score for Project Location (b)	70.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction phase information provided by applicant.
Construction: Off-Road Equipment	Construction equipment provided by applicant.
Construction: Dust From Material Movement	Net cut of approximately 3,216 CY of soil would be used to balance the site during grading. Site would be covered in 30,500 CY aggregate base, and 50 CY of asphalt concrete for the driveway.
Operations: Vehicle Data	All vehicle emissions calculated off-model.
Construction: On-Road Fugitive Dust	All access roads to the project site are paved. On-site is not paved.
Construction: Trips and VMT	During grading, worker trips set to 12 trips per day to reflect peak.
Operations: Off-Road Equipment	Operational equipment based on six most emissions intensive tenant options. See assumptions table.

Weber Road Industrial and Construction Yard - Mitigated Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Weber Road Industrial and Construction Yard - Mitigated
Construction Start Date	9/1/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	34.8
Location	38.40712197373236, -121.90781232181737
County	Solano-Sacramento
City	Unincorporated
Air District	Yolo/Solano AQMD
Air Basin	Sacramento Valley
TAZ	837
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.14

1.2. Land Use Types

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

Other Asphalt Surfaces	41.0	Acre	41.0	0.00	175,111	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.26	1.89	18.5	16.3	0.03	0.86	18.2	19.0	0.79	4.25	5.04	—	3,292	3,292	0.11	0.16	2.23	3,344
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.25	108	22.3	16.2	0.10	0.86	18.2	19.0	0.79	4.25	5.04	—	14,535	14,535	0.15	2.19	0.72	15,191
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.33	1.93	3.44	2.48	0.01	0.13	3.03	3.16	0.12	0.58	0.70	—	1,200	1,200	0.02	0.14	0.76	1,242
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.35	0.63	0.45	< 0.005	0.02	0.55	0.58	0.02	0.11	0.13	—	199	199	< 0.005	0.02	0.13	206

2.2. Construction Emissions by Year, Unmitigated

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

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

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.26	1.89	18.5	16.3	0.03	0.86	18.2	19.0	0.79	4.25	5.04	—	3,292	3,292	0.11	0.16	2.23	3,344
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.25	108	22.3	16.2	0.10	0.86	18.2	19.0	0.79	4.25	5.04	—	14,535	14,535	0.15	2.19	0.72	15,191
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.33	1.93	3.44	2.48	0.01	0.13	3.03	3.16	0.12	0.58	0.70	—	1,200	1,200	0.02	0.14	0.76	1,242
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	0.35	0.63	0.45	< 0.005	0.02	0.55	0.58	0.02	0.11	0.13	—	199	199	< 0.005	0.02	0.13	206

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.61	1.65	11.4	27.4	0.04	0.36	0.00	0.36	0.34	0.00	0.34	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.61	1.65	11.4	27.4	0.04	0.36	0.00	0.36	0.34	0.00	0.34	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.85	1.01	6.06	14.9	0.02	0.19	0.00	0.19	0.18	0.00	0.18	0.00	2,370	2,370	0.10	0.02	0.00	2,378
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.16	0.18	1.11	2.71	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	0.00	392	392	0.02	< 0.005	0.00	394

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.28	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	1.61	1.37	11.4	27.4	0.04	0.36	—	0.36	0.34	—	0.34	—	4,270	4,270	0.17	0.03	—	4,285
Total	1.61	1.65	11.4	27.4	0.04	0.36	0.00	0.36	0.34	0.00	0.34	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	1.61	1.37	11.4	27.4	0.04	0.36	—	0.36	0.34	—	0.34	—	4,270	4,270	0.17	0.03	—	4,285
Total	1.61	1.65	11.4	27.4	0.04	0.36	0.00	0.36	0.34	0.00	0.34	0.00	4,272	4,272	0.17	0.03	0.00	4,287
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.28	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08

Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	0.85	0.73	6.06	14.9	0.02	0.19	—	0.19	0.18	—	0.18	—	2,368	2,368	0.10	0.02	—	2,376
Total	0.85	1.01	6.06	14.9	0.02	0.19	0.00	0.19	0.18	0.00	0.18	0.00	2,370	2,370	0.10	0.02	0.00	2,378
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.05	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.34
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Off-Road	0.16	0.13	1.11	2.71	< 0.005	0.03	—	0.03	0.03	—	0.03	—	392	392	0.02	< 0.005	—	393
Total	0.16	0.18	1.11	2.71	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	0.00	392	392	0.02	< 0.005	0.00	394

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.64	0.96	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.39	2.39	< 0.005	< 0.005	—	2.39
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	23.4	23.4	< 0.005	< 0.005	0.10	23.8
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	0.07	29.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	13.5	11.8	0.02	0.59	—	0.59	0.55	—	0.55	—	2,435	2,435	0.10	0.02	—	2,443
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.37	0.32	< 0.005	0.02	—	0.02	0.01	—	0.01	—	66.7	66.7	< 0.005	< 0.005	—	66.9
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.1
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.77	1.77	< 0.005	< 0.005	< 0.005	1.80
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.13
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	17.4	15.4	0.02	0.85	—	0.85	0.78	—	0.78	—	2,322	2,322	0.09	0.02	—	2,330
Dust From Material Movement	—	—	—	—	—	—	6.67	6.67	—	3.05	3.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.2	31.2	< 0.005	< 0.005	0.06	32.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.17	1.82	17.4	15.4	0.02	0.85	—	0.85	0.78	—	0.78	—	2,322	2,322	0.09	0.02	—	2,330

Dust From Material Movement	—	—	—	—	—	—	6.67	6.67	—	3.05	3.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.72	1.52	< 0.005	0.08	—	0.08	0.08	—	0.08	—	229	229	0.01	< 0.005	—	230
Dust From Material Movement	—	—	—	—	—	—	0.66	0.66	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.10	1.10	< 0.005	0.11	0.11	—	3.08	3.08	< 0.005	< 0.005	< 0.005	3.23
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.28	< 0.005	0.02	—	0.02	0.01	—	0.01	—	37.9	37.9	< 0.005	< 0.005	—	38.1
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	—	0.51	0.51	< 0.005	< 0.005	< 0.005	0.53
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.59	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	112	112	0.01	< 0.005	0.49	114
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	0.07	29.6
Hauling	0.03	0.02	0.96	0.22	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	798	798	0.01	0.13	1.61	837
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.05	0.05	0.49	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	< 0.005	< 0.005	0.01	103
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.03	0.01	1.03	0.23	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	798	798	0.01	0.13	0.04	836
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.02	10.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.92
Hauling	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.7	78.7	< 0.005	0.01	0.07	82.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.72
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.01	13.7

3.7. Paving (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.36	4.35	0.01	0.17	—	0.17	0.16	—	0.16	—	654	654	0.03	0.01	—	656
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	107	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.79	1.79	< 0.005	< 0.005	—	1.80
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.30	0.30	< 0.005	< 0.005	—	0.30
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.02	0.01	0.64	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	500	500	< 0.005	0.08	0.03	524

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.18
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.44
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.24

3.9. Trenching (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.61	5.06	0.01	0.24	—	0.24	0.22	—	0.22	—	781	781	0.03	0.01	—	783
Dust From Material Movement	—	—	—	—	—	—	0.55	0.55	—	0.06	0.06	—	—	—	—	—	—	—
Architectural Coatings	—	24.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.8	42.8	< 0.005	< 0.005	—	42.9
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Architectural Coatings	—	1.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.61	0.61	< 0.005	0.06	0.06	—	1.71	1.71	< 0.005	< 0.005	< 0.005	1.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.08	7.08	< 0.005	< 0.005	—	7.11
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Architectural Coatings	—	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.30
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.45	0.24	17.6	3.90	0.09	0.25	3.53	3.79	0.25	0.97	1.22	—	13,631	13,631	0.12	2.17	0.71	14,281

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.55	3.55	< 0.005	< 0.005	0.01	3.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.62
Hauling	0.03	0.01	0.94	0.21	< 0.005	0.01	0.19	0.20	0.01	0.05	0.07	—	747	747	0.01	0.12	0.65	783
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	< 0.005	< 0.005	0.17	0.04	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	124	124	< 0.005	0.02	0.11	130

3.11. Trenching (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.23	2.09	2.75	< 0.005	0.09	—	0.09	0.08	—	0.08	—	408	408	0.02	< 0.005	—	410
Onsite truck	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	11.2	11.2	< 0.005	1.12	1.12	—	31.3	31.3	< 0.005	< 0.005	< 0.005	32.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.24	2.24	< 0.005	< 0.005	—	2.24
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.18
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.37	0.37	< 0.005	< 0.005	—	0.37
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.5	63.5	< 0.005	< 0.005	0.01	64.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.4	28.4	< 0.005	< 0.005	< 0.005	29.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.28	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.05	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	2.06	2.06	< 0.005	< 0.005	—	2.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.34
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.34	0.34	< 0.005	< 0.005	—	0.34

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

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

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

Generato Sets	1.12	0.92	8.42	8.90	0.02	0.25	—	0.25	0.23	—	0.23	—	1,335	1,335	0.05	0.01	—	1,340
Forklifts	0.01	0.01	0.08	1.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	152	152	0.01	< 0.005	—	153
Tractors/ Loaders/ Backhoe s	0.11	0.11	0.57	8.11	0.01	0.02	—	0.02	0.02	—	0.02	—	1,162	1,162	0.05	0.01	—	1,166
Excavato rs	0.24	0.20	1.69	2.03	< 0.005	0.06	—	0.06	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Other Material Handling Equipment	0.03	0.03	0.17	2.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	347	347	0.01	< 0.005	—	348
Cranes	0.09	0.09	0.49	4.88	0.01	0.02	—	0.02	0.02	—	0.02	—	990	990	0.04	0.01	—	994
Total	1.61	1.37	11.4	27.4	0.04	0.36	—	0.36	0.34	—	0.34	—	4,270	4,270	0.17	0.03	—	4,285
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Generato r Sets	1.12	0.92	8.42	8.90	0.02	0.25	—	0.25	0.23	—	0.23	—	1,335	1,335	0.05	0.01	—	1,340
Forklifts	0.01	0.01	0.08	1.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	152	152	0.01	< 0.005	—	153
Tractors/ Loaders/ Backhoe s	0.11	0.11	0.57	8.11	0.01	0.02	—	0.02	0.02	—	0.02	—	1,162	1,162	0.05	0.01	—	1,166
Excavato rs	0.24	0.20	1.69	2.03	< 0.005	0.06	—	0.06	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Other Material Handling Equipment	0.03	0.03	0.17	2.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	347	347	0.01	< 0.005	—	348
Cranes	0.09	0.09	0.49	4.88	0.01	0.02	—	0.02	0.02	—	0.02	—	990	990	0.04	0.01	—	994
Total	1.61	1.37	11.4	27.4	0.04	0.36	—	0.36	0.34	—	0.34	—	4,270	4,270	0.17	0.03	—	4,285
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Generator Sets	0.12	0.10	0.88	0.93	< 0.005	0.03	—	0.03	0.02	—	0.02	—	126	126	0.01	< 0.005	—	126
Forklifts	< 0.005	< 0.005	0.01	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.0	18.0	< 0.005	< 0.005	—	18.0
Tractors/ Loaders/ Backhoes	0.01	0.01	0.05	0.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	98.0	98.0	< 0.005	< 0.005	—	98.4
Excavators	0.01	0.01	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.4
Other Material Handling Equipment	< 0.005	< 0.005	0.01	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.9	18.9	< 0.005	< 0.005	—	18.9
Cranes	0.01	0.01	0.06	0.63	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	117	117	< 0.005	< 0.005	—	117
Total	0.16	0.13	1.11	2.71	< 0.005	0.03	—	0.03	0.03	—	0.03	—	392	392	0.02	< 0.005	—	393

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Erosion Control	Site Preparation	9/1/2023	9/8/2023	5.00	6.00	—
Lime Treat Subgrade	Site Preparation	10/31/2023	11/13/2023	5.00	10.0	—
Earthwork	Grading	9/11/2023	10/30/2023	5.00	36.0	—
Asphalt Paving	Paving	12/18/2023	12/18/2023	5.00	1.00	—
Aggregate Base	Trenching	11/16/2023	12/13/2023	5.00	20.0	—
Site Utilities	Trenching	11/14/2023	11/15/2023	5.00	2.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Erosion Control	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	84.0	0.37
Lime Treat Subgrade	Plate Compactors	Diesel	Average	1.00	7.00	367	0.40
Lime Treat Subgrade	Cement and Mortar Mixers	Diesel	Average	1.00	7.00	84.0	0.37
Lime Treat Subgrade	Surfacing Equipment	Diesel	Average	1.00	7.00	399	0.30
Earthwork	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Earthwork	Plate Compactors	Diesel	Average	1.00	7.00	36.0	0.38
Earthwork	Graders	Diesel	Average	2.00	7.00	148	0.41
Asphalt Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Asphalt Paving	Plate Compactors	Diesel	Average	1.00	7.00	36.0	0.38
Asphalt Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Aggregate Base	Graders	Diesel	Average	1.00	7.00	148	0.41
Aggregate Base	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Aggregate Base	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43

Site Utilities	Excavators	Diesel	Average	1.00	7.00	36.0	0.38
Site Utilities	Plate Compactors	Diesel	Average	1.00	7.00	8.00	0.43
Site Utilities	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Erosion Control	—	—	—	—
Erosion Control	Worker	2.50	11.7	LDA,LDT1,LDT2
Erosion Control	Vendor	1.00	8.40	HHDT,MHDT
Erosion Control	Hauling	0.00	20.0	HHDT
Erosion Control	Onsite truck	0.00	—	HHDT
Earthwork	—	—	—	—
Earthwork	Worker	12.0	11.7	LDA,LDT1,LDT2
Earthwork	Vendor	1.00	8.40	HHDT,MHDT
Earthwork	Hauling	11.2	20.0	HHDT
Earthwork	Onsite truck	1.00	8.40	HHDT
Lime Treat Subgrade	—	—	—	—
Lime Treat Subgrade	Worker	7.50	11.7	LDA,LDT1,LDT2
Lime Treat Subgrade	Vendor	1.00	8.40	HHDT,MHDT
Lime Treat Subgrade	Hauling	0.00	20.0	HHDT
Lime Treat Subgrade	Onsite truck	1.00	8.40	HHDT
Site Utilities	—	—	—	—
Site Utilities	Worker	7.50	11.7	LDA,LDT1,LDT2
Site Utilities	Vendor	1.00	8.40	HHDT,MHDT
Site Utilities	Hauling	0.00	20.0	HHDT

Site Utilities	Onsite truck	1.00	8.40	HHDT
Asphalt Paving	—	—	—	—
Asphalt Paving	Worker	7.50	11.7	LDA,LDT1,LDT2
Asphalt Paving	Vendor	1.00	8.40	HHDT,MHDT
Asphalt Paving	Hauling	7.00	20.0	HHDT
Asphalt Paving	Onsite truck	1.00	8.40	HHDT
Aggregate Base	—	—	—	—
Aggregate Base	Worker	7.50	11.7	LDA,LDT1,LDT2
Aggregate Base	Vendor	1.00	8.40	HHDT,MHDT
Aggregate Base	Hauling	191	20.0	HHDT
Aggregate Base	Onsite truck	1.00	8.40	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Aggregate Base	0.00	0.00	0.00	0.00	107,158

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Earthwork	—	3,216	63.0	0.00	—
Asphalt Paving	50.0	—	1.00	0.00	41.0

Aggregate Base	30,500	—	8.75	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	41.0	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	107,158

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	2,282,754

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Generator Sets	Diesel	Average	6.00	8.00	30.0	0.74
Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Other Material Handling Equipment	Diesel	Tier 4 Final	1.00	8.00	93.0	0.40
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Crushing/Proc. Equipment	Diesel	Average	1.00	8.00	12.0	0.85
Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.5	annual days of extreme heat
Extreme Precipitation	6.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	37.6
AQ-PM	12.7
AQ-DPM	31.5

Drinking Water	37.5
Lead Risk Housing	9.17
Pesticides	80.8
Toxic Releases	42.7
Traffic	50.5
Effect Indicators	—
CleanUp Sites	86.8
Groundwater	87.8
Haz Waste Facilities/Generators	93.6
Impaired Water Bodies	43.8
Solid Waste	77.6
Sensitive Population	—
Asthma	86.8
Cardio-vascular	67.5
Low Birth Weights	20.9
Socioeconomic Factor Indicators	—
Education	46.2
Housing	17.9
Linguistic	25.6
Poverty	10.9
Unemployment	48.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	94.26408315

Employed	49.30065443
Median HI	79.84088284
Education	—
Bachelor's or higher	45.52803798
High school enrollment	100
Preschool enrollment	37.79032465
Transportation	—
Auto Access	93.63531374
Active commuting	3.772616451
Social	—
2-parent households	88.50250225
Voting	54.13832927
Neighborhood	—
Alcohol availability	81.95816759
Park access	4.619530348
Retail density	10.04747851
Supermarket access	9.790837931
Tree canopy	17.28474272
Housing	—
Homeownership	66.77787758
Housing habitability	86.03875273
Low-inc homeowner severe housing cost burden	84.11394842
Low-inc renter severe housing cost burden	87.5914282
Uncrowded housing	56.30694213
Health Outcomes	—
Insured adults	83.11305017
Arthritis	60.6

Asthma ER Admissions	18.3
High Blood Pressure	76.3
Cancer (excluding skin)	45.0
Asthma	55.1
Coronary Heart Disease	81.5
Chronic Obstructive Pulmonary Disease	76.7
Diagnosed Diabetes	82.1
Life Expectancy at Birth	50.8
Cognitively Disabled	24.2
Physically Disabled	37.2
Heart Attack ER Admissions	32.3
Mental Health Not Good	64.8
Chronic Kidney Disease	79.8
Obesity	59.2
Pedestrian Injuries	19.6
Physical Health Not Good	79.7
Stroke	84.7
Health Risk Behaviors	—
Binge Drinking	8.9
Current Smoker	56.8
No Leisure Time for Physical Activity	74.2
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	48.8
Elderly	37.4
English Speaking	87.9

Foreign-born	26.8
Outdoor Workers	23.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	91.2
Traffic Density	51.7
Traffic Access	23.0
Other Indices	—
Hardship	32.8
Other Decision Support	—
2016 Voting	69.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	56.0
Healthy Places Index Score for Project Location (b)	70.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

Operational Criteria Pollutant Emissions

Source	ROG (tons per year)	NOx (tons per year)	PM_{10} (pounds per day)[1]
Mobile	0.22	3.44	0.41
Area	0.05	0.00	0.00
Off-Road	0.22	2.12	0.78
Project Total	*0.49*	*5.56*	*1.19*
YSAQMD Thresholds	**10 tons per year**	**10 tons per year**	**80 pounds per day**
Exceed Thresholds?	No	No	No

Source: Appendix A

Operational GHG Emissions

Source	Emissions ($MTCO_2e$ per year)
Mobile	1351.65
Area	0
Energy	0
Water	0.34
Waste	0
Off-Road	393
Total	**1744.99**
Source: Appendix A.	

0 0

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Solano (SV)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Year	Vehicle Catego	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX
Solano (SV)	2024	HHDT	Aggregate	Aggregate	Diesel	2419.231	411015	411015.04	0	46135.18	1.618338895	98.39286313	2.673809443	0.029154388	0.0375248

Assumptions			
Potential Tenant	Daily Trips for Staff	Daily Truck Trips	Total Daily Trips
Truck and Fleet Storage	27	23	50
Steel and Rebar Laydown Storage	18	2	20
Tree and Bark Companies	8	2	10
Gravel, Mulch, and Composting Storage	23	2	25
Trucking Companies	20	20	40
Gravel Crush Operation	--	15	15
Total Daily Trips	96	64	--
Total Daily VMT (miles per day)	*960*	*1280*	--
Total Annual VMT	*249600*	*332800*	--

Emissions Source	ROG	NOx	PM10	CO2	CH4	N2O
RUNEX	17.58747932	2071.473786	39.0049532	1985311.9	0.8168929	312.7867
IDLEX	533.478709	6297.14324	2.51017634	1234748.7	24.778704	194.5352
STREX	0	171.1238044	0	0	0	0
PMTW	-	-	45.9117766	-	-	-
PMBW	-	-	96.3979494	-	-	-
Total (g/day)	551.0661883	8539.74083	183.824856	3220060.6	25.595597	507.3219
Total (g/sec)	0.006378081	0.098839593	0.0021276	37.26922	0.0002962	0.005872
Total (lbs/day)	1.21489154	18.82688343	0.40526395	7099.01	0.0564286	1.118452
Total (tons/yr)	0.221717706	3.435906226	0.07396067	1295.5693	0.0102982	0.204117
			GWP	1	30	273 Source: Understanding Global Warming Potentials | US EPA
			CO2e	1295.5693	0.3089464	55.72407
			Total CO2e (tons/yr)	1351.602		

PM10 emissions for HRA

Total Daily Truck Trips	64
Roadway Segment (miles)	0.48
Total Daily VMT along segment (miles per da	30.72

Emissions Source	PM10 (g/day)	PM10 (g/sec)	
RUNEX	0.936118876	0.000010835	<- line volume source
IDLEX	2.510176341	0.000029053	<- area source
Total	***3.446295217***	***0.000039888***	
Total (lbs/day)	0.007597771		
Total (tons/yr)	0.001386593		

PM2.5_STREX	PM2.5_PM	PM2.5_PM	PM10_RUNEX	PM10_IDLE	PM10_STR	PM10_PMTW	PM10_PMBW	CO2_RUNE	CO2_IDLEX	CO2_STRE	CH4_RUNE	CH4_IDLEX	CH4_STRE	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS
0	0.008967	0.026359	0.03047262	0.039222	0	0.035868575	0.075310898	1551.025	19292.95	0	0.000638	0.387167	0	0.244365	3.039612	0	0.01374	8.335605	0	0

ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE)	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
0	0	0.015642	9.489452	0	0	0	0	0.21907	0.063156	122.6021	0	0.014687	0.182693	0

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Solano (SV)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Vehicle Category	Fuel	Vehicle Type and F	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM10_RUN	PM10_IDLEX	PM10_STRE	PM10_PMT	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STRE	CH4_RUNE	CH4_IDLEX	CH4_STRE	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNE	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIURN
HHDT	Gasoline	HHDT Gasoline	16.32774	0	0.233923	0.007602	0	0.00275833	0.02	0.103877	2608.896	0	50.93399	0.699419	0	6.12E-05	0.38321	0	0.005641	4.82349	0	0.000332	0.148755	1.338239	10.6407
HHDT	Diesel	HHDT Diesel	1.618339	98.39286	2.673809	0.030473	0.039221505	0	0.0358686	0.075311	1551.025	19292.95	0	0.000638	0.387167	0	0.244365	3.039612	0	0.01374	8.335605	0	0	0	0
LDA	Gasoline	LDA Gasoline	0.042224	0	0.262367	0.001228	0	0.00211613	0.008	0.005447	282.9469	0	70.46856	0.002264	0	0.074149	0.004734	0	0.033942	0.008535	0	0.337312	0.094612	0.24422	1.543968
LDA	Diesel	LDA Diesel	0.224183	0	0	0.015881	0	0	0.008	0.005551	239.0361	0	0	0.001143	0	0	0.03766	0	0	0.024615	0	0	0	0	0
LDT1	Gasoline	LDT1 Gasoline	0.135166	0	0.436616	0.001838	0	0.00328203	0.008	0.006694	336.1399	0	89.35574	0.006099	0	0.120507	0.009823	0	0.041346	0.027194	0	0.63743	0.202639	0.595758	3.342406
LDT1	Diesel	LDT1 Diesel	1.620899	0	0	0.238177	0	0	0.008	0.007642	415.0834	0	0	0.014491	0	0	0.065397	0	0	0.311982	0	0	0	0	0
LDT2	Gasoline	LDT2 Gasoline	0.063518	0	0.33995	0.001255	0	0.00210805	0.008	0.00642	346.6943	0	87.90185	0.002597	0	0.085085	0.005693	0	0.037922	0.009978	0	0.393241	0.086544	0.232846	1.486297
LDT2	Diesel	LDT2 Diesel	0.043126	0	0	0.004768	0	0	0.008	0.006356	314.7943	0	0	0.000509	0	0	0.049596	0	0	0.010963	0	0	0	0	0
LHDT1	Gasoline	LHDT1 Gasoline	0.222334	0.037765	0.669779	0.001826	0	0.00037849	0.008	0.078	894.7927	120.5203	25.88619	0.010123	0.116635	0.035547	0.012347	0.003025	0.052224	0.050497	0.43252	0.178457	0.055425	0.312467	3.341196
LHDT1	Diesel	LHDT1 Diesel	2.324008	2.249078	0	0.051075	0.027628981	0	0.012	0.078	637.4209	136.0171	0	0.010466	0.005098	0	0.100426	0.02143	0	0.225327	0.10976	0	0	0	0
LHDT2	Gasoline	LHDT2 Gasoline	0.180009	0.036254	0.632978	0.001531	0	0.00027224	0.008	0.091	986.2645	138.2096	25.6664	0.006972	0.113991	0.032786	0.010577	0.002984	0.050621	0.032864	0.415587	0.161033	0.045892	0.248905	2.709849
LHDT2	Diesel	LHDT2 Diesel	1.544714	2.148981	0	0.041506	0.027657681	0	0.012	0.091	773.9123	215.8221	0	0.008572	0.005098	0	0.12193	0.034003	0	0.184557	0.10976	0	0	0	0
MCY	Gasoline	MCY Gasoline	0.669547	0	0.163593	0.001816	0	0.00343087	0.004	0.012	193.7578	0	53.95267	0.186978	0	0.206436	0.043832	0	0.009324	1.274522	0	1.556374	3.580848	3.877019	4.975281
MDV	Gasoline	MDV Gasoline	0.098592	0	0.488627	0.0013	0	0.00230862	0.008	0.006622	426.9541	0	110.0542	0.003619	0	0.113739	0.007524	0	0.043953	0.015163	0	0.584872	0.116838	0.341374	2.069648
MDV	Diesel	MDV Diesel	0.074091	0	0	0.006136	0	0	0.008	0.00664	424.275	0	0	0.000518	0	0	0.066845	0	0	0.011147	0	0	0	0	0
MH	Gasoline	MH Gasoline	0.337881	0	0.439685	0.001505	0	0.00035459	0.012	0.045048	1949.026	0	31.11309	0.011514	0	0.036161	0.022485	0	0.047824	0.047624	0	0.147305	10.7604	0.24494	4.249198
MH	Diesel	MH Diesel	4.75164	0	0	0.11869	0	0	0.016	0.044842	1082.333	0	0	0.00637	0	0	0.170522	0	0	0.137134	0	0	0	0	0
MHDT	Gasoline	MHDT Gasoline	0.63062	0.088303	0.442793	0.001545	0	0.00062439	0.012	0.045048	1778.936	536.6557	47.43802	0.021648	0.26203	0.052068	0.029697	0.007305	0.03346	0.108879	1.009908	0.289751	0.040652	0.337523	3.417137
MHDT	Diesel	MHDT Diesel	1.345364	15.02802	1.613378	0.014478	0.032465586	0	0.012	0.04518	1151.751	2309.672	0	0.00142	0.011608	0	0.181459	0.36389	0	0.03057	0.249912	0	0	0	0
OBUS	Gasoline	OBUS Gasoline	0.387203	0.065226	0.393555	0.000938	0	0.00024896	0.012	0.044887	1784.288	380.2874	31.05133	0.011039	0.212154	0.036316	0.021151	0.006021	0.03381	0.050762	0.748727	0.177232	0.029843	0.132032	2.562414
OBUS	Diesel	OBUS Diesel	1.772874	16.97374	1.679586	0.044347	0.019019631	0	0.012	0.060038	1469.364	3531.295	0	0.003865	0.058204	0	0.231499	0.556357	0	0.083217	1.253117	0	0	0	0
SBUS	Gasoline	SBUS Gasoline	0.492404	0.923952	0.696753	0.001081	0	0.00063537	0.008	0.044917	794.2381	2568.635	58.69674	0.011172	2.519183	0.077929	0.026591	0.088628	0.065135	0.053565	10.60384	0.434634	0.124031	0.328769	1.986515
SBUS	Diesel	SBUS Diesel	4.090531	20.0019	0.652918	0.019258	0.020757916	0	0.012	0.044917	1099.485	2226.718	0	0.002595	0.008263	0	0.173224	0.35082	0	0.055879	0.177908	0	0	0	0
UBUS	Gasoline	UBUS Gasoline	0.054635	0	0.727984	0.000921	0	0.00039517	0.0084063	0.09293	1073.583	0	63.02482	0.002382	0	0.075218	0.006015	0	0.08093	0.007436	0	0.328268	0.074761	0.128729	0.887102
UBUS	Diesel	UBUS Diesel	0.107249	0	0	0.002011	0	0	0.012	0.11	747.4628	0	0	0.00141	0	0	0.117763	0	0	0.030353	0	0	0	0	0

Trip Assumptions

Potential Tenant	Daily Trips for Staff	Daily Truck Trips	Total Daily Trips
Truck and Fleet Storage	27	23	50
Steel and Rebar Laydov	18	2	20
Tree and Bark Compan	8	2	10
Gravel, Mulch, and Cor	23	2	25
Trucking Companies	20	20	40
Gravel Crush Operation	--	15	15
Total Daily Trips	96	64	--
Total Daily VMT (miles	*960*	*1280*	--
Total Annual VMT	*249600*	*332800*	--

Fleet Assumptions

Total Fleet Mix (from EMFAC)		Daily Trips	Daily VMT
LDA	0.466082	44.74385708	447.438571
LDT1	0.038272	3.674101063	36.7410106
LDT2	0.201479	19.3419421	193.419421
MDV	0.145705	13.98772539	139.877254
LHD1	0.038756	3.720581246	37.2058125
LHD2	0.009414	0.903782966	9.03782966
MHD	0.006518	0.625705244	6.25705244
HHD	0.085883	8.244784329	82.4478433
OBUS	0.001487	0.142733784	1.42733784
UBUS	0.000107	0.010283724	0.10283724
MCY	0.004498	0.43182507	4.3182507
SBUS	0.000291	0.027945614	0.27945614
MH	0.001508	0.14473238	1.4473238
	1	96	960

Fleet Mix Type	Vehicle Type/Fuel	Emissions Source	ROG	NOx	PM10	CO2	CH4	N2O
HHD	HHDT Diesel	RUNEX	1.132851	133.4286	2.512402	127878.7	0.052618012	20.1473349
HHD	HHDT Diesel	IDLEX	68.72526	811.2279	0.323373	159066.2	3.192110516	25.0609443
HHD	HHDT Diesel	STREX	0	22.04498	0	0	0	0
HHD	HHDT Diesel	PMTW	-	-	2.957287	-	-	-
HHD	HHDT Diesel	PMBW	-	-	6.209221	-	-	-
HHD	HHDT Gasoline	RUNEX	397.6863	1346.187	0.626754	215097.8	57.66558955	31.5948762
HHD	HHDT Gasoline	IDLEX	0	0	0	0	0	0
HHD	HHDT Gasoline	STREX	0.002739	1.928641	0.022742	419.9398	0.000504401	0.04650485
HHD	HHDT Gasoline	PMTW	-	-	1.648957	-	-	-
HHD	HHDT Gasoline	PMBW	-	-	8.564467	-	-	-
LDA	LDA Diesel	RUNEX	11.01372	100.308	7.105771	106954	0.511566411	16.850644
LDA	LDA Diesel	IDLEX	0	0	0	0	0	0
LDA	LDA Diesel	STREX	0	0	0	0	0	0
LDA	LDA Diesel	PMTW	-	-	3.57951	-	-	-
LDA	LDA Diesel	PMBW	-	-	2.483791	-	-	-
LDA	LDA Gasoline	RUNEX	3.819074	18.89265	0.549619	126601.4	1.013049333	2.11824164
LDA	LDA Gasoline	IDLEX	0	0	0	0	0	0
LDA	LDA Gasoline	STREX	15.09265	11.73929	0.094684	3153.035	3.317734496	1.51871327
LDA	LDA Gasoline	PMTW	-	-	3.57951	-	-	-
LDA	LDA Gasoline	PMBW	-	-	2.437384	-	-	-
LDT1	LDT1 Diesel	RUNEX	11.46255	59.55348	8.750872	15250.58	0.532413353	2.40273586
LDT1	LDT1 Diesel	IDLEX	0	0	0	0	0	0
LDT1	LDT1 Diesel	STREX	0	0	0	0	0	0
LDT1	LDT1 Diesel	PMTW	-	-	0.293928	-	-	-
LDT1	LDT1 Diesel	PMBW	-	-	0.280767	-	-	-
LDT1	LDT1 Gasoline	RUNEX	0.99915	4.96613	0.067539	12350.12	0.224089211	0.36089706
LDT1	LDT1 Gasoline	IDLEX	0	0	0	0	0	0
LDT1	LDT1 Gasoline	STREX	2.341981	1.604172	0.012059	328.302	0.442755403	0.15190848
LDT1	LDT1 Gasoline	PMTW	-	-	0.293928	-	-	-
LDT1	LDT1 Gasoline	PMBW	-	-	0.245952	-	-	-
LDT2	LDT2 Diesel	RUNEX	2.120497	8.341488	0.922264	60887.33	0.098493023	9.59282321
LDT2	LDT2 Diesel	IDLEX	0	0	0	0	0	0
LDT2	LDT2 Diesel	STREX	0	0	0	0	0	0
LDT2	LDT2 Diesel	PMTW	-	-	1.547356	-	-	-
LDT2	LDT2 Diesel	PMBW	-	-	1.229294	-	-	-
LDT2	LDT2 Gasoline	RUNEX	1.92988	12.2856	0.242726	67057.42	0.502301717	1.10122342
LDT2	LDT2 Gasoline	IDLEX	0	0	0	0	0	0
LDT2	LDT2 Gasoline	STREX	7.606036	6.575286	0.040774	1700.192	1.645707171	0.73348142
LDT2	LDT2 Gasoline	PMTW	-	-	1.547356	-	-	-
LDT2	LDT2 Gasoline	PMBW	-	-	1.241752	-	-	-
LHD1	LHDT1 Diesel	RUNEX	8.383482	86.46661	1.900277	23715.76	0.389396722	3.73642804
LHD1	LHDT1 Diesel	IDLEX	0.40837	8.367876	0.102796	506.0625	0.018968001	0.07973036
LHD1	LHDT1 Diesel	STREX	0	0	0	0	0	0
LHD1	LHDT1 Diesel	PMTW	-	-	0.44647	-	-	-
LHD1	LHDT1 Diesel	PMBW	-	-	2.902054	-	-	-
LHD1	LHDT1 Gasoline	RUNEX	1.878796	8.272118	0.067937	33291.49	0.376637072	0.45937085
LHD1	LHDT1 Gasoline	IDLEX	1.609226	0.140509	0	448.4054	0.433948984	0.01125473
LHD1	LHDT1 Gasoline	STREX	0.663964	2.491966	0.001408	96.31169	0.13225461	0.19430353
LHD1	LHDT1 Gasoline	PMTW	-	-	0.297647	-	-	-
LHD1	LHDT1 Gasoline	PMBW	-	-	2.902054	-	-	-
LHD2	LHDT2 Diesel	RUNEX	1.667995	13.96087	0.375121	6994.487	0.07747519	1.10198435
LHD2	LHDT2 Diesel	IDLEX	0.099199	1.942213	0.024997	195.0563	0.004607602	0.03073121
LHD2	LHDT2 Diesel	STREX	0	0	0	0	0	0
LHD2	LHDT2 Diesel	PMTW	-	-	0.108454	-	-	-
LHD2	LHDT2 Diesel	PMBW	-	-	0.822443	-	-	-
LHD2	LHDT2 Gasoline	RUNEX	0.297016	1.626891	0.013838	8913.69	0.063009769	0.09559701
LHD2	LHDT2 Gasoline	IDLEX	0.375601	0.032765	0	124.9115	0.103023324	0.00269693
LHD2	LHDT2 Gasoline	STREX	0.145539	0.572074	0.000246	23.19685	0.029631187	0.04575058
LHD2	LHDT2 Gasoline	PMTW	-	-	0.072303	-	-	-
LHD2	LHDT2 Gasoline	PMBW	-	-	0.822443	-	-	-
MCY	MCY Gasoline	RUNEX	5.503704	2.891271	0.007841	836.6949	0.807418022	0.18927782
MCY	MCY Gasoline	IDLEX	0	0	0	0	0	0
MCY	MCY Gasoline	STREX	0.672081	0.070644	0.001482	23.29812	0.08914429	0.00402635
MCY	MCY Gasoline	PMTW	-	-	0.017273	-	-	-
MCY	MCY Gasoline	PMBW	-	-	0.051819	-	-	-
MDV	MDV Diesel	RUNEX	1.559265	10.36362	0.858319	59346.43	0.072424874	9.35005367
MDV	MDV Diesel	IDLEX	0	0	0	0	0	0
MDV	MDV Diesel	STREX	0	0	0	0	0	0
MDV	MDV Diesel	PMTW	-	-	1.119018	-	-	-
MDV	MDV Diesel	PMBW	-	-	0.928764	-	-	-
MDV	MDV Gasoline	RUNEX	2.12097	13.79082	0.181827	59721.17	0.506182941	1.05242587
MDV	MDV Gasoline	IDLEX	0	0	0	0	0	0
MDV	MDV Gasoline	STREX	8.181026	6.834774	0.032292	1539.408	1.590948702	0.61480391
MDV	MDV Gasoline	PMTW	-	-	1.119018	-	-	-
MDV	MDV Gasoline	PMBW	-	-	0.926291	-	-	-
MH	MH Diesel	RUNEX	0.198477	6.877162	0.171784	1566.486	0.009218862	0.24680055
MH	MH Diesel	IDLEX	0	0	0	0	0	0
MH	MH Diesel	STREX	0	0	0	0	0	0
MH	MH Diesel	PMTW	-	-	0.023157	-	-	-
MH	MH Diesel	PMBW	-	-	0.064901	-	-	-
MH	MH Gasoline	RUNEX	0.068927	0.489024	0.002178	2820.872	0.016665098	0.03254265
MH	MH Gasoline	IDLEX	0	0	0	0	0	0
MH	MH Gasoline	STREX	0.02132	0.063637	5.13E-05	4.503071	0.005233653	0.00692175
MH	MH Gasoline	PMTW	-	-	0.017368	-	-	-
MH	MH Gasoline	PMBW	-	-	0.065198	-	-	-
MHD	MHDT Diesel	RUNEX	0.191279	8.418015	0.09059	7206.566	0.008884403	1.13539734
MHD	MHDT Diesel	IDLEX	0.156371	9.40311	0.020314	1445.174	0.007263032	0.22768773
MHD	MHDT Diesel	STREX	0	1.009499	0	0	0	0
MHD	MHDT Diesel	PMTW	-	-	0.075085	-	-	-
MHD	MHDT Diesel	PMBW	-	-	0.282691	-	-	-

MHD	MHDT Gasoline	RUNEX	0.68126	3.945821	0.009665	11130.9	0.135451969	0.18581538
MHD	MHDT Gasoline	IDLEX	0.631905	0.055252	0	335.7883	0.163953663	0.00457104
MHD	MHDT Gasoline	STREX	0.181299	0.277058	0.000391	29.68222	0.032579071	0.02093631
MHD	MHDT Gasoline	PMTW	-	-	0.075085	-	-	-
MHD	MHDT Gasoline	PMBW	-	-	0.281865	-	-	-
OBUS	OBUS Diesel	RUNEX	0.118778	2.53049	0.063298	2097.279	0.005516942	0.3304272
OBUS	OBUS Diesel	IDLEX	0.178862	2.422727	0.002715	504.0351	0.008307681	0.07941094
OBUS	OBUS Diesel	STREX	0	0.239734	0	0	0	0
OBUS	OBUS Diesel	PMTW	-	-	0.017128	-	-	-
OBUS	OBUS Diesel	PMBW	-	-	0.085694	-	-	-
OBUS	OBUS Gasoline	RUNEX	0.072454	0.552669	0.001339	2546.781	0.015756	0.03018912
OBUS	OBUS Gasoline	IDLEX	0.106869	0.00931	0	54.27985	0.030281595	0.00085939
OBUS	OBUS Gasoline	STREX	0.025297	0.056174	3.55E-05	4.432073	0.005183582	0.00482581
OBUS	OBUS Gasoline	PMTW	-	-	0.017128	-	-	-
OBUS	OBUS Gasoline	PMBW	-	-	0.064068	-	-	-
SBUS	SBUS Diesel	RUNEX	0.015616	1.143124	0.005382	307.2579	0.000725317	0.04840861
SBUS	SBUS Diesel	IDLEX	0.004972	0.558966	0.00058	62.22701	0.000230925	0.00980389
SBUS	SBUS Diesel	STREX	0	0.018246	0	0	0	0
SBUS	SBUS Diesel	PMTW	-	-	0.003353	-	-	-
SBUS	SBUS Diesel	PMBW	-	-	0.012552	-	-	-
SBUS	SBUS Gasoline	RUNEX	0.014969	0.137605	0.000302	221.9547	0.003122204	0.00743116
SBUS	SBUS Gasoline	IDLEX	0.296331	0.02582	0	71.78207	0.07040013	0.00247677
SBUS	SBUS Gasoline	STREX	0.012146	0.019471	1.78E-05	1.640317	0.002177772	0.00182024
SBUS	SBUS Gasoline	PMTW	-	-	0.002236	-	-	-
SBUS	SBUS Gasoline	PMBW	-	-	0.012552	-	-	-
UBUS	UBUS Diesel	RUNEX	0.003121	0.011029	0.000207	76.86701	0.00014498	0.01211043
UBUS	UBUS Diesel	IDLEX	0	0	0	0	0	0
UBUS	UBUS Diesel	STREX	0	0	0	0	0	0
UBUS	UBUS Diesel	PMTW	-	-	0.001234	-	-	-
UBUS	UBUS Diesel	PMBW	-	-	0.011312	-	-	-
UBUS	UBUS Gasoline	RUNEX	0.000765	0.005618	9.48E-05	110.4043	0.000245002	0.00061856
UBUS	UBUS Gasoline	IDLEX	0	0	0	0	0	0
UBUS	UBUS Gasoline	STREX	0.003376	0.007486	4.06E-06	0.64813	0.000773523	0.00083227
UBUS	UBUS Gasoline	PMTW	-	-	0.000864	-	-	-
UBUS	UBUS Gasoline	PMBW	-	-	0.009557	-	-	-
		Total (g/day)	0.004141	0.013105	0.01052	111.0524	0.001018525	0.00145083
		Total (g/sec)	0.00000	0.00000	0.00000	0.00129	0.00000	0.00000
		Total (lbs/day)	0.00001	0.00003	0.00002	0.24483	0.00000	0.00000
		Total (tons/yr)	0.00000	0.00001	0.00000	0.04468	0.00000	0.00000
					GWP	1	30	273
					CO2e	0.044681	1.22939E-05	0.00015936
					Total CO2e (tons/yr)	0.045		

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction phase information provided by applicant.
Construction: Off-Road Equipment	Construction equipment provided by applicant.
Construction: Dust From Material Movement	Net cut of approximately 3,216 CY of soil would be used to balance the site during grading. Site would be covered in 30,500 CY aggregate base, and 50 CY of asphalt concrete for the driveway.
Operations: Vehicle Data	All vehicle emissions calculated off-model.
Construction: On-Road Fugitive Dust	All access roads to the project site are paved. On-site is not paved.
Construction: Trips and VMT	During grading, worker trips set to 12 trips per day to reflect peak.
Operations: Off-Road Equipment	Operational equipment based on six most emissions intensive tenant options. See assumptions table.

APPENDIX B

HEALTH RISK ASSESSMENT RESULTS

ATTACHMENT B:
HRA MODELING INPUT AND OUTPUT FILES

AERMOD Output Files - Construction

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 7/28/2023
** File: C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road
Construction HRA\Weber Road Construction HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road Const
   MODELOPT CONC FLAT ELEV
   AVERTIME 1 ANNUAL
   POLLUTID PM_10
   FLAGPOLE 1.50
   RUNORNOT RUN
   ERRORFIL "Weber Road Construction HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION CONSTRUCTION AREAPOLY   595817.556  4252109.225       22.890
** Source Parameters **
   SRCPARAM CONSTRUCTION 3.8804E-09     1.300         5
   AREAVERT CONSTRUCTION 595817.556 4252109.225 595713.631 4251733.856
   AREAVERT CONSTRUCTION 595727.591 4251054.470 595539.907 4251051.368
   AREAVERT CONSTRUCTION 595524.396 4251819.167
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
   INCLUDED "Weber Road Construction HRA.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\KVCB_724828_93241\724828_2017-2021_AdjU.sfc
   PROFFILE ..\KVCB_724828_93241\724828_2017-2021_AdjU.PFL
   SURFDATA 93241 2017
   UAIRDATA 23230 2017 OAKLAND/WSO_AP
   PROFBASE 33.2 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Weber Road Construction HRA.AD\01H1GALL.PLT" 31
   PLOTFILE ANNUAL ALL "Weber Road Construction HRA.AD\AN00GALL.PLT" 32
   SUMMFILE "Weber Road Construction HRA.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
**
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 7/28/2023
** File: C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road
Construction HRA\Weber Road Construction HRA.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road Const
   MODELOPT CONC FLAT ELEV
   AVERTIME 1 ANNUAL
   POLLUTID PM_10
   FLAGPOLE 1.50
   RUNORNOT RUN
   ERRORFIL "Weber Road Construction HRA.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION CONSTRUCTION AREAPOLY   595817.556  4252109.225       22.890
** Source Parameters **
   SRCPARAM CONSTRUCTION 3.8804E-09     1.300         5
   AREAVERT CONSTRUCTION 595817.556 4252109.225 595713.631 4251733.856
   AREAVERT CONSTRUCTION 595727.591 4251054.470 595539.907 4251051.368
   AREAVERT CONSTRUCTION 595524.396 4251819.167
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
```

```
RE STARTING
   INCLUDED "Weber Road Construction HRA.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\KVCB_724828_93241\724828_2017-2021_AdjU.sfc
   PROFFILE ..\KVCB_724828_93241\724828_2017-2021_AdjU.PFL
   SURFDATA 93241 2017
   UAIRDATA 23230 2017 OAKLAND/WSO_AP
   PROFBASE 33.2 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Weber Road Construction HRA.AD\01H1GALL.PLT" 31
   PLOTFILE ANNUAL ALL "Weber Road Construction HRA.AD\AN00GALL.PLT" 32
   SUMMFILE "Weber Road Construction HRA.sum"
OU FINISHED


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

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

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


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


    ********   WARNING MESSAGES   ********
 ME W186      65       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187      65       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

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

 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
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                                  PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

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

 ** Model Options Selected:
      * Model Allows User-Specified Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Allow FLAT/ELEV Terrain Option by Source,
        with      0 FLAT and      1 ELEV Source(s).
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Accepts FLAGPOLE Receptor . Heights.
      * The User Specified a Pollutant Type of: PM_10

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

 **This Run Includes:      1 Source(s);       1 Source Group(s); and     509
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:      0 VOLUME source(s)
                 and:      1 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
```

```
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                and:      0 SWPOINT source(s)


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

 **The AERMET Input Meteorological Data Version Date:  21112

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

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

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    33.20 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Weber Road Construction HRA.err

 **File for Summary of Results:   Weber Road Construction HRA.sum

 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
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                                  PAGE   2
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*
```

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ SOURCE SCALAR VARY BY	URBAN SOURCE
CONSTRUCTION	0	0.38804E-08	595817.6	4252109.2	22.9	1.30	5	0.00	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	CONSTRUCTION,

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(595558.2, 4250870.1, 22.9, 22.9, 0.0); (595558.2, 4250890.1, 22.9, 22.9, 0.0);
(595558.2, 4250910.1, 22.9, 22.9, 0.0); (595558.2, 4250930.1, 22.9, 22.9, 0.0);
(595558.2, 4250950.1, 22.9, 22.9, 0.0); (595558.2, 4250970.1, 22.9, 22.9, 0.0);
(595558.2, 4250990.1, 22.9, 22.9, 0.0); (595578.2, 4250870.1, 22.9, 22.9, 0.0);

```
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4250910.1,      22.9,      22.9,       0.0);
     ( 595578.2, 4250930.1,      22.9,      22.9,       0.0);         ( 595578.2,
4250950.1,      22.9,      22.9,       0.0);
     ( 595578.2, 4250970.1,      22.9,      22.9,       0.0);         ( 595578.2,
4250990.1,      22.9,      22.9,       0.0);
     ( 595598.2, 4250870.1,      22.9,      22.9,       0.0);         ( 595598.2,
4250890.1,      22.9,      22.9,       0.0);
     ( 595598.2, 4250910.1,      22.9,      22.9,       0.0);         ( 595598.2,
4250930.1,      22.9,      22.9,       0.0);
     ( 595598.2, 4250950.1,      22.9,      22.9,       0.0);         ( 595598.2,
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     ( 595598.2, 4250990.1,      22.9,      22.9,       0.0);         ( 595393.2,
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     ( 595393.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595393.2,
4250727.5,      21.5,      21.5,       0.0);
     ( 595393.2, 4250747.5,      21.8,      21.8,       0.0);         ( 595413.2,
4250627.5,      22.4,      22.4,       0.0);
     ( 595413.2, 4250647.5,      22.1,      22.1,       0.0);         ( 595413.2,
4250667.5,      21.7,      21.7,       0.0);
     ( 595413.2, 4250687.5,      21.4,      21.4,       0.0);         ( 595413.2,
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     ( 595413.2, 4250727.5,      21.4,      21.4,       0.0);         ( 595413.2,
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     ( 595473.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595473.2,
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     ( 595493.2, 4250627.5,      21.9,      21.9,       0.0);         ( 595493.2,
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     ( 595493.2, 4250667.5,      21.7,      21.7,       0.0);         ( 595493.2,
4250687.5,      21.3,      21.3,       0.0);
     ( 595493.2, 4250707.5,      21.3,      21.3,       0.0);         ( 595493.2,
4250727.5,      21.3,      21.3,       0.0);
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     ( 595513.2, 4250667.5,      21.7,      21.7,       0.0);         ( 595513.2,
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     ( 595513.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595307.5,
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     ( 595307.5, 4250470.6,      22.9,      22.9,       0.0);         ( 595307.5,
4250490.6,      22.9,      22.9,       0.0);
     ( 595307.5, 4250510.6,      22.9,      22.9,       0.0);         ( 595327.5,
4250470.6,      22.9,      22.9,       0.0);
     ( 595327.5, 4250490.6,      22.9,      22.9,       0.0);         ( 595327.5,
4250510.6,      22.9,      22.9,       0.0);
     ( 595347.5, 4250470.6,      22.9,      22.9,       0.0);         ( 595347.5,
4250490.6,      22.9,      22.9,       0.0);
     ( 595347.5, 4250510.6,      22.9,      22.9,       0.0);         ( 595367.5,
4250470.6,      22.9,      22.9,       0.0);
     ( 595367.5, 4250490.6,      22.9,      22.9,       0.0);         ( 595367.5,
4250510.6,      22.9,      22.9,       0.0);
     ( 595387.5, 4250470.6,      22.9,      22.9,       0.0);         ( 595387.5,
4250490.6,      22.9,      22.9,       0.0);
     ( 595387.5, 4250510.6,      22.9,      22.9,       0.0);         ( 595407.5,
4250470.6,      22.9,      22.9,       0.0);
     ( 595407.5, 4250490.6,      22.9,      22.9,       0.0);         ( 595407.5,
4250510.6,      22.9,      22.9,       0.0);
     ( 595427.5, 4250470.6,      22.9,      22.9,       0.0);         ( 595427.5,
4250490.6,      22.9,      22.9,       0.0);
     ( 595427.5, 4250510.6,      22.9,      22.9,       0.0);         ( 595447.5,
4250470.6,      22.9,      22.9,       0.0);
     ( 595447.5, 4250490.6,      22.9,      22.9,       0.0);         ( 595447.5,
4250510.6,      22.8,      22.8,       0.0);
     ( 595467.5, 4250470.6,      22.8,      22.8,       0.0);         ( 595467.5,
4250490.6,      22.8,      22.8,       0.0);
```


*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

```
     ( 595467.5, 4250510.6,      22.8,      22.8,       0.0);         ( 595487.5,
4250470.6,      22.7,      22.7,       0.0);
     ( 595487.5, 4250490.6,      22.6,      22.6,       0.0);         ( 595487.5,
4250510.6,      22.6,      22.6,       0.0);
     ( 595507.5, 4250470.6,      22.6,      22.6,       0.0);         ( 595507.5,
4250490.6,      22.6,      22.6,       0.0);
```

```
     ( 595507.5, 4250510.6,      22.5,      22.5,       0.0);         ( 595507.5,
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     ( 595527.5, 4250470.6,      22.5,      22.5,       0.0);         ( 595527.5,
4250490.6,      22.5,      22.5,       0.0);
     ( 595527.5, 4250510.6,      22.5,      22.5,       0.0);         ( 595527.5,
4250530.6,      22.3,      22.3,       0.0);
     ( 596132.2, 4250952.4,      21.6,      21.6,       0.0);         ( 596132.2,
4250972.4,      21.6,      21.6,       0.0);
     ( 596132.2, 4250992.4,      21.6,      21.6,       0.0);         ( 596132.2,
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     ( 596152.2, 4250952.4,      21.6,      21.6,       0.0);         ( 596152.2,
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     ( 596152.2, 4250992.4,      21.6,      21.6,       0.0);         ( 596152.2,
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     ( 596172.2, 4250952.4,      21.6,      21.6,       0.0);         ( 596172.2,
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     ( 596172.2, 4250992.4,      21.6,      21.6,       0.0);         ( 596172.2,
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4250972.4,      21.6,      21.6,       0.0);
     ( 596192.2, 4250992.4,      21.6,      21.6,       0.0);         ( 596192.2,
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     ( 596192.2, 4251032.4,      21.6,      21.6,       0.0);         ( 596212.2,
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     ( 596212.2, 4250972.4,      21.5,      21.5,       0.0);         ( 596212.2,
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     ( 596212.2, 4251012.4,      21.6,      21.6,       0.0);         ( 596212.2,
4251032.4,      21.6,      21.6,       0.0);
     ( 596232.2, 4250952.4,      21.3,      21.3,       0.0);         ( 596232.2,
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     ( 596232.2, 4250992.4,      21.6,      21.6,       0.0);         ( 596232.2,
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     ( 596232.2, 4251032.4,      21.6,      21.6,       0.0);         ( 596252.2,
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     ( 596252.2, 4250972.4,      21.5,      21.5,       0.0);         ( 596252.2,
4250992.4,      21.6,      21.6,       0.0);
     ( 596252.2, 4251012.4,      21.6,      21.6,       0.0);         ( 596252.2,
4251032.4,      21.6,      21.6,       0.0);
     ( 596272.2, 4250952.4,      21.3,      21.3,       0.0);         ( 596272.2,
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     ( 596272.2, 4250992.4,      21.4,      21.4,       0.0);         ( 596272.2,
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     ( 596272.2, 4251032.4,      21.6,      21.6,       0.0);         ( 596292.2,
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     ( 596292.2, 4250972.4,      21.3,      21.3,       0.0);         ( 596292.2,
4250992.4,      21.4,      21.4,       0.0);
     ( 596292.2, 4251012.4,      21.4,      21.4,       0.0);         ( 596292.2,
4251032.4,      21.4,      21.4,       0.0);
     ( 596312.2, 4250952.4,      21.3,      21.3,       0.0);         ( 596312.2,
4250972.4,      21.3,      21.3,       0.0);
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     ( 596312.2, 4251032.4,      21.3,      21.3,       0.0);         ( 596270.9,
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     ( 596270.9, 4250817.3,      21.3,      21.3,       0.0);         ( 596270.9,
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     ( 596270.9, 4250857.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250877.3,      21.3,      21.3,       0.0);
     ( 596270.9, 4250897.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250917.3,      21.3,      21.3,       0.0);
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4250797.3,      21.2,      21.2,       0.0);
     ( 596290.9, 4250817.3,      21.2,      21.2,       0.0);         ( 596290.9,
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4250877.3,      21.3,      21.3,       0.0);
     ( 596290.9, 4250897.3,      21.3,      21.3,       0.0);         ( 596290.9,
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     ( 596290.9, 4250937.3,      21.3,      21.3,       0.0);         ( 596310.9,
4250797.3,      21.0,      21.0,       0.0);
     ( 596310.9, 4250817.3,      21.0,      21.0,       0.0);         ( 596310.9,
4250837.3,      21.1,      21.1,       0.0);
     ( 596310.9, 4250857.3,      21.2,      21.2,       0.0);         ( 596310.9,
4250877.3,      21.3,      21.3,       0.0);
     ( 596310.9, 4250897.3,      21.3,      21.3,       0.0);         ( 596310.9,
4250917.3,      21.3,      21.3,       0.0);
     ( 596310.9, 4250937.3,      21.3,      21.3,       0.0);         ( 596330.9,
4250797.3,      21.0,      21.0,       0.0);
     ( 596330.9, 4250817.3,      21.0,      21.0,       0.0);         ( 596330.9,
4250837.3,      21.0,      21.0,       0.0);
     ( 596330.9, 4250857.3,      21.1,      21.1,       0.0);         ( 596330.9,
4250877.3,      21.2,      21.2,       0.0);
     ( 596330.9, 4250897.3,      21.3,      21.3,       0.0);         ( 596330.9,
4250917.3,      21.3,      21.3,       0.0);
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                        ***       12:13:31

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 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                    (METERS)

     ( 596330.9, 4250937.3,      21.3,      21.3,       0.0);         ( 596183.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596183.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596183.2,
4250705.8,      21.3,      21.3,       0.0);
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     ( 596203.2, 4250705.8,      21.3,      21.3,       0.0);         ( 596223.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596223.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596223.2,
4250705.8,      21.3,      21.3,       0.0);
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*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

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↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                        ***       12:13:31

                                  PAGE   8
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                                    *** DISCRETE CARTESIAN RECEPTORS ***
                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                               (METERS)
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 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        12:13:31

                                  PAGE   9
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                                    *** DISCRETE CARTESIAN RECEPTORS ***
                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
```

(METERS)

(596397.0, 4252310.5, 22.9, 22.9, 0.0); (596397.0, 4252330.5, 22.9, 22.9, 0.0);
(596397.0, 4252350.5, 22.9, 22.9, 0.0); (596397.0, 4252370.5, 22.9, 22.9, 0.0);
(596397.0, 4252390.5, 22.9, 22.9, 0.0); (596397.0, 4252410.5, 22.9, 22.9, 0.0);
(596417.0, 4252270.5, 22.9, 22.9, 0.0); (596417.0, 4252290.5, 22.9, 22.9, 0.0);
(596417.0, 4252310.5, 22.9, 22.9, 0.0); (596417.0, 4252330.5, 22.9, 22.9, 0.0);
(596417.0, 4252350.5, 22.9, 22.9, 0.0); (596417.0, 4252370.5, 22.9, 22.9, 0.0);
(596417.0, 4252390.5, 22.9, 22.9, 0.0); (596417.0, 4252410.5, 22.9, 22.9, 0.0);
(596437.0, 4252270.5, 22.8, 22.8, 0.0); (596437.0, 4252290.5, 22.9, 22.9, 0.0);
(596437.0, 4252310.5, 22.9, 22.9, 0.0); (596437.0, 4252330.5, 22.9, 22.9, 0.0);
(596437.0, 4252350.5, 22.9, 22.9, 0.0); (596437.0, 4252370.5, 22.9, 22.9, 0.0);
(596437.0, 4252390.5, 22.9, 22.9, 0.0); (596437.0, 4252410.5, 22.9, 22.9, 0.0);
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(596457.0, 4252310.5, 22.9, 22.9, 0.0); (596457.0, 4252330.5, 22.9, 22.9, 0.0);
(596457.0, 4252350.5, 22.9, 22.9, 0.0); (596457.0, 4252370.5, 22.9, 22.9, 0.0);
(596457.0, 4252390.5, 22.9, 22.9, 0.0); (596457.0, 4252410.5, 22.9, 22.9, 0.0);
(596477.0, 4252270.5, 22.8, 22.8, 0.0); (596477.0, 4252290.5, 22.9, 22.9, 0.0);
(596477.0, 4252310.5, 22.9, 22.9, 0.0); (596477.0, 4252330.5, 22.9, 22.9, 0.0);
(596477.0, 4252350.5, 22.9, 22.9, 0.0); (596477.0, 4252370.5, 22.9, 22.9, 0.0);
(596477.0, 4252390.5, 22.9, 22.9, 0.0); (596477.0, 4252410.5, 22.9, 22.9, 0.0);
(596497.0, 4252330.5, 22.9, 22.9, 0.0); (596497.0, 4252350.5, 22.9, 22.9, 0.0);
(596497.0, 4252370.5, 22.9, 22.9, 0.0); (596497.0, 4252390.5, 22.9, 22.9, 0.0);
(596497.0, 4252410.5, 22.9, 22.9, 0.0); (594781.6, 4251521.0, 24.7, 24.7, 0.0);
(594781.6, 4251541.0, 24.7, 24.7, 0.0); (594781.6, 4251561.0, 24.7, 24.7, 0.0);
(594781.6, 4251581.0, 24.7, 24.7, 0.0); (594781.6, 4251601.0, 24.7, 24.7, 0.0);

```
     ( 594801.6, 4251521.0,      24.7,      24.7,       0.0);         ( 594801.6,
4251541.0,      24.7,      24.7,       0.0);
     ( 594801.6, 4251561.0,      24.7,      24.7,       0.0);         ( 594801.6,
4251581.0,      24.7,      24.7,       0.0);
     ( 594801.6, 4251601.0,      24.7,      24.7,       0.0);         ( 594821.6,
4251521.0,      24.7,      24.7,       0.0);
     ( 594821.6, 4251541.0,      24.7,      24.7,       0.0);         ( 594821.6,
4251561.0,      24.7,      24.7,       0.0);
     ( 594821.6, 4251581.0,      24.7,      24.7,       0.0);         ( 594841.6,
4251561.0,      24.6,      24.6,       0.0);
     ( 594841.6, 4251581.0,      24.6,      24.6,       0.0);

 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                          ***       12:13:31

                                    PAGE  10
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                                              *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                                  (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

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



                                         *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                              (METERS/SEC)

                                                   1.54,   3.09,   5.14,   8.23,
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10.80,
↟ *** AERMOD - VERSION 22112 ***   *** C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road Const ***   07/28/23
 *** AERMET - VERSION 21112 ***   ***
                         ***   12:13:31

                                   PAGE 11
 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

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

   Surface file: ..\KVCB_724828_93241\724828_2017-2021_AdjU.sfc
                  Met Version: 21112
   Profile file: ..\KVCB_724828_93241\724828_2017-2021_AdjU.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:   93241   Upper air station no.:   23230
                  Name: UNKNOWN   Name: OAKLAND/WSO_AP
                  Year: 2017   Year: 2017

 First 24 hours of scalar data
 YR MO DY JDY HR   H0   U*   W* DT/DZ ZICNV ZIMCH M-O LEN   Z0 BOWEN ALBEDO REF WS   WD   HT REF TA   HT
- -
 17 01 01   1 01 -25.0 0.249 -9.000 -9.000 -999. 298.   68.0 0.01   0.54 1.00   4.36 201.   10.0 280.9   2.0
 17 01 01   1 02 -36.6 0.365 -9.000 -9.000 -999. 530.   146.7 0.01   0.54 1.00   6.38 211.   10.0 281.4   2.0
 17 01 01   1 03 -31.6 0.315 -9.000 -9.000 -999. 425.   108.8 0.01   0.54 1.00   5.53 214.   10.0 280.9   2.0
 17 01 01   1 04 -17.5 0.172 -9.000 -9.000 -999. 184.   32.4 0.01   0.54 1.00   3.18 305.   10.0 276.4   2.0
 17 01 01   1 05   -8.6 0.120 -9.000 -9.000 -999. 101.   18.1 0.03   0.54 1.00   1.93   1.   10.0 274.9   2.0
 17 01 01   1 06 -10.8 0.135 -9.000 -9.000 -999. 119.   20.6 0.03   0.54 1.00   2.15   11.   10.0 275.9   2.0
 17 01 01   1 07 -12.0 0.140 -9.000 -9.000 -999. 126.   21.7 0.02   0.54 1.00   2.42 357.   10.0 276.4   2.0
 17 01 01   1 08   -9.7 0.125 -9.000 -9.000 -999. 107.   18.4 0.02   0.54 1.00   2.18 342.   10.0 277.0   2.0
 17 01 01   1 09   2.6 0.104 0.208 0.005 124.   81.   -39.5 0.03   0.54 0.41   1.38   29.   10.0 277.5   2.0
 17 01 01   1 10   4.4 0.119 0.349 0.005 350.   99.   -35.3 0.02   0.54 0.28   1.72 356.   10.0 279.2   2.0

```
 17 01 01   1 11   10.9  0.164  0.564  0.005  592.  159.    -36.3  0.03   0.54
0.23    2.15    1.   10.0  280.9    2.0
 17 01 01   1 12   14.5  0.165  0.676  0.017  768.  161.    -28.0  0.03   0.54
0.22    2.13   12.   10.0  281.4    2.0
 17 01 01   1 13   72.0  0.177  1.253  0.019  985.  179.     -6.9  0.03   0.54
0.22    2.08  143.   10.0  282.5    2.0
 17 01 01   1 14   65.1  0.167  1.252  0.020 1084.  163.     -6.4  0.01   0.54
0.23    2.21  191.   10.0  284.9    2.0
 17 01 01   1 15   39.8  0.254  1.063  0.019 1086.  306.    -36.8  0.01   0.54
0.26    3.86  199.   10.0  284.2    2.0
 17 01 01   1 16    9.4  0.267  0.658  0.019 1087.  331.   -181.8  0.01   0.54
0.34    4.32  200.   10.0  284.9    2.0
 17 01 01   1 17  -25.4  0.289 -9.000 -9.000 -999.  373.     92.1  0.01   0.54
0.59    5.09  248.   10.0  283.1    2.0
 17 01 01   1 18  -23.3  0.233 -9.000 -9.000 -999.  272.     59.9  0.01   0.54
1.00    4.15  234.   10.0  282.0    2.0
 17 01 01   1 19  -21.2  0.212 -9.000 -9.000 -999.  234.     49.3  0.01   0.54
1.00    3.78  228.   10.0  281.4    2.0
 17 01 01   1 20  -24.8  0.247 -9.000 -9.000 -999.  295.     67.1  0.01   0.54
1.00    4.44  275.   10.0  281.4    2.0
 17 01 01   1 21  -25.7  0.256 -9.000 -9.000 -999.  310.     71.8  0.01   0.54
1.00    4.53  244.   10.0  280.9    2.0
 17 01 01   1 22  -25.4  0.253 -9.000 -9.000 -999.  305.     70.2  0.01   0.54
1.00    4.48  244.   10.0  280.9    2.0
 17 01 01   1 23  -25.2  0.250 -9.000 -9.000 -999.  300.     68.9  0.01   0.54
1.00    4.44  218.   10.0  280.4    2.0
 17 01 01   1 24  -20.2  0.200 -9.000 -9.000 -999.  215.     43.9  0.01   0.54
1.00    3.58  221.   10.0  279.2    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 17 01 01 01   10.0 1  201.    4.36   281.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        12:13:31

                                  PAGE  12
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     CONSTRUCTION,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS
***
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** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
595558.19	4250870.06	0.00554	595558.19	4250890.06	0.00605
595558.19	4250910.06	0.00666	595558.19	4250930.06	0.00739
595558.19	4250950.06	0.00830	595558.19	4250970.06	0.00946
595558.19	4250990.06	0.01101	595578.19	4250870.06	0.00583
595578.19	4250890.06	0.00640	595578.19	4250910.06	0.00708
595578.19	4250930.06	0.00791	595578.19	4250950.06	0.00894
595578.19	4250970.06	0.01026	595578.19	4250990.06	0.01205
595598.19	4250870.06	0.00607	595598.19	4250890.06	0.00667
595598.19	4250910.06	0.00740	595598.19	4250930.06	0.00828
595598.19	4250950.06	0.00939	595598.19	4250970.06	0.01081
595598.19	4250990.06	0.01271	595393.16	4250647.52	0.00206
595393.16	4250667.52	0.00213	595393.16	4250687.52	0.00221
595393.16	4250707.52	0.00229	595393.16	4250727.52	0.00238
595393.16	4250747.52	0.00248	595413.16	4250627.52	0.00206
595413.16	4250647.52	0.00214	595413.16	4250667.52	0.00222
595413.16	4250687.52	0.00230	595413.16	4250707.52	0.00240
595413.16	4250727.52	0.00249	595413.16	4250747.52	0.00260
595433.16	4250627.52	0.00213	595433.16	4250647.52	0.00222
595433.16	4250667.52	0.00230	595433.16	4250687.52	0.00240
595433.16	4250707.52	0.00250	595433.16	4250727.52	0.00261
595453.16	4250627.52	0.00220	595453.16	4250647.52	0.00229
595453.16	4250667.52	0.00239	595453.16		

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4250687.52        0.00249
         595453.16    4250707.52        0.00260                        595453.16
4250727.52        0.00272
         595473.16    4250627.52        0.00228                        595473.16
4250647.52        0.00237
         595473.16    4250667.52        0.00248                        595473.16
4250687.52        0.00259
         595473.16    4250707.52        0.00271                        595473.16
4250727.52        0.00284
         595493.16    4250627.52        0.00235                        595493.16
4250647.52        0.00245
         595493.16    4250667.52        0.00256                        595493.16
4250687.52        0.00268
         595493.16    4250707.52        0.00282                        595493.16
4250727.52        0.00296
         595513.16    4250627.52        0.00242                        595513.16
4250647.52        0.00253
         595513.16    4250667.52        0.00265                        595513.16
4250687.52        0.00278
         595513.16    4250707.52        0.00292                        595307.48
4250450.61        0.00132
         595307.48    4250470.61        0.00136                        595307.48
4250490.61        0.00140
         595307.48    4250510.61        0.00144                        595327.48
4250470.61        0.00140
         595327.48    4250490.61        0.00144                        595327.48
4250510.61        0.00148
         595347.48    4250470.61        0.00144                        595347.48
4250490.61        0.00148
         595347.48    4250510.61        0.00153                        595367.48
4250470.61        0.00148
         595367.48    4250490.61        0.00153                        595367.48
4250510.61        0.00157
         595387.48    4250470.61        0.00152                        595387.48
4250490.61        0.00157
         595387.48    4250510.61        0.00162                        595407.48
4250470.61        0.00156
```

***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
595407.48	4250490.61	0.00161	595407.48	4250510.61	0.00167
595427.48	4250470.61	0.00160	595427.48	4250490.61	0.00165
595427.48	4250510.61	0.00171	595447.48	4250470.61	0.00164
595447.48	4250490.61	0.00170	595447.48	4250510.61	0.00176
595467.48	4250470.61	0.00168	595467.48	4250490.61	0.00174
595467.48	4250510.61	0.00180	595487.48	4250470.61	0.00171
595487.48	4250490.61	0.00178	595487.48	4250510.61	0.00184
595507.48	4250470.61	0.00175	595507.48	4250490.61	0.00182
595507.48	4250510.61	0.00189	595507.48	4250530.61	0.00196
595527.48	4250470.61	0.00179	595527.48	4250490.61	0.00186
595527.48	4250510.61	0.00193	595527.48	4250530.61	0.00201
596132.19	4250952.37	0.00194	596132.19	4250972.37	0.00200
596132.19	4250992.37	0.00206	596132.19	4251012.37	0.00212
596152.19	4250952.37	0.00186	596152.19	4250972.37	0.00191
596152.19	4250992.37	0.00197	596152.19	4251012.37	0.00203
596172.19	4250952.37	0.00178	596172.19	4250972.37	0.00183
596172.19	4250992.37	0.00188	596172.19	4251012.37	0.00194
596192.19	4250952.37	0.00171	596192.19	4250972.37	0.00176
596192.19	4250992.37	0.00181	596192.19	4251012.37	0.00186
596192.19	4251032.37	0.00191	596212.19	4250952.37	0.00164
596212.19	4250972.37	0.00169	596212.19		

4250992.37   0.00173
         596212.19   4251012.37   0.00178   596212.19
4251032.37   0.00183
         596232.19   4250952.37   0.00158   596232.19
4250972.37   0.00162
         596232.19   4250992.37   0.00167   596232.19
4251012.37   0.00171
         596232.19   4251032.37   0.00176   596252.19
4250952.37   0.00152
         596252.19   4250972.37   0.00156   596252.19
4250992.37   0.00160
         596252.19   4251012.37   0.00165   596252.19
4251032.37   0.00169
         596272.19   4250952.37   0.00147   596272.19
4250972.37   0.00150
         596272.19   4250992.37   0.00154   596272.19
4251012.37   0.00158
         596272.19   4251032.37   0.00163   596292.19
4250952.37   0.00141
         596292.19   4250972.37   0.00145   596292.19
4250992.37   0.00148
         596292.19   4251012.37   0.00152   596292.19
4251032.37   0.00156
         596312.19   4250952.37   0.00137   596312.19
4250972.37   0.00140
         596312.19   4250992.37   0.00143   596312.19
4251012.37   0.00147
         596312.19   4251032.37   0.00151   596270.86
4250797.28   0.00123
         596270.86   4250817.28   0.00125   596270.86
4250837.28   0.00128
         596270.86   4250857.28   0.00131   596270.86
4250877.28   0.00134
         596270.86   4250897.28   0.00138   596270.86
4250917.28   0.00141
         596270.86   4250937.28   0.00144   596290.86
4250797.28   0.00119
         596290.86   4250817.28   0.00121   596290.86
4250837.28   0.00124

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596290.86	4250857.28	0.00127	596290.86	4250877.28	0.00130
596290.86	4250897.28	0.00133	596290.86	4250917.28	0.00136
596290.86	4250937.28	0.00139	596310.86	4250797.28	0.00115
596310.86	4250817.28	0.00117	596310.86	4250837.28	0.00120
596310.86	4250857.28	0.00123	596310.86	4250877.28	0.00126
596310.86	4250897.28	0.00129	596310.86	4250917.28	0.00131
596310.86	4250937.28	0.00134	596330.86	4250797.28	0.00111
596330.86	4250817.28	0.00114	596330.86	4250837.28	0.00116
596330.86	4250857.28	0.00119	596330.86	4250877.28	0.00122
596330.86	4250897.28	0.00124	596330.86	4250917.28	0.00127
596330.86	4250937.28	0.00130	596183.21	4250665.84	0.00124
596183.21	4250685.84	0.00127	596183.21	4250705.84	0.00129
596203.21	4250665.84	0.00120	596203.21	4250685.84	0.00123
596203.21	4250705.84	0.00125	596223.21	4250665.84	0.00116
596223.21	4250685.84	0.00119	596223.21	4250705.84	0.00121
596243.21	4250665.84	0.00113	596243.21	4250685.84	0.00115
596243.21	4250705.84	0.00117	596263.21	4250665.84	0.00109
596263.21	4250685.84	0.00111	596263.21	4250705.84	0.00113
596283.21	4250665.84	0.00106	596283.21	4250685.84	0.00108
596283.21	4250705.84	0.00110	596303.21		

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4250665.84        0.00103
         596303.21    4250685.84        0.00105                     596303.21
4250705.84        0.00106
         596323.21    4250665.84        0.00100                     596323.21
4250685.84        0.00102
         596323.21    4250705.84        0.00103                     596343.21
4250665.84        0.00097
         596343.21    4250685.84        0.00099                     596343.21
4250705.84        0.00100
         596363.21    4250665.84        0.00094                     596363.21
4250685.84        0.00096
         596363.21    4250705.84        0.00097                     596383.21
4250665.84        0.00091
         596383.21    4250685.84        0.00093                     596383.21
4250705.84        0.00095
         596403.21    4250665.84        0.00089                     596403.21
4250685.84        0.00090
         596403.21    4250705.84        0.00092                     596423.21
4250665.84        0.00086
         596423.21    4250685.84        0.00088                     596423.21
4250705.84        0.00089
         596443.21    4250665.84        0.00084                     596443.21
4250685.84        0.00085
         596443.21    4250705.84        0.00087                     594623.00
4250488.97        0.00053
         594623.00    4250538.97        0.00054                     594623.00
4250588.97        0.00055
         594623.00    4250638.97        0.00056                     594623.00
4250688.97        0.00057
         594623.00    4250738.97        0.00058                     594623.00
4250788.97        0.00058
         594623.00    4250838.97        0.00060                     594623.00
4250888.97        0.00061
         594623.00    4250938.97        0.00062                     594623.00
4250988.97        0.00063
         594623.00    4251038.97        0.00064                     594623.00
4251088.97        0.00064
         594623.00    4251138.97        0.00065                     594623.00
4251188.97        0.00065
         594623.00    4251238.97        0.00065                     594623.00
4251288.97        0.00065
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
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                                  PAGE  15
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
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YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
594623.00	4251338.97	0.00065	594623.00	4251388.97	0.00064
594623.00	4251438.97	0.00064	594623.00	4251488.97	0.00063
594623.00	4251538.97	0.00063	594623.00	4251588.97	0.00063
594623.00	4251638.97	0.00062	594623.00	4251688.97	0.00062
594623.00	4251738.97	0.00061	594623.00	4251788.97	0.00060
594623.00	4251838.97	0.00059	594623.00	4251888.97	0.00058
594623.00	4251938.97	0.00056	594623.00	4251988.97	0.00055
594623.00	4252038.97	0.00053	594623.00	4252088.97	0.00052
594623.00	4252138.97	0.00050	594623.00	4252188.97	0.00049
594623.00	4252238.97	0.00049	594623.00	4252288.97	0.00048
594623.00	4252338.97	0.00047	594623.00	4252388.97	0.00046
594623.00	4252438.97	0.00045	594698.93	4252431.49	0.00050
594748.93	4252431.49	0.00054	594798.93	4252431.49	0.00058
594848.93	4252431.49	0.00062	594898.93	4252431.49	0.00067
594948.93	4252431.49	0.00073	594998.93	4252431.49	0.00080
595048.93	4252431.49	0.00087	595098.93	4252431.49	0.00096
595148.93	4252431.49	0.00105	595198.93	4252431.49	0.00116
595248.93	4252431.49	0.00127	595298.93	4252431.49	0.00140
595348.93	4252431.49	0.00154	595398.93		

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4252431.49        0.00169
         595448.93    4252431.49        0.00184                        595498.93
4252431.49        0.00199
         595548.93    4252431.49        0.00217                        595598.93
4252431.49        0.00240
         595648.93    4252431.49        0.00265                        595698.93
4252431.49        0.00293
         595748.93    4252431.49        0.00320                        595798.93
4252431.49        0.00347
         595848.93    4252431.49        0.00373                        595898.93
4252431.49        0.00400
         595948.93    4252431.49        0.00421                        595998.93
4252431.49        0.00431
         596048.93    4252431.49        0.00436                        596098.93
4252431.49        0.00439
         596148.93    4252431.49        0.00438                        596198.93
4252431.49        0.00430
         596248.93    4252431.49        0.00416                        596298.93
4252431.49        0.00399
         596348.93    4252431.49        0.00379                        596398.93
4252431.49        0.00358
         596448.93    4252431.49        0.00338                        596498.93
4252431.49        0.00319
         596548.93    4252431.49        0.00301                        596598.93
4252431.49        0.00284
         596648.93    4250511.49        0.00059                        596648.93
4250551.49        0.00061
         596648.93    4250591.49        0.00062                        596648.93
4250631.49        0.00064
         596648.93    4250671.49        0.00066                        596648.93
4250711.49        0.00068
         596648.93    4250751.49        0.00070                        596648.93
4250791.49        0.00073
         596648.93    4250831.49        0.00075                        596648.93
4250871.49        0.00077
         596648.93    4250911.49        0.00080                        596648.93
4250951.49        0.00083
         596648.93    4250991.49        0.00086                        596648.93
4251031.49        0.00089
         596648.93    4251071.49        0.00093                        596648.93
4251111.49        0.00096
         596648.93    4251151.49        0.00100                        596648.93
4251191.49        0.00105
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                      ***        12:13:31

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 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*
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*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596648.93	4251231.49	0.00110	596648.93	4251271.49	0.00115
596648.93	4251311.49	0.00120	596648.93	4251351.49	0.00126
596648.93	4251391.49	0.00132	596648.93	4251431.49	0.00139
596648.93	4251471.49	0.00146	596648.93	4251511.49	0.00153
596648.93	4251551.49	0.00161	596648.93	4251591.49	0.00169
596648.93	4251631.49	0.00176	596648.93	4251671.49	0.00184
596648.93	4251711.49	0.00192	596648.93	4251751.49	0.00201
596648.93	4251791.49	0.00209	596648.93	4251831.49	0.00217
596648.93	4251871.49	0.00225	596648.93	4251911.49	0.00233
596648.93	4251951.49	0.00240	596648.93	4251991.49	0.00247
596648.93	4252031.49	0.00253	596648.93	4252071.49	0.00259
596648.93	4252111.49	0.00263	596648.93	4252151.49	0.00267
596648.93	4252191.49	0.00270	596648.93	4252231.49	0.00272
596648.93	4252271.49	0.00273	596648.93	4252311.49	0.00273
596648.93	4252351.49	0.00272	596648.93	4252391.49	0.00270
596648.93	4252431.49	0.00267	594613.98	4250434.11	0.00051
594663.98	4250434.11	0.00055	594713.98	4250434.11	0.00058
594763.98	4250434.11	0.00061	594813.98		

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4250434.11        0.00065
         594863.98    4250434.11        0.00069                    594913.98
4250434.11        0.00074
         594963.98    4250434.11        0.00079                    595013.98
4250434.11        0.00086
         595063.98    4250434.11        0.00092                    595113.98
4250434.11        0.00099
         595163.98    4250434.11        0.00106                    595213.98
4250434.11        0.00114
         595263.98    4250434.11        0.00122                    595313.98
4250434.11        0.00131
         595363.98    4250434.11        0.00140                    595413.98
4250434.11        0.00149
         595463.98    4250434.11        0.00157                    595513.98
4250434.11        0.00165
         595563.98    4250434.11        0.00175                    595613.98
4250434.11        0.00183
         595663.98    4250434.11        0.00188                    595713.98
4250434.11        0.00190
         595763.98    4250434.11        0.00185                    595813.98
4250434.11        0.00177
         595863.98    4250434.11        0.00166                    595913.98
4250434.11        0.00153
         595963.98    4250434.11        0.00141                    596013.98
4250434.11        0.00130
         596063.98    4250434.11        0.00119                    596113.98
4250434.11        0.00110
         596163.98    4250434.11        0.00102                    596213.98
4250434.11        0.00095
         596263.98    4250434.11        0.00089                    596313.98
4250434.11        0.00083
         596363.98    4250434.11        0.00078                    596413.98
4250434.11        0.00074
         596463.98    4250434.11        0.00069                    596513.98
4250434.11        0.00066
         596563.98    4250434.11        0.00062                    596613.98
4250434.11        0.00059
         596663.98    4250434.11        0.00056                    595977.64
4250946.01        0.00283
         595977.64    4250966.01        0.00294                    595977.64
4250986.01        0.00306
         595977.64    4251006.01        0.00319                    595977.64
4251026.01        0.00332
         595997.64    4250946.01        0.00268                    595997.64
4250966.01        0.00278
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***       12:13:31
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*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
595997.64	4250986.01	0.00288	595997.64	4251006.01	0.00300
595997.64	4251026.01	0.00312	596017.64	4250946.01	0.00253
596017.64	4250966.01	0.00263	596017.64	4250986.01	0.00272
596017.64	4251006.01	0.00283	596017.64	4251026.01	0.00294
596037.64	4250946.01	0.00240	596037.64	4250966.01	0.00249
596037.64	4250986.01	0.00258	596037.64	4251006.01	0.00267
596037.64	4251026.01	0.00277	596057.64	4250946.01	0.00228
596057.64	4250966.01	0.00236	596057.64	4250986.01	0.00244
596057.64	4251006.01	0.00253	596057.64	4251026.01	0.00263
596077.64	4250946.01	0.00218	596077.64	4250966.01	0.00225
596077.64	4250986.01	0.00232	596077.64	4251006.01	0.00240
596077.64	4251026.01	0.00249	596097.64	4250946.01	0.00208
596097.64	4250966.01	0.00214	596097.64	4250986.01	0.00221
596097.64	4251006.01	0.00228	596097.64	4251026.01	0.00236
596117.64	4250946.01	0.00198	596117.64	4250966.01	0.00204
596117.64	4250986.01	0.00211	596117.64	4251006.01	0.00218
596117.64	4251026.01	0.00225	596336.95		

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4252250.50        0.00440
         596356.95    4252270.50        0.00422                    596356.95
4252290.50        0.00418
         596356.95    4252310.50        0.00413                    596356.95
4252330.50        0.00408
         596356.95    4252350.50        0.00402                    596356.95
4252370.50        0.00396
         596356.95    4252390.50        0.00390                    596376.95
4252270.50        0.00410
         596376.95    4252290.50        0.00406                    596376.95
4252310.50        0.00401
         596376.95    4252330.50        0.00397                    596376.95
4252350.50        0.00391
         596376.95    4252370.50        0.00386                    596376.95
4252390.50        0.00380
         596396.95    4252270.50        0.00397                    596396.95
4252290.50        0.00394
         596396.95    4252310.50        0.00390                    596396.95
4252330.50        0.00386
         596396.95    4252350.50        0.00381                    596396.95
4252370.50        0.00376
         596396.95    4252390.50        0.00371                    596396.95
4252410.50        0.00365
         596416.95    4252270.50        0.00385                    596416.95
4252290.50        0.00382
         596416.95    4252310.50        0.00379                    596416.95
4252330.50        0.00375
         596416.95    4252350.50        0.00371                    596416.95
4252370.50        0.00366
         596416.95    4252390.50        0.00362                    596416.95
4252410.50        0.00357
         596436.95    4252270.50        0.00374                    596436.95
4252290.50        0.00371
         596436.95    4252310.50        0.00368                    596436.95
4252330.50        0.00365
         596436.95    4252350.50        0.00361                    596436.95
4252370.50        0.00357
         596436.95    4252390.50        0.00353                    596436.95
4252410.50        0.00348
         596456.95    4252270.50        0.00363                    596456.95
4252290.50        0.00361
         596456.95    4252310.50        0.00358                    596456.95
4252330.50        0.00355
         596456.95    4252350.50        0.00352                    596456.95
4252370.50        0.00348
         596456.95    4252390.50        0.00344                    596456.95
4252410.50        0.00340
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
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*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596476.95	4252270.50	0.00352	596476.95	4252290.50	0.00350
596476.95	4252310.50	0.00348	596476.95	4252330.50	0.00345
596476.95	4252350.50	0.00342	596476.95	4252370.50	0.00339
596476.95	4252390.50	0.00335	596476.95	4252410.50	0.00332
596496.95	4252330.50	0.00336	596496.95	4252350.50	0.00333
596496.95	4252370.50	0.00330	596496.95	4252390.50	0.00327
596496.95	4252410.50	0.00324	594781.55	4251521.04	0.00083
594781.55	4251541.04	0.00083	594781.55	4251561.04	0.00083
594781.55	4251581.04	0.00083	594781.55	4251601.04	0.00083
594801.55	4251521.04	0.00087	594801.55	4251541.04	0.00087
594801.55	4251561.04	0.00086	594801.55	4251581.04	0.00086
594801.55	4251601.04	0.00086	594821.55	4251521.04	0.00090
594821.55	4251541.04	0.00090	594821.55	4251561.04	0.00090
594821.55	4251581.04	0.00090	594841.55	4251561.04	0.00094
594841.55	4251581.04	0.00094			

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
595558.19	4250870.06	0.39677	(20121309)	595558.19	4250890.06	0.41347	(20121309)
595558.19	4250910.06	0.43175	(20121309)	595558.19	4250930.06	0.45207	(20121309)
595558.19	4250950.06	0.47502	(20121309)	595558.19	4250970.06	0.50156	(20121309)
595558.19	4250990.06	0.53327	(20121309)	595578.19	4250870.06	0.38243	(20121309)
595578.19	4250890.06	0.40016	(20121309)	595578.19	4250910.06	0.41947	(20121309)
595578.19	4250930.06	0.44083	(20121309)	595578.19	4250950.06	0.46479	(20121309)
595578.19	4250970.06	0.49229	(20121309)	595578.19	4250990.06	0.52481	(20121309)
595598.19	4250870.06	0.39403	(17103108)	595598.19	4250890.06	0.40990	(17103108)
595598.19	4250910.06	0.43052	(20022808)	595598.19	4250930.06	0.45415	(20022808)
595598.19	4250950.06	0.48076	(20022808)	595598.19	4250970.06	0.51117	(20022808)
595598.19	4250990.06	0.54705	(20022808)	595393.16	4250647.52	0.17194	(21120308)
595393.16	4250667.52	0.17395	(21120308)	595393.16	4250687.52	0.17536	(21120308)
595393.16	4250707.52	0.17654	(21120308)	595393.16	4250727.52	0.18386	(20122109)
595393.16	4250747.52	0.19067	(20122109)	595413.16	4250627.52	0.18402	(20091307)
595413.16	4250647.52	0.18537	(20091307)	595413.16			

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4250667.52        0.18622  (20091307)
       595413.16   4250687.52        0.18658  (20091307)                595413.16
4250707.52        0.18660  (20091307)
       595413.16   4250727.52        0.18721  (21120308)                595413.16
4250747.52        0.18940  (21120308)
       595433.16   4250627.52        0.19152  (20091307)                595433.16
4250647.52        0.19492  (20091307)
       595433.16   4250667.52        0.19791  (20091307)                595433.16
4250687.52        0.20041  (20091307)
       595433.16   4250707.52        0.20241  (20091307)                595433.16
4250727.52        0.20399  (20091307)
       595453.16   4250627.52        0.20202  (20121309)                595453.16
4250647.52        0.20070  (20121309)
       595453.16   4250667.52        0.20306  (20091307)                595453.16
4250687.52        0.20786  (20091307)
       595453.16   4250707.52        0.21229  (20091307)                595453.16
4250727.52        0.21638  (20091307)
       595473.16   4250627.52        0.23487  (20121309)                595473.16
4250647.52        0.23581  (20121309)
       595473.16   4250667.52        0.23631  (20121309)                595473.16
4250687.52        0.23639  (20121309)
       595473.16   4250707.52        0.23619  (20121309)                595473.16
4250727.52        0.23576  (20121309)
       595493.16   4250627.52        0.25932  (20121309)                595493.16
4250647.52        0.26299  (20121309)
       595493.16   4250667.52        0.26615  (20121309)                595493.16
4250687.52        0.26879  (20121309)
       595493.16   4250707.52        0.27187  (20121309)                595493.16
4250727.52        0.27471  (20121309)
       595513.16   4250627.52        0.27202  (20121309)                595513.16
4250647.52        0.27784  (20121309)
       595513.16   4250667.52        0.28368  (20121309)                595513.16
4250687.52        0.28948  (20121309)
       595513.16   4250707.52        0.29527  (20121309)                595307.48
4250450.61        0.13461  (21120308)
       595307.48   4250470.61        0.13500  (21120308)                595307.48
4250490.61        0.13593  (18011021)
       595307.48   4250510.61        0.13826  (20122109)                595327.48
4250470.61        0.14073  (21120308)
       595327.48   4250490.61        0.14190  (21120308)                595327.48
4250510.61        0.14274  (21120308)
       595347.48   4250470.61        0.14337  (21120308)                595347.48
4250490.61        0.14577  (21120308)
       595347.48   4250510.61        0.14784  (21120308)                595367.48
4250470.61        0.15273  (20091307)
       595367.48   4250490.61        0.15355  (20091307)                595367.48
4250510.61        0.15404  (20091307)
       595387.48   4250470.61        0.15897  (20091307)                595387.48
4250490.61        0.16114  (20091307)
       595387.48   4250510.61        0.16302  (20091307)                595407.48
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*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
595407.48	4250490.61	0.16421	(20091307)	595407.48	4250510.61	0.16755	(20091307)
595427.48	4250470.61	0.17028	(20121309)	595427.48	4250490.61	0.16924	(20121309)
595427.48	4250510.61	0.16796	(20121309)	595447.48	4250470.61	0.19536	(20121309)
595447.48	4250490.61	0.19581	(20121309)	595447.48	4250510.61	0.19603	(20121309)
595467.48	4250470.61	0.21480	(20121309)	595467.48	4250490.61	0.21696	(20121309)
595467.48	4250510.61	0.21896	(20121309)	595487.48	4250470.61	0.22606	(20121309)
595487.48	4250490.61	0.22992	(20121309)	595487.48	4250510.61	0.23373	(20121309)
595507.48	4250470.61	0.22798	(20121309)	595507.48	4250490.61	0.23331	(20121309)
595507.48	4250510.61	0.23862	(20121309)	595507.48	4250530.61	0.24395	(20121309)
595527.48	4250470.61	0.22056	(20121309)	595527.48	4250490.61	0.22692	(20121309)
595527.48	4250510.61	0.23338	(20121309)	595527.48	4250530.61	0.23985	(20121309)
596132.19	4250952.37	0.10972	(20022608)	596132.19	4250972.37	0.10967	(20022608)
596132.19	4250992.37	0.10960	(20022608)	596132.19	4251012.37	0.10954	(20022608)
596152.19	4250952.37	0.10686	(20022608)	596152.19			

4250972.37 0.10684 (20022608)
596152.19 4250992.37 0.10678 (20022608) 596152.19
4251012.37 0.10671 (20022608)
596172.19 4250952.37 0.10420 (20022608) 596172.19
4250972.37 0.10418 (20022608)
596172.19 4250992.37 0.10412 (20022608) 596172.19
4251012.37 0.10407 (20022608)
596192.19 4250952.37 0.10162 (20022608) 596192.19
4250972.37 0.10164 (20022608)
596192.19 4250992.37 0.10163 (20022608) 596192.19
4251012.37 0.10158 (20022608)
596192.19 4251032.37 0.10152 (20022608) 596212.19
4250952.37 0.09907 (20022608)
596212.19 4250972.37 0.09921 (20022608) 596212.19
4250992.37 0.09928 (20022608)
596212.19 4251012.37 0.09923 (20022608) 596212.19
4251032.37 0.09917 (20022608)
596232.19 4250952.37 0.09686 (20022608) 596232.19
4250972.37 0.09699 (20022608)
596232.19 4250992.37 0.09706 (20022608) 596232.19
4251012.37 0.09701 (20022608)
596232.19 4251032.37 0.09695 (20022608) 596252.19
4250952.37 0.09477 (20022608)
596252.19 4250972.37 0.09485 (20022608) 596252.19
4250992.37 0.09489 (20022608)
596252.19 4251012.37 0.09489 (20022608) 596252.19
4251032.37 0.09483 (20022608)
596272.19 4250952.37 0.09280 (20022608) 596272.19
4250972.37 0.09275 (20022608)
596272.19 4250992.37 0.09277 (20022608) 596272.19
4251012.37 0.09287 (20022608)
596272.19 4251032.37 0.09280 (20022608) 596292.19
4250952.37 0.09092 (20022608)
596292.19 4250972.37 0.09087 (20022608) 596292.19
4250992.37 0.09082 (20022608)
596292.19 4251012.37 0.09080 (20022608) 596292.19
4251032.37 0.09069 (20022608)
596312.19 4250952.37 0.08913 (20022608) 596312.19
4250972.37 0.08906 (20022608)
596312.19 4250992.37 0.08898 (20022608) 596312.19
4251012.37 0.08886 (20022608)
596312.19 4251032.37 0.08869 (20022608) 596270.86
4250797.28 0.09327 (20022608)
596270.86 4250817.28 0.09322 (20022608) 596270.86
4250837.28 0.09318 (20022608)
596270.86 4250857.28 0.09314 (20022608) 596270.86
4250877.28 0.09310 (20022608)
596270.86 4250897.28 0.09305 (20022608) 596270.86
4250917.28 0.09301 (20022608)
596270.86 4250937.28 0.09296 (20022608) 596290.86

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
596290.86	4250857.28	0.09120	(20022608)	596290.86	4250877.28	0.09121	(20022608)
596290.86	4250897.28	0.09117	(20022608)	596290.86	4250917.28	0.09112	(20022608)
596290.86	4250937.28	0.09108	(20022608)	596310.86	4250797.28	0.08929	(20022608)
596310.86	4250817.28	0.08925	(20022608)	596310.86	4250837.28	0.08924	(20022608)
596310.86	4250857.28	0.08933	(20022608)	596310.86	4250877.28	0.08937	(20022608)
596310.86	4250897.28	0.08937	(20022608)	596310.86	4250917.28	0.08933	(20022608)
596310.86	4250937.28	0.08928	(20022608)	596330.86	4250797.28	0.08759	(20022608)
596330.86	4250817.28	0.08756	(20022608)	596330.86	4250837.28	0.08752	(20022608)
596330.86	4250857.28	0.08750	(20022608)	596330.86	4250877.28	0.08756	(20022608)
596330.86	4250897.28	0.08766	(20022608)	596330.86	4250917.28	0.08762	(20022608)
596330.86	4250937.28	0.08757	(20022608)	596183.21	4250665.84	0.11123	(19011809)
596183.21	4250685.84	0.11096	(19011809)	596183.21	4250705.84	0.11060	(19011809)
596203.21	4250665.84	0.10818	(19011809)	596203.21			

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4250685.84        0.10780  (19011809)
       596203.21   4250705.84        0.10730  (19011809)                596223.21
4250665.84        0.10510  (19011809)
       596223.21   4250685.84        0.10454  (19011809)                596223.21
4250705.84        0.10384  (19011809)
       596243.21   4250665.84        0.10189  (19011809)                596243.21
4250685.84        0.10113  (19011809)
       596243.21   4250705.84        0.10019  (19011809)                596263.21
4250665.84        0.09850  (19011809)
       596263.21   4250685.84        0.09748  (19011809)                596263.21
4250705.84        0.09627  (19011809)
       596283.21   4250665.84        0.09487  (19011809)                596283.21
4250685.84        0.09358  (19011809)
       596283.21   4250705.84        0.09207  (19011809)                596303.21
4250665.84        0.09097  (19011809)
       596303.21   4250685.84        0.08958  (20022608)                596303.21
4250705.84        0.09007  (20022608)
       596323.21   4250665.84        0.08760  (20022608)                596323.21
4250685.84        0.08822  (20022608)
       596323.21   4250705.84        0.08849  (20022608)                596343.21
4250665.84        0.08634  (20022608)
       596343.21   4250685.84        0.08670  (20022608)                596343.21
4250705.84        0.08683  (20022608)
       596363.21   4250665.84        0.08488  (20022608)                596363.21
4250685.84        0.08507  (20022608)
       596363.21   4250705.84        0.08513  (20022608)                596383.21
4250665.84        0.08336  (20022608)
       596383.21   4250685.84        0.08346  (20022608)                596383.21
4250705.84        0.08358  (20022608)
       596403.21   4250665.84        0.08193  (20022608)                596403.21
4250685.84        0.08197  (20022608)
       596403.21   4250705.84        0.08207  (20022608)                596423.21
4250665.84        0.08061  (20022608)
       596423.21   4250685.84        0.08061  (20022608)                596423.21
4250705.84        0.08059  (20022608)
       596443.21   4250665.84        0.07915  (20022608)                596443.21
4250685.84        0.07915  (20022608)
       596443.21   4250705.84        0.07912  (20022608)                594623.00
4250488.97        0.06645  (18122016)
       594623.00   4250538.97        0.06755  (18122016)                594623.00
4250588.97        0.06786  (18122016)
       594623.00   4250638.97        0.06652  (18122016)                594623.00
4250688.97        0.06259  (18122016)
       594623.00   4250738.97        0.05986  (20022707)                594623.00
4250788.97        0.05833  (20022707)
       594623.00   4250838.97        0.05887  (19122420)                594623.00
4250888.97        0.05923  (17021408)
       594623.00   4250938.97        0.05950  (17121508)                594623.00
4250988.97        0.05870  (17121508)
       594623.00   4251038.97        0.05813  (17012607)                594623.00
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4251088.97 0.05864 (17022308)
594623.00 4251138.97 0.05906 (17022308) 594623.00
4251188.97 0.05999 (18020808)
594623.00 4251238.97 0.05914 (17022308) 594623.00
4251288.97 0.06058 (18021708)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
594623.00	4251338.97	0.06040	(18021708)	594623.00	4251388.97	0.05920	(17022308)
594623.00	4251438.97	0.05926	(17022308)	594623.00	4251488.97	0.05943	(17022308)
594623.00	4251538.97	0.05999	(17022308)	594623.00	4251588.97	0.06117	(17022308)
594623.00	4251638.97	0.06234	(17022308)	594623.00	4251688.97	0.06246	(20091007)
594623.00	4251738.97	0.06308	(20091007)	594623.00	4251788.97	0.06330	(20091007)
594623.00	4251838.97	0.06338	(20091007)	594623.00	4251888.97	0.06365	(20060906)
594623.00	4251938.97	0.06594	(18111408)	594623.00	4251988.97	0.06701	(18111408)
594623.00	4252038.97	0.06744	(18111408)	594623.00	4252088.97	0.06759	(18111408)
594623.00	4252138.97	0.06767	(18111408)	594623.00	4252188.97	0.06770	(18111408)
594623.00	4252238.97	0.06757	(18111408)	594623.00	4252288.97	0.06700	(18111408)
594623.00	4252338.97	0.06546	(18111408)	594623.00	4252388.97	0.06424	(19092207)
594623.00	4252438.97	0.06216	(19092207)	594698.93			

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4252431.49        0.06252  (19092207)
       594748.93   4252431.49        0.06153  (19092207)                594798.93
4252431.49        0.06359  (18122002)
       594848.93   4252431.49        0.06679  (18122002)                594898.93
4252431.49        0.07046  (18010704)
       594948.93   4252431.49        0.07503  (18010704)                594998.93
4252431.49        0.08093  (19011924)
       595048.93   4252431.49        0.09052  (19011924)                595098.93
4252431.49        0.09774  (19011924)
       595148.93   4252431.49        0.10404  (17022603)                595198.93
4252431.49        0.11187  (20021218)
       595248.93   4252431.49        0.12294  (20122009)                595298.93
4252431.49        0.15412  (20122009)
       595348.93   4252431.49        0.16615  (20122009)                595398.93
4252431.49        0.15922  (17022401)
       595448.93   4252431.49        0.17111  (17011219)                595498.93
4252431.49        0.18406  (17020220)
       595548.93   4252431.49        0.19631  (19121407)                595598.93
4252431.49        0.20860  (20012507)
       595648.93   4252431.49        0.22814  (17122306)                595698.93
4252431.49        0.23445  (19012621)
       595748.93   4252431.49        0.24152  (18011623)                595798.93
4252431.49        0.23349  (17122618)
       595848.93   4252431.49        0.23447  (20122420)                595898.93
4252431.49        0.21569  (17052206)
       595948.93   4252431.49        0.19248  (21120304)                595998.93
4252431.49        0.16917  (18120905)
       596048.93   4252431.49        0.15143  (18010204)                596098.93
4252431.49        0.13601  (17022408)
       596148.93   4252431.49        0.12112  (20020204)                596198.93
4252431.49        0.11296  (21021408)
       596248.93   4252431.49        0.10342  (21021408)                596298.93
4252431.49        0.10790  (17122709)
       596348.93   4252431.49        0.10493  (17122709)                596398.93
4252431.49        0.10748  (19011009)
       596448.93   4252431.49        0.11515  (19011009)                596498.93
4252431.49        0.11516  (19011009)
       596548.93   4252431.49        0.11060  (19011009)                596598.93
4252431.49        0.10403  (19011009)
       596648.93   4250511.49        0.06786  (20022608)                596648.93
4250551.49        0.06786  (20022608)
       596648.93   4250591.49        0.06779  (20022608)                596648.93
4250631.49        0.06764  (20022608)
       596648.93   4250671.49        0.06733  (20022608)                596648.93
4250711.49        0.06758  (20022608)
       596648.93   4250751.49        0.06712  (20022608)                596648.93
4250791.49        0.06642  (20022608)
       596648.93   4250831.49        0.06520  (20022608)                596648.93
4250871.49        0.06502  (20012509)
       596648.93   4250911.49        0.06507  (20012509)                596648.93
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*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
596648.93	4251231.49	0.06468	(21011617)	596648.93	4251271.49	0.06459	(21011617)
596648.93	4251311.49	0.06440	(21011617)	596648.93	4251351.49	0.06407	(21011617)
596648.93	4251391.49	0.06331	(21011617)	596648.93	4251431.49	0.06185	(21011617)
596648.93	4251471.49	0.05935	(21011617)	596648.93	4251511.49	0.05564	(21011617)
596648.93	4251551.49	0.05473	(19022308)	596648.93	4251591.49	0.05470	(19022308)
596648.93	4251631.49	0.05467	(19022308)	596648.93	4251671.49	0.05469	(19022308)
596648.93	4251711.49	0.05803	(18011709)	596648.93	4251751.49	0.06526	(18011709)
596648.93	4251791.49	0.06944	(18011709)	596648.93	4251831.49	0.07149	(18011709)
596648.93	4251871.49	0.07540	(19011009)	596648.93	4251911.49	0.08132	(19011009)
596648.93	4251951.49	0.08472	(19011009)	596648.93	4251991.49	0.08654	(19011009)
596648.93	4252031.49	0.08738	(19011009)	596648.93			

4252071.49 0.08779 (19011009)
596648.93 4252111.49 0.08790 (19011009) 596648.93
4252151.49 0.08792 (19011009)
596648.93 4252191.49 0.08792 (19011009) 596648.93
4252231.49 0.08802 (19011009)
596648.93 4252271.49 0.08832 (19011009) 596648.93
4252311.49 0.08915 (19011009)
596648.93 4252351.49 0.09090 (19011009) 596648.93
4252391.49 0.09369 (19011009)
596648.93 4252431.49 0.09732 (19011009) 594613.98
4250434.11 0.06495 (18122016)
594663.98 4250434.11 0.06591 (18122016) 594713.98
4250434.11 0.06737 (18122016)
594763.98 4250434.11 0.06975 (21120108) 594813.98
4250434.11 0.07282 (20020708)
594863.98 4250434.11 0.07760 (18011024) 594913.98
4250434.11 0.08127 (18011024)
594963.98 4250434.11 0.08476 (20121606) 595013.98
4250434.11 0.08867 (20121606)
595063.98 4250434.11 0.10493 (20122109) 595113.98
4250434.11 0.12082 (20122109)
595163.98 4250434.11 0.13106 (20122109) 595213.98
4250434.11 0.13539 (20122109)
595263.98 4250434.11 0.13023 (20122109) 595313.98
4250434.11 0.13556 (21120308)
595363.98 4250434.11 0.14939 (20091307) 595413.98
4250434.11 0.15444 (20121309)
595463.98 4250434.11 0.20813 (20121309) 595513.98
4250434.11 0.21639 (20121309)
595563.98 4250434.11 0.20261 (17103108) 595613.98
4250434.11 0.21278 (17103108)
595663.98 4250434.11 0.25744 (20022808) 595713.98
4250434.11 0.24882 (20022808)
595763.98 4250434.11 0.18254 (20022808) 595813.98
4250434.11 0.17136 (18121517)
595863.98 4250434.11 0.15753 (21120908) 595913.98
4250434.11 0.15153 (20091107)
595963.98 4250434.11 0.13274 (21120201) 596013.98
4250434.11 0.12264 (17012919)
596063.98 4250434.11 0.11193 (20020508) 596113.98
4250434.11 0.10314 (21120203)
596163.98 4250434.11 0.10037 (20010707) 596213.98
4250434.11 0.10412 (19011809)
596263.98 4250434.11 0.10155 (19011809) 596313.98
4250434.11 0.09656 (19011809)
596363.98 4250434.11 0.09141 (19011809) 596413.98
4250434.11 0.08526 (19011809)
596463.98 4250434.11 0.07785 (19011809) 596513.98
4250434.11 0.06914 (19011809)
596563.98 4250434.11 0.06671 (20022608) 596613.98

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
595997.64	4250986.01	0.14640	(19011809)	595997.64	4251006.01	0.14593	(19011809)
595997.64	4251026.01	0.14532	(19011809)	596017.64	4250946.01	0.14137	(19011809)
596017.64	4250966.01	0.14104	(19011809)	596017.64	4250986.01	0.14051	(19011809)
596017.64	4251006.01	0.13980	(19011809)	596017.64	4251026.01	0.13888	(19011809)
596037.64	4250946.01	0.13590	(19011809)	596037.64	4250966.01	0.13541	(19011809)
596037.64	4250986.01	0.13462	(19011809)	596037.64	4251006.01	0.13361	(19011809)
596037.64	4251026.01	0.13231	(19011809)	596057.64	4250946.01	0.13041	(19011809)
596057.64	4250966.01	0.12955	(19011809)	596057.64	4250986.01	0.12842	(19011809)
596057.64	4251006.01	0.12717	(19011809)	596057.64	4251026.01	0.12547	(19011809)
596077.64	4250946.01	0.12498	(19011809)	596077.64			

```
4250966.01        0.12372  (19011809)
       596077.64   4250986.01        0.12216  (19011809)                596077.64
4251006.01        0.12037  (19011809)
       596077.64   4251026.01        0.11859  (20022608)                596097.64
4250946.01        0.11936  (19011809)
       596097.64   4250966.01        0.11768  (19011809)                596097.64
4250986.01        0.11565  (19011809)
       596097.64   4251006.01        0.11492  (20022608)                596097.64
4251026.01        0.11498  (20022608)
       596117.64   4250946.01        0.11342  (19011809)                596117.64
4250966.01        0.11187  (20022608)
       596117.64   4250986.01        0.11180  (20022608)                596117.64
4251006.01        0.11174  (20022608)
       596117.64   4251026.01        0.11170  (20022608)                596336.95
4252250.50        0.13029  (19011009)
       596356.95   4252270.50        0.12878  (19011009)                596356.95
4252290.50        0.13174  (19011009)
       596356.95   4252310.50        0.13377  (19011009)                596356.95
4252330.50        0.13416  (19011009)
       596356.95   4252350.50        0.13230  (19011009)                596356.95
4252370.50        0.12761  (19011009)
       596356.95   4252390.50        0.11962  (19011009)                596376.95
4252270.50        0.12419  (19011009)
       596376.95   4252290.50        0.12731  (19011009)                596376.95
4252310.50        0.12983  (19011009)
       596376.95   4252330.50        0.13119  (19011009)                596376.95
4252350.50        0.13081  (19011009)
       596376.95   4252370.50        0.12806  (19011009)                596376.95
4252390.50        0.12240  (19011009)
       596396.95   4252270.50        0.11985  (19011009)                596396.95
4252290.50        0.12295  (19011009)
       596396.95   4252310.50        0.12573  (19011009)                596396.95
4252330.50        0.12774  (19011009)
       596396.95   4252350.50        0.12846  (19011009)                596396.95
4252370.50        0.12730  (19011009)
       596396.95   4252390.50        0.12365  (19011009)                596396.95
4252410.50        0.11710  (19011009)
       596416.95   4252270.50        0.11574  (19011009)                596416.95
4252290.50        0.11871  (19011009)
       596416.95   4252310.50        0.12160  (19011009)                596416.95
4252330.50        0.12403  (19011009)
       596416.95   4252350.50        0.12554  (19011009)                596416.95
4252370.50        0.12559  (19011009)
       596416.95   4252390.50        0.12361  (19011009)                596416.95
4252410.50        0.11911  (19011009)
       596436.95   4252270.50        0.11194  (19011009)                596436.95
4252290.50        0.11470  (19011009)
       596436.95   4252310.50        0.11756  (19011009)                596436.95
4252330.50        0.12020  (19011009)
       596436.95   4252350.50        0.12224  (19011009)                596436.95
```

4252370.50   0.12320 (19011009)
596436.95   4252390.50   0.12255 (19011009)   596436.95
4252410.50   0.11979 (19011009)
596456.95   4252270.50   0.10845 (19011009)   596456.95
4252290.50   0.11097 (19011009)
596456.95   4252310.50   0.11368 (19011009)   596456.95
4252330.50   0.11637 (19011009)
596456.95   4252350.50   0.11872 (19011009)   596456.95
4252370.50   0.12035 (19011009)
596456.95   4252390.50   0.12073 (19011009)   596456.95
4252410.50   0.11938 (19011009)
↑ *** AERMOD - VERSION 22112 ***   *** C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road Const ***   07/28/23
*** AERMET - VERSION 21112 ***   ***
***   12:13:31

PAGE 25
*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   CONSTRUCTION,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)
- -
596476.95   4252270.50   0.10531 (19011009)   596476.95
4252290.50   0.10753 (19011009)
596476.95   4252310.50   0.11003 (19011009)   596476.95
4252330.50   0.11265 (19011009)
596476.95   4252350.50   0.11514 (19011009)   596476.95
4252370.50   0.11718 (19011009)
596476.95   4252390.50   0.11833 (19011009)   596476.95
4252410.50   0.11812 (19011009)
596496.95   4252330.50   0.10912 (19011009)   596496.95
4252350.50   0.11161 (19011009)
596496.95   4252370.50   0.11388 (19011009)   596496.95
4252390.50   0.11554 (19011009)
596496.95   4252410.50   0.11618 (19011009)   594781.55
4251521.04   0.06674 (17022308)
594781.55   4251541.04   0.06707 (20091007)   594781.55
4251561.04   0.06848 (20091007)
594781.55   4251581.04   0.06944 (20091007)   594781.55

```
 4251601.04        0.07007  (20091007)
       594801.55   4251521.04        0.06779  (17022308)                594801.55
 4251541.04        0.06895  (20091007)
       594801.55   4251561.04        0.07015  (20091007)                594801.55
 4251581.04        0.07095  (20091007)
       594801.55   4251601.04        0.07146  (20091007)                594821.55
 4251521.04        0.06933  (20091007)
       594821.55   4251541.04        0.07079  (20091007)                594821.55
 4251561.04        0.07178  (20091007)
       594821.55   4251581.04        0.07244  (20091007)                594841.55
 4251561.04        0.07341  (20091007)
       594841.55   4251581.04        0.07393  (20091007)

 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        12:13:31

                                  PAGE  26
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                                  *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***


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


                         NETWORK
GROUP ID                       AVERAGE CONC                RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

ALL       1ST HIGHEST VALUE IS       0.01271 AT (  595598.19,  4250990.06,
22.86,    22.86,    0.00)  DC
          2ND HIGHEST VALUE IS       0.01205 AT (  595578.19,  4250990.06,
22.86,    22.86,    0.00)  DC
          3RD HIGHEST VALUE IS       0.01101 AT (  595558.19,  4250990.06,
22.86,    22.86,    0.00)  DC
          4TH HIGHEST VALUE IS       0.01081 AT (  595598.19,  4250970.06,
22.86,    22.86,    0.00)  DC
          5TH HIGHEST VALUE IS       0.01026 AT (  595578.19,  4250970.06,
22.86,    22.86,    0.00)  DC
          6TH HIGHEST VALUE IS       0.00946 AT (  595558.19,  4250970.06,
22.86,    22.86,    0.00)  DC
          7TH HIGHEST VALUE IS       0.00939 AT (  595598.19,  4250950.06,
22.86,    22.86,    0.00)  DC
          8TH HIGHEST VALUE IS       0.00894 AT (  595578.19,  4250950.06,
```

```
22.86,    22.86,    0.00)  DC
          9TH HIGHEST VALUE IS       0.00830 AT (  595558.19,  4250950.06,
22.86,    22.86,    0.00)  DC
         10TH HIGHEST VALUE IS       0.00828 AT (  595598.19,  4250930.06,
22.86,    22.86,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                        ***        12:13:31

                                   PAGE  27
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

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


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

                                                              DATE
                                              NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.54705  ON 20022808: AT (  595598.19,
4250990.06,    22.86,    22.86,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                        ***        12:13:31

                                   PAGE  28
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

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

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

A Total of            0 Fatal Error Message(s)
A Total of            2 Warning Message(s)
A Total of         1381 Informational Message(s)

A Total of        43824 Hours Were Processed

A Total of          493 Calm Hours Identified

A Total of          888 Missing Hours Identified (  2.03 Percent)


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


   ********   WARNING MESSAGES   ********
ME W186      65       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
ME W187      65       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

AERMOD Output Files – Operation (unmitigated)

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.0.0
** Lakes Environmental Software Inc.
** Date: 7/28/2023
** File: C:\Users\kheck\Desktop\Projects\Weber
Road\Weber_HRA_operational\Weber_HRA_operational.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road Const
   MODELOPT CONC FLAT ELEV
   AVERTIME 1 ANNUAL
   POLLUTID PM_10
   FLAGPOLE 1.50
   RUNORNOT RUN
   ERRORFIL Weber_HRA_operational.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION #1           AREAPOLY   595817.556  4252109.225       22.890
** DESCRSRC Operational Equipment Use
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 7.72E-06
** Vertical Dimension = 7.77
** SZINIT = 3.61
** Nodes = 2
** 595728.254, 4251043.429, 22.54, 3.88, 3.95
```

```
** 594944.447, 4251037.948, 23.74, 3.88, 3.95
** ----------------------------------------------------------------
   LOCATION L0000001     VOLUME   595724.004 4251043.400 22.56
   LOCATION L0000002     VOLUME   595715.504 4251043.340 22.56
   LOCATION L0000003     VOLUME   595707.004 4251043.281 22.56
   LOCATION L0000004     VOLUME   595698.505 4251043.221 22.56
   LOCATION L0000005     VOLUME   595690.005 4251043.162 22.56
   LOCATION L0000006     VOLUME   595681.505 4251043.102 22.56
   LOCATION L0000007     VOLUME   595673.005 4251043.043 22.56
   LOCATION L0000008     VOLUME   595664.506 4251042.984 22.65
   LOCATION L0000009     VOLUME   595656.006 4251042.924 22.73
   LOCATION L0000010     VOLUME   595647.506 4251042.865 22.82
   LOCATION L0000011     VOLUME   595639.006 4251042.805 22.86
   LOCATION L0000012     VOLUME   595630.506 4251042.746 22.86
   LOCATION L0000013     VOLUME   595622.007 4251042.686 22.86
   LOCATION L0000014     VOLUME   595613.507 4251042.627 22.86
   LOCATION L0000015     VOLUME   595605.007 4251042.567 22.86
   LOCATION L0000016     VOLUME   595596.507 4251042.508 22.86
   LOCATION L0000017     VOLUME   595588.007 4251042.449 22.86
   LOCATION L0000018     VOLUME   595579.508 4251042.389 22.86
   LOCATION L0000019     VOLUME   595571.008 4251042.330 22.86
   LOCATION L0000020     VOLUME   595562.508 4251042.270 22.86
   LOCATION L0000021     VOLUME   595554.008 4251042.211 22.86
   LOCATION L0000022     VOLUME   595545.508 4251042.151 22.86
   LOCATION L0000023     VOLUME   595537.009 4251042.092 22.86
   LOCATION L0000024     VOLUME   595528.509 4251042.033 22.86
   LOCATION L0000025     VOLUME   595520.009 4251041.973 22.86
   LOCATION L0000026     VOLUME   595511.509 4251041.914 22.86
   LOCATION L0000027     VOLUME   595503.009 4251041.854 22.86
   LOCATION L0000028     VOLUME   595494.510 4251041.795 22.86
   LOCATION L0000029     VOLUME   595486.010 4251041.735 22.86
   LOCATION L0000030     VOLUME   595477.510 4251041.676 22.86
   LOCATION L0000031     VOLUME   595469.010 4251041.616 22.86
   LOCATION L0000032     VOLUME   595460.511 4251041.557 22.86
   LOCATION L0000033     VOLUME   595452.011 4251041.498 22.86
   LOCATION L0000034     VOLUME   595443.511 4251041.438 22.86
   LOCATION L0000035     VOLUME   595435.011 4251041.379 22.86
   LOCATION L0000036     VOLUME   595426.511 4251041.319 22.86
   LOCATION L0000037     VOLUME   595418.012 4251041.260 22.86
   LOCATION L0000038     VOLUME   595409.512 4251041.200 22.86
   LOCATION L0000039     VOLUME   595401.012 4251041.141 22.86
   LOCATION L0000040     VOLUME   595392.512 4251041.082 22.86
   LOCATION L0000041     VOLUME   595384.012 4251041.022 22.86
   LOCATION L0000042     VOLUME   595375.513 4251040.963 22.86
   LOCATION L0000043     VOLUME   595367.013 4251040.903 22.92
   LOCATION L0000044     VOLUME   595358.513 4251040.844 22.99
   LOCATION L0000045     VOLUME   595350.013 4251040.784 23.06
   LOCATION L0000046     VOLUME   595341.513 4251040.725 23.12
   LOCATION L0000047     VOLUME   595333.014 4251040.665 23.13
   LOCATION L0000048     VOLUME   595324.514 4251040.606 23.15
```

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   LOCATION L0000049     VOLUME   595316.014 4251040.547 23.16
   LOCATION L0000050     VOLUME   595307.514 4251040.487 23.16
   LOCATION L0000051     VOLUME   595299.014 4251040.428 23.16
   LOCATION L0000052     VOLUME   595290.515 4251040.368 23.16
   LOCATION L0000053     VOLUME   595282.015 4251040.309 23.16
   LOCATION L0000054     VOLUME   595273.515 4251040.249 23.16
   LOCATION L0000055     VOLUME   595265.015 4251040.190 23.16
   LOCATION L0000056     VOLUME   595256.515 4251040.130 23.16
   LOCATION L0000057     VOLUME   595248.016 4251040.071 23.16
   LOCATION L0000058     VOLUME   595239.516 4251040.012 23.16
   LOCATION L0000059     VOLUME   595231.016 4251039.952 23.16
   LOCATION L0000060     VOLUME   595222.516 4251039.893 23.17
   LOCATION L0000061     VOLUME   595214.017 4251039.833 23.25
   LOCATION L0000062     VOLUME   595205.517 4251039.774 23.32
   LOCATION L0000063     VOLUME   595197.017 4251039.714 23.38
   LOCATION L0000064     VOLUME   595188.517 4251039.655 23.42
   LOCATION L0000065     VOLUME   595180.017 4251039.596 23.44
   LOCATION L0000066     VOLUME   595171.518 4251039.536 23.45
   LOCATION L0000067     VOLUME   595163.018 4251039.477 23.47
   LOCATION L0000068     VOLUME   595154.518 4251039.417 23.47
   LOCATION L0000069     VOLUME   595146.018 4251039.358 23.47
   LOCATION L0000070     VOLUME   595137.518 4251039.298 23.47
   LOCATION L0000071     VOLUME   595129.019 4251039.239 23.47
   LOCATION L0000072     VOLUME   595120.519 4251039.179 23.47
   LOCATION L0000073     VOLUME   595112.019 4251039.120 23.47
   LOCATION L0000074     VOLUME   595103.519 4251039.061 23.47
   LOCATION L0000075     VOLUME   595095.019 4251039.001 23.47
   LOCATION L0000076     VOLUME   595086.520 4251038.942 23.47
   LOCATION L0000077     VOLUME   595078.020 4251038.882 23.47
   LOCATION L0000078     VOLUME   595069.520 4251038.823 23.47
   LOCATION L0000079     VOLUME   595061.020 4251038.763 23.47
   LOCATION L0000080     VOLUME   595052.520 4251038.704 23.47
   LOCATION L0000081     VOLUME   595044.021 4251038.645 23.47
   LOCATION L0000082     VOLUME   595035.521 4251038.585 23.53
   LOCATION L0000083     VOLUME   595027.021 4251038.526 23.60
   LOCATION L0000084     VOLUME   595018.521 4251038.466 23.67
   LOCATION L0000085     VOLUME   595010.022 4251038.407 23.70
   LOCATION L0000086     VOLUME   595001.522 4251038.347 23.70
   LOCATION L0000087     VOLUME   594993.022 4251038.288 23.70
   LOCATION L0000088     VOLUME   594984.522 4251038.228 23.70
   LOCATION L0000089     VOLUME   594976.022 4251038.169 23.70
   LOCATION L0000090     VOLUME   594967.523 4251038.110 23.70
   LOCATION L0000091     VOLUME   594959.023 4251038.050 23.70
   LOCATION L0000092     VOLUME   594950.523 4251037.991 23.71
** End of LINE VOLUME Source ID = SLINE1
** Source Parameters **
   SRCPARAM #1           1.3055E-08     1.300         5
   AREAVERT #1           595817.556 4252109.225 595713.631 4251733.856
   AREAVERT #1           595727.591 4251054.470 595539.907 4251051.368
   AREAVERT #1           595524.396 4251819.167
```

```
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000002     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000003     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000004     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000005     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000006     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000007     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000008     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000009     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000010     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000011     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000012     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000013     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000014     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000015     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000016     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000017     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000018     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000019     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000020     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000021     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000022     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000023     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000024     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000025     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000026     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000027     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000028     0.00000008391      3.88      3.95      3.61
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   SRCPARAM L0000091     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000092     0.00000008391      3.88      3.95      3.61
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** AERMOD Receptor Pathway
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RE FINISHED
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   UAIRDATA 23230 2017 OAKLAND/WSO_AP
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** AERMOD Output Pathway
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   RECTABLE 1 1ST
** Auto-Generated Plotfiles
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   PLOTFILE ANNUAL ALL WEBER_HRA_OPERATIONAL.AD\AN00GALL.PLT 32
   SUMMFILE Weber_HRA_operational.sum
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** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
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** AERMOD View Ver. 10.0.0
** Lakes Environmental Software Inc.
** Date: 7/28/2023
** File: C:\Users\kheck\Desktop\Projects\Weber
Road\Weber_HRA_operational\Weber_HRA_operational.ADI
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** AERMOD Control Pathway
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   AVERTIME 1 ANNUAL
   POLLUTID PM_10
   FLAGPOLE 1.50
   RUNORNOT RUN
   ERRORFIL Weber_HRA_operational.err
CO FINISHED
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** AERMOD Source Pathway
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** Source ID - Type - X Coord. - Y Coord. **
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** DESCRSRC Operational Equipment Use
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 7.72E-06
** Vertical Dimension = 7.77
** SZINIT = 3.61
** Nodes = 2
** 595728.254, 4251043.429, 22.54, 3.88, 3.95
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   LOCATION L0000005     VOLUME   595690.005 4251043.162 22.56
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   LOCATION L0000008     VOLUME   595664.506 4251042.984 22.65
   LOCATION L0000009     VOLUME   595656.006 4251042.924 22.73
   LOCATION L0000010     VOLUME   595647.506 4251042.865 22.82
   LOCATION L0000011     VOLUME   595639.006 4251042.805 22.86
   LOCATION L0000012     VOLUME   595630.506 4251042.746 22.86
   LOCATION L0000013     VOLUME   595622.007 4251042.686 22.86
   LOCATION L0000014     VOLUME   595613.507 4251042.627 22.86
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   LOCATION L0000045     VOLUME   595350.013 4251040.784 23.06
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   LOCATION L0000048     VOLUME   595324.514 4251040.606 23.15
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   LOCATION L0000055     VOLUME   595265.015 4251040.190 23.16
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   LOCATION L0000064     VOLUME   595188.517 4251039.655 23.42
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   LOCATION L0000074     VOLUME   595103.519 4251039.061 23.47
   LOCATION L0000075     VOLUME   595095.019 4251039.001 23.47
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   LOCATION L0000082     VOLUME   595035.521 4251038.585 23.53
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   LOCATION L0000089     VOLUME   594976.022 4251038.169 23.70
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   LOCATION L0000092     VOLUME   594950.523 4251037.991 23.71
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** Source Parameters **
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   AREAVERT #1           595727.591 4251054.470 595539.907 4251051.368
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** AERMOD Receptor Pathway
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RE FINISHED
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** AERMOD Meteorology Pathway
**************************************
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   PROFFILE KVCB_724828_93241\724828_2017-2021_AdjU.pfl
   SURFDATA 93241 2017
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   PROFBASE 33.2 METERS
ME FINISHED
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** AERMOD Output Pathway
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   PLOTFILE 1 ALL 1ST WEBER_HRA_OPERATIONAL.AD\01H1GALL.PLT 31
   PLOTFILE ANNUAL ALL WEBER_HRA_OPERATIONAL.AD\AN00GALL.PLT 32
   SUMMFILE Weber_HRA_operational.sum
OU FINISHED


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

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

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


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


    ********   WARNING MESSAGES   ********
 ME W186     267       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
```

```
 ME W187     267       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


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

 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                         ***       13:06:47

                                   PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

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

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses RURAL Dispersion Only.

 **Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Allow FLAT/ELEV Terrain Option by Source,
           with      0 FLAT and     93 ELEV Source(s).
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.

 **Other Options Specified:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Accepts FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_10

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

```
 **This Run Includes:     93 Source(s);       1 Source Group(s); and     278
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:     92 VOLUME source(s)
                 and:      1 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)


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

 **The AERMET Input Meteorological Data Version Date:  21112

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

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

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    33.20 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Weber_HRA_operational.err

 **File for Summary of Results:   Weber_HRA_operational.sum

 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
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 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.83910E-07	595724.0	4251043.4	22.6	3.88	3.95	3.61	NO	
L0000002	0	0.83910E-07	595715.5	4251043.3	22.6	3.88	3.95	3.61	NO	
L0000003	0	0.83910E-07	595707.0	4251043.3	22.6	3.88	3.95	3.61	NO	
L0000004	0	0.83910E-07	595698.5	4251043.2	22.6	3.88	3.95	3.61	NO	
L0000005	0	0.83910E-07	595690.0	4251043.2	22.6	3.88	3.95	3.61	NO	
L0000006	0	0.83910E-07	595681.5	4251043.1	22.6	3.88	3.95	3.61	NO	
L0000007	0	0.83910E-07	595673.0	4251043.0	22.6	3.88	3.95	3.61	NO	
L0000008	0	0.83910E-07	595664.5	4251043.0	22.7	3.88	3.95	3.61	NO	
L0000009	0	0.83910E-07	595656.0	4251042.9	22.7	3.88	3.95	3.61	NO	
L0000010	0	0.83910E-07	595647.5	4251042.9	22.8	3.88	3.95	3.61	NO	
L0000011	0	0.83910E-07	595639.0	4251042.8	22.9	3.88	3.95	3.61	NO	
L0000012	0	0.83910E-07	595630.5	4251042.7	22.9	3.88	3.95	3.61	NO	
L0000013	0	0.83910E-07	595622.0	4251042.7	22.9	3.88	3.95	3.61	NO	
L0000014	0	0.83910E-07	595613.5	4251042.6	22.9	3.88	3.95	3.61	NO	
L0000015	0	0.83910E-07	595605.0	4251042.6	22.9	3.88	3.95	3.61	NO	
L0000016	0	0.83910E-07	595596.5	4251042.5	22.9	3.88	3.95			

```
3.61     NO
 L0000017         0   0.83910E-07  595588.0 4251042.4    22.9     3.88     3.95
3.61     NO
 L0000018         0   0.83910E-07  595579.5 4251042.4    22.9     3.88     3.95
3.61     NO
 L0000019         0   0.83910E-07  595571.0 4251042.3    22.9     3.88     3.95
3.61     NO
 L0000020         0   0.83910E-07  595562.5 4251042.3    22.9     3.88     3.95
3.61     NO
 L0000021         0   0.83910E-07  595554.0 4251042.2    22.9     3.88     3.95
3.61     NO
 L0000022         0   0.83910E-07  595545.5 4251042.2    22.9     3.88     3.95
3.61     NO
 L0000023         0   0.83910E-07  595537.0 4251042.1    22.9     3.88     3.95
3.61     NO
 L0000024         0   0.83910E-07  595528.5 4251042.0    22.9     3.88     3.95
3.61     NO
 L0000025         0   0.83910E-07  595520.0 4251042.0    22.9     3.88     3.95
3.61     NO
 L0000026         0   0.83910E-07  595511.5 4251041.9    22.9     3.88     3.95
3.61     NO
 L0000027         0   0.83910E-07  595503.0 4251041.9    22.9     3.88     3.95
3.61     NO
 L0000028         0   0.83910E-07  595494.5 4251041.8    22.9     3.88     3.95
3.61     NO
 L0000029         0   0.83910E-07  595486.0 4251041.7    22.9     3.88     3.95
3.61     NO
 L0000030         0   0.83910E-07  595477.5 4251041.7    22.9     3.88     3.95
3.61     NO
 L0000031         0   0.83910E-07  595469.0 4251041.6    22.9     3.88     3.95
3.61     NO
 L0000032         0   0.83910E-07  595460.5 4251041.6    22.9     3.88     3.95
3.61     NO
 L0000033         0   0.83910E-07  595452.0 4251041.5    22.9     3.88     3.95
3.61     NO
 L0000034         0   0.83910E-07  595443.5 4251041.4    22.9     3.88     3.95
3.61     NO
 L0000035         0   0.83910E-07  595435.0 4251041.4    22.9     3.88     3.95
3.61     NO
 L0000036         0   0.83910E-07  595426.5 4251041.3    22.9     3.88     3.95
3.61     NO
 L0000037         0   0.83910E-07  595418.0 4251041.3    22.9     3.88     3.95
3.61     NO
 L0000038         0   0.83910E-07  595409.5 4251041.2    22.9     3.88     3.95
3.61     NO
 L0000039         0   0.83910E-07  595401.0 4251041.1    22.9     3.88     3.95
3.61     NO
 L0000040         0   0.83910E-07  595392.5 4251041.1    22.9     3.88     3.95
3.61     NO
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
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 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000041	0	0.83910E-07	595384.0	4251041.0	22.9	3.88	3.95	3.61	NO
L0000042	0	0.83910E-07	595375.5	4251041.0	22.9	3.88	3.95	3.61	NO
L0000043	0	0.83910E-07	595367.0	4251040.9	22.9	3.88	3.95	3.61	NO
L0000044	0	0.83910E-07	595358.5	4251040.8	23.0	3.88	3.95	3.61	NO
L0000045	0	0.83910E-07	595350.0	4251040.8	23.1	3.88	3.95	3.61	NO
L0000046	0	0.83910E-07	595341.5	4251040.7	23.1	3.88	3.95	3.61	NO
L0000047	0	0.83910E-07	595333.0	4251040.7	23.1	3.88	3.95	3.61	NO
L0000048	0	0.83910E-07	595324.5	4251040.6	23.2	3.88	3.95	3.61	NO
L0000049	0	0.83910E-07	595316.0	4251040.5	23.2	3.88	3.95	3.61	NO
L0000050	0	0.83910E-07	595307.5	4251040.5	23.2	3.88	3.95	3.61	NO
L0000051	0	0.83910E-07	595299.0	4251040.4	23.2	3.88	3.95	3.61	NO
L0000052	0	0.83910E-07	595290.5	4251040.4	23.2	3.88	3.95	3.61	NO
L0000053	0	0.83910E-07	595282.0	4251040.3	23.2	3.88	3.95	3.61	NO
L0000054	0	0.83910E-07	595273.5	4251040.2	23.2	3.88	3.95	3.61	NO
L0000055	0	0.83910E-07	595265.0	4251040.2	23.2	3.88	3.95	3.61	NO
L0000056	0	0.83910E-07	595256.5	4251040.1	23.2	3.88	3.95		

```
3.61     NO
 L0000057         0   0.83910E-07  595248.0 4251040.1    23.2     3.88     3.95
3.61     NO
 L0000058         0   0.83910E-07  595239.5 4251040.0    23.2     3.88     3.95
3.61     NO
 L0000059         0   0.83910E-07  595231.0 4251040.0    23.2     3.88     3.95
3.61     NO
 L0000060         0   0.83910E-07  595222.5 4251039.9    23.2     3.88     3.95
3.61     NO
 L0000061         0   0.83910E-07  595214.0 4251039.8    23.2     3.88     3.95
3.61     NO
 L0000062         0   0.83910E-07  595205.5 4251039.8    23.3     3.88     3.95
3.61     NO
 L0000063         0   0.83910E-07  595197.0 4251039.7    23.4     3.88     3.95
3.61     NO
 L0000064         0   0.83910E-07  595188.5 4251039.7    23.4     3.88     3.95
3.61     NO
 L0000065         0   0.83910E-07  595180.0 4251039.6    23.4     3.88     3.95
3.61     NO
 L0000066         0   0.83910E-07  595171.5 4251039.5    23.4     3.88     3.95
3.61     NO
 L0000067         0   0.83910E-07  595163.0 4251039.5    23.5     3.88     3.95
3.61     NO
 L0000068         0   0.83910E-07  595154.5 4251039.4    23.5     3.88     3.95
3.61     NO
 L0000069         0   0.83910E-07  595146.0 4251039.4    23.5     3.88     3.95
3.61     NO
 L0000070         0   0.83910E-07  595137.5 4251039.3    23.5     3.88     3.95
3.61     NO
 L0000071         0   0.83910E-07  595129.0 4251039.2    23.5     3.88     3.95
3.61     NO
 L0000072         0   0.83910E-07  595120.5 4251039.2    23.5     3.88     3.95
3.61     NO
 L0000073         0   0.83910E-07  595112.0 4251039.1    23.5     3.88     3.95
3.61     NO
 L0000074         0   0.83910E-07  595103.5 4251039.1    23.5     3.88     3.95
3.61     NO
 L0000075         0   0.83910E-07  595095.0 4251039.0    23.5     3.88     3.95
3.61     NO
 L0000076         0   0.83910E-07  595086.5 4251038.9    23.5     3.88     3.95
3.61     NO
 L0000077         0   0.83910E-07  595078.0 4251038.9    23.5     3.88     3.95
3.61     NO
 L0000078         0   0.83910E-07  595069.5 4251038.8    23.5     3.88     3.95
3.61     NO
 L0000079         0   0.83910E-07  595061.0 4251038.8    23.5     3.88     3.95
3.61     NO
 L0000080         0   0.83910E-07  595052.5 4251038.7    23.5     3.88     3.95
3.61     NO
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000081	0	0.83910E-07	595044.0	4251038.6	23.5	3.88	3.95	3.61	NO
L0000082	0	0.83910E-07	595035.5	4251038.6	23.5	3.88	3.95	3.61	NO
L0000083	0	0.83910E-07	595027.0	4251038.5	23.6	3.88	3.95	3.61	NO
L0000084	0	0.83910E-07	595018.5	4251038.5	23.7	3.88	3.95	3.61	NO
L0000085	0	0.83910E-07	595010.0	4251038.4	23.7	3.88	3.95	3.61	NO
L0000086	0	0.83910E-07	595001.5	4251038.3	23.7	3.88	3.95	3.61	NO
L0000087	0	0.83910E-07	594993.0	4251038.3	23.7	3.88	3.95	3.61	NO
L0000088	0	0.83910E-07	594984.5	4251038.2	23.7	3.88	3.95	3.61	NO
L0000089	0	0.83910E-07	594976.0	4251038.2	23.7	3.88	3.95	3.61	NO
L0000090	0	0.83910E-07	594967.5	4251038.1	23.7	3.88	3.95	3.61	NO
L0000091	0	0.83910E-07	594959.0	4251038.0	23.7	3.88	3.95	3.61	NO
L0000092	0	0.83910E-07	594950.5	4251038.0	23.7	3.88	3.95	3.61	NO

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
#1	0	0.13055E-07	595817.6	4252109.2	22.9	1.30	5	0.00	NO	

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	#1 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 ,
	L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 ,
	L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 ,
	L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 ,
	L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 ,
	L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 ,
	L0000048 , L0000049 , L0000050 , L0000051 , L0000052 ,

L0000053 , L0000054 , L0000055 ,

L0000056 , L0000057 , L0000058 , L0000059 , L0000060 ,
L0000061 , L0000062 , L0000063 ,

L0000064 , L0000065 , L0000066 , L0000067 , L0000068 ,
L0000069 , L0000070 , L0000071 ,

L0000072 , L0000073 , L0000074 , L0000075 , L0000076 ,
L0000077 , L0000078 , L0000079 ,

L0000080 , L0000081 , L0000082 , L0000083 , L0000084 ,
L0000085 , L0000086 , L0000087 ,

L0000088 , L0000089 , L0000090 , L0000091 , L0000092 ,

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(595558.2, 4250870.1, 22.9, 22.9, 0.0); (595558.2, 4250890.1, 22.9, 22.9, 0.0);
(595558.2, 4250910.1, 22.9, 22.9, 0.0); (595558.2, 4250930.1, 22.9, 22.9, 0.0);
(595558.2, 4250950.1, 22.9, 22.9, 0.0); (595558.2, 4250970.1, 22.9, 22.9, 0.0);
(595558.2, 4250990.1, 22.9, 22.9, 0.0); (595578.2, 4250870.1, 22.9, 22.9, 0.0);
(595578.2, 4250890.1, 22.9, 22.9, 0.0); (595578.2, 4250910.1, 22.9, 22.9, 0.0);
(595578.2, 4250930.1, 22.9, 22.9, 0.0); (595578.2, 4250950.1, 22.9, 22.9, 0.0);
(595578.2, 4250970.1, 22.9, 22.9, 0.0); (595578.2, 4250990.1, 22.9, 22.9, 0.0);
(595598.2, 4250870.1, 22.9, 22.9, 0.0); (595598.2, 4250890.1, 22.9, 22.9, 0.0);
(595598.2, 4250910.1, 22.9, 22.9, 0.0); (595598.2, 4250930.1, 22.9, 22.9, 0.0);
(595598.2, 4250950.1, 22.9, 22.9, 0.0); (595598.2, 4250970.1, 22.9, 22.9, 0.0);
(595598.2, 4250990.1, 22.9, 22.9, 0.0); (595393.2, 4250647.5, 22.3, 22.3, 0.0);
(595393.2, 4250667.5, 21.9, 21.9, 0.0); (595393.2,

```
4250687.5,      21.4,      21.4,       0.0);
     ( 595393.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595393.2,
4250727.5,      21.5,      21.5,       0.0);
     ( 595393.2, 4250747.5,      21.8,      21.8,       0.0);         ( 595413.2,
4250627.5,      22.4,      22.4,       0.0);
     ( 595413.2, 4250647.5,      22.1,      22.1,       0.0);         ( 595413.2,
4250667.5,      21.7,      21.7,       0.0);
     ( 595413.2, 4250687.5,      21.4,      21.4,       0.0);         ( 595413.2,
4250707.5,      21.4,      21.4,       0.0);
     ( 595413.2, 4250727.5,      21.4,      21.4,       0.0);         ( 595413.2,
4250747.5,      21.6,      21.6,       0.0);
     ( 595433.2, 4250627.5,      22.2,      22.2,       0.0);         ( 595433.2,
4250647.5,      22.0,      22.0,       0.0);
     ( 595433.2, 4250667.5,      21.8,      21.8,       0.0);         ( 595433.2,
4250687.5,      21.6,      21.6,       0.0);
     ( 595433.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595433.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595453.2, 4250627.5,      22.2,      22.2,       0.0);         ( 595453.2,
4250647.5,      22.0,      22.0,       0.0);
     ( 595453.2, 4250667.5,      21.8,      21.8,       0.0);         ( 595453.2,
4250687.5,      21.6,      21.6,       0.0);
     ( 595453.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595453.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595473.2, 4250627.5,      22.1,      22.1,       0.0);         ( 595473.2,
4250647.5,      22.0,      22.0,       0.0);
     ( 595473.2, 4250667.5,      21.8,      21.8,       0.0);         ( 595473.2,
4250687.5,      21.5,      21.5,       0.0);
     ( 595473.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595473.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595493.2, 4250627.5,      21.9,      21.9,       0.0);         ( 595493.2,
4250647.5,      21.9,      21.9,       0.0);
     ( 595493.2, 4250667.5,      21.7,      21.7,       0.0);         ( 595493.2,
4250687.5,      21.3,      21.3,       0.0);
     ( 595493.2, 4250707.5,      21.3,      21.3,       0.0);         ( 595493.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595513.2, 4250627.5,      21.9,      21.9,       0.0);         ( 595513.2,
4250647.5,      21.8,      21.8,       0.0);
     ( 595513.2, 4250667.5,      21.7,      21.7,       0.0);         ( 595513.2,
4250687.5,      21.5,      21.5,       0.0);
     ( 595513.2, 4250707.5,      21.4,      21.4,       0.0);         ( 596132.2,
4250952.4,      21.6,      21.6,       0.0);
     ( 596132.2, 4250972.4,      21.6,      21.6,       0.0);         ( 596132.2,
4250992.4,      21.6,      21.6,       0.0);
     ( 596132.2, 4251012.4,      21.6,      21.6,       0.0);         ( 596152.2,
4250952.4,      21.6,      21.6,       0.0);
     ( 596152.2, 4250972.4,      21.6,      21.6,       0.0);         ( 596152.2,
4250992.4,      21.6,      21.6,       0.0);
     ( 596152.2, 4251012.4,      21.6,      21.6,       0.0);         ( 596172.2,
4250952.4,      21.6,      21.6,       0.0);
     ( 596172.2, 4250972.4,      21.6,      21.6,       0.0);         ( 596172.2,
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4250992.4,   21.6,   21.6,   0.0);
     (596172.2, 4251012.4,   21.6,   21.6,   0.0);   (596192.2,
4250952.4,   21.5,   21.5,   0.0);
     (596192.2, 4250972.4,   21.6,   21.6,   0.0);   (596192.2,
4250992.4,   21.6,   21.6,   0.0);
     (596192.2, 4251012.4,   21.6,   21.6,   0.0);   (596192.2,
4251032.4,   21.6,   21.6,   0.0);
     (596212.2, 4250952.4,   21.4,   21.4,   0.0);   (596212.2,
4250972.4,   21.5,   21.5,   0.0);
     (596212.2, 4250992.4,   21.6,   21.6,   0.0);   (596212.2,
4251012.4,   21.6,   21.6,   0.0);
     (596212.2, 4251032.4,   21.6,   21.6,   0.0);   (596232.2,
4250952.4,   21.3,   21.3,   0.0);
     (596232.2, 4250972.4,   21.5,   21.5,   0.0);   (596232.2,
4250992.4,   21.6,   21.6,   0.0);
     (596232.2, 4251012.4,   21.6,   21.6,   0.0);   (596232.2,
4251032.4,   21.6,   21.6,   0.0);

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                                    *** DISCRETE CARTESIAN RECEPTORS ***
                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                              (METERS)

     (596252.2, 4250952.4,   21.3,   21.3,   0.0);   (596252.2,
4250972.4,   21.5,   21.5,   0.0);
     (596252.2, 4250992.4,   21.6,   21.6,   0.0);   (596252.2,
4251012.4,   21.6,   21.6,   0.0);
     (596252.2, 4251032.4,   21.6,   21.6,   0.0);   (596272.2,
4250952.4,   21.3,   21.3,   0.0);
     (596272.2, 4250972.4,   21.3,   21.3,   0.0);   (596272.2,
4250992.4,   21.4,   21.4,   0.0);
     (596272.2, 4251012.4,   21.6,   21.6,   0.0);   (596272.2,
4251032.4,   21.6,   21.6,   0.0);
     (596292.2, 4250952.4,   21.3,   21.3,   0.0);   (596292.2,
4250972.4,   21.3,   21.3,   0.0);
     (596292.2, 4250992.4,   21.4,   21.4,   0.0);   (596292.2,
4251012.4,   21.4,   21.4,   0.0);
     (596292.2, 4251032.4,   21.4,   21.4,   0.0);   (596312.2,
4250952.4,   21.3,   21.3,   0.0);
     (596312.2, 4250972.4,   21.3,   21.3,   0.0);   (596312.2,
4250992.4,   21.3,   21.3,   0.0);
     (596312.2, 4251012.4,   21.3,   21.3,   0.0);   (596312.2,
4251032.4,   21.3,   21.3,   0.0);
     (596270.9, 4250797.3,   21.3,   21.3,   0.0);   (596270.9,

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4250817.3,      21.3,      21.3,       0.0);
     ( 596270.9, 4250837.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250857.3,      21.3,      21.3,       0.0);
     ( 596270.9, 4250877.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596270.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596290.9, 4250797.3,      21.2,      21.2,       0.0);         ( 596290.9,
4250817.3,      21.2,      21.2,       0.0);
     ( 596290.9, 4250837.3,      21.2,      21.2,       0.0);         ( 596290.9,
4250857.3,      21.3,      21.3,       0.0);
     ( 596290.9, 4250877.3,      21.3,      21.3,       0.0);         ( 596290.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596290.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596290.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596310.9, 4250797.3,      21.0,      21.0,       0.0);         ( 596310.9,
4250817.3,      21.0,      21.0,       0.0);
     ( 596310.9, 4250837.3,      21.1,      21.1,       0.0);         ( 596310.9,
4250857.3,      21.2,      21.2,       0.0);
     ( 596310.9, 4250877.3,      21.3,      21.3,       0.0);         ( 596310.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596310.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596310.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596330.9, 4250797.3,      21.0,      21.0,       0.0);         ( 596330.9,
4250817.3,      21.0,      21.0,       0.0);
     ( 596330.9, 4250837.3,      21.0,      21.0,       0.0);         ( 596330.9,
4250857.3,      21.1,      21.1,       0.0);
     ( 596330.9, 4250877.3,      21.2,      21.2,       0.0);         ( 596330.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596330.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596330.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596183.2, 4250665.8,      21.3,      21.3,       0.0);         ( 596183.2,
4250685.8,      21.3,      21.3,       0.0);
     ( 596183.2, 4250705.8,      21.3,      21.3,       0.0);         ( 596203.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596203.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596203.2,
4250705.8,      21.3,      21.3,       0.0);
     ( 596223.2, 4250665.8,      21.3,      21.3,       0.0);         ( 596223.2,
4250685.8,      21.3,      21.3,       0.0);
     ( 596223.2, 4250705.8,      21.3,      21.3,       0.0);         ( 596243.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596243.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596243.2,
4250705.8,      21.3,      21.3,       0.0);
     ( 596263.2, 4250665.8,      21.3,      21.3,       0.0);         ( 596263.2,
4250685.8,      21.3,      21.3,       0.0);
     ( 596263.2, 4250705.8,      21.3,      21.3,       0.0);         ( 596283.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596283.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596283.2,
4250705.8,      21.3,      21.3,       0.0);
     ( 596303.2, 4250665.8,      21.3,      21.3,       0.0);         ( 596303.2,
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4250685.8,      21.3,      21.3,       0.0);
     ( 596303.2, 4250705.8,      21.3,      21.3,       0.0);         ( 596323.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596323.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596323.2,
4250705.8,      21.3,      21.3,       0.0);
     ( 596343.2, 4250665.8,      21.2,      21.2,       0.0);         ( 596343.2,
4250685.8,      21.2,      21.2,       0.0);
     ( 596343.2, 4250705.8,      21.2,      21.2,       0.0);         ( 596363.2,
4250665.8,      21.0,      21.0,       0.0);
     ( 596363.2, 4250685.8,      21.0,      21.0,       0.0);         ( 596363.2,
4250705.8,      21.0,      21.0,       0.0);
     ( 596383.2, 4250665.8,      20.8,      20.8,       0.0);         ( 596383.2,
4250685.8,      20.8,      20.8,       0.0);
     ( 596383.2, 4250705.8,      21.0,      21.0,       0.0);         ( 596403.2,
4250665.8,      20.7,      20.7,       0.0);
     ( 596403.2, 4250685.8,      20.7,      20.7,       0.0);         ( 596403.2,
4250705.8,      20.9,      20.9,       0.0);
     ( 596423.2, 4250665.8,      20.7,      20.7,       0.0);         ( 596423.2,
4250685.8,      20.7,      20.7,       0.0);
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                        ***       13:06:47

                                  PAGE   9
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                       (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                  (METERS)

     ( 596423.2, 4250705.8,      20.7,      20.7,       0.0);         ( 596443.2,
4250665.8,      20.5,      20.5,       0.0);
     ( 596443.2, 4250685.8,      20.5,      20.5,       0.0);         ( 596443.2,
4250705.8,      20.5,      20.5,       0.0);
     ( 595977.6, 4250946.0,      21.9,      21.9,       0.0);         ( 595977.6,
4250966.0,      21.9,      21.9,       0.0);
     ( 595977.6, 4250986.0,      21.9,      21.9,       0.0);         ( 595977.6,
4251006.0,      21.9,      21.9,       0.0);
     ( 595977.6, 4251026.0,      21.9,      21.9,       0.0);         ( 595997.6,
4250946.0,      21.9,      21.9,       0.0);
     ( 595997.6, 4250966.0,      21.9,      21.9,       0.0);         ( 595997.6,
4250986.0,      21.9,      21.9,       0.0);
     ( 595997.6, 4251006.0,      21.9,      21.9,       0.0);         ( 595997.6,
4251026.0,      21.9,      21.9,       0.0);
     ( 596017.6, 4250946.0,      21.9,      21.9,       0.0);         ( 596017.6,
4250966.0,      21.9,      21.9,       0.0);
     ( 596017.6, 4250986.0,      21.9,      21.9,       0.0);         ( 596017.6,
4251006.0,      21.9,      21.9,       0.0);
     ( 596017.6, 4251026.0,      21.9,      21.9,       0.0);         ( 596037.6,
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4250946.0,      21.8,      21.8,       0.0);
     ( 596037.6, 4250966.0,      21.9,      21.9,       0.0);         ( 596037.6,
4250986.0,      21.9,      21.9,       0.0);
     ( 596037.6, 4251006.0,      21.9,      21.9,       0.0);         ( 596037.6,
4251026.0,      21.9,      21.9,       0.0);
     ( 596057.6, 4250946.0,      21.7,      21.7,       0.0);         ( 596057.6,
4250966.0,      21.7,      21.7,       0.0);
     ( 596057.6, 4250986.0,      21.7,      21.7,       0.0);         ( 596057.6,
4251006.0,      21.9,      21.9,       0.0);
     ( 596057.6, 4251026.0,      21.9,      21.9,       0.0);         ( 596077.6,
4250946.0,      21.6,      21.6,       0.0);
     ( 596077.6, 4250966.0,      21.6,      21.6,       0.0);         ( 596077.6,
4250986.0,      21.6,      21.6,       0.0);
     ( 596077.6, 4251006.0,      21.8,      21.8,       0.0);         ( 596077.6,
4251026.0,      21.9,      21.9,       0.0);
     ( 596097.6, 4250946.0,      21.6,      21.6,       0.0);         ( 596097.6,
4250966.0,      21.6,      21.6,       0.0);
     ( 596097.6, 4250986.0,      21.6,      21.6,       0.0);         ( 596097.6,
4251006.0,      21.6,      21.6,       0.0);
     ( 596097.6, 4251026.0,      21.7,      21.7,       0.0);         ( 596117.6,
4250946.0,      21.6,      21.6,       0.0);
     ( 596117.6, 4250966.0,      21.6,      21.6,       0.0);         ( 596117.6,
4250986.0,      21.6,      21.6,       0.0);
     ( 596117.6, 4251006.0,      21.6,      21.6,       0.0);         ( 596117.6,
4251026.0,      21.7,      21.7,       0.0);
     ( 596337.0, 4252250.5,      22.6,      22.6,       0.0);         ( 596357.0,
4252270.5,      22.6,      22.6,       0.0);
     ( 596357.0, 4252290.5,      22.7,      22.7,       0.0);         ( 596357.0,
4252310.5,      22.9,      22.9,       0.0);
     ( 596357.0, 4252330.5,      22.9,      22.9,       0.0);         ( 596357.0,
4252350.5,      22.9,      22.9,       0.0);
     ( 596377.0, 4252270.5,      22.7,      22.7,       0.0);         ( 596377.0,
4252290.5,      22.8,      22.8,       0.0);
     ( 596377.0, 4252310.5,      22.9,      22.9,       0.0);         ( 596377.0,
4252330.5,      22.9,      22.9,       0.0);
     ( 596377.0, 4252350.5,      22.9,      22.9,       0.0);         ( 596397.0,
4252270.5,      22.8,      22.8,       0.0);
     ( 596397.0, 4252290.5,      22.9,      22.9,       0.0);         ( 596397.0,
4252310.5,      22.9,      22.9,       0.0);
     ( 596397.0, 4252330.5,      22.9,      22.9,       0.0);         ( 596397.0,
4252350.5,      22.9,      22.9,       0.0);
     ( 596417.0, 4252270.5,      22.9,      22.9,       0.0);         ( 596417.0,
4252290.5,      22.9,      22.9,       0.0);
     ( 596417.0, 4252310.5,      22.9,      22.9,       0.0);         ( 596417.0,
4252330.5,      22.9,      22.9,       0.0);
     ( 596417.0, 4252350.5,      22.9,      22.9,       0.0);         ( 596437.0,
4252270.5,      22.8,      22.8,       0.0);
     ( 596437.0, 4252290.5,      22.9,      22.9,       0.0);         ( 596437.0,
4252310.5,      22.9,      22.9,       0.0);
     ( 596437.0, 4252330.5,      22.9,      22.9,       0.0);         ( 596437.0,
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4252350.5,   22.9,   22.9,   0.0);
     (596457.0, 4252270.5,   22.8,   22.8,   0.0);   (596457.0,
4252290.5,   22.9,   22.9,   0.0);
     (596457.0, 4252310.5,   22.9,   22.9,   0.0);   (596457.0,
4252330.5,   22.9,   22.9,   0.0);
     (596457.0, 4252350.5,   22.9,   22.9,   0.0);   (596477.0,
4252270.5,   22.8,   22.8,   0.0);
     (596477.0, 4252290.5,   22.9,   22.9,   0.0);   (596477.0,
4252310.5,   22.9,   22.9,   0.0);
     (596477.0, 4252330.5,   22.9,   22.9,   0.0);   (596477.0,
4252350.5,   22.9,   22.9,   0.0);
     (596497.0, 4252330.5,   22.9,   22.9,   0.0);   (596497.0,
4252350.5,   22.9,   22.9,   0.0);
     (594781.6, 4251521.0,   24.7,   24.7,   0.0);   (594781.6,
4251541.0,   24.7,   24.7,   0.0);
     (594781.6, 4251561.0,   24.7,   24.7,   0.0);   (594781.6,
4251581.0,   24.7,   24.7,   0.0);
     (594781.6, 4251601.0,   24.7,   24.7,   0.0);   (594801.6,
4251521.0,   24.7,   24.7,   0.0);
     (594801.6, 4251541.0,   24.7,   24.7,   0.0);   (594801.6,
4251561.0,   24.7,   24.7,   0.0);

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                       (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                    (METERS)

     (594801.6, 4251581.0,   24.7,   24.7,   0.0);   (594801.6,
4251601.0,   24.7,   24.7,   0.0);
     (594821.6, 4251521.0,   24.7,   24.7,   0.0);   (594821.6,
4251541.0,   24.7,   24.7,   0.0);
     (594821.6, 4251561.0,   24.7,   24.7,   0.0);   (594821.6,
4251581.0,   24.7,   24.7,   0.0);
     (594841.6, 4251561.0,   24.6,   24.6,   0.0);   (594841.6,
4251581.0,   24.6,   24.6,   0.0);

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                                        *** METEOROLOGICAL DAYS SELECTED FOR

PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54,   3.09,   5.14,   8.23,
10.80,

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

Surface file: KVCB_724828_93241\724828_2017-2021_AdjU.sfc
Met Version: 21112
Profile file: KVCB_724828_93241\724828_2017-2021_AdjU.pfl

Surface format: FREE

Profile format: FREE

Surface station no.:   93241   Upper air station no.:   23230

Name: UNKNOWN Name: OAKLAND/WSO_AP
Year: 2017 Year: 2017

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
17	01	01	1	01	-25.0	0.249	-9.000	-9.000	-999.	298.	68.0	0.01	0.54	1.00	4.36	201.	10.0	280.9	2.0
17	01	01	1	02	-36.6	0.365	-9.000	-9.000	-999.	530.	146.7	0.01	0.54	1.00	6.38	211.	10.0	281.4	2.0
17	01	01	1	03	-31.6	0.315	-9.000	-9.000	-999.	425.	108.8	0.01	0.54	1.00	5.53	214.	10.0	280.9	2.0
17	01	01	1	04	-17.5	0.172	-9.000	-9.000	-999.	184.	32.4	0.01	0.54	1.00	3.18	305.	10.0	276.4	2.0
17	01	01	1	05	-8.6	0.120	-9.000	-9.000	-999.	101.	18.1	0.03	0.54	1.00	1.93	1.	10.0	274.9	2.0
17	01	01	1	06	-10.8	0.135	-9.000	-9.000	-999.	119.	20.6	0.03	0.54	1.00	2.15	11.	10.0	275.9	2.0
17	01	01	1	07	-12.0	0.140	-9.000	-9.000	-999.	126.	21.7	0.02	0.54	1.00	2.42	357.	10.0	276.4	2.0
17	01	01	1	08	-9.7	0.125	-9.000	-9.000	-999.	107.	18.4	0.02	0.54	1.00	2.18	342.	10.0	277.0	2.0
17	01	01	1	09	2.6	0.104	0.208	0.005	124.	81.	-39.5	0.03	0.54	0.41	1.38	29.	10.0	277.5	2.0
17	01	01	1	10	4.4	0.119	0.349	0.005	350.	99.	-35.3	0.02	0.54	0.28	1.72	356.	10.0	279.2	2.0
17	01	01	1	11	10.9	0.164	0.564	0.005	592.	159.	-36.3	0.03	0.54	0.23	2.15	1.	10.0	280.9	2.0
17	01	01	1	12	14.5	0.165	0.676	0.017	768.	161.	-28.0	0.03	0.54	0.22	2.13	12.	10.0	281.4	2.0
17	01	01	1	13	72.0	0.177	1.253	0.019	985.	179.	-6.9	0.03	0.54	0.22	2.08	143.	10.0	282.5	2.0
17	01	01	1	14	65.1	0.167	1.252	0.020	1084.	163.	-6.4	0.01	0.54	0.23	2.21	191.	10.0	284.9	2.0
17	01	01	1	15	39.8	0.254	1.063	0.019	1086.	306.	-36.8	0.01	0.54	0.26	3.86	199.	10.0	284.2	2.0
17	01	01	1	16	9.4	0.267	0.658	0.019	1087.	331.	-181.8	0.01	0.54	0.34	4.32	200.	10.0	284.9	2.0
17	01	01	1	17	-25.4	0.289	-9.000	-9.000	-999.	373.	92.1	0.01	0.54	0.59	5.09	248.	10.0	283.1	2.0
17	01	01	1	18	-23.3	0.233	-9.000	-9.000	-999.	272.	59.9	0.01	0.54	1.00	4.15	234.	10.0	282.0	2.0
17	01	01	1	19	-21.2	0.212	-9.000	-9.000	-999.	234.	49.3	0.01	0.54	1.00	3.78	228.	10.0	281.4	2.0
17	01	01	1	20	-24.8	0.247	-9.000	-9.000	-999.	295.	67.1	0.01	0.54	1.00	4.44	275.	10.0	281.4	2.0
17	01	01	1	21	-25.7	0.256	-9.000	-9.000	-999.	310.	71.8	0.01	0.54

```
1.00    4.53  244.   10.0  280.9    2.0
 17 01 01   1 22  -25.4  0.253 -9.000 -9.000 -999.  305.     70.2  0.01   0.54
1.00    4.48  244.   10.0  280.9    2.0
 17 01 01   1 23  -25.2  0.250 -9.000 -9.000 -999.  300.     68.9  0.01   0.54
1.00    4.44  218.   10.0  280.4    2.0
 17 01 01   1 24  -20.2  0.200 -9.000 -9.000 -999.  215.     43.9  0.01   0.54
1.00    3.58  221.   10.0  279.2    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 17 01 01 01   10.0 1  201.    4.36   281.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                        ***       13:06:47

                                  PAGE  13
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                  *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

       X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         595558.19    4250870.06        0.01877                      595558.19
4250890.06        0.02051
         595558.19    4250910.06        0.02257                      595558.19
4250930.06        0.02506
         595558.19    4250950.06        0.02814                      595558.19
4250970.06        0.03208
         595558.19    4250990.06        0.03737                      595578.19
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4250870.06 0.01976
595578.19 4250890.06 0.02169 595578.19
4250910.06 0.02399
595578.19 4250930.06 0.02679 595578.19
4250950.06 0.03029
595578.19 4250970.06 0.03480 595578.19
4250990.06 0.04087
595598.19 4250870.06 0.02054 595598.19
4250890.06 0.02259
595598.19 4250910.06 0.02505 595598.19
4250930.06 0.02805
595598.19 4250950.06 0.03180 595598.19
4250970.06 0.03661
595598.19 4250990.06 0.04309 595393.16
4250647.52 0.00699
595393.16 4250667.52 0.00725 595393.16
4250687.52 0.00751
595393.16 4250707.52 0.00779 595393.16
4250727.52 0.00810
595393.16 4250747.52 0.00844 595413.16
4250627.52 0.00699
595413.16 4250647.52 0.00725 595413.16
4250667.52 0.00753
595413.16 4250687.52 0.00782 595413.16
4250707.52 0.00813
595413.16 4250727.52 0.00847 595413.16
4250747.52 0.00884
595433.16 4250627.52 0.00723 595433.16
4250647.52 0.00752
595433.16 4250667.52 0.00782 595433.16
4250687.52 0.00814
595433.16 4250707.52 0.00848 595433.16
4250727.52 0.00885
595453.16 4250627.52 0.00747 595453.16
4250647.52 0.00778
595453.16 4250667.52 0.00811 595453.16
4250687.52 0.00846
595453.16 4250707.52 0.00883 595453.16
4250727.52 0.00924
595473.16 4250627.52 0.00771 595473.16
4250647.52 0.00805
595473.16 4250667.52 0.00840 595473.16
4250687.52 0.00878
595473.16 4250707.52 0.00919 595473.16
4250727.52 0.00963
595493.16 4250627.52 0.00795 595493.16
4250647.52 0.00831
595493.16 4250667.52 0.00869 595493.16
4250687.52 0.00909
595493.16 4250707.52 0.00954 595493.16

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         595513.16    4250627.52        0.00820                       595513.16
4250647.52        0.00858
         595513.16    4250667.52        0.00899                       595513.16
4250687.52        0.00943
         595513.16    4250707.52        0.00991                       596132.19
4250952.37        0.00655
         596132.19    4250972.37        0.00675                       596132.19
4250992.37        0.00695
         596132.19    4251012.37        0.00717                       596152.19
4250952.37        0.00627
         596152.19    4250972.37        0.00645                       596152.19
4250992.37        0.00665
         596152.19    4251012.37        0.00685                       596172.19
4250952.37        0.00601
         596172.19    4250972.37        0.00618                       596172.19
4250992.37        0.00636
         596172.19    4251012.37        0.00655                       596192.19
4250952.37        0.00577
         596192.19    4250972.37        0.00593                       596192.19
4250992.37        0.00610
         596192.19    4251012.37        0.00628                       596192.19
4251032.37        0.00647
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:06:47

                                  PAGE  14
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                 L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

       X-COORD (M)   Y-COORD (M)        CONC                         X-COORD (M)
Y-COORD (M)        CONC
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- -

596212.19 4250952.37 0.00554 596212.19
4250972.37 0.00569
596212.19 4250992.37 0.00586 596212.19
4251012.37 0.00602
596212.19 4251032.37 0.00620 596232.19
4250952.37 0.00533
596232.19 4250972.37 0.00547 596232.19
4250992.37 0.00563
596232.19 4251012.37 0.00578 596232.19
4251032.37 0.00594
596252.19 4250952.37 0.00513 596252.19
4250972.37 0.00527
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4251012.37 0.00556
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4250952.37 0.00495
596272.19 4250972.37 0.00507 596272.19
4250992.37 0.00520
596272.19 4251012.37 0.00535 596272.19
4251032.37 0.00549
596292.19 4250952.37 0.00477 596292.19
4250972.37 0.00489
596292.19 4250992.37 0.00501 596292.19
4251012.37 0.00514
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4250952.37 0.00461
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4250992.37 0.00483
596312.19 4251012.37 0.00496 596312.19
4251032.37 0.00508
596270.86 4250797.28 0.00414 596270.86
4250817.28 0.00423
596270.86 4250837.28 0.00433 596270.86
4250857.28 0.00443
596270.86 4250877.28 0.00454 596270.86
4250897.28 0.00465
596270.86 4250917.28 0.00476 596270.86
4250937.28 0.00487
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4250817.28 0.00409
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4250857.28 0.00429
596290.86 4250877.28 0.00439 596290.86
4250897.28 0.00449
596290.86 4250917.28 0.00459 596290.86
4250937.28 0.00470
596310.86 4250797.28 0.00388 596310.86
4250817.28 0.00396

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         596310.86    4250837.28        0.00405                      596310.86
4250857.28        0.00415
         596310.86    4250877.28        0.00424                      596310.86
4250897.28        0.00434
         596310.86    4250917.28        0.00444                      596310.86
4250937.28        0.00454
         596330.86    4250797.28        0.00376                      596330.86
4250817.28        0.00384
         596330.86    4250837.28        0.00393                      596330.86
4250857.28        0.00401
         596330.86    4250877.28        0.00411                      596330.86
4250897.28        0.00420
         596330.86    4250917.28        0.00429                      596330.86
4250937.28        0.00439
         596183.21    4250665.84        0.00420                      596183.21
4250685.84        0.00428
         596183.21    4250705.84        0.00437                      596203.21
4250665.84        0.00406
         596203.21    4250685.84        0.00414                      596203.21
4250705.84        0.00422
         596223.21    4250665.84        0.00393                      596223.21
4250685.84        0.00401
         596223.21    4250705.84        0.00408                      596243.21
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         596243.21    4250685.84        0.00388                      596243.21
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         596263.21    4250665.84        0.00369                      596263.21
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         596263.21    4250705.84        0.00383                      596283.21
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         596283.21    4250685.84        0.00364                      596283.21
4250705.84        0.00371
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:06:47

                                  PAGE  15
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                   L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                   L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                   L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,
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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596303.21	4250665.84	0.00347	596303.21	4250685.84	0.00353
596303.21	4250705.84	0.00360	596323.21	4250665.84	0.00337
596323.21	4250685.84	0.00343	596323.21	4250705.84	0.00349
596343.21	4250665.84	0.00327	596343.21	4250685.84	0.00333
596343.21	4250705.84	0.00339	596363.21	4250665.84	0.00318
596363.21	4250685.84	0.00323	596363.21	4250705.84	0.00329
596383.21	4250665.84	0.00309	596383.21	4250685.84	0.00314
596383.21	4250705.84	0.00319	596403.21	4250665.84	0.00300
596403.21	4250685.84	0.00305	596403.21	4250705.84	0.00310
596423.21	4250665.84	0.00292	596423.21	4250685.84	0.00297
596423.21	4250705.84	0.00302	596443.21	4250665.84	0.00284
596443.21	4250685.84	0.00289	596443.21	4250705.84	0.00294
595977.64	4250946.01	0.00956	595977.64	4250966.01	0.00993
595977.64	4250986.01	0.01033	595977.64	4251006.01	0.01076
595977.64	4251026.01	0.01122	595997.64	4250946.01	0.00904
595997.64	4250966.01	0.00938	595997.64	4250986.01	0.00974
595997.64	4251006.01	0.01012	595997.64	4251026.01	0.01054
596017.64	4250946.01	0.00856	596017.64	4250966.01	0.00887
596017.64	4250986.01	0.00920	596017.64	4251006.01	0.00955
596017.64	4251026.01	0.00993	596037.64		

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4250946.01        0.00812
         596037.64    4250966.01        0.00841                        596037.64
4250986.01        0.00871
         596037.64    4251006.01        0.00903                        596037.64
4251026.01        0.00937
         596057.64    4250946.01        0.00771                        596057.64
4250966.01        0.00797
         596057.64    4250986.01        0.00825                        596057.64
4251006.01        0.00855
         596057.64    4251026.01        0.00887                        596077.64
4250946.01        0.00735
         596077.64    4250966.01        0.00759                        596077.64
4250986.01        0.00784
         596077.64    4251006.01        0.00811                        596077.64
4251026.01        0.00840
         596097.64    4250946.01        0.00701                        596097.64
4250966.01        0.00723
         596097.64    4250986.01        0.00746                        596097.64
4251006.01        0.00771
         596097.64    4251026.01        0.00798                        596117.64
4250946.01        0.00670
         596117.64    4250966.01        0.00690                        596117.64
4250986.01        0.00712
         596117.64    4251006.01        0.00735                        596117.64
4251026.01        0.00759
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4252270.50        0.01423
         596356.95    4252290.50        0.01408                        596356.95
4252310.50        0.01392
         596356.95    4252330.50        0.01375                        596356.95
4252350.50        0.01355
         596376.95    4252270.50        0.01380                        596376.95
4252290.50        0.01367
         596376.95    4252310.50        0.01352                        596376.95
4252330.50        0.01336
         596376.95    4252350.50        0.01319                        596396.95
4252270.50        0.01339
         596396.95    4252290.50        0.01327                        596396.95
4252310.50        0.01314
         596396.95    4252330.50        0.01299                        596396.95
4252350.50        0.01284
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*** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5

YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): #1 , L0000001
, L0000002 , L0000003 , L0000004 ,
L0000005 , L0000006 , L0000007 , L0000008 , L0000009
, L0000010 , L0000011 , L0000012 ,
L0000013 , L0000014 , L0000015 , L0000016 , L0000017
, L0000018 , L0000019 , L0000020 ,
L0000021 , L0000022 , L0000023 , L0000024 , L0000025
, L0000026 , L0000027 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596416.95	4252270.50	0.01299	596416.95	4252290.50	0.01288
596416.95	4252310.50	0.01277	596416.95	4252330.50	0.01264
596416.95	4252350.50	0.01250	596436.95	4252270.50	0.01260
596436.95	4252290.50	0.01251	596436.95	4252310.50	0.01241
596436.95	4252330.50	0.01229	596436.95	4252350.50	0.01217
596456.95	4252270.50	0.01223	596456.95	4252290.50	0.01216
596456.95	4252310.50	0.01206	596456.95	4252330.50	0.01196
596456.95	4252350.50	0.01185	596476.95	4252270.50	0.01188
596476.95	4252290.50	0.01181	596476.95	4252310.50	0.01173
596476.95	4252330.50	0.01164	596476.95	4252350.50	0.01154
596496.95	4252330.50	0.01133	596496.95	4252350.50	0.01124
594781.55	4251521.04	0.00282	594781.55	4251541.04	0.00282
594781.55	4251561.04	0.00282	594781.55	4251581.04	0.00281
594781.55	4251601.04	0.00281	594801.55	4251521.04	0.00294
594801.55	4251541.04	0.00293	594801.55	4251561.04	0.00293

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                               *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   #1   , L0000001
 , L0000002   , L0000003   , L0000004   ,
                 L0000005   , L0000006   , L0000007   , L0000008   , L0000009
 , L0000010   , L0000011   , L0000012   ,
                 L0000013   , L0000014   , L0000015   , L0000016   , L0000017
 , L0000018   , L0000019   , L0000020   ,
                 L0000021   , L0000022   , L0000023   , L0000024   , L0000025
 , L0000026   , L0000027   , . . .   ,

                                     *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M)
Y-COORD (M)   CONC   (YYMMDDHH)
 -
- -
        595558.19   4250870.06   1.33647 (20121309)   595558.19
 4250890.06   1.39274 (20121309)
        595558.19   4250910.06   1.45435 (20121309)   595558.19
 4250930.06   1.52280 (20121309)
        595558.19   4250950.06   1.60016 (20121309)   595558.19
 4250970.06   1.68957 (20121309)
        595558.19   4250990.06   1.79643 (20121309)   595578.19
 4250870.06   1.28821 (20121309)
        595578.19   4250890.06   1.34794 (20121309)   595578.19
 4250910.06   1.41302 (20121309)
        595578.19   4250930.06   1.48497 (20121309)   595578.19
 4250950.06   1.56573 (20121309)
        595578.19   4250970.06   1.65836 (20121309)   595578.19

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4250990.06        1.76794  (20121309)
       595598.19   4250870.06        1.32708  (17103108)                595598.19
4250890.06        1.38057  (17103108)
       595598.19   4250910.06        1.45030  (20022808)                595598.19
4250930.06        1.52990  (20022808)
       595598.19   4250950.06        1.61953  (20022808)                595598.19
4250970.06        1.72196  (20022808)
       595598.19   4250990.06        1.84282  (20022808)                595393.16
4250647.52        0.57935  (21120308)
       595393.16   4250667.52        0.58614  (21120308)                595393.16
4250687.52        0.59088  (21120308)
       595393.16   4250707.52        0.59490  (21120308)                595393.16
4250727.52        0.61974  (20122109)
       595393.16   4250747.52        0.64270  (20122109)                595413.16
4250627.52        0.61994  (20091307)
       595413.16   4250647.52        0.62448  (20091307)                595413.16
4250667.52        0.62737  (20091307)
       595413.16   4250687.52        0.62863  (20091307)                595413.16
4250707.52        0.62873  (20091307)
       595413.16   4250727.52        0.63084  (21120308)                595413.16
4250747.52        0.63825  (21120308)
       595433.16   4250627.52        0.64516  (20091307)                595433.16
4250647.52        0.65663  (20091307)
       595433.16   4250667.52        0.66671  (20091307)                595433.16
4250687.52        0.67513  (20091307)
       595433.16   4250707.52        0.68190  (20091307)                595433.16
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       595453.16   4250627.52        0.68064  (20121309)                595453.16
4250647.52        0.67622  (20121309)
       595453.16   4250667.52        0.68402  (20091307)                595453.16
4250687.52        0.70021  (20091307)
       595453.16   4250707.52        0.71516  (20091307)                595453.16
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       595473.16   4250627.52        0.79115  (20121309)                595473.16
4250647.52        0.79434  (20121309)
       595473.16   4250667.52        0.79605  (20121309)                595473.16
4250687.52        0.79634  (20121309)
       595473.16   4250707.52        0.79572  (20121309)                595473.16
4250727.52        0.79428  (20121309)
       595493.16   4250627.52        0.87340  (20121309)                595493.16
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       595493.16   4250667.52        0.89646  (20121309)                595493.16
4250687.52        0.90536  (20121309)
       595493.16   4250707.52        0.91574  (20121309)                595493.16
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       595513.16   4250627.52        0.91612  (20121309)                595513.16
4250647.52        0.93573  (20121309)
       595513.16   4250667.52        0.95540  (20121309)                595513.16
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       595513.16   4250707.52        0.99447  (20121309)                596132.19
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        596132.19   4250972.37        0.36901  (20022608)                596132.19
 4250992.37        0.36880  (20022608)
        596132.19   4251012.37        0.36858  (20022608)                596152.19
 4250952.37        0.35956  (20022608)
        596152.19   4250972.37        0.35948  (20022608)                596152.19
 4250992.37        0.35928  (20022608)
        596152.19   4251012.37        0.35907  (20022608)                596172.19
 4250952.37        0.35062  (20022608)
        596172.19   4250972.37        0.35054  (20022608)                596172.19
 4250992.37        0.35035  (20022608)
        596172.19   4251012.37        0.35016  (20022608)                596192.19
 4250952.37        0.34191  (20022608)
        596192.19   4250972.37        0.34200  (20022608)                596192.19
 4250992.37        0.34196  (20022608)
        596192.19   4251012.37        0.34178  (20022608)                596192.19
 4251032.37        0.34159  (20022608)
🡅 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:06:47

                                  PAGE  18
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
        596212.19   4250952.37        0.33336  (20022608)                596212.19
 4250972.37        0.33382  (20022608)
        596212.19   4250992.37        0.33406  (20022608)                596212.19
 4251012.37        0.33388  (20022608)
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       596232.19   4250972.37        0.32633  (20022608)               596232.19
4250992.37        0.32660  (20022608)
       596232.19   4251012.37        0.32640  (20022608)               596232.19
4251032.37        0.32620  (20022608)
       596252.19   4250952.37        0.31889  (20022608)               596252.19
4250972.37        0.31915  (20022608)
       596252.19   4250992.37        0.31930  (20022608)               596252.19
4251012.37        0.31928  (20022608)
       596252.19   4251032.37        0.31908  (20022608)               596272.19
4250952.37        0.31226  (20022608)
       596272.19   4250972.37        0.31208  (20022608)               596272.19
4250992.37        0.31214  (20022608)
       596272.19   4251012.37        0.31248  (20022608)               596272.19
4251032.37        0.31225  (20022608)
       596292.19   4250952.37        0.30592  (20022608)               596292.19
4250972.37        0.30574  (20022608)
       596292.19   4250992.37        0.30559  (20022608)               596292.19
4251012.37        0.30553  (20022608)
       596292.19   4251032.37        0.30515  (20022608)               596312.19
4250952.37        0.29988  (20022608)
       596312.19   4250972.37        0.29968  (20022608)               596312.19
4250992.37        0.29940  (20022608)
       596312.19   4251012.37        0.29900  (20022608)               596312.19
4251032.37        0.29842  (20022608)
       596270.86   4250797.28        0.31382  (20022608)               596270.86
4250817.28        0.31367  (20022608)
       596270.86   4250837.28        0.31353  (20022608)               596270.86
4250857.28        0.31338  (20022608)
       596270.86   4250877.28        0.31324  (20022608)               596270.86
4250897.28        0.31309  (20022608)
       596270.86   4250917.28        0.31295  (20022608)               596270.86
4250937.28        0.31279  (20022608)
       596290.86   4250797.28        0.30687  (20022608)               596290.86
4250817.28        0.30674  (20022608)
       596290.86   4250837.28        0.30663  (20022608)               596290.86
4250857.28        0.30688  (20022608)
       596290.86   4250877.28        0.30689  (20022608)               596290.86
4250897.28        0.30675  (20022608)
       596290.86   4250917.28        0.30661  (20022608)               596290.86
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4250817.28        0.30031  (20022608)
       596310.86   4250837.28        0.30026  (20022608)               596310.86
4250857.28        0.30058  (20022608)
       596310.86   4250877.28        0.30071  (20022608)               596310.86
4250897.28        0.30072  (20022608)
       596310.86   4250917.28        0.30056  (20022608)               596310.86
4250937.28        0.30041  (20022608)
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       596330.86   4250837.28        0.29448  (20022608)               596330.86
 4250857.28        0.29441  (20022608)
       596330.86   4250877.28        0.29463  (20022608)               596330.86
 4250897.28        0.29494  (20022608)
       596330.86   4250917.28        0.29481  (20022608)               596330.86
 4250937.28        0.29464  (20022608)
       596183.21   4250665.84        0.37424  (19011809)               596183.21
 4250685.84        0.37333  (19011809)
       596183.21   4250705.84        0.37214  (19011809)               596203.21
 4250665.84        0.36399  (19011809)
       596203.21   4250685.84        0.36269  (19011809)               596203.21
 4250705.84        0.36102  (19011809)
       596223.21   4250665.84        0.35362  (19011809)               596223.21
 4250685.84        0.35175  (19011809)
       596223.21   4250705.84        0.34939  (19011809)               596243.21
 4250665.84        0.34282  (19011809)
       596243.21   4250685.84        0.34026  (19011809)               596243.21
 4250705.84        0.33710  (19011809)
       596263.21   4250665.84        0.33140  (19011809)               596263.21
 4250685.84        0.32798  (19011809)
       596263.21   4250705.84        0.32393  (19011809)               596283.21
 4250665.84        0.31919  (19011809)
       596283.21   4250685.84        0.31487  (19011809)               596283.21
 4250705.84        0.30978  (19011809)
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:06:47

                                  PAGE  19
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                 L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                       *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                     ** CONC OF PM_10    IN MICROGRAMS/M**3
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X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
596303.21	4250665.84	0.30608	(19011809)	596303.21	4250685.84	0.30152	(20022608)
596303.21	4250705.84	0.30314	(20022608)	596323.21	4250665.84	0.29490	(20022608)
596323.21	4250685.84	0.29692	(20022608)	596323.21	4250705.84	0.29780	(20022608)
596343.21	4250665.84	0.29063	(20022608)	596343.21	4250685.84	0.29177	(20022608)
596343.21	4250705.84	0.29220	(20022608)	596363.21	4250665.84	0.28567	(20022608)
596363.21	4250685.84	0.28627	(20022608)	596363.21	4250705.84	0.28646	(20022608)
596383.21	4250665.84	0.28054	(20022608)	596383.21	4250685.84	0.28084	(20022608)
596383.21	4250705.84	0.28124	(20022608)	596403.21	4250665.84	0.27571	(20022608)
596403.21	4250685.84	0.27581	(20022608)	596403.21	4250705.84	0.27614	(20022608)
596423.21	4250665.84	0.27125	(20022608)	596423.21	4250685.84	0.27124	(20022608)
596423.21	4250705.84	0.27118	(20022608)	596443.21	4250665.84	0.26635	(20022608)
596443.21	4250685.84	0.26631	(20022608)	596443.21	4250705.84	0.26622	(20022608)
595977.64	4250946.01	0.51491	(19011809)	595977.64	4250966.01	0.51421	(19011809)
595977.64	4250986.01	0.51333	(19011809)	595977.64	4251006.01	0.51227	(19011809)
595977.64	4251026.01	0.51087	(19011809)	595997.64	4250946.01	0.49479	(19011809)
595997.64	4250966.01	0.49382	(19011809)	595997.64	4250986.01	0.49262	(19011809)
595997.64	4251006.01	0.49104	(19011809)	595997.64	4251026.01	0.48896	(19011809)
596017.64	4250946.01	0.47568	(19011809)	596017.64	4250966.01	0.47457	(19011809)
596017.64	4250986.01	0.47278	(19011809)	596017.64	4251006.01	0.47040	(19011809)
596017.64	4251026.01	0.46730	(19011809)	596037.64	4250946.01	0.45726	(19011809)
596037.64	4250966.01	0.45562	(19011809)	596037.64	4250986.01	0.45296	(19011809)
596037.64	4251006.01	0.44956	(19011809)	596037.64	4251026.01	0.44519	(19011809)
596057.64	4250946.01	0.43880	(19011809)	596057.64			

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 4250966.01        0.43589  (19011809)
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 4251006.01        0.42790  (19011809)
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       596077.64   4251006.01        0.40502  (19011809)                596077.64
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       596117.64   4250966.01        0.37643  (20022608)                596117.64
 4250986.01        0.37620  (20022608)
       596117.64   4251006.01        0.37598  (20022608)                596117.64
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       596356.95   4252290.50        0.44330  (19011009)                596356.95
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       596356.95   4252330.50        0.45143  (19011009)                596356.95
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       596376.95   4252270.50        0.41792  (19011009)                596376.95
 4252290.50        0.42840  (19011009)
       596376.95   4252310.50        0.43686  (19011009)                596376.95
 4252330.50        0.44143  (19011009)
       596376.95   4252350.50        0.44013  (19011009)                596396.95
 4252270.50        0.40331  (19011009)
       596396.95   4252290.50        0.41374  (19011009)                596396.95
 4252310.50        0.42308  (19011009)
       596396.95   4252330.50        0.42983  (19011009)                596396.95
 4252350.50        0.43225  (19011009)
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:06:47

                                   PAGE  20
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
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 , L0000018    , L0000019    , L0000020    ,
                L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                                  *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        596416.95   4252270.50        0.38950  (19011009)                596416.95
 4252290.50        0.39948  (19011009)
        596416.95   4252310.50        0.40920  (19011009)                596416.95
 4252330.50        0.41736  (19011009)
        596416.95   4252350.50        0.42241  (19011009)                596436.95
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        596436.95   4252290.50        0.38600  (19011009)                596436.95
 4252310.50        0.39560  (19011009)
        596436.95   4252330.50        0.40447  (19011009)                596436.95
 4252350.50        0.41134  (19011009)
        596456.95   4252270.50        0.36500  (19011009)                596456.95
 4252290.50        0.37345  (19011009)
        596456.95   4252310.50        0.38256  (19011009)                596456.95
 4252330.50        0.39162  (19011009)
        596456.95   4252350.50        0.39950  (19011009)                596476.95
 4252270.50        0.35445  (19011009)
        596476.95   4252290.50        0.36191  (19011009)                596476.95
 4252310.50        0.37031  (19011009)
        596476.95   4252330.50        0.37910  (19011009)                596476.95
 4252350.50        0.38747  (19011009)
        596496.95   4252330.50        0.36722  (19011009)                596496.95
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        594781.55   4251521.04        0.22458  (17022308)                594781.55
 4251541.04        0.22589  (20091007)
        594781.55   4251561.04        0.23058  (20091007)                594781.55
 4251581.04        0.23379  (20091007)
        594781.55   4251601.04        0.23590  (20091007)                594801.55
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 4251561.04        0.23620  (20091007)
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 4251601.04        0.24057  (20091007)
        594821.55   4251521.04        0.23349  (20091007)                594821.55
 4251541.04        0.23839  (20091007)
        594821.55   4251561.04        0.24170  (20091007)                594821.55
 4251581.04        0.24388  (20091007)
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 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                                  *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***

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

                       NETWORK
GROUP ID   AVERAGE CONC   RECEPTOR (XR, YR,
ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
- -
- - - - - - - - - - - - - - - - - - -

ALL   1ST HIGHEST VALUE IS   0.04309 AT (595598.19, 4250990.06,
22.86,   22.86,   0.00) DC
          2ND HIGHEST VALUE IS   0.04087 AT (595578.19, 4250990.06,
22.86,   22.86,   0.00) DC
          3RD HIGHEST VALUE IS   0.03737 AT (595558.19, 4250990.06,
22.86,   22.86,   0.00) DC
          4TH HIGHEST VALUE IS   0.03661 AT (595598.19, 4250970.06,
22.86,   22.86,   0.00) DC
          5TH HIGHEST VALUE IS   0.03480 AT (595578.19, 4250970.06,
22.86,   22.86,   0.00) DC
          6TH HIGHEST VALUE IS   0.03208 AT (595558.19, 4250970.06,
22.86,   22.86,   0.00) DC
          7TH HIGHEST VALUE IS   0.03180 AT (595598.19, 4250950.06,
22.86,   22.86,   0.00) DC
          8TH HIGHEST VALUE IS   0.03029 AT (595578.19, 4250950.06,
22.86,   22.86,   0.00) DC
          9TH HIGHEST VALUE IS   0.02814 AT (595558.19, 4250950.06,
22.86,   22.86,   0.00) DC
         10TH HIGHEST VALUE IS   0.02805 AT (595598.19, 4250930.06,
22.86,   22.86,   0.00) DC

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

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

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

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

```
                                                        DATE                          NETWORK
GROUP ID                              AVERAGE CONC     (YYMMDDHH)              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       1.84282  ON 20022808: AT (  595598.19, 4250990.06,    22.86,    22.86,    0.00)  DC
```

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

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

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

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

```
A Total of             0 Fatal Error Message(s)
A Total of             2 Warning Message(s)
A Total of          1381 Informational Message(s)

A Total of         43824 Hours Were Processed

A Total of           493 Calm Hours Identified
```

```
A Total of          888 Missing Hours Identified (  2.03 Percent)


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


   ********   WARNING MESSAGES   ********
ME W186     267       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
ME W187     267       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

AERMOD Output Files – Operation (mitigated)

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.0.0
** Lakes Environmental Software Inc.
** Date: 7/28/2023
** File: C:\Users\kheck\Desktop\Projects\Weber
Road\WeberRd_Op_Mit\WeberRd_Op_Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road Const
   MODELOPT CONC FLAT ELEV
   AVERTIME 1 ANNUAL
   POLLUTID PM_10
   FLAGPOLE 1.50
   RUNORNOT RUN
   ERRORFIL WeberRd_Op_Mit.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION #1           AREAPOLY   595817.556  4252109.225       22.890
** DESCRSRC Operational Equipment Use
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 7.72E-06
** Vertical Dimension = 7.77
** SZINIT = 3.61
** Nodes = 2
** 595728.254, 4251043.429, 22.54, 3.88, 3.95
```

```
** 594944.447, 4251037.948, 23.74, 3.88, 3.95
** ----------------------------------------------------------------
   LOCATION L0000001     VOLUME   595724.004 4251043.400 22.56
   LOCATION L0000002     VOLUME   595715.504 4251043.340 22.56
   LOCATION L0000003     VOLUME   595707.004 4251043.281 22.56
   LOCATION L0000004     VOLUME   595698.505 4251043.221 22.56
   LOCATION L0000005     VOLUME   595690.005 4251043.162 22.56
   LOCATION L0000006     VOLUME   595681.505 4251043.102 22.56
   LOCATION L0000007     VOLUME   595673.005 4251043.043 22.56
   LOCATION L0000008     VOLUME   595664.506 4251042.984 22.65
   LOCATION L0000009     VOLUME   595656.006 4251042.924 22.73
   LOCATION L0000010     VOLUME   595647.506 4251042.865 22.82
   LOCATION L0000011     VOLUME   595639.006 4251042.805 22.86
   LOCATION L0000012     VOLUME   595630.506 4251042.746 22.86
   LOCATION L0000013     VOLUME   595622.007 4251042.686 22.86
   LOCATION L0000014     VOLUME   595613.507 4251042.627 22.86
   LOCATION L0000015     VOLUME   595605.007 4251042.567 22.86
   LOCATION L0000016     VOLUME   595596.507 4251042.508 22.86
   LOCATION L0000017     VOLUME   595588.007 4251042.449 22.86
   LOCATION L0000018     VOLUME   595579.508 4251042.389 22.86
   LOCATION L0000019     VOLUME   595571.008 4251042.330 22.86
   LOCATION L0000020     VOLUME   595562.508 4251042.270 22.86
   LOCATION L0000021     VOLUME   595554.008 4251042.211 22.86
   LOCATION L0000022     VOLUME   595545.508 4251042.151 22.86
   LOCATION L0000023     VOLUME   595537.009 4251042.092 22.86
   LOCATION L0000024     VOLUME   595528.509 4251042.033 22.86
   LOCATION L0000025     VOLUME   595520.009 4251041.973 22.86
   LOCATION L0000026     VOLUME   595511.509 4251041.914 22.86
   LOCATION L0000027     VOLUME   595503.009 4251041.854 22.86
   LOCATION L0000028     VOLUME   595494.510 4251041.795 22.86
   LOCATION L0000029     VOLUME   595486.010 4251041.735 22.86
   LOCATION L0000030     VOLUME   595477.510 4251041.676 22.86
   LOCATION L0000031     VOLUME   595469.010 4251041.616 22.86
   LOCATION L0000032     VOLUME   595460.511 4251041.557 22.86
   LOCATION L0000033     VOLUME   595452.011 4251041.498 22.86
   LOCATION L0000034     VOLUME   595443.511 4251041.438 22.86
   LOCATION L0000035     VOLUME   595435.011 4251041.379 22.86
   LOCATION L0000036     VOLUME   595426.511 4251041.319 22.86
   LOCATION L0000037     VOLUME   595418.012 4251041.260 22.86
   LOCATION L0000038     VOLUME   595409.512 4251041.200 22.86
   LOCATION L0000039     VOLUME   595401.012 4251041.141 22.86
   LOCATION L0000040     VOLUME   595392.512 4251041.082 22.86
   LOCATION L0000041     VOLUME   595384.012 4251041.022 22.86
   LOCATION L0000042     VOLUME   595375.513 4251040.963 22.86
   LOCATION L0000043     VOLUME   595367.013 4251040.903 22.92
   LOCATION L0000044     VOLUME   595358.513 4251040.844 22.99
   LOCATION L0000045     VOLUME   595350.013 4251040.784 23.06
   LOCATION L0000046     VOLUME   595341.513 4251040.725 23.12
   LOCATION L0000047     VOLUME   595333.014 4251040.665 23.13
   LOCATION L0000048     VOLUME   595324.514 4251040.606 23.15
```

```
   LOCATION L0000049     VOLUME   595316.014 4251040.547 23.16
   LOCATION L0000050     VOLUME   595307.514 4251040.487 23.16
   LOCATION L0000051     VOLUME   595299.014 4251040.428 23.16
   LOCATION L0000052     VOLUME   595290.515 4251040.368 23.16
   LOCATION L0000053     VOLUME   595282.015 4251040.309 23.16
   LOCATION L0000054     VOLUME   595273.515 4251040.249 23.16
   LOCATION L0000055     VOLUME   595265.015 4251040.190 23.16
   LOCATION L0000056     VOLUME   595256.515 4251040.130 23.16
   LOCATION L0000057     VOLUME   595248.016 4251040.071 23.16
   LOCATION L0000058     VOLUME   595239.516 4251040.012 23.16
   LOCATION L0000059     VOLUME   595231.016 4251039.952 23.16
   LOCATION L0000060     VOLUME   595222.516 4251039.893 23.17
   LOCATION L0000061     VOLUME   595214.017 4251039.833 23.25
   LOCATION L0000062     VOLUME   595205.517 4251039.774 23.32
   LOCATION L0000063     VOLUME   595197.017 4251039.714 23.38
   LOCATION L0000064     VOLUME   595188.517 4251039.655 23.42
   LOCATION L0000065     VOLUME   595180.017 4251039.596 23.44
   LOCATION L0000066     VOLUME   595171.518 4251039.536 23.45
   LOCATION L0000067     VOLUME   595163.018 4251039.477 23.47
   LOCATION L0000068     VOLUME   595154.518 4251039.417 23.47
   LOCATION L0000069     VOLUME   595146.018 4251039.358 23.47
   LOCATION L0000070     VOLUME   595137.518 4251039.298 23.47
   LOCATION L0000071     VOLUME   595129.019 4251039.239 23.47
   LOCATION L0000072     VOLUME   595120.519 4251039.179 23.47
   LOCATION L0000073     VOLUME   595112.019 4251039.120 23.47
   LOCATION L0000074     VOLUME   595103.519 4251039.061 23.47
   LOCATION L0000075     VOLUME   595095.019 4251039.001 23.47
   LOCATION L0000076     VOLUME   595086.520 4251038.942 23.47
   LOCATION L0000077     VOLUME   595078.020 4251038.882 23.47
   LOCATION L0000078     VOLUME   595069.520 4251038.823 23.47
   LOCATION L0000079     VOLUME   595061.020 4251038.763 23.47
   LOCATION L0000080     VOLUME   595052.520 4251038.704 23.47
   LOCATION L0000081     VOLUME   595044.021 4251038.645 23.47
   LOCATION L0000082     VOLUME   595035.521 4251038.585 23.53
   LOCATION L0000083     VOLUME   595027.021 4251038.526 23.60
   LOCATION L0000084     VOLUME   595018.521 4251038.466 23.67
   LOCATION L0000085     VOLUME   595010.022 4251038.407 23.70
   LOCATION L0000086     VOLUME   595001.522 4251038.347 23.70
   LOCATION L0000087     VOLUME   594993.022 4251038.288 23.70
   LOCATION L0000088     VOLUME   594984.522 4251038.228 23.70
   LOCATION L0000089     VOLUME   594976.022 4251038.169 23.70
   LOCATION L0000090     VOLUME   594967.523 4251038.110 23.70
   LOCATION L0000091     VOLUME   594959.023 4251038.050 23.70
   LOCATION L0000092     VOLUME   594950.523 4251037.991 23.71
** End of LINE VOLUME Source ID = SLINE1
   LOCATION #2           AREAPOLY   595817.276  4252104.135       22.910
** Source Parameters **
   SRCPARAM #1           1.1951E-10     1.300         5
   AREAVERT #1           595817.556 4252109.225 595713.631 4251733.856
   AREAVERT #1           595727.591 4251054.470 595539.907 4251051.368
```

```
   AREAVERT #1           595524.396 4251819.167
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000002     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000003     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000004     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000005     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000006     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000007     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000008     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000009     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000010     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000011     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000012     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000013     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000014     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000015     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000016     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000017     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000018     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000019     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000020     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000021     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000022     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000023     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000024     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000025     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000026     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000027     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000028     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000029     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000030     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000031     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000032     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000033     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000034     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000035     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000036     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000037     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000038     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000039     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000040     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000041     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000042     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000043     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000044     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000045     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000046     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000047     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000048     0.00000008391      3.88      3.95      3.61
```

```
   SRCPARAM L0000049     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000050     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000051     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000052     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000053     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000054     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000055     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000056     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000057     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000058     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000059     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000060     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000061     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000062     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000063     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000064     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000065     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000066     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000067     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000068     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000069     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000070     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000071     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000072     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000073     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000074     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000075     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000076     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000077     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000078     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000079     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000080     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000081     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000082     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000083     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000084     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000085     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000086     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000087     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000088     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000089     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000090     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000091     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000092     0.00000008391      3.88      3.95      3.61
** ------------------------------------------------------------------
   SRCPARAM #2           6.263E-09     1.300         5
   AREAVERT #2           595817.276 4252104.135 595711.878 4251730.451
   AREAVERT #2           595729.125 4251134.473 595539.408 4251130.640
   AREAVERT #2           595524.078 4251822.434
   SRCGROUP ALL
```

```
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED WeberRd_Op_Mit.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\Weber_HRA_operational\KVCB_724828_93241\724828_2017-2021_AdjU.sfc
   PROFFILE ..\Weber_HRA_operational\KVCB_724828_93241\724828_2017-2021_AdjU.pfl
   SURFDATA 93241 2017
   UAIRDATA 23230 2017 OAKLAND/WSO_AP
   PROFBASE 33.2 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WEBERRD_OP_MIT.AD\01H1GALL.PLT 31
   PLOTFILE ANNUAL ALL WEBERRD_OP_MIT.AD\AN00GALL.PLT 32
   SUMMFILE WeberRd_Op_Mit.sum
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
** ZONEINX  0
**
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.0.0
** Lakes Environmental Software Inc.
** Date: 7/28/2023
** File: C:\Users\kheck\Desktop\Projects\Weber
Road\WeberRd_Op_Mit\WeberRd_Op_Mit.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\06_Weber Road Construction HRA\Weber Road Const
   MODELOPT CONC FLAT ELEV
   AVERTIME 1 ANNUAL
   POLLUTID PM_10
   FLAGPOLE 1.50
   RUNORNOT RUN
   ERRORFIL WeberRd_Op_Mit.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION #1           AREAPOLY   595817.556  4252109.225       22.890
** DESCRSRC Operational Equipment Use
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC
** PREFIX
** Length of Side = 8.50
** Configuration = Adjacent
** Emission Rate = 7.72E-06
** Vertical Dimension = 7.77
** SZINIT = 3.61
** Nodes = 2
** 595728.254, 4251043.429, 22.54, 3.88, 3.95
```

```
** 594944.447, 4251037.948, 23.74, 3.88, 3.95
** ----------------------------------------------------------------
   LOCATION L0000001     VOLUME   595724.004 4251043.400 22.56
   LOCATION L0000002     VOLUME   595715.504 4251043.340 22.56
   LOCATION L0000003     VOLUME   595707.004 4251043.281 22.56
   LOCATION L0000004     VOLUME   595698.505 4251043.221 22.56
   LOCATION L0000005     VOLUME   595690.005 4251043.162 22.56
   LOCATION L0000006     VOLUME   595681.505 4251043.102 22.56
   LOCATION L0000007     VOLUME   595673.005 4251043.043 22.56
   LOCATION L0000008     VOLUME   595664.506 4251042.984 22.65
   LOCATION L0000009     VOLUME   595656.006 4251042.924 22.73
   LOCATION L0000010     VOLUME   595647.506 4251042.865 22.82
   LOCATION L0000011     VOLUME   595639.006 4251042.805 22.86
   LOCATION L0000012     VOLUME   595630.506 4251042.746 22.86
   LOCATION L0000013     VOLUME   595622.007 4251042.686 22.86
   LOCATION L0000014     VOLUME   595613.507 4251042.627 22.86
   LOCATION L0000015     VOLUME   595605.007 4251042.567 22.86
   LOCATION L0000016     VOLUME   595596.507 4251042.508 22.86
   LOCATION L0000017     VOLUME   595588.007 4251042.449 22.86
   LOCATION L0000018     VOLUME   595579.508 4251042.389 22.86
   LOCATION L0000019     VOLUME   595571.008 4251042.330 22.86
   LOCATION L0000020     VOLUME   595562.508 4251042.270 22.86
   LOCATION L0000021     VOLUME   595554.008 4251042.211 22.86
   LOCATION L0000022     VOLUME   595545.508 4251042.151 22.86
   LOCATION L0000023     VOLUME   595537.009 4251042.092 22.86
   LOCATION L0000024     VOLUME   595528.509 4251042.033 22.86
   LOCATION L0000025     VOLUME   595520.009 4251041.973 22.86
   LOCATION L0000026     VOLUME   595511.509 4251041.914 22.86
   LOCATION L0000027     VOLUME   595503.009 4251041.854 22.86
   LOCATION L0000028     VOLUME   595494.510 4251041.795 22.86
   LOCATION L0000029     VOLUME   595486.010 4251041.735 22.86
   LOCATION L0000030     VOLUME   595477.510 4251041.676 22.86
   LOCATION L0000031     VOLUME   595469.010 4251041.616 22.86
   LOCATION L0000032     VOLUME   595460.511 4251041.557 22.86
   LOCATION L0000033     VOLUME   595452.011 4251041.498 22.86
   LOCATION L0000034     VOLUME   595443.511 4251041.438 22.86
   LOCATION L0000035     VOLUME   595435.011 4251041.379 22.86
   LOCATION L0000036     VOLUME   595426.511 4251041.319 22.86
   LOCATION L0000037     VOLUME   595418.012 4251041.260 22.86
   LOCATION L0000038     VOLUME   595409.512 4251041.200 22.86
   LOCATION L0000039     VOLUME   595401.012 4251041.141 22.86
   LOCATION L0000040     VOLUME   595392.512 4251041.082 22.86
   LOCATION L0000041     VOLUME   595384.012 4251041.022 22.86
   LOCATION L0000042     VOLUME   595375.513 4251040.963 22.86
   LOCATION L0000043     VOLUME   595367.013 4251040.903 22.92
   LOCATION L0000044     VOLUME   595358.513 4251040.844 22.99
   LOCATION L0000045     VOLUME   595350.013 4251040.784 23.06
   LOCATION L0000046     VOLUME   595341.513 4251040.725 23.12
   LOCATION L0000047     VOLUME   595333.014 4251040.665 23.13
   LOCATION L0000048     VOLUME   595324.514 4251040.606 23.15
```

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   LOCATION L0000049     VOLUME   595316.014 4251040.547 23.16
   LOCATION L0000050     VOLUME   595307.514 4251040.487 23.16
   LOCATION L0000051     VOLUME   595299.014 4251040.428 23.16
   LOCATION L0000052     VOLUME   595290.515 4251040.368 23.16
   LOCATION L0000053     VOLUME   595282.015 4251040.309 23.16
   LOCATION L0000054     VOLUME   595273.515 4251040.249 23.16
   LOCATION L0000055     VOLUME   595265.015 4251040.190 23.16
   LOCATION L0000056     VOLUME   595256.515 4251040.130 23.16
   LOCATION L0000057     VOLUME   595248.016 4251040.071 23.16
   LOCATION L0000058     VOLUME   595239.516 4251040.012 23.16
   LOCATION L0000059     VOLUME   595231.016 4251039.952 23.16
   LOCATION L0000060     VOLUME   595222.516 4251039.893 23.17
   LOCATION L0000061     VOLUME   595214.017 4251039.833 23.25
   LOCATION L0000062     VOLUME   595205.517 4251039.774 23.32
   LOCATION L0000063     VOLUME   595197.017 4251039.714 23.38
   LOCATION L0000064     VOLUME   595188.517 4251039.655 23.42
   LOCATION L0000065     VOLUME   595180.017 4251039.596 23.44
   LOCATION L0000066     VOLUME   595171.518 4251039.536 23.45
   LOCATION L0000067     VOLUME   595163.018 4251039.477 23.47
   LOCATION L0000068     VOLUME   595154.518 4251039.417 23.47
   LOCATION L0000069     VOLUME   595146.018 4251039.358 23.47
   LOCATION L0000070     VOLUME   595137.518 4251039.298 23.47
   LOCATION L0000071     VOLUME   595129.019 4251039.239 23.47
   LOCATION L0000072     VOLUME   595120.519 4251039.179 23.47
   LOCATION L0000073     VOLUME   595112.019 4251039.120 23.47
   LOCATION L0000074     VOLUME   595103.519 4251039.061 23.47
   LOCATION L0000075     VOLUME   595095.019 4251039.001 23.47
   LOCATION L0000076     VOLUME   595086.520 4251038.942 23.47
   LOCATION L0000077     VOLUME   595078.020 4251038.882 23.47
   LOCATION L0000078     VOLUME   595069.520 4251038.823 23.47
   LOCATION L0000079     VOLUME   595061.020 4251038.763 23.47
   LOCATION L0000080     VOLUME   595052.520 4251038.704 23.47
   LOCATION L0000081     VOLUME   595044.021 4251038.645 23.47
   LOCATION L0000082     VOLUME   595035.521 4251038.585 23.53
   LOCATION L0000083     VOLUME   595027.021 4251038.526 23.60
   LOCATION L0000084     VOLUME   595018.521 4251038.466 23.67
   LOCATION L0000085     VOLUME   595010.022 4251038.407 23.70
   LOCATION L0000086     VOLUME   595001.522 4251038.347 23.70
   LOCATION L0000087     VOLUME   594993.022 4251038.288 23.70
   LOCATION L0000088     VOLUME   594984.522 4251038.228 23.70
   LOCATION L0000089     VOLUME   594976.022 4251038.169 23.70
   LOCATION L0000090     VOLUME   594967.523 4251038.110 23.70
   LOCATION L0000091     VOLUME   594959.023 4251038.050 23.70
   LOCATION L0000092     VOLUME   594950.523 4251037.991 23.71
** End of LINE VOLUME Source ID = SLINE1
   LOCATION #2           AREAPOLY   595817.276  4252104.135       22.910
** Source Parameters **
   SRCPARAM #1           1.1951E-10     1.300         5
   AREAVERT #1           595817.556 4252109.225 595713.631 4251733.856
   AREAVERT #1           595727.591 4251054.470 595539.907 4251051.368
```

```
   AREAVERT #1           595524.396 4251819.167
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000002     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000003     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000004     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000005     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000006     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000007     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000008     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000009     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000010     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000011     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000012     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000013     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000014     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000015     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000016     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000017     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000018     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000019     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000020     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000021     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000022     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000023     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000024     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000025     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000026     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000027     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000028     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000029     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000030     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000031     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000032     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000033     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000034     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000035     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000036     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000037     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000038     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000039     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000040     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000041     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000042     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000043     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000044     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000045     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000046     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000047     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000048     0.00000008391      3.88      3.95      3.61
```

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   SRCPARAM L0000049     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000050     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000051     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000052     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000053     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000054     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000055     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000056     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000057     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000058     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000059     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000060     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000061     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000062     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000063     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000064     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000065     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000066     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000067     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000068     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000069     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000070     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000071     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000072     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000073     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000074     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000075     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000076     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000077     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000078     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000079     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000080     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000081     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000082     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000083     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000084     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000085     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000086     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000087     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000088     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000089     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000090     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000091     0.00000008391      3.88      3.95      3.61
   SRCPARAM L0000092     0.00000008391      3.88      3.95      3.61
** ------------------------------------------------------------------
   SRCPARAM #2           6.263E-09     1.300         5
   AREAVERT #2           595817.276 4252104.135 595711.878 4251730.451
   AREAVERT #2           595729.125 4251134.473 595539.408 4251130.640
   AREAVERT #2           595524.078 4251822.434
   SRCGROUP ALL
```

```
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED WeberRd_Op_Mit.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE ..\Weber_HRA_operational\KVCB_724828_93241\724828_2017-2021_AdjU.sfc
   PROFFILE ..\Weber_HRA_operational\KVCB_724828_93241\724828_2017-2021_AdjU.pfl
   SURFDATA 93241 2017
   UAIRDATA 23230 2017 OAKLAND/WSO_AP
   PROFBASE 33.2 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WEBERRD_OP_MIT.AD\01H1GALL.PLT 31
   PLOTFILE ANNUAL ALL WEBERRD_OP_MIT.AD\AN00GALL.PLT 32
   SUMMFILE WeberRd_Op_Mit.sum
OU FINISHED


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

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

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


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

```
   ********   WARNING MESSAGES   ********
 ME W186     272       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187     272       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


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

 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                         ***        13:38:56

                                    PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

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

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses RURAL Dispersion Only.

 **Model Allows User-Specified Options:
         1. Stack-tip Downwash.
         2. Allow FLAT/ELEV Terrain Option by Source,
            with      0 FLAT and     94 ELEV Source(s).
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.

 **Other Options Specified:
         ADJ_U*   - Use ADJ_U* option for SBL in AERMET
         CCVR_Sub - Meteorological data includes CCVR substitutions
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Accepts FLAGPOLE Receptor Heights.
```

```
 **The User Specified a Pollutant Type of:  PM_10

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

 **This Run Includes:     94 Source(s);       1 Source Group(s); and     278
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:     92 VOLUME source(s)
                 and:      2 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)


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

 **The AERMET Input Meteorological Data Version Date:  21112

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

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

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    33.20 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                 ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out
```

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.83910E-07	595724.0	4251043.4	22.6	3.88	3.95	3.61	NO	
L0000002	0	0.83910E-07	595715.5	4251043.3	22.6	3.88	3.95	3.61	NO	
L0000003	0	0.83910E-07	595707.0	4251043.3	22.6	3.88	3.95	3.61	NO	
L0000004	0	0.83910E-07	595698.5	4251043.2	22.6	3.88	3.95	3.61	NO	
L0000005	0	0.83910E-07	595690.0	4251043.2	22.6	3.88	3.95	3.61	NO	
L0000006	0	0.83910E-07	595681.5	4251043.1	22.6	3.88	3.95	3.61	NO	
L0000007	0	0.83910E-07	595673.0	4251043.0	22.6	3.88	3.95	3.61	NO	
L0000008	0	0.83910E-07	595664.5	4251043.0	22.7	3.88	3.95	3.61	NO	
L0000009	0	0.83910E-07	595656.0	4251042.9	22.7	3.88	3.95	3.61	NO	
L0000010	0	0.83910E-07	595647.5	4251042.9	22.8	3.88	3.95	3.61	NO	
L0000011	0	0.83910E-07	595639.0	4251042.8	22.9	3.88	3.95	3.61	NO	
L0000012	0	0.83910E-07	595630.5	4251042.7	22.9	3.88	3.95	3.61	NO	
L0000013	0	0.83910E-07	595622.0	4251042.7	22.9	3.88	3.95	3.61	NO	

L0000014	0	0.83910E-07	595613.5	4251042.6	22.9	3.88	3.95	3.61 NO
L0000015	0	0.83910E-07	595605.0	4251042.6	22.9	3.88	3.95	3.61 NO
L0000016	0	0.83910E-07	595596.5	4251042.5	22.9	3.88	3.95	3.61 NO
L0000017	0	0.83910E-07	595588.0	4251042.4	22.9	3.88	3.95	3.61 NO
L0000018	0	0.83910E-07	595579.5	4251042.4	22.9	3.88	3.95	3.61 NO
L0000019	0	0.83910E-07	595571.0	4251042.3	22.9	3.88	3.95	3.61 NO
L0000020	0	0.83910E-07	595562.5	4251042.3	22.9	3.88	3.95	3.61 NO
L0000021	0	0.83910E-07	595554.0	4251042.2	22.9	3.88	3.95	3.61 NO
L0000022	0	0.83910E-07	595545.5	4251042.2	22.9	3.88	3.95	3.61 NO
L0000023	0	0.83910E-07	595537.0	4251042.1	22.9	3.88	3.95	3.61 NO
L0000024	0	0.83910E-07	595528.5	4251042.0	22.9	3.88	3.95	3.61 NO
L0000025	0	0.83910E-07	595520.0	4251042.0	22.9	3.88	3.95	3.61 NO
L0000026	0	0.83910E-07	595511.5	4251041.9	22.9	3.88	3.95	3.61 NO
L0000027	0	0.83910E-07	595503.0	4251041.9	22.9	3.88	3.95	3.61 NO
L0000028	0	0.83910E-07	595494.5	4251041.8	22.9	3.88	3.95	3.61 NO
L0000029	0	0.83910E-07	595486.0	4251041.7	22.9	3.88	3.95	3.61 NO
L0000030	0	0.83910E-07	595477.5	4251041.7	22.9	3.88	3.95	3.61 NO
L0000031	0	0.83910E-07	595469.0	4251041.6	22.9	3.88	3.95	3.61 NO
L0000032	0	0.83910E-07	595460.5	4251041.6	22.9	3.88	3.95	3.61 NO
L0000033	0	0.83910E-07	595452.0	4251041.5	22.9	3.88	3.95	3.61 NO
L0000034	0	0.83910E-07	595443.5	4251041.4	22.9	3.88	3.95	3.61 NO
L0000035	0	0.83910E-07	595435.0	4251041.4	22.9	3.88	3.95	3.61 NO
L0000036	0	0.83910E-07	595426.5	4251041.3	22.9	3.88	3.95	3.61 NO
L0000037	0	0.83910E-07	595418.0	4251041.3	22.9	3.88	3.95	3.61 NO
L0000038	0	0.83910E-07	595409.5	4251041.2	22.9	3.88	3.95	3.61 NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0000039	0	0.83910E-07	595401.0	4251041.1	22.9	3.88	3.95	3.61	NO	
L0000040	0	0.83910E-07	595392.5	4251041.1	22.9	3.88	3.95	3.61	NO	
L0000041	0	0.83910E-07	595384.0	4251041.0	22.9	3.88	3.95	3.61	NO	
L0000042	0	0.83910E-07	595375.5	4251041.0	22.9	3.88	3.95	3.61	NO	
L0000043	0	0.83910E-07	595367.0	4251040.9	22.9	3.88	3.95	3.61	NO	
L0000044	0	0.83910E-07	595358.5	4251040.8	23.0	3.88	3.95	3.61	NO	
L0000045	0	0.83910E-07	595350.0	4251040.8	23.1	3.88	3.95	3.61	NO	
L0000046	0	0.83910E-07	595341.5	4251040.7	23.1	3.88	3.95	3.61	NO	
L0000047	0	0.83910E-07	595333.0	4251040.7	23.1	3.88	3.95	3.61	NO	
L0000048	0	0.83910E-07	595324.5	4251040.6	23.2	3.88	3.95	3.61	NO	
L0000049	0	0.83910E-07	595316.0	4251040.5	23.2	3.88	3.95	3.61	NO	
L0000050	0	0.83910E-07	595307.5	4251040.5	23.2	3.88	3.95	3.61	NO	
L0000051	0	0.83910E-07	595299.0	4251040.4	23.2	3.88	3.95	3.61	NO	
L0000052	0	0.83910E-07	595290.5	4251040.4	23.2	3.88	3.95	3.61	NO	
L0000053	0	0.83910E-07	595282.0	4251040.3	23.2	3.88	3.95	3.61	NO	

L0000054	0	0.83910E-07	595273.5	4251040.2	23.2	3.88	3.95	3.61 NO
L0000055	0	0.83910E-07	595265.0	4251040.2	23.2	3.88	3.95	3.61 NO
L0000056	0	0.83910E-07	595256.5	4251040.1	23.2	3.88	3.95	3.61 NO
L0000057	0	0.83910E-07	595248.0	4251040.1	23.2	3.88	3.95	3.61 NO
L0000058	0	0.83910E-07	595239.5	4251040.0	23.2	3.88	3.95	3.61 NO
L0000059	0	0.83910E-07	595231.0	4251040.0	23.2	3.88	3.95	3.61 NO
L0000060	0	0.83910E-07	595222.5	4251039.9	23.2	3.88	3.95	3.61 NO
L0000061	0	0.83910E-07	595214.0	4251039.8	23.2	3.88	3.95	3.61 NO
L0000062	0	0.83910E-07	595205.5	4251039.8	23.3	3.88	3.95	3.61 NO
L0000063	0	0.83910E-07	595197.0	4251039.7	23.4	3.88	3.95	3.61 NO
L0000064	0	0.83910E-07	595188.5	4251039.7	23.4	3.88	3.95	3.61 NO
L0000065	0	0.83910E-07	595180.0	4251039.6	23.4	3.88	3.95	3.61 NO
L0000066	0	0.83910E-07	595171.5	4251039.5	23.4	3.88	3.95	3.61 NO
L0000067	0	0.83910E-07	595163.0	4251039.5	23.5	3.88	3.95	3.61 NO
L0000068	0	0.83910E-07	595154.5	4251039.4	23.5	3.88	3.95	3.61 NO
L0000069	0	0.83910E-07	595146.0	4251039.4	23.5	3.88	3.95	3.61 NO
L0000070	0	0.83910E-07	595137.5	4251039.3	23.5	3.88	3.95	3.61 NO
L0000071	0	0.83910E-07	595129.0	4251039.2	23.5	3.88	3.95	3.61 NO
L0000072	0	0.83910E-07	595120.5	4251039.2	23.5	3.88	3.95	3.61 NO
L0000073	0	0.83910E-07	595112.0	4251039.1	23.5	3.88	3.95	3.61 NO
L0000074	0	0.83910E-07	595103.5	4251039.1	23.5	3.88	3.95	3.61 NO
L0000075	0	0.83910E-07	595095.0	4251039.0	23.5	3.88	3.95	3.61 NO
L0000076	0	0.83910E-07	595086.5	4251038.9	23.5	3.88	3.95	3.61 NO
L0000077	0	0.83910E-07	595078.0	4251038.9	23.5	3.88	3.95	3.61 NO
L0000078	0	0.83910E-07	595069.5	4251038.8	23.5	3.88	3.95	3.61 NO

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0000081	0	0.83910E-07	595044.0	4251038.6	23.5	3.88	3.95	3.61	NO	
L0000082	0	0.83910E-07	595035.5	4251038.6	23.5	3.88	3.95	3.61	NO	
L0000083	0	0.83910E-07	595027.0	4251038.5	23.6	3.88	3.95	3.61	NO	
L0000084	0	0.83910E-07	595018.5	4251038.5	23.7	3.88	3.95	3.61	NO	
L0000085	0	0.83910E-07	595010.0	4251038.4	23.7	3.88	3.95	3.61	NO	
L0000086	0	0.83910E-07	595001.5	4251038.3	23.7	3.88	3.95	3.61	NO	
L0000087	0	0.83910E-07	594993.0	4251038.3	23.7	3.88	3.95	3.61	NO	
L0000088	0	0.83910E-07	594984.5	4251038.2	23.7	3.88	3.95	3.61	NO	
L0000089	0	0.83910E-07	594976.0	4251038.2	23.7	3.88	3.95	3.61	NO	
L0000090	0	0.83910E-07	594967.5	4251038.1	23.7	3.88	3.95	3.61	NO	
L0000091	0	0.83910E-07	594959.0	4251038.0	23.7	3.88	3.95	3.61	NO	
L0000092	0	0.83910E-07	594950.5	4251038.0	23.7	3.88	3.95	3.61	NO	

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	X (METERS)	Y (METERS)	ELEV. (METERS)	BASE HEIGHT (METERS)	RELEASE OF VERTS.	NUMBER INIT. SZ BY	URBAN SOURCE SCALAR VARY
#1	0	0.11951E-09	595817.6	4252109.2	22.9	1.30	5	0.00	NO
#2	0	0.62630E-08	595817.3	4252104.1	22.9	1.30	5	0.00	NO

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	#1 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 ,

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(595558.2, 4250870.1, 22.9, 22.9, 0.0); (595558.2, 4250890.1, 22.9, 22.9, 0.0);
(595558.2, 4250910.1, 22.9, 22.9, 0.0); (595558.2, 4250930.1, 22.9, 22.9, 0.0);
(595558.2, 4250950.1, 22.9, 22.9, 0.0); (595558.2, 4250970.1, 22.9, 22.9, 0.0);
(595558.2, 4250990.1, 22.9, 22.9, 0.0); (595578.2, 4250870.1, 22.9, 22.9, 0.0);
(595578.2, 4250890.1, 22.9, 22.9, 0.0); (595578.2, 4250910.1, 22.9, 22.9, 0.0);
(595578.2, 4250930.1, 22.9, 22.9, 0.0); (595578.2, 4250950.1, 22.9, 22.9, 0.0);
(595578.2, 4250970.1, 22.9, 22.9, 0.0); (595578.2, 4250990.1, 22.9, 22.9, 0.0);
(595598.2, 4250870.1, 22.9, 22.9, 0.0); (595598.2,

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4250890.1,      22.9,      22.9,       0.0);
     ( 595598.2, 4250910.1,      22.9,      22.9,       0.0);         ( 595598.2,
4250930.1,      22.9,      22.9,       0.0);
     ( 595598.2, 4250950.1,      22.9,      22.9,       0.0);         ( 595598.2,
4250970.1,      22.9,      22.9,       0.0);
     ( 595598.2, 4250990.1,      22.9,      22.9,       0.0);         ( 595393.2,
4250647.5,      22.3,      22.3,       0.0);
     ( 595393.2, 4250667.5,      21.9,      21.9,       0.0);         ( 595393.2,
4250687.5,      21.4,      21.4,       0.0);
     ( 595393.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595393.2,
4250727.5,      21.5,      21.5,       0.0);
     ( 595393.2, 4250747.5,      21.8,      21.8,       0.0);         ( 595413.2,
4250627.5,      22.4,      22.4,       0.0);
     ( 595413.2, 4250647.5,      22.1,      22.1,       0.0);         ( 595413.2,
4250667.5,      21.7,      21.7,       0.0);
     ( 595413.2, 4250687.5,      21.4,      21.4,       0.0);         ( 595413.2,
4250707.5,      21.4,      21.4,       0.0);
     ( 595413.2, 4250727.5,      21.4,      21.4,       0.0);         ( 595413.2,
4250747.5,      21.6,      21.6,       0.0);
     ( 595433.2, 4250627.5,      22.2,      22.2,       0.0);         ( 595433.2,
4250647.5,      22.0,      22.0,       0.0);
     ( 595433.2, 4250667.5,      21.8,      21.8,       0.0);         ( 595433.2,
4250687.5,      21.6,      21.6,       0.0);
     ( 595433.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595433.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595453.2, 4250627.5,      22.2,      22.2,       0.0);         ( 595453.2,
4250647.5,      22.0,      22.0,       0.0);
     ( 595453.2, 4250667.5,      21.8,      21.8,       0.0);         ( 595453.2,
4250687.5,      21.6,      21.6,       0.0);
     ( 595453.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595453.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595473.2, 4250627.5,      22.1,      22.1,       0.0);         ( 595473.2,
4250647.5,      22.0,      22.0,       0.0);
     ( 595473.2, 4250667.5,      21.8,      21.8,       0.0);         ( 595473.2,
4250687.5,      21.5,      21.5,       0.0);
     ( 595473.2, 4250707.5,      21.4,      21.4,       0.0);         ( 595473.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595493.2, 4250627.5,      21.9,      21.9,       0.0);         ( 595493.2,
4250647.5,      21.9,      21.9,       0.0);
     ( 595493.2, 4250667.5,      21.7,      21.7,       0.0);         ( 595493.2,
4250687.5,      21.3,      21.3,       0.0);
     ( 595493.2, 4250707.5,      21.3,      21.3,       0.0);         ( 595493.2,
4250727.5,      21.3,      21.3,       0.0);
     ( 595513.2, 4250627.5,      21.9,      21.9,       0.0);         ( 595513.2,
4250647.5,      21.8,      21.8,       0.0);
     ( 595513.2, 4250667.5,      21.7,      21.7,       0.0);         ( 595513.2,
4250687.5,      21.5,      21.5,       0.0);
     ( 595513.2, 4250707.5,      21.4,      21.4,       0.0);         ( 596132.2,
4250952.4,      21.6,      21.6,       0.0);
     ( 596132.2, 4250972.4,      21.6,      21.6,       0.0);         ( 596132.2,
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4250992.4,   21.6,   21.6,   0.0);
     (596132.2, 4251012.4,   21.6,   21.6,   0.0);   (596152.2,
4250952.4,   21.6,   21.6,   0.0);
     (596152.2, 4250972.4,   21.6,   21.6,   0.0);   (596152.2,
4250992.4,   21.6,   21.6,   0.0);
     (596152.2, 4251012.4,   21.6,   21.6,   0.0);   (596172.2,
4250952.4,   21.6,   21.6,   0.0);
     (596172.2, 4250972.4,   21.6,   21.6,   0.0);   (596172.2,
4250992.4,   21.6,   21.6,   0.0);
     (596172.2, 4251012.4,   21.6,   21.6,   0.0);   (596192.2,
4250952.4,   21.5,   21.5,   0.0);
     (596192.2, 4250972.4,   21.6,   21.6,   0.0);   (596192.2,
4250992.4,   21.6,   21.6,   0.0);
     (596192.2, 4251012.4,   21.6,   21.6,   0.0);   (596192.2,
4251032.4,   21.6,   21.6,   0.0);
     (596212.2, 4250952.4,   21.4,   21.4,   0.0);   (596212.2,
4250972.4,   21.5,   21.5,   0.0);
     (596212.2, 4250992.4,   21.6,   21.6,   0.0);   (596212.2,
4251012.4,   21.6,   21.6,   0.0);
     (596212.2, 4251032.4,   21.6,   21.6,   0.0);   (596232.2,
4250952.4,   21.3,   21.3,   0.0);
     (596232.2, 4250972.4,   21.5,   21.5,   0.0);   (596232.2,
4250992.4,   21.6,   21.6,   0.0);
     (596232.2, 4251012.4,   21.6,   21.6,   0.0);   (596232.2,
4251032.4,   21.6,   21.6,   0.0);

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                       (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                   (METERS)

     (596252.2, 4250952.4,   21.3,   21.3,   0.0);   (596252.2,
4250972.4,   21.5,   21.5,   0.0);
     (596252.2, 4250992.4,   21.6,   21.6,   0.0);   (596252.2,
4251012.4,   21.6,   21.6,   0.0);
     (596252.2, 4251032.4,   21.6,   21.6,   0.0);   (596272.2,
4250952.4,   21.3,   21.3,   0.0);
     (596272.2, 4250972.4,   21.3,   21.3,   0.0);   (596272.2,
4250992.4,   21.4,   21.4,   0.0);
     (596272.2, 4251012.4,   21.6,   21.6,   0.0);   (596272.2,
4251032.4,   21.6,   21.6,   0.0);
     (596292.2, 4250952.4,   21.3,   21.3,   0.0);   (596292.2,
4250972.4,   21.3,   21.3,   0.0);
     (596292.2, 4250992.4,   21.4,   21.4,   0.0);   (596292.2,

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4251012.4,      21.4,      21.4,       0.0);
     ( 596292.2, 4251032.4,      21.4,      21.4,       0.0);         ( 596312.2,
4250952.4,      21.3,      21.3,       0.0);
     ( 596312.2, 4250972.4,      21.3,      21.3,       0.0);         ( 596312.2,
4250992.4,      21.3,      21.3,       0.0);
     ( 596312.2, 4251012.4,      21.3,      21.3,       0.0);         ( 596312.2,
4251032.4,      21.3,      21.3,       0.0);
     ( 596270.9, 4250797.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250817.3,      21.3,      21.3,       0.0);
     ( 596270.9, 4250837.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250857.3,      21.3,      21.3,       0.0);
     ( 596270.9, 4250877.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596270.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596270.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596290.9, 4250797.3,      21.2,      21.2,       0.0);         ( 596290.9,
4250817.3,      21.2,      21.2,       0.0);
     ( 596290.9, 4250837.3,      21.2,      21.2,       0.0);         ( 596290.9,
4250857.3,      21.3,      21.3,       0.0);
     ( 596290.9, 4250877.3,      21.3,      21.3,       0.0);         ( 596290.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596290.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596290.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596310.9, 4250797.3,      21.0,      21.0,       0.0);         ( 596310.9,
4250817.3,      21.0,      21.0,       0.0);
     ( 596310.9, 4250837.3,      21.1,      21.1,       0.0);         ( 596310.9,
4250857.3,      21.2,      21.2,       0.0);
     ( 596310.9, 4250877.3,      21.3,      21.3,       0.0);         ( 596310.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596310.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596310.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596330.9, 4250797.3,      21.0,      21.0,       0.0);         ( 596330.9,
4250817.3,      21.0,      21.0,       0.0);
     ( 596330.9, 4250837.3,      21.0,      21.0,       0.0);         ( 596330.9,
4250857.3,      21.1,      21.1,       0.0);
     ( 596330.9, 4250877.3,      21.2,      21.2,       0.0);         ( 596330.9,
4250897.3,      21.3,      21.3,       0.0);
     ( 596330.9, 4250917.3,      21.3,      21.3,       0.0);         ( 596330.9,
4250937.3,      21.3,      21.3,       0.0);
     ( 596183.2, 4250665.8,      21.3,      21.3,       0.0);         ( 596183.2,
4250685.8,      21.3,      21.3,       0.0);
     ( 596183.2, 4250705.8,      21.3,      21.3,       0.0);         ( 596203.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596203.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596203.2,
4250705.8,      21.3,      21.3,       0.0);
     ( 596223.2, 4250665.8,      21.3,      21.3,       0.0);         ( 596223.2,
4250685.8,      21.3,      21.3,       0.0);
     ( 596223.2, 4250705.8,      21.3,      21.3,       0.0);         ( 596243.2,
4250665.8,      21.3,      21.3,       0.0);
     ( 596243.2, 4250685.8,      21.3,      21.3,       0.0);         ( 596243.2,
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4250705.8,   21.3,   21.3,   0.0);
     (596263.2, 4250665.8,   21.3,   21.3,   0.0);   (596263.2,
4250685.8,   21.3,   21.3,   0.0);
     (596263.2, 4250705.8,   21.3,   21.3,   0.0);   (596283.2,
4250665.8,   21.3,   21.3,   0.0);
     (596283.2, 4250685.8,   21.3,   21.3,   0.0);   (596283.2,
4250705.8,   21.3,   21.3,   0.0);
     (596303.2, 4250665.8,   21.3,   21.3,   0.0);   (596303.2,
4250685.8,   21.3,   21.3,   0.0);
     (596303.2, 4250705.8,   21.3,   21.3,   0.0);   (596323.2,
4250665.8,   21.3,   21.3,   0.0);
     (596323.2, 4250685.8,   21.3,   21.3,   0.0);   (596323.2,
4250705.8,   21.3,   21.3,   0.0);
     (596343.2, 4250665.8,   21.2,   21.2,   0.0);   (596343.2,
4250685.8,   21.2,   21.2,   0.0);
     (596343.2, 4250705.8,   21.2,   21.2,   0.0);   (596363.2,
4250665.8,   21.0,   21.0,   0.0);
     (596363.2, 4250685.8,   21.0,   21.0,   0.0);   (596363.2,
4250705.8,   21.0,   21.0,   0.0);
     (596383.2, 4250665.8,   20.8,   20.8,   0.0);   (596383.2,
4250685.8,   20.8,   20.8,   0.0);
     (596383.2, 4250705.8,   21.0,   21.0,   0.0);   (596403.2,
4250665.8,   20.7,   20.7,   0.0);
     (596403.2, 4250685.8,   20.7,   20.7,   0.0);   (596403.2,
4250705.8,   20.9,   20.9,   0.0);
     (596423.2, 4250665.8,   20.7,   20.7,   0.0);   (596423.2,
4250685.8,   20.7,   20.7,   0.0);

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                  (METERS)

     (596423.2, 4250705.8,   20.7,   20.7,   0.0);   (596443.2,
4250665.8,   20.5,   20.5,   0.0);
     (596443.2, 4250685.8,   20.5,   20.5,   0.0);   (596443.2,
4250705.8,   20.5,   20.5,   0.0);
     (595977.6, 4250946.0,   21.9,   21.9,   0.0);   (595977.6,
4250966.0,   21.9,   21.9,   0.0);
     (595977.6, 4250986.0,   21.9,   21.9,   0.0);   (595977.6,
4251006.0,   21.9,   21.9,   0.0);
     (595977.6, 4251026.0,   21.9,   21.9,   0.0);   (595997.6,
4250946.0,   21.9,   21.9,   0.0);
     (595997.6, 4250966.0,   21.9,   21.9,   0.0);   (595997.6,

```
4250986.0,      21.9,      21.9,       0.0);
     ( 595997.6, 4251006.0,      21.9,      21.9,       0.0);         ( 595997.6,
4251026.0,      21.9,      21.9,       0.0);
     ( 596017.6, 4250946.0,      21.9,      21.9,       0.0);         ( 596017.6,
4250966.0,      21.9,      21.9,       0.0);
     ( 596017.6, 4250986.0,      21.9,      21.9,       0.0);         ( 596017.6,
4251006.0,      21.9,      21.9,       0.0);
     ( 596017.6, 4251026.0,      21.9,      21.9,       0.0);         ( 596037.6,
4250946.0,      21.8,      21.8,       0.0);
     ( 596037.6, 4250966.0,      21.9,      21.9,       0.0);         ( 596037.6,
4250986.0,      21.9,      21.9,       0.0);
     ( 596037.6, 4251006.0,      21.9,      21.9,       0.0);         ( 596037.6,
4251026.0,      21.9,      21.9,       0.0);
     ( 596057.6, 4250946.0,      21.7,      21.7,       0.0);         ( 596057.6,
4250966.0,      21.7,      21.7,       0.0);
     ( 596057.6, 4250986.0,      21.7,      21.7,       0.0);         ( 596057.6,
4251006.0,      21.9,      21.9,       0.0);
     ( 596057.6, 4251026.0,      21.9,      21.9,       0.0);         ( 596077.6,
4250946.0,      21.6,      21.6,       0.0);
     ( 596077.6, 4250966.0,      21.6,      21.6,       0.0);         ( 596077.6,
4250986.0,      21.6,      21.6,       0.0);
     ( 596077.6, 4251006.0,      21.8,      21.8,       0.0);         ( 596077.6,
4251026.0,      21.9,      21.9,       0.0);
     ( 596097.6, 4250946.0,      21.6,      21.6,       0.0);         ( 596097.6,
4250966.0,      21.6,      21.6,       0.0);
     ( 596097.6, 4250986.0,      21.6,      21.6,       0.0);         ( 596097.6,
4251006.0,      21.6,      21.6,       0.0);
     ( 596097.6, 4251026.0,      21.7,      21.7,       0.0);         ( 596117.6,
4250946.0,      21.6,      21.6,       0.0);
     ( 596117.6, 4250966.0,      21.6,      21.6,       0.0);         ( 596117.6,
4250986.0,      21.6,      21.6,       0.0);
     ( 596117.6, 4251006.0,      21.6,      21.6,       0.0);         ( 596117.6,
4251026.0,      21.7,      21.7,       0.0);
     ( 596337.0, 4252250.5,      22.6,      22.6,       0.0);         ( 596357.0,
4252270.5,      22.6,      22.6,       0.0);
     ( 596357.0, 4252290.5,      22.7,      22.7,       0.0);         ( 596357.0,
4252310.5,      22.9,      22.9,       0.0);
     ( 596357.0, 4252330.5,      22.9,      22.9,       0.0);         ( 596357.0,
4252350.5,      22.9,      22.9,       0.0);
     ( 596377.0, 4252270.5,      22.7,      22.7,       0.0);         ( 596377.0,
4252290.5,      22.8,      22.8,       0.0);
     ( 596377.0, 4252310.5,      22.9,      22.9,       0.0);         ( 596377.0,
4252330.5,      22.9,      22.9,       0.0);
     ( 596377.0, 4252350.5,      22.9,      22.9,       0.0);         ( 596397.0,
4252270.5,      22.8,      22.8,       0.0);
     ( 596397.0, 4252290.5,      22.9,      22.9,       0.0);         ( 596397.0,
4252310.5,      22.9,      22.9,       0.0);
     ( 596397.0, 4252330.5,      22.9,      22.9,       0.0);         ( 596397.0,
4252350.5,      22.9,      22.9,       0.0);
     ( 596417.0, 4252270.5,      22.9,      22.9,       0.0);         ( 596417.0,
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4252290.5,   22.9,   22.9,   0.0);
     (596417.0, 4252310.5,   22.9,   22.9,   0.0);   (596417.0,
4252330.5,   22.9,   22.9,   0.0);
     (596417.0, 4252350.5,   22.9,   22.9,   0.0);   (596437.0,
4252270.5,   22.8,   22.8,   0.0);
     (596437.0, 4252290.5,   22.9,   22.9,   0.0);   (596437.0,
4252310.5,   22.9,   22.9,   0.0);
     (596437.0, 4252330.5,   22.9,   22.9,   0.0);   (596437.0,
4252350.5,   22.9,   22.9,   0.0);
     (596457.0, 4252270.5,   22.8,   22.8,   0.0);   (596457.0,
4252290.5,   22.9,   22.9,   0.0);
     (596457.0, 4252310.5,   22.9,   22.9,   0.0);   (596457.0,
4252330.5,   22.9,   22.9,   0.0);
     (596457.0, 4252350.5,   22.9,   22.9,   0.0);   (596477.0,
4252270.5,   22.8,   22.8,   0.0);
     (596477.0, 4252290.5,   22.9,   22.9,   0.0);   (596477.0,
4252310.5,   22.9,   22.9,   0.0);
     (596477.0, 4252330.5,   22.9,   22.9,   0.0);   (596477.0,
4252350.5,   22.9,   22.9,   0.0);
     (596497.0, 4252330.5,   22.9,   22.9,   0.0);   (596497.0,
4252350.5,   22.9,   22.9,   0.0);
     (594781.6, 4251521.0,   24.7,   24.7,   0.0);   (594781.6,
4251541.0,   24.7,   24.7,   0.0);
     (594781.6, 4251561.0,   24.7,   24.7,   0.0);   (594781.6,
4251581.0,   24.7,   24.7,   0.0);
     (594781.6, 4251601.0,   24.7,   24.7,   0.0);   (594801.6,
4251521.0,   24.7,   24.7,   0.0);
     (594801.6, 4251541.0,   24.7,   24.7,   0.0);   (594801.6,
4251561.0,   24.7,   24.7,   0.0);

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                       (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                    (METERS)

     (594801.6, 4251581.0,   24.7,   24.7,   0.0);   (594801.6,
4251601.0,   24.7,   24.7,   0.0);
     (594821.6, 4251521.0,   24.7,   24.7,   0.0);   (594821.6,
4251541.0,   24.7,   24.7,   0.0);
     (594821.6, 4251561.0,   24.7,   24.7,   0.0);   (594821.6,
4251581.0,   24.7,   24.7,   0.0);
     (594841.6, 4251561.0,   24.6,   24.6,   0.0);   (594841.6,
4251581.0,   24.6,   24.6,   0.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

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

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

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

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

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

Surface file:

..\Weber_HRA_operational\KVCB_724828_93241\724828_2017-2021_AdjU.sfc
Met Version: 21112
   Profile file:
..\Weber_HRA_operational\KVCB_724828_93241\724828_2017-2021_AdjU.pfl
   Surface format: FREE

   Profile format: FREE

   Surface station no.:   93241   Upper air station no.:   23230
                  Name: UNKNOWN   Name:
OAKLAND/WSO_AP
                  Year: 2017   Year: 2017

 First 24 hours of scalar data
 YR MO DY JDY HR   H0   U*   W* DT/DZ ZICNV ZIMCH M-O LEN   Z0 BOWEN
ALBEDO REF WS   WD   HT REF TA   HT
- -
- - - - - - - - - - - - - - - - - - -
 17 01 01   1 01 -25.0 0.249 -9.000 -9.000 -999. 298.   68.0 0.01   0.54
1.00   4.36 201.   10.0 280.9   2.0
 17 01 01   1 02 -36.6 0.365 -9.000 -9.000 -999. 530.   146.7 0.01   0.54
1.00   6.38 211.   10.0 281.4   2.0
 17 01 01   1 03 -31.6 0.315 -9.000 -9.000 -999. 425.   108.8 0.01   0.54
1.00   5.53 214.   10.0 280.9   2.0
 17 01 01   1 04 -17.5 0.172 -9.000 -9.000 -999. 184.   32.4 0.01   0.54
1.00   3.18 305.   10.0 276.4   2.0
 17 01 01   1 05   -8.6 0.120 -9.000 -9.000 -999. 101.   18.1 0.03   0.54
1.00   1.93   1.   10.0 274.9   2.0
 17 01 01   1 06 -10.8 0.135 -9.000 -9.000 -999. 119.   20.6 0.03   0.54
1.00   2.15   11.   10.0 275.9   2.0
 17 01 01   1 07 -12.0 0.140 -9.000 -9.000 -999. 126.   21.7 0.02   0.54
1.00   2.42 357.   10.0 276.4   2.0
 17 01 01   1 08   -9.7 0.125 -9.000 -9.000 -999. 107.   18.4 0.02   0.54
1.00   2.18 342.   10.0 277.0   2.0
 17 01 01   1 09   2.6 0.104 0.208 0.005 124.   81.   -39.5 0.03   0.54
0.41   1.38   29.   10.0 277.5   2.0
 17 01 01   1 10   4.4 0.119 0.349 0.005 350.   99.   -35.3 0.02   0.54
0.28   1.72 356.   10.0 279.2   2.0
 17 01 01   1 11   10.9 0.164 0.564 0.005 592. 159.   -36.3 0.03   0.54
0.23   2.15   1.   10.0 280.9   2.0
 17 01 01   1 12   14.5 0.165 0.676 0.017 768. 161.   -28.0 0.03   0.54
0.22   2.13   12.   10.0 281.4   2.0
 17 01 01   1 13   72.0 0.177 1.253 0.019 985. 179.   -6.9 0.03   0.54
0.22   2.08 143.   10.0 282.5   2.0
 17 01 01   1 14   65.1 0.167 1.252 0.020 1084. 163.   -6.4 0.01   0.54
0.23   2.21 191.   10.0 284.9   2.0
 17 01 01   1 15   39.8 0.254 1.063 0.019 1086. 306.   -36.8 0.01   0.54
0.26   3.86 199.   10.0 284.2   2.0
 17 01 01   1 16   9.4 0.267 0.658 0.019 1087. 331.   -181.8 0.01   0.54
0.34   4.32 200.   10.0 284.9   2.0

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 17 01 01   1 17  -25.4  0.289 -9.000 -9.000 -999.  373.     92.1  0.01   0.54
0.59    5.09  248.   10.0  283.1    2.0
 17 01 01   1 18  -23.3  0.233 -9.000 -9.000 -999.  272.     59.9  0.01   0.54
1.00    4.15  234.   10.0  282.0    2.0
 17 01 01   1 19  -21.2  0.212 -9.000 -9.000 -999.  234.     49.3  0.01   0.54
1.00    3.78  228.   10.0  281.4    2.0
 17 01 01   1 20  -24.8  0.247 -9.000 -9.000 -999.  295.     67.1  0.01   0.54
1.00    4.44  275.   10.0  281.4    2.0
 17 01 01   1 21  -25.7  0.256 -9.000 -9.000 -999.  310.     71.8  0.01   0.54
1.00    4.53  244.   10.0  280.9    2.0
 17 01 01   1 22  -25.4  0.253 -9.000 -9.000 -999.  305.     70.2  0.01   0.54
1.00    4.48  244.   10.0  280.9    2.0
 17 01 01   1 23  -25.2  0.250 -9.000 -9.000 -999.  300.     68.9  0.01   0.54
1.00    4.44  218.   10.0  280.4    2.0
 17 01 01   1 24  -20.2  0.200 -9.000 -9.000 -999.  215.     43.9  0.01   0.54
1.00    3.58  221.   10.0  279.2    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 17 01 01 01   10.0 1  201.    4.36   281.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:38:56

                                  PAGE  13
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                 L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                           *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

       X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
Y-COORD (M)        CONC
```

- -

595558.19 4250870.06 0.00676 595558.19
4250890.06 0.00726
595558.19 4250910.06 0.00784 595558.19
4250930.06 0.00849
595558.19 4250950.06 0.00926 595558.19
4250970.06 0.01016
595558.19 4250990.06 0.01125 595578.19
4250870.06 0.00703
595578.19 4250890.06 0.00757 595578.19
4250910.06 0.00819
595578.19 4250930.06 0.00891 595578.19
4250950.06 0.00975
595578.19 4250970.06 0.01075 595578.19
4250990.06 0.01196
595598.19 4250870.06 0.00725 595598.19
4250890.06 0.00782
595598.19 4250910.06 0.00848 595598.19
4250930.06 0.00924
595598.19 4250950.06 0.01013 595598.19
4250970.06 0.01119
595598.19 4250990.06 0.01248 595393.16
4250647.52 0.00290
595393.16 4250667.52 0.00300 595393.16
4250687.52 0.00310
595393.16 4250707.52 0.00322 595393.16
4250727.52 0.00334
595393.16 4250747.52 0.00347 595413.16
4250627.52 0.00289
595413.16 4250647.52 0.00299 595413.16
4250667.52 0.00310
595413.16 4250687.52 0.00321 595413.16
4250707.52 0.00333
595413.16 4250727.52 0.00347 595413.16
4250747.52 0.00361
595433.16 4250627.52 0.00297 595433.16
4250647.52 0.00308
595433.16 4250667.52 0.00320 595433.16
4250687.52 0.00332
595433.16 4250707.52 0.00345 595433.16
4250727.52 0.00359
595453.16 4250627.52 0.00305 595453.16
4250647.52 0.00317
595453.16 4250667.52 0.00330 595453.16
4250687.52 0.00343
595453.16 4250707.52 0.00357 595453.16
4250727.52 0.00372
595473.16 4250627.52 0.00314 595473.16
4250647.52 0.00326

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         595473.16    4250667.52        0.00340                      595473.16
4250687.52        0.00354
         595473.16    4250707.52        0.00369                      595473.16
4250727.52        0.00385
         595493.16    4250627.52        0.00322                      595493.16
4250647.52        0.00335
         595493.16    4250667.52        0.00349                      595493.16
4250687.52        0.00364
         595493.16    4250707.52        0.00381                      595493.16
4250727.52        0.00398
         595513.16    4250627.52        0.00330                      595513.16
4250647.52        0.00344
         595513.16    4250667.52        0.00359                      595513.16
4250687.52        0.00375
         595513.16    4250707.52        0.00392                      596132.19
4250952.37        0.00274
         596132.19    4250972.37        0.00282                      596132.19
4250992.37        0.00291
         596132.19    4251012.37        0.00299                      596152.19
4250952.37        0.00263
         596152.19    4250972.37        0.00271                      596152.19
4250992.37        0.00279
         596152.19    4251012.37        0.00287                      596172.19
4250952.37        0.00253
         596172.19    4250972.37        0.00260                      596172.19
4250992.37        0.00267
         596172.19    4251012.37        0.00275                      596192.19
4250952.37        0.00243
         596192.19    4250972.37        0.00250                      596192.19
4250992.37        0.00257
         596192.19    4251012.37        0.00264                      596192.19
4251032.37        0.00271
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:38:56

                                  PAGE  14
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                 L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,
```

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596212.19	4250952.37	0.00234	596212.19	4250972.37	0.00241
596212.19	4250992.37	0.00247	596212.19	4251012.37	0.00254
596212.19	4251032.37	0.00260	596232.19	4250952.37	0.00226
596232.19	4250972.37	0.00232	596232.19	4250992.37	0.00238
596232.19	4251012.37	0.00244	596232.19	4251032.37	0.00250
596252.19	4250952.37	0.00218	596252.19	4250972.37	0.00223
596252.19	4250992.37	0.00229	596252.19	4251012.37	0.00235
596252.19	4251032.37	0.00241	596272.19	4250952.37	0.00210
596272.19	4250972.37	0.00215	596272.19	4250992.37	0.00221
596272.19	4251012.37	0.00226	596272.19	4251032.37	0.00232
596292.19	4250952.37	0.00203	596292.19	4250972.37	0.00208
596292.19	4250992.37	0.00213	596292.19	4251012.37	0.00218
596292.19	4251032.37	0.00224	596312.19	4250952.37	0.00197
596312.19	4250972.37	0.00201	596312.19	4250992.37	0.00206
596312.19	4251012.37	0.00211	596312.19	4251032.37	0.00216
596270.86	4250797.28	0.00178	596270.86	4250817.28	0.00182
596270.86	4250837.28	0.00185	596270.86	4250857.28	0.00189
596270.86	4250877.28	0.00193	596270.86	4250897.28	0.00198
596270.86	4250917.28	0.00202	596270.86	4250937.28	0.00207
596290.86	4250797.28	0.00172	596290.86		

4250817.28   0.00176
         596290.86   4250837.28   0.00179   596290.86
4250857.28   0.00183
         596290.86   4250877.28   0.00187   596290.86
4250897.28   0.00191
         596290.86   4250917.28   0.00196   596290.86
4250937.28   0.00200
         596310.86   4250797.28   0.00167   596310.86
4250817.28   0.00170
         596310.86   4250837.28   0.00173   596310.86
4250857.28   0.00177
         596310.86   4250877.28   0.00181   596310.86
4250897.28   0.00185
         596310.86   4250917.28   0.00189   596310.86
4250937.28   0.00194
         596330.86   4250797.28   0.00162   596330.86
4250817.28   0.00165
         596330.86   4250837.28   0.00168   596330.86
4250857.28   0.00172
         596330.86   4250877.28   0.00175   596330.86
4250897.28   0.00179
         596330.86   4250917.28   0.00183   596330.86
4250937.28   0.00187
         596183.21   4250665.84   0.00180   596183.21
4250685.84   0.00184
         596183.21   4250705.84   0.00188   596203.21
4250665.84   0.00175
         596203.21   4250685.84   0.00178   596203.21
4250705.84   0.00182
         596223.21   4250665.84   0.00170   596223.21
4250685.84   0.00173
         596223.21   4250705.84   0.00176   596243.21
4250665.84   0.00164
         596243.21   4250685.84   0.00168   596243.21
4250705.84   0.00171
         596263.21   4250665.84   0.00160   596263.21
4250685.84   0.00162
         596263.21   4250705.84   0.00165   596283.21
4250665.84   0.00155
         596283.21   4250685.84   0.00158   596283.21
4250705.84   0.00161

 *** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

                  *** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5

YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): #1 , L0000001
, L0000002 , L0000003 , L0000004 ,
L0000005 , L0000006 , L0000007 , L0000008 , L0000009
, L0000010 , L0000011 , L0000012 ,
L0000013 , L0000014 , L0000015 , L0000016 , L0000017
, L0000018 , L0000019 , L0000020 ,
L0000021 , L0000022 , L0000023 , L0000024 , L0000025
, L0000026 , L0000027 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596303.21	4250665.84	0.00151	596303.21	4250685.84	0.00153
596303.21	4250705.84	0.00156	596323.21	4250665.84	0.00146
596323.21	4250685.84	0.00149	596323.21	4250705.84	0.00151
596343.21	4250665.84	0.00142	596343.21	4250685.84	0.00145
596343.21	4250705.84	0.00147	596363.21	4250665.84	0.00138
596363.21	4250685.84	0.00140	596363.21	4250705.84	0.00143
596383.21	4250665.84	0.00134	596383.21	4250685.84	0.00136
596383.21	4250705.84	0.00139	596403.21	4250665.84	0.00131
596403.21	4250685.84	0.00133	596403.21	4250705.84	0.00135
596423.21	4250665.84	0.00127	596423.21	4250685.84	0.00129
596423.21	4250705.84	0.00131	596443.21	4250665.84	0.00124
596443.21	4250685.84	0.00126	596443.21	4250705.84	0.00128
595977.64	4250946.01	0.00393	595977.64	4250966.01	0.00407
595977.64	4250986.01	0.00421	595977.64	4251006.01	0.00437
595977.64	4251026.01	0.00454	595997.64	4250946.01	0.00373

595997.64 4250966.01 0.00385 595997.64 4250986.01 0.00398
595997.64 4251006.01 0.00413 595997.64 4251026.01 0.00428
596017.64 4250946.01 0.00354 596017.64 4250966.01 0.00366
596017.64 4250986.01 0.00378 596017.64 4251006.01 0.00391
596017.64 4251026.01 0.00405 596037.64 4250946.01 0.00337
596037.64 4250966.01 0.00347 596037.64 4250986.01 0.00359
596037.64 4251006.01 0.00371 596037.64 4251026.01 0.00384
596057.64 4250946.01 0.00321 596057.64 4250966.01 0.00331
596057.64 4250986.01 0.00341 596057.64 4251006.01 0.00353
596057.64 4251026.01 0.00365 596077.64 4250946.01 0.00306
596077.64 4250966.01 0.00315 596077.64 4250986.01 0.00325
596077.64 4251006.01 0.00336 596077.64 4251026.01 0.00347
596097.64 4250946.01 0.00293 596097.64 4250966.01 0.00301
596097.64 4250986.01 0.00311 596097.64 4251006.01 0.00320
596097.64 4251026.01 0.00331 596117.64 4250946.01 0.00280
596117.64 4250966.01 0.00289 596117.64 4250986.01 0.00297
596117.64 4251006.01 0.00306 596117.64 4251026.01 0.00316
596336.95 4252250.50 0.00694 596356.95 4252270.50 0.00665
596356.95 4252290.50 0.00659 596356.95 4252310.50 0.00652
596356.95 4252330.50 0.00644 596356.95 4252350.50 0.00635
596376.95 4252270.50 0.00644 596376.95 4252290.50 0.00639
596376.95 4252310.50 0.00632 596376.95 4252330.50 0.00625
596376.95 4252350.50 0.00617 596396.95 4252270.50 0.00624
596396.95 4252290.50 0.00620 596396.95 4252310.50 0.00614
596396.95 4252330.50 0.00607 596396.95 4252350.50 0.00600

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): #1 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
596416.95	4252270.50	0.00605	596416.95	4252290.50	0.00601
596416.95	4252310.50	0.00596	596416.95	4252330.50	0.00590
596416.95	4252350.50	0.00584	596436.95	4252270.50	0.00586
596436.95	4252290.50	0.00583	596436.95	4252310.50	0.00578
596436.95	4252330.50	0.00574	596436.95	4252350.50	0.00568
596456.95	4252270.50	0.00568	596456.95	4252290.50	0.00565
596456.95	4252310.50	0.00562	596456.95	4252330.50	0.00557
596456.95	4252350.50	0.00552	596476.95	4252270.50	0.00551
596476.95	4252290.50	0.00548	596476.95	4252310.50	0.00545
596476.95	4252330.50	0.00542	596476.95	4252350.50	0.00537
596496.95	4252330.50	0.00526	596496.95		

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4252350.50        0.00523
         594781.55    4251521.04        0.00128                       594781.55
4251541.04        0.00128
         594781.55    4251561.04        0.00128                       594781.55
4251581.04        0.00128
         594781.55    4251601.04        0.00127                       594801.55
4251521.04        0.00133
         594801.55    4251541.04        0.00133                       594801.55
4251561.04        0.00133
         594801.55    4251581.04        0.00133                       594801.55
4251601.04        0.00133
         594821.55    4251521.04        0.00139                       594821.55
4251541.04        0.00139
         594821.55    4251561.04        0.00138                       594821.55
4251581.04        0.00138
         594841.55    4251561.04        0.00144                       594841.55
4251581.04        0.00144
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:38:56

                                   PAGE  17
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                 L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                          *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        595558.19   4250870.06        0.54478  (20121309)                595558.19
 4250890.06        0.56498  (20121309)
        595558.19   4250910.06        0.58638  (20121309)                595558.19
 4250930.06        0.60928  (20121309)
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595558.19 4250950.06 0.63393 (20121309) 595558.19
4250970.06 0.66073 (20121309)
595558.19 4250990.06 0.69026 (20121309) 595578.19
4250870.06 0.51977 (20121309)
595578.19 4250890.06 0.54158 (20121309) 595578.19
4250910.06 0.56467 (20121309)
595578.19 4250930.06 0.58930 (20121309) 595578.19
4250950.06 0.61573 (20121309)
595578.19 4250970.06 0.64437 (20121309) 595578.19
4250990.06 0.67571 (20121309)
595598.19 4250870.06 0.53878 (17103108) 595598.19
4250890.06 0.55722 (17103108)
595598.19 4250910.06 0.57706 (17103108) 595598.19
4250930.06 0.59857 (17103108)
595598.19 4250950.06 0.62209 (17103108) 595598.19
4250970.06 0.65287 (20022808)
595598.19 4250990.06 0.68776 (20022808) 595393.16
4250647.52 0.26780 (20091307)
595393.16 4250667.52 0.26830 (20091307) 595393.16
4250687.52 0.27069 (21120308)
595393.16 4250707.52 0.27528 (21120308) 595393.16
4250727.52 0.27938 (21120308)
595393.16 4250747.52 0.28285 (21120308) 595413.16
4250627.52 0.27902 (20091307)
595413.16 4250647.52 0.28306 (20091307) 595413.16
4250667.52 0.28646 (20091307)
595413.16 4250687.52 0.28916 (20091307) 595413.16
4250707.52 0.29139 (20091307)
595413.16 4250727.52 0.29309 (20091307) 595413.16
4250747.52 0.29410 (20091307)
595433.16 4250627.52 0.28216 (20091307) 595433.16
4250647.52 0.28911 (20091307)
595433.16 4250667.52 0.29559 (20091307) 595433.16
4250687.52 0.30156 (20091307)
595433.16 4250707.52 0.30697 (20091307) 595433.16
4250727.52 0.31191 (20091307)
595453.16 4250627.52 0.31146 (20121309) 595453.16
4250647.52 0.31073 (20121309)
595453.16 4250667.52 0.30950 (20121309) 595453.16
4250687.52 0.30774 (20121309)
595453.16 4250707.52 0.31136 (20091307) 595453.16
4250727.52 0.31976 (20091307)
595473.16 4250627.52 0.35310 (20121309) 595473.16
4250647.52 0.35564 (20121309)
595473.16 4250667.52 0.35766 (20121309) 595473.16
4250687.52 0.35918 (20121309)
595473.16 4250707.52 0.36039 (20121309) 595473.16
4250727.52 0.36140 (20121309)
595493.16 4250627.52 0.38088 (20121309) 595493.16
4250647.52 0.38697 (20121309)

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       595493.16   4250667.52        0.39241  (20121309)               595493.16
 4250687.52        0.39727  (20121309)
       595493.16   4250707.52        0.40277  (20121309)               595493.16
 4250727.52        0.40808  (20121309)
       595513.16   4250627.52        0.39191  (20121309)               595513.16
 4250647.52        0.40062  (20121309)
       595513.16   4250667.52        0.40931  (20121309)               595513.16
 4250687.52        0.41801  (20121309)
       595513.16   4250707.52        0.42676  (20121309)               596132.19
 4250952.37        0.18211  (20022608)
       596132.19   4250972.37        0.18188  (20022608)               596132.19
 4250992.37        0.18163  (20022608)
       596132.19   4251012.37        0.18137  (20022608)               596152.19
 4250952.37        0.17723  (20022608)
       596152.19   4250972.37        0.17706  (20022608)               596152.19
 4250992.37        0.17681  (20022608)
       596152.19   4251012.37        0.17656  (20022608)               596172.19
 4250952.37        0.17271  (20022608)
       596172.19   4250972.37        0.17254  (20022608)               596172.19
 4250992.37        0.17229  (20022608)
       596172.19   4251012.37        0.17206  (20022608)               596192.19
 4250952.37        0.16830  (20022608)
       596192.19   4250972.37        0.16821  (20022608)               596192.19
 4250992.37        0.16806  (20022608)
       596192.19   4251012.37        0.16782  (20022608)               596192.19
 4251032.37        0.16760  (20022608)
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:38:56

                                  PAGE  18
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
 , L0000018    , L0000019    , L0000020    ,
                 L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                       *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                     ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **
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X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
596212.19	4250952.37	0.16398	(20022608)	596212.19	4250972.37	0.16407	(20022608)
596212.19	4250992.37	0.16406	(20022608)	596212.19	4251012.37	0.16383	(20022608)
596212.19	4251032.37	0.16361	(20022608)	596232.19	4250952.37	0.16021	(20022608)
596232.19	4250972.37	0.16029	(20022608)	596232.19	4250992.37	0.16028	(20022608)
596232.19	4251012.37	0.16006	(20022608)	596232.19	4251032.37	0.15984	(20022608)
596252.19	4250952.37	0.15665	(20022608)	596252.19	4250972.37	0.15664	(20022608)
596252.19	4250992.37	0.15660	(20022608)	596252.19	4251012.37	0.15647	(20022608)
596252.19	4251032.37	0.15625	(20022608)	596272.19	4250952.37	0.15329	(20022608)
596272.19	4250972.37	0.15308	(20022608)	596272.19	4250992.37	0.15299	(20022608)
596272.19	4251012.37	0.15303	(20022608)	596272.19	4251032.37	0.15280	(20022608)
596292.19	4250952.37	0.15008	(20022608)	596292.19	4250972.37	0.14987	(20022608)
596292.19	4250992.37	0.14968	(20022608)	596292.19	4251012.37	0.14953	(20022608)
596292.19	4251032.37	0.14923	(20022608)	596312.19	4250952.37	0.14702	(20022608)
596312.19	4250972.37	0.14681	(20022608)	596312.19	4250992.37	0.14655	(20022608)
596312.19	4251012.37	0.14625	(20022608)	596312.19	4251032.37	0.14586	(20022608)
596270.86	4250797.28	0.15403	(20022608)	596270.86	4250817.28	0.15446	(20022608)
596270.86	4250837.28	0.15452	(20022608)	596270.86	4250857.28	0.15440	(20022608)
596270.86	4250877.28	0.15423	(20022608)	596270.86	4250897.28	0.15404	(20022608)
596270.86	4250917.28	0.15384	(20022608)	596270.86	4250937.28	0.15364	(20022608)
596290.86	4250797.28	0.15097	(20022608)	596290.86	4250817.28	0.15112	(20022608)
596290.86	4250837.28	0.15107	(20022608)	596290.86	4250857.28	0.15111	(20022608)
596290.86	4250877.28	0.15101	(20022608)	596290.86	4250897.28	0.15082	(20022608)
596290.86	4250917.28	0.15062	(20022608)	596290.86			

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 4250937.28        0.15043  (20022608)
       596310.86   4250797.28        0.14794  (20022608)               596310.86
 4250817.28        0.14794  (20022608)
       596310.86   4250837.28        0.14785  (20022608)               596310.86
 4250857.28        0.14792  (20022608)
       596310.86   4250877.28        0.14786  (20022608)               596310.86
 4250897.28        0.14775  (20022608)
       596310.86   4250917.28        0.14756  (20022608)               596310.86
 4250937.28        0.14737  (20022608)
       596330.86   4250797.28        0.14515  (20022608)               596330.86
 4250817.28        0.14507  (20022608)
       596330.86   4250837.28        0.14491  (20022608)               596330.86
 4250857.28        0.14478  (20022608)
       596330.86   4250877.28        0.14478  (20022608)               596330.86
 4250897.28        0.14482  (20022608)
       596330.86   4250917.28        0.14464  (20022608)               596330.86
 4250937.28        0.14444  (20022608)
       596183.21   4250665.84        0.18436  (19011809)               596183.21
 4250685.84        0.18387  (19011809)
       596183.21   4250705.84        0.18318  (19011809)               596203.21
 4250665.84        0.17921  (19011809)
       596203.21   4250685.84        0.17846  (19011809)               596203.21
 4250705.84        0.17752  (19011809)
       596223.21   4250665.84        0.17394  (19011809)               596223.21
 4250685.84        0.17290  (19011809)
       596223.21   4250705.84        0.17164  (19011809)               596243.21
 4250665.84        0.16849  (19011809)
       596243.21   4250685.84        0.16710  (19011809)               596243.21
 4250705.84        0.16546  (19011809)
       596263.21   4250665.84        0.16272  (19011809)               596263.21
 4250685.84        0.16095  (19011809)
       596263.21   4250705.84        0.15884  (19011809)               596283.21
 4250665.84        0.15658  (19011809)
       596283.21   4250685.84        0.15435  (19011809)               596283.21
 4250705.84        0.15178  (19011809)
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***        13:38:56

                                  PAGE  19
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     #1          , L0000001
 , L0000002    , L0000003    , L0000004    ,
                 L0000005    , L0000006    , L0000007    , L0000008    , L0000009
 , L0000010    , L0000011    , L0000012    ,
                 L0000013    , L0000014    , L0000015    , L0000016    , L0000017
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 , L0000018    , L0000019    , L0000020    ,
                L0000021    , L0000022    , L0000023    , L0000024    , L0000025
 , L0000026    , L0000027    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

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

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -
        596303.21   4250665.84        0.15001  (19011809)                596303.21
 4250685.84        0.14732  (19011809)
        596303.21   4250705.84        0.14427  (19011809)                596323.21
 4250665.84        0.14299  (19011809)
        596323.21   4250685.84        0.13985  (19011809)                596323.21
 4250705.84        0.14014  (20022608)
        596343.21   4250665.84        0.13550  (19011809)                596343.21
 4250685.84        0.13617  (20022608)
        596343.21   4250705.84        0.13985  (20022608)                596363.21
 4250665.84        0.13214  (20022608)
        596363.21   4250685.84        0.13616  (20022608)                596363.21
 4250705.84        0.13866  (20022608)
        596383.21   4250665.84        0.13252  (20022608)                596383.21
 4250685.84        0.13534  (20022608)
        596383.21   4250705.84        0.13714  (20022608)                596403.21
 4250665.84        0.13220  (20022608)
        596403.21   4250685.84        0.13407  (20022608)                596403.21
 4250705.84        0.13525  (20022608)
        596423.21   4250665.84        0.13137  (20022608)                596423.21
 4250685.84        0.13257  (20022608)
        596423.21   4250705.84        0.13314  (20022608)                596443.21
 4250665.84        0.12986  (20022608)
        596443.21   4250685.84        0.13058  (20022608)                596443.21
 4250705.84        0.13088  (20022608)
        595977.64   4250946.01        0.25421  (19011809)                595977.64
 4250966.01        0.25362  (19011809)
        595977.64   4250986.01        0.25296  (19011809)                595977.64
 4251006.01        0.25221  (19011809)
        595977.64   4251026.01        0.25130  (19011809)                595997.64
 4250946.01        0.24392  (19011809)
        595997.64   4250966.01        0.24324  (19011809)                595997.64
 4250986.01        0.24244  (19011809)
        595997.64   4251006.01        0.24146  (19011809)                595997.64
 4251026.01        0.24024  (19011809)
        596017.64   4250946.01        0.23420  (19011809)                596017.64
 4250966.01        0.23347  (19011809)
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       596017.64   4250986.01        0.23240  (19011809)                596017.64
 4251006.01        0.23105  (19011809)
       596017.64   4251026.01        0.22935  (19011809)                596037.64
 4250946.01        0.22486  (19011809)
       596037.64   4250966.01        0.22388  (19011809)                596037.64
 4250986.01        0.22240  (19011809)
       596037.64   4251006.01        0.22059  (19011809)                596037.64
 4251026.01        0.21830  (19011809)
       596057.64   4250946.01        0.21555  (19011809)                596057.64
 4250966.01        0.21397  (19011809)
       596057.64   4250986.01        0.21195  (19011809)                596057.64
 4251006.01        0.20977  (19011809)
       596057.64   4251026.01        0.20681  (19011809)                596077.64
 4250946.01        0.20637  (19011809)
       596077.64   4250966.01        0.20415  (19011809)                596077.64
 4250986.01        0.20143  (19011809)
       596077.64   4251006.01        0.19836  (19011809)                596077.64
 4251026.01        0.19665  (20022608)
       596097.64   4250946.01        0.19690  (19011809)                596097.64
 4250966.01        0.19399  (19011809)
       596097.64   4250986.01        0.19084  (20022608)                596097.64
 4251006.01        0.19056  (20022608)
       596097.64   4251026.01        0.19051  (20022608)                596117.64
 4250946.01        0.18693  (19011809)
       596117.64   4250966.01        0.18568  (20022608)                596117.64
 4250986.01        0.18542  (20022608)
       596117.64   4251006.01        0.18516  (20022608)                596117.64
 4251026.01        0.18494  (20022608)
       596336.95   4252250.50        0.21404  (19011009)                596356.95
 4252270.50        0.21163  (19011009)
       596356.95   4252290.50        0.21681  (19011009)                596356.95
 4252310.50        0.22040  (19011009)
       596356.95   4252330.50        0.22127  (19011009)                596356.95
 4252350.50        0.21837  (19011009)
       596376.95   4252270.50        0.20394  (19011009)                596376.95
 4252290.50        0.20933  (19011009)
       596376.95   4252310.50        0.21374  (19011009)                596376.95
 4252330.50        0.21623  (19011009)
       596376.95   4252350.50        0.21580  (19011009)                596396.95
 4252270.50        0.19664  (19011009)
       596396.95   4252290.50        0.20199  (19011009)                596396.95
 4252310.50        0.20680  (19011009)
       596396.95   4252330.50        0.21038  (19011009)                596396.95
 4252350.50        0.21179  (19011009)
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                      ***        13:38:56

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*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): #1 , L0000001 , L0000002 , L0000003 , L0000004 ,
L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 ,
L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 ,
L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
596416.95	4252270.50	0.18977	(19011009)	596416.95	4252290.50	0.19486	(19011009)
596416.95	4252310.50	0.19984	(19011009)	596416.95	4252330.50	0.20408	(19011009)
596416.95	4252350.50	0.20681	(19011009)	596436.95	4252270.50	0.18340	(19011009)
596436.95	4252290.50	0.18814	(19011009)	596436.95	4252310.50	0.19303	(19011009)
596436.95	4252330.50	0.19762	(19011009)	596436.95	4252350.50	0.20121	(19011009)
596456.95	4252270.50	0.17761	(19011009)	596456.95	4252290.50	0.18189	(19011009)
596456.95	4252310.50	0.18654	(19011009)	596456.95	4252330.50	0.19117	(19011009)
596456.95	4252350.50	0.19528	(19011009)	596476.95	4252270.50	0.17238	(19011009)
596476.95	4252290.50	0.17616	(19011009)	596476.95	4252310.50	0.18042	(19011009)
596476.95	4252330.50	0.18493	(19011009)	596476.95	4252350.50	0.18924	(19011009)
596496.95	4252330.50	0.17899	(19011009)	596496.95	4252350.50	0.18331	(19011009)
594781.55	4251521.04	0.10923	(17022308)	594781.55	4251541.04	0.10952	(17022308)
594781.55	4251561.04	0.11002	(17022308)	594781.55	4251581.04	0.11079	(17022308)
594781.55	4251601.04	0.11187	(17022308)	594801.55			

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

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

GROUP ID	NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01248 AT (595598.19, 4250990.06, 22.86, 22.86, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.01196 AT (595578.19, 4250990.06, 22.86, 22.86, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.01125 AT (595558.19, 4250990.06, 22.86, 22.86, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.01119 AT (595598.19, 4250970.06, 22.86, 22.86, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.01075 AT (595578.19, 4250970.06, 22.86, 22.86, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.01016 AT (595558.19, 4250970.06, 22.86, 22.86, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.01013 AT (595598.19, 4250950.06, 22.86, 22.86, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.00975 AT (595578.19, 4250950.06, 22.86, 22.86, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.00926 AT (595558.19, 4250950.06,		

```
22.86,    22.86,    0.00)  DC
         10TH HIGHEST VALUE IS       0.00924 AT (  595598.19,  4250930.06,
22.86,    22.86,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***       13:38:56

                                 PAGE  22
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

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


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

                                                     DATE
                                           NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.69026  ON 20121309: AT (  595558.19,
4250990.06,    22.86,    22.86,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\06_Weber Road
Construction HRA\Weber Road Const ***        07/28/23
 *** AERMET - VERSION  21112 ***   ***
                       ***       13:38:56

                                 PAGE  23
 *** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  ADJ_U*

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

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

```
A Total of            0 Fatal Error Message(s)
A Total of            2 Warning Message(s)
A Total of         1381 Informational Message(s)

A Total of        43824 Hours Were Processed

A Total of          493 Calm Hours Identified

A Total of          888 Missing Hours Identified (  2.03 Percent)


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


   ********   WARNING MESSAGES   ********
ME W186     272       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
ME W187     272       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

HARP2 Output Files

HARP2 - HRACalc (dated 22118) 7/28/2023 12:18:36 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 0.33

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 0.33
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: ON
16 years to 70 years: ON

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed
Calculating cancer risk
Cancer risk saved to: C:\Users\brishea\OneDrive - Stantec\Desktop\harp results\constr_res_CancerRisk.csv
Calculating chronic risk
Chronic risk saved to: C:\Users\brishea\OneDrive - Stantec\Desktop\harp results\constr_res_NCChronicRisk.csv
Calculating acute risk
Acute risk saved to: C:\Users\brishea\OneDrive - Stantec\Desktop\harp results\constr_res_NCAcuteRisk.csv
HRA ran successfully

HARP2 - HRACalc (dated 22118) 7/28/2023 12:19:28 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16
Total Exposure Duration: 0.33

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0.33
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: Moderate8HR

Worker Adjustment Factors

NOTE: The worker adjustment factors below are only used for cancer assessments. However, the GLC adjustment factor is also applied to 8-hr noncancer chronic assessments.
Worker adjustments factors enabled: YES
GLC adjustment factor: 4.2
Exposure frequency: 250

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk saved to: C:\Users\brishea\OneDrive - Stantec\Desktop\harp results\constr_worker_CancerRisk.csv
Calculating chronic risk
Chronic risk saved to: C:\Users\brishea\OneDrive - Stantec\Desktop\harp results\constr_worker_NCChronicRisk.csv
Calculating acute risk
Acute risk saved to: C:\Users\brishea\OneDrive - Stantec\Desktop\harp results\constr_worker_NCAcuteRisk.csv
HRA ran successfully

HARP2 - HRACalc (dated 21081) 7/28/2023 2:14:00 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: Cancer
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 0
Total Exposure Duration: 15

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 13
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: ON
16 years to 70 years: ON

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk saved to: C:\Users\kheck\Desktop\Projects\Weber Road\ResidentialRisk_WeberCancerRisk.csv
HRA ran successfully

HARP2 - HRACalc (dated 21081) 7/28/2023 2:15:46 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: Cancer
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16
Total Exposure Duration: 15

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 15

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: Moderate8HR

Worker Adjustment Factors

NOTE: The worker adjustment factors below are only used for cancer assessments. However, the GLC adjustment factor is also applied to 8-hr noncancer chronic assessments.
Worker adjustments factors enabled: YES
GLC adjustment factor: 4.2
Exposure frequency: 250

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk saved to: C:\Users\kheck\Desktop\Projects\Weber Road\WorkerRisk_OperationCancerRisk.csv
HRA ran successfully

HARP RAST RISKS

Construction

Residential

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK
1			9901	DieselExhPM	0.01271	7.32E-07	0.33YrCancerDerived_Inh_FAH3to70	*	7.32E-07

Worker

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK
1			9901	DieselExhPM	0.00332	1.19E-08	0.33YrCancerDerived_InhSoilDerm	*	1.19E-08

Operational

Residential

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK
1	Residential_unmitigated		9901	DieselExhPM	0.04309	2.56E-05	15YrCancerDerived_Inh_FAH3to70	*	2.56E-05
2	Residential_mitigated		9901	DieselExhPM	0.01248	7.42E-06	15YrCancerDerived_Inh_FAH3to70	*	7.42E-06

Worker

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK
1	Worker		9901	DieselExhPM	0.01122	1.75E-06	15YrCancerDerived_InhSoilDerm	*	1.75E-06

APPENDIX C

ENERGY CALCULATIONS

Weber Road Construction and Industrial Yard Project—Energy Consumption Summary

Date of Last Revision: July 28, 2023

Summary of Energy Use During Construction (2023)	(Annually)	
Construction vehicle fuel	14,518	gallons (gasoline, diesel)
Construction equipment fuel	4,607	gallons (diesel)

Summary of Energy Use During Proposed Operations (2024)	(Annually)	
Operational vehicle fuel consumption	67,115	gallons (gasoline, diesel)
Operational equipment fuel	34,629	gallons (diesel)

Construction Vehicle Fuel Calculations (Page 1 of 2)

California Air Resource Board (CARB). 2023. EMFAC2021 Web Database. Website: https://arb.ca.gov/emfac/emissions-inventory/. Accessed July 12, 2023.

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Solano (SV)
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

VMT = Vehicle Miles Traveled
FE = Fuel Economy

						Given			*Calculations*	
Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (mi/day)	Fuel Consumption (1000 gallons/day)	FE (mi/gallon)	VMT*FE
Solano (SV)	2023	HHDT	Aggregate	Aggregate	Gasoline	0.78496085	36.704818	0.011486733	3.19540983	117.2869
Solano (SV)	2023	HHDT	Aggregate	Aggregate	Diesel	2350.1464	406717.61	67.65584534	6.011566418	2445010
Solano (SV)	2023	LDA	Aggregate	Aggregate	Gasoline	54776.1797	2216475.5	76.43700159	28.99741597	64272063
Solano (SV)	2023	LDA	Aggregate	Aggregate	Diesel	238.002912	7879.9678	0.186670974	42.21313925	332638.2
Solano (SV)	2023	LDT1	Aggregate	Aggregate	Gasoline	5721.35284	187808.33	7.718819198	24.331226	4569607
Solano (SV)	2023	LDT1	Aggregate	Aggregate	Diesel	2.96128358	29.975252	0.001225898	24.45167385	732.9451
Solano (SV)	2023	LDT2	Aggregate	Aggregate	Gasoline	23756.9917	936591.47	39.8308888	23.5141996	22023199
Solano (SV)	2023	LDT2	Aggregate	Aggregate	Diesel	82.8185481	3474.2481	0.109820617	31.63566405	109910.1
Solano (SV)	2023	LHDT1	Aggregate	Aggregate	Gasoline	2483.32162	91741.78	9.853245347	9.310818564	854191.1
Solano (SV)	2023	LHDT1	Aggregate	Aggregate	Diesel	2668.73356	97329.384	6.156950512	15.80805038	1538588
Solano (SV)	2023	LHDT2	Aggregate	Aggregate	Gasoline	255.516655	9708.0288	1.146159313	8.470051875	82227.51
Solano (SV)	2023	LHDT2	Aggregate	Aggregate	Diesel	920.585834	35775.758	2.761296878	12.9561432	463515.8
Solano (SV)	2023	MDV	Aggregate	Aggregate	Gasoline	19373.4071	688593.72	36.05723611	19.09724076	13150240
Solano (SV)	2023	MDV	Aggregate	Aggregate	Diesel	343.26181	13364.076	0.564001553	23.69510423	316663.2
Solano (SV)	2023	MHDT	Aggregate	Aggregate	Gasoline	134.519628	9405.7606	1.998807041	4.705687126	44260.57
Solano (SV)	2023	MHDT	Aggregate	Aggregate	Diesel	492.425667	21476.518	2.559091165	8.392244385	180236.2

Worker

Sum of VMT*FE (Column BI)	**1.05E+08**
Total VMT	**4054217**
Weighted Average Fuel Economy	**25.84347**

Vendor

Sum of VMT*FE (Column BI)	**5608146**
Total VMT	**672191.5**
Weighted Average Fuel Economy	**8.343078**

Haul

Sum of VMT*FE (Column BI)	**2445127**
Total VMT	**406754.3**
Weighted Average Fuel Economy	**6.011312**

Construction Vehicle Fuel Calculations (Page 2 of 2)

Construction Schedule

Source: CalEEMod Output

Weber Road Construction and Industrial Yard Project

CalEEMod Phase Type	Phase Name	Start Date	End Date	Num Days Week	Num Days
Site Preparation	Erosion Control	9/1/2023	9/8/2023	5	6
Site Preparation	Lime Treat Subgrade	10/31/2023	11/13/2023	5	10
Grading	Earthwork	9/11/2023	10/30/2023	5	36
Paving	Asphalt Paving	12/18/2023	12/18/2023	5	1
Trenching	Aggregate Base	11/16/2023	12/13/2023	5	20
Trenching	Site Utilities	11/14/2023	11/15/2023	5	2

Construction Trips and VMT

	Trips per Day			Construction Trip Length in Miles			Number of Days per Phase	Trips per Phase			VMT per Phase			Fuel Consumption (gallons)		
Phase Name	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length		Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trips	Vendor Trips	Hauling Trips	Worker Trips	Vendor Trips	Hauling Trips
Erosion Control	3	1	0	11.7	8.4	20	6	18	6	0	211	50	0	8.15	6.04	0.00
Lime Treat Subgrade	8	2	0	11.7	8.4	20	10	80	20	0	936	168	0	36.22	20.14	0.00
Earthwork	12	2	11.00	11.7	8.4	20	36	432	72	396	5,054	605	7,920	195.58	72.49	1,317.52
Asphalt Paving	8	2	7	11.7	8.4	20	1	8	2	7	94	17	140	3.62	2.01	23.29
Aggregate Base	8	2	191	11.7	8.4	20	20	160	40	3,820	1,872	336	76,400	72.44	40.27	12,709.37
Site Utilities	8	2	0	11.7	8.4	20	2	16	4	0	187	34	0	7.24	4.03	0.00
											8,354	1,210	84,460	323	145	14,050

Total Project Construction VMT (miles)

94,023

Total Project Fuel Consumption (gallons)

14,518

Construction Equipment Fuel Calculation

Weber Road Construction and Industrial Yard Project
Construction Schedule

CalEEMod Phase Type	Phase Name	Start Date	End Date	Num Days/ Week	Num Days
Site Preparation	Erosion Control	9/1/2023	9/8/2023	5	6
Site Preparation	Lime Treat Subgrade	10/31/2023	11/13/2023	5	10
Grading	Earthwork	9/11/2023	10/30/2023	5	36
Paving	Asphalt Paving	12/18/2023	12/18/2023	5	1
Trenching	Aggregate Base	11/16/2023	12/13/2023	5	20
Trenching	Site Utilities	11/14/2023	11/15/2023	5	2

Construction Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of Days	HP Hours	HP Bin	Equipment Type + HP	Fuel (gallons/HP-hour)	Diesel Fuel Usage
Erosion Control	Tractors/Loaders/Backhoes	1	4	84	0.37	6	745.92	100	Tractors/Loaders/Backhoes 100	0.05608047	41.83
Lime Treat Subgrade	Plate Compactors	1	7	367	0.4	10	10,276.00	600	Plate Compactors 600	0	0.00
Lime Treat Subgrade	Cement and Mortar Mixers	1	7	84	0.37	10	2,175.60	100	Cement and Mortar Mixers 100	0	0.00
Lime Treat Subgrade	Surfacing Equipment	1	7	399	0.3	10	8,379.00	600	Surfacing Equipment 600	0.05044493	422.68
Earthwork	Rubber Tired Dozers	1	7	367	0.4	36	36,993.60	600	Rubber Tired Dozers 600	0.05044493	1,866.14
Earthwork	Plate Compactors	1	7	36	0.38	36	3,447.36	50	Plate Compactors 50	0	0.00
Earthwork	Graders	2	7	148	0.41	36	30,582.72	175	Graders 175	0.05044493	1,542.74
Asphalt Paving	Pavers	1	7	81	0.42	1	238.14	100	Pavers 100	0.05608047	13.36
Asphalt Paving	Plate Compactors	1	7	36	0.38	1	95.76	50	Plate Compactors 50	0	0.00
Asphalt Paving	Tractors/Loaders/Backhoes	1	7	84	0.37	1	217.56	100	Tractors/Loaders/Backhoes 100	0.05608047	12.20
Aggregate Base	Graders	1	7	148	0.41	20	8,495.20	175	Graders 175	0.05044493	428.54
Aggregate Base	Tractors/Loaders/Backhoes	1	7	84	0.37	20	4,351.20	100	Tractors/Loaders/Backhoes 100	0.05608047	244.02
Aggregate Base	Plate Compactors	1	7	8	0.43	20	481.60	15	Plate Compactors 15	0	0.00
Site Utilities	Excavators	1	7	36	0.38	2	191.52	50	Excavators 50	0.05608047	10.74
Site Utilities	Plate Compactors	1	7	8	0.43	2	48.16	15	Plate Compactors 15	0	0.00
Site Utilities	Tractors/Loaders/Backhoes	1	7	84	0.37	2	435.12	100	Tractors/Loaders/Backhoes 100	0.05608047	24.40
											4,606.65

Notes:
Equipment assumptions are provided in the CalEEMod output files.
Source of usage estimates: California Air Resource Board (CARB). 2023. OFFROAD2021 (v1.0.4) Emissions Inventory
Website: https://arb.ca.gov/emfac/emissions-inventory/. Accessed July 12, 2023.

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory
Region Type: Sub-Area
Region: Solano (SV)
Calendar Year: 2023
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hour

Region	CalYr	Vehicle Class + HP Bin	Model Year	Fuel
Solano (SV)	2023	Excavators 100	Aggregate	Diesel
Solano (SV)	2023	Excavators 175	Aggregate	Diesel
Solano (SV)	2023	Excavators 25	Aggregate	Diesel
Solano (SV)	2023	Excavators 300	Aggregate	Diesel
Solano (SV)	2023	Excavators 50	Aggregate	Diesel
Solano (SV)	2023	Excavators 600	Aggregate	Diesel
Solano (SV)	2023	Excavators 75	Aggregate	Diesel
Solano (SV)	2023	Graders 100	Aggregate	Diesel
Solano (SV)	2023	Graders 175	Aggregate	Diesel
Solano (SV)	2023	Graders 300	Aggregate	Diesel
Solano (SV)	2023	Graders 50	Aggregate	Diesel
Solano (SV)	2023	Graders 600	Aggregate	Diesel
Solano (SV)	2023	Graders 75	Aggregate	Diesel
Solano (SV)	2023	Cement And Mortar Mixers 25	Aggregate	Diesel
Solano (SV)	2023	Plate Compactors 25	Aggregate	Diesel
Solano (SV)	2023	Pavers 100	Aggregate	Diesel
Solano (SV)	2023	Pavers 175	Aggregate	Diesel
Solano (SV)	2023	Pavers 300	Aggregate	Diesel
Solano (SV)	2023	Pavers 50	Aggregate	Diesel
Solano (SV)	2023	Pavers 600	Aggregate	Diesel
Solano (SV)	2023	Pavers 75	Aggregate	Diesel
Solano (SV)	2023	Rubber Tired Dozers 100	Aggregate	Diesel
Solano (SV)	2023	Rubber Tired Dozers 175	Aggregate	Diesel
Solano (SV)	2023	Rubber Tired Dozers 300	Aggregate	Diesel
Solano (SV)	2023	Rubber Tired Dozers 50	Aggregate	Diesel
Solano (SV)	2023	Rubber Tired Dozers 600	Aggregate	Diesel
Solano (SV)	2023	Rubber Tired Dozers 75	Aggregate	Diesel
Solano (SV)	2023	Surfacing Equipment 100	Aggregate	Diesel
Solano (SV)	2023	Surfacing Equipment 175	Aggregate	Diesel
Solano (SV)	2023	Surfacing Equipment 300	Aggregate	Diesel
Solano (SV)	2023	Surfacing Equipment 50	Aggregate	Diesel
Solano (SV)	2023	Surfacing Equipment 600	Aggregate	Diesel
Solano (SV)	2023	Surfacing Equipment 75	Aggregate	Diesel
Solano (SV)	2023	Tractors/Loaders/Backhoes 100	Aggregate	Diesel
Solano (SV)	2023	Tractors/Loaders/Backhoes 175	Aggregate	Diesel
Solano (SV)	2023	Tractors/Loaders/Backhoes 25	Aggregate	Diesel
Solano (SV)	2023	Tractors/Loaders/Backhoes 300	Aggregate	Diesel

Solano (SV)	2023	Tractors/Loaders/Backhoes	50	Aggregate	Diesel
Solano (SV)	2023	Tractors/Loaders/Backhoes	600	Aggregate	Diesel
Solano (SV)	2023	Tractors/Loaders/Backhoes	75	Aggregate	Diesel

s/year for Horsepower-hours

Fuel Consumption (gallons/year)	Horsepower Hours (HP-hours/year)	Fuel (gallons/HP-hour)
6787.412499	121029.889	0.056080465
38452.07074	762258.4065	0.050444928
0.303068333	5.404169374	0.056080465
40983.85655	812447.5114	0.050444928
11109.74615	198103.6726	0.056080465
47591.69871	943438.7204	0.050444928
8815.178988	157188.0499	0.056080465
252.4169328	4500.977856	0.056080465
4097.725265	81231.65984	0.050444928
14655.18176	290518.437	0.050444928
30.70166764	547.4574334	0.056080465
3603.245326	71429.28813	0.050444928
96.37935068	1718.590423	0.056080465
0.543075881	0	0
2.38332693	0	0
935.1653564	16675.42076	0.056080465
3174.129633	62922.67098	0.050444928
3861.735453	76553.49259	0.050444928
167.382726	2984.688606	0.056080465
686.2043233	13603.0389	0.050444928
859.7779958	15331.14945	0.056080465
174.5935381	3113.268355	0.056080465
569.917427	11297.81417	0.050444928
707.1744837	14018.74293	0.050444928
23.66544508	421.9908826	0.056080465
4151.239289	82292.50036	0.050444928
77.06799794	1374.239629	0.056080465
88.53747459	1578.757844	0.056080465
399.3762002	7917.073388	0.050444928
461.3694198	9146.002072	0.050444928
40.58896358	723.7629595	0.056080465
2706.787276	53658.26379	0.050444928
72.28518075	1288.954724	0.056080465
45128.04799	804701.7388	0.056080465
48464.11112	960733.0736	0.050444928
1.007899674	17.97238428	0.056080465
20523.98609	406859.257	0.050444928

4049.282679	72204.86942	0.056080465
15625.91961	309761.9543	0.050444928
19155.91057	341579.023	0.056080465

Operational Fuel Calculation—Project-Generated Operational Trips (Page 1 of 2)

California Air Resource Board (CARB). 2023. EMFAC2021 Web Database. Website: https://arb.ca.gov/emfac/emissions-inventory/. Accessed July 12, 2023.

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Solano (SV)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

VMT = Vehicle Miles Traveled
FE = Fuel Economy

				Given						*Calculations*	
Region	Calendar Year	Vehicle Class	Model Year	Speed	Fuel	Population	VMT	Fuel Consumption		FE	VMT*FE
Solano (SV)	2024	LDA	Aggregate	Aggregate	Gasoline	54381.47838	2223522.058	75.1910753		29.57162202	65753153.8
Solano (SV)	2024	LDA	Aggregate	Aggregate	Diesel	221.3016234	7228.537025	0.170142775		42.48512477	307105.297
									Sum of VMT*FE		**66060259.1**
									Total VMT		**2230750.59**
									Weighted Average Fuel Economy		**29.613467**
Solano (SV)	2024	LDT1	Aggregate	Aggregate	Gasoline	5527.035701	183149.6247	7.406745029		24.72741049	4528815.95
Solano (SV)	2024	LDT1	Aggregate	Aggregate	Diesel	2.676911715	26.42817772	0.001080195		24.46611716	646.594892
Solano (SV)	2024	LDT2	Aggregate	Aggregate	Gasoline	24092.78924	960712.7801	39.86339052		24.10012715	23153300.2
Solano (SV)	2024	LDT2	Aggregate	Aggregate	Diesel	85.09801348	3599.455554	0.111574049		32.26068768	116120.911
Solano (SV)	2024	MDV	Aggregate	Aggregate	Gasoline	19106.66253	684430.2616	35.07860054		19.51133315	13354146.9
Solano (SV)	2024	MDV	Aggregate	Aggregate	Diesel	339.7444173	12942.04333	0.540691912		23.93607718	309781.748
									Sum of VMT*FE		**41462812.2**
									Total VMT		**1844860.59**
									Weighted Average Fuel Economy		**22.4747671**
Solano (SV)	2024	LHDT1	Aggregate	Aggregate	Gasoline	2430.467588	90996.60146	9.607405432		9.47150634	861874.888
Solano (SV)	2024	LHDT1	Aggregate	Aggregate	Diesel	2595.038812	94496.76834	5.965959776		15.83932375	1496764.91
Solano (SV)	2024	LHDT2	Aggregate	Aggregate	Gasoline	253.5608397	9733.804914	1.131234365		8.604587359	83755.3747
Solano (SV)	2024	LHDT2	Aggregate	Aggregate	Diesel	913.6487428	35325.21592	2.711423259		13.02829272	460227.254
Solano (SV)	2024	MHDT	Aggregate	Aggregate	Gasoline	131.2888702	9595.32648	2.006784275		4.781443924	45879.5155
Solano (SV)	2024	MHDT	Aggregate	Aggregate	Diesel	497.012982	21599.84614	2.56271281		8.428508281	182054.482
Solano (SV)	2024	HHDT	Aggregate	Aggregate	Gasoline	0.722746361	37.08639182	0.011332101		3.272684683	121.372066
Solano (SV)	2024	HHDT	Aggregate	Aggregate	Diesel	2419.231392	411015.0389	67.36940829		6.100915079	2507567.85
									Sum of VMT*FE		**5638245.64**
									Total VMT		**672799.689**
									Weighted Average Fuel Economy		**8.38027386**
Solano (SV)	2024	MCY	Aggregate	Aggregate	Gasoline	3867.956903	21529.07895	0.533389897		40.36274228	868972.665
									Weighted Average Fuel Economy		**40.3627423**
Solano (SV)	2024	MH	Aggregate	Aggregate	Gasoline	555.5885845	5143.938961	1.165558095		4.413284059	22701.6638
Solano (SV)	2024	MH	Aggregate	Aggregate	Diesel	218.2524005	2071.841367	0.220809087		9.382953366	19439.9909
Solano (SV)	2024	OBUS	Aggregate	Aggregate	Gasoline	68.65861758	5750.173854	1.200583886		4.789481121	27540.3491
Solano (SV)	2024	OBUS	Aggregate	Aggregate	Diesel	16.40689271	1365.964391	0.203342125		6.717567205	9175.9576
Solano (SV)	2024	SBUS	Aggregate	Aggregate	Gasoline	10.92057186	673.5332086	0.065739255		10.24552539	6900.70159
Solano (SV)	2024	SBUS	Aggregate	Aggregate	Diesel	32.01374142	719.7238788	0.084940481		8.47327297	6098.41689
Solano (SV)	2024	UBUS	Aggregate	Aggregate	Gasoline	7.168487226	337.1381191	0.042281662		7.973625099	2688.21297
Solano (SV)	2024	UBUS	Aggregate	Aggregate	Diesel	2.457935334	175.5674289	0.012922099		13.58660271	2385.3649
									Sum of VMT*FE		**96930.6578**
									Total VMT		**16237.8812**
									Weighted Average Fuel Economy		**5.96941538**

Operational Fuel Calculation—Project-Generated Operational Trips (Page 2 of 2)

Total Operational VMT

Weber Road Construction and Industrial Project

Trip Type	Annual VMT
Staff Trip - Mixed Fleet	249,600.00
Haul Trips - HHDT	332,800.00

Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
0.466081845	0.038271886	0.201478564	0.145705473	0.04	0.01	0.006517763	0.08588317	0.00148681	0.00010712	0.004498178	0.0002911	0.001507629	1.000

*based on EMFAC results - see vehicle emissions calculation spreadsheet

Trip Type 1: Staff Trips with Mixed Fleet

Vehicle Type	Fraction of 1	Annual VMT	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
Passenger Cars (LDA)	0.4661	116,334	29.61	3,928
Light Trucks and Medium Vehicles (LDT1, LDT2, an	0.3855	96,210	22.47	4,281
Light-Heavy to Heavy-Heavy Diesel Trucks	0.1406	35,087	8.38	4,187
Motorcycles	0.0045	1,123	40.36	28
Other	0.0034	847	5.97	142
Total	1.0000	249600		**12,566**

Trip Type 2: Haul Trips with HHDT

Vehicle Type	Fraction of 1	Annual VMT	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
HHDT	1	332800.0000	6.10	**54,549**

Operational Equipment Fuel Calculation

Weber Road Construction and Industrial Yard Project

Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of Days per Year	HP Hours	HP Bin	Equipment Type + HP	Fuel (gallons/HP-hour)	Diesel Fuel Usage
Generator Sets	6	8	30	0.74	208	221,644.80	50	Generator Sets 50	0.04237621	9,392.47
Forklifts	1	8	82	0.2	260	34,112.00	100	Forklifts 100	0.05734041	1,956.00
Cranes	1	8	367	0.29	260	221,374.40	600	Cranes 600	0.05173333	11,452.44
Tractors/Loaders/Backhoes	1	8	84	0.37	120	29,836.80	100	Tractors/Loaders/Backhoes 100	0.05650435	1,685.91
Excavators	1	8	36	0.38	120	13,132.80	50	Excavators 50	0.05610369	736.80
Other Material Handling Equipment	1	8	93	0.4	120	35,712.00	100	Other Material Handling Equipment 100	0	0.00
Tractors/Loaders/Backhoes	2	8	84	0.37	260	129,292.80	100	Tractors/Loaders/Backhoes 100	0.05650435	7,305.61
Tractors/Loaders/Backhoes	1	8	84	0.37	104	25,858.56	100	Tractors/Loaders/Backhoes 100	0.05650435	1,461.12
Excavators	1	8	36	0.38	104	11,381.76	50	Excavators 50	0.05610369	638.56
Crushing/Proc. Equipment	1	8	12	0.85	104	8,486.40	15	Crushing/Proc. Equipment 15	0	0.00
										34,628.89

Notes:
Equipment assumptions are provided in the CalEEMod output files.
Source of usage estimates: California Air Resource Board (CARB). 2023. OFFROAD2021 (v1.0.4) Emissions Inventory
Website: https://arb.ca.gov/emfac/emissions-inventory/. Accessed July 24, 2023.

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory
Region Type: Sub-Area
Region: Solano (SV)
Calendar Year: 2024
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for

Region	CalYr	Vehicle Class + HP Bin	Model Year	Fuel	Fuel Consumption (gallons/year)
Solano (SV)	2024	Cranes 100	Aggregate	Diesel	245.5811266
Solano (SV)	2024	Cranes 50	Aggregate	Diesel	20.5472061
Solano (SV)	2024	Cranes 600	Aggregate	Diesel	8168.701843
Solano (SV)	2024	Excavators 100	Aggregate	Diesel	6796.287374
Solano (SV)	2024	Excavators 50	Aggregate	Diesel	11037.28792
Solano (SV)	2024	Excavators 600	Aggregate	Diesel	47314.36043
Solano (SV)	2024	Misc - Crushing/Proc. Equipment 15	Aggregate	Gasoline	6.661886508
Solano (SV)	2024	Tractors/Loaders/Backhoes 100	Aggregate	Diesel	45522.23684
Solano (SV)	2024	Tractors/Loaders/Backhoes 50	Aggregate	Diesel	4290.153248
Solano (SV)	2024	Tractors/Loaders/Backhoes 600	Aggregate	Diesel	15565.75107
Solano (SV)	2024	Forklifts 100	Aggregate	Diesel	3575.588996
Solano (SV)	2024	Forklifts 50	Aggregate	Diesel	565.4698296
Solano (SV)	2024	Forklifts 600	Aggregate	Diesel	289.7027146
Solano (SV)	2024	Generator Sets 50	Aggregate	Diesel	7084.65

Horsepower-hours

Horsepower Hours (HP-hours/year)	Fuel (gallons/HP-hour)
2954.065594	0.083133268
239.9260013	0.085639764
157900.169	0.051733332
120610.0999	0.056349239
196730.162	0.056103689
940592.7076	0.050302708
0	0
805641.3029	0.056504348
72411.12086	0.05924716
310034.8193	0.050206461
62357.22334	0.057340414
9241.460037	0.061188365
5797.130487	0.049973468
167184.6	0.042376212

Appendix C BIOLOGICAL RESOURCES ASSESSMENT

From: Greg Matuzak Environmental Consulting LLC
Greg Matuzak, Principal Biologist
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To: Brian Griggs
Griggs Group
Email: brian@griggsgroup.com
Phone: (925) 580-4902

Date: July 30, 2023

Re: **Response to Stantec Consulting Review of the Biological Resources Assessment for a 40-Acre Parcel in the City of Vacaville, Solano County**

This Technical Memorandum (Tech Memo) includes a response to the comments from Stantec Consulting who reviewed the Biological Resources Assessment covering the development of the 40-acre parcel in the City of Vacaville (assuming as a 3rd party reviewer for the City of Vacaville). The following is the comment from Stantec Consulting that I received from you on July 28, 2023:

- *Bio – Stantec needs clarification from your bio consultant regarding the Project's potential indirect impacts on species that may use the adjacent pond and drainage features. This information is currently not included in the biological resources assessment and needs to be discussed in the ISMND. Stantec's preference would be for your consultant to provide this as a supplemental memo that they can attach to the December Bio Report.*

Response to Comments

The attached National Wetland Inventory (NWI) and National Hydrography Dataset (NHD) map covering the subject parcel and areas adjacent to it was included in the Appendices of the Biological Resources Assessment covering the development of the 40-acre parcel in the City of Vacaville. The reporting concluded accurately that no wetland or stream resources are mapped within the NWI/NHD data covering the subject parcel and Project area. The NWI/NHD mapping identifies aquatic resources to the south and east of the Project area, including a pond, drainage, and potential wetlands adjacent to the east of the subject parcel and Project area and the mapping includes a drainage ditch located along the southern side of Weber Road.

The following is the response to comments and updated assessment of those aquatic resources and the potential for special-status species that may associate with those aquatic resources to be impacted indirectly by the proposed Project. Additionally, the assessment below answers how the proposed Project will avoid and minimize any potential indirect impacts to those aquatic resources and the special-status species that could associate with those resources. Direct impacts to those aquatic resources will not occur with the proposed Project related disturbance within the subject parcel.

Per the attached Photo Log that was also included as an attachment to the Biological Resources Assessment covering the development of the 40-acre parcel in the City of Vacaville (see Photo #9), the pond, drainage, and potential wetland located to the east of the subject parcel and adjacent to the northern section of the subject parcel contains a highly vegetated buffer located between the subject parcel and those aquatic resources. Furthermore, you can see in Photo #9 that a berm is also located between the subject parcel and the pond area, adjacent to the northern section of the subject parcel. It is assumed that the existing berm was developed as part of the creation of the pond to the east of the northern section of the subject parcel. Therefore, the proposed Project would have no direct or indirect impacts on the pond, drainage, or potential wetlands within the area to the east of the northern section of the subject parcel given the existing heavy vegetation and berm that protects those aquatic resources.

For the drainage that continues south just east of the eastern border of the subject parcel (see Photo #10), the berm does not continue south of the pond area in the north. However, there is heavier vegetation adjacent to the east of the eastern border of the subject parcel that would assist in minimizing any potential sedimentation from disturbance within the subject parcel. Photo #10 clearly shows thicker vegetation to the east of the subject parcel along the western side of that drainage. This is most likely due to a lack of mowing and grazing within the parcel to the east of the subject parcel. Additionally, given the size of proposed disturbance within the subject parcel, a Stormwater Prevention Pollution Plan (SWPPP) will most likely be required and therefore, additional Best Management Practices (BMPs) would be in place along the eastern border of the subject parcel to further minimize any potential indirect impacts to the drainage that runs south adjacent to the eastern border of the subject parcel. Therefore, the proposed Project would have no direct or indirect impact on the drainage located east of the central and southern section of the subject parcel given the heavy vegetative buffer and with the implementation of a SWPPP and additional BMPs.

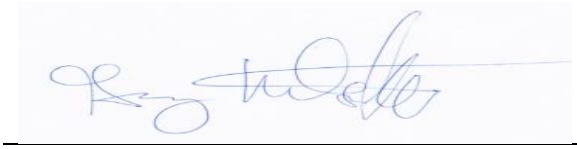
For the drainage that flows along the southern side of Weber Road, the existing road is a wide enough buffer with regular traffic, making it highly unlikely any disturbance within the subject parcel to the north of Weber Road would have an impact within Weber Road and the drainage along the southern side of the road. Therefore, the proposed Project would have no direct or indirect impact on the drainage located along the southern side of Weber

Road.

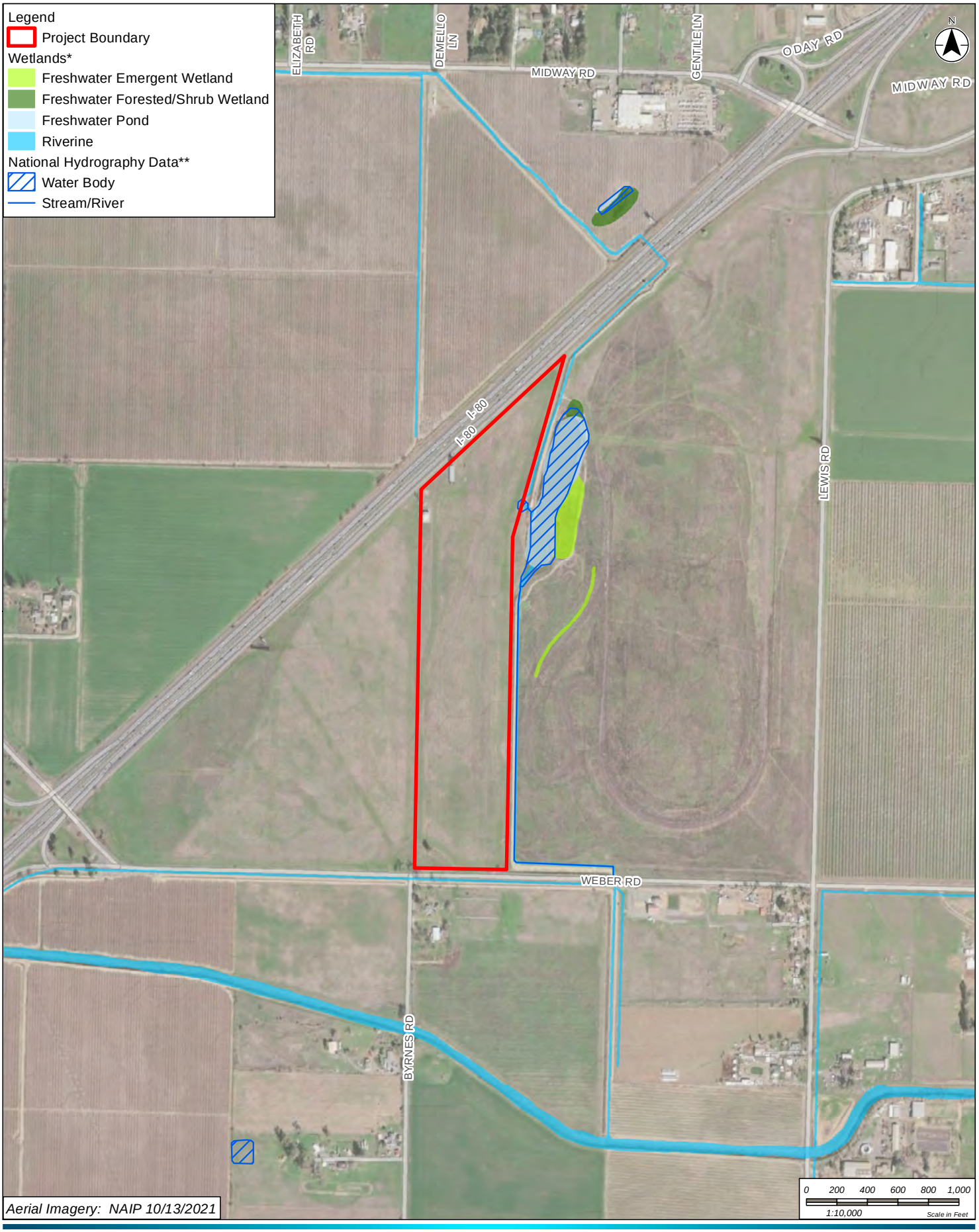
Any special-status species that may occur within the mapped aquatic resources to the east and south of the subject parcel and Project area would not be directly or indirectly impacted given those aquatic resources have sufficient built in protection along the southern and eastern borders of the subject parcel. Additionally, and as outlined above, the development and implementation of a SWPPP with stringent BMPs would also further minimize any potential for indirect impacts to occur to those aquatic resources and therefore, any special-status species that could occur within those areas to the east and south of the subject parcel.

Let me know if you have any questions or comments on the responses to comments on the Stantec comment on the Biological Resources Assessment covering the development of the 40-acre parcel in the City of Vacaville. I can be reached at the phone number and email listed at the top of this Tech Memo.

Regards,



Greg Matuzak, Principal Biologist
Greg Matuzak Environmental Consulting LLC



GREG MATUZAK
Environmental Consulting LLC
Nevada City, CA

Weber Road Property

* Data downloaded from https://www.fws.gov/wetlands/Data/Data-Download.html 3/6/2019
** National Hydrography Dataset (NHD) downloaded from http://nhd.usgs.gov March, 2019

Prepared: Melissa Nugent 12/16/2022 D:__GIS_Matuzak\20221216_Solano_WeberRd\mxd\Fig5_NWI-NHD_Solano_WeberRd.mxd

Figure 5. Wetlands and Water Features Map

Photos of the December 15th, 2022 Field Surveys of the Project Area

Photo 1: Entrance into the southern section of the Project area off of Weber Road. Medium sized eucalyptus trees along Weber Road at the frontage to the Project area.

Photo 2: Looking north from along Weber Road into the southwestern section of the Project area. Current cattle grazing activities within the Project area.

Photo 3: Looking southeast from the southern entrance into the Project area. Cattle fencing and Project area fencing along Weber Road.

Photo 4: Project area from the southwestern section looking east. The southern section of the Project area contains a single eucalyptus tree.

Photo 5: Central section of the Project area looking west. Project area is dominated by upland non-native annual grassland and pasture species.

Photo 6: Northwestern section of the Project area along Interstate 80 with an existing building. Area contains highly disturbed vegetation and asphalt.

Photo 7: Northwestern corner of the Project area along Interstate 80 with an existing building. Area contains highly disturbed vegetation and asphalt/pavement.

Photo 8: Looking southeast along the northern section of the Project area. The Project area is dominated by non-native annual grassland and pasture species.

Photo 9: Looking east along the eastern section of the Project area. The neighboring parcel to the east contains a Solano Irrigation District drainage basin.

Photo 10: Looking north along Weber Road into the neighboring parcel to the east of the Project area that contains a Solano Irrigation District canal and drainage basin. Project area is located to the left on the other side of the fence heading north in the photo.

Photo 11: Looking towards the southeastern corner of the Project area along Weber Road. Open channel flows east into the Solano Irrigation District canal on the neighboring parcel to the east of the Project area.

Photo 12: Looking north into the central section of the Project area from Weber Road. Grazing cattle and highly disturbed soils and vegetation dominate Project area.

FORMER VACA-DIXON AIRPORT PROPERTY
WEBER ROAD (APN'S 0109-270-050 & 0109-220-060)
VACAVILLE, CALIFORNIA, 95687

Biological Resources Assessment

Prepared for:
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January 2023

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1 INTRODUCTION

At the request of Brian Griggs from the Griggs Group, Mr. Greg Matuzak was retained to prepare a Biological Resources Assessment Report (Biological Report) for the Griggs Group Weber Road Project (Project) located in Vacaville, Solano County, California (see Appendix A). The Biological Report includes an evaluation of sensitive biological resources within the Project area, including sensitive biological resources under the jurisdiction of the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), United States Army Corps of Engineers (Corps), and the City of Vacaville Planning Department. Preparation of the Biological Report included background research, field biological resources surveys, and reporting as detailed herein.

Mr. Greg Matuzak, Principal and owner of Greg Matuzak Environmental Consulting LLC is a wetlands ecologist and wildlife biologist with 20 years of experience conducting aquatic resources delineations and biological resources assessments in Northern California. Mr. Matuzak is 40-hour Wetland Delineation Certified (Wetland Training Institute) and has conducted aquatic resources delineations for 100's of linear miles of projects and 1000s of acres of site development projects. Additionally, Mr. Matuzak has conducted special-status biological resources surveys and developed biological resources assessments for dozens of projects in northern California, including projects in the City of Vacaville, City of Dixon, and Solano County, several of which were projects directly with the City of Vacaville, City of Dixon, and Solano County as a Senior Biologist with Stantec Consulting Services Inc. Mr. Matuzak is responsible for the field data collection and assessment developed as part of this Biological Report.

1.1 Project Setting

The Biological Report includes a full coverage assessment of the Project area; see Appendix A for Project Area Overview Figures. The Project area is located northeast of the City of Vacaville and is bordered by Weber Road along the southern boundary, Interstate 80 (I-80) along the northern boundary, Solano Irrigation District Drainage Basin (formerly the Vaca Valley Raceway property) along the eastern boundary, and a private parcel along the western boundary. Griggs Group, the Project applicant, submitted a planning application with the City of Vacaville within the following Assessor Parcels (APNs): 0109-270-050 & 0109-220-060. In total, the Project area is approximately 40 acres in size.

Results of the Phase I ESA covering the Project area was developed by Gribi Associates (dated March 28, 2022). The Phase I ESA concluded that the Project area has no significant recognized environmental conditions relative to historical activities within the Project area. The Project area historically operated as a small airport/glider port at various

levels of activity from the late 1940s to approximately 1992. Approximately three fuel underground storage tanks (USTs) of unknown age were present on the northwest side of the Project area and were removed in the mid-1980s, prior to promulgation of UST regulations, and an electromagnetic survey was conducted as part of this Phase I ESA to confirm that the USTs are no longer present within the Project area.

The Project area is and has been primarily agricultural and rural residential since at least the 1930s. The Vaca Valley Raceway was present immediately east from the Project area from approximately the mid-1960s to the late 1980s/early 1990s. While it is possible that fuel spills occurred on the Vaca Valley Raceway property, the Vaca Valley Raceway property is located in an expected downgradient (southeast) direction from the Project area and would not be expected to have impacted environmental conditions on the Project area. No other historical activities or business types were identified which would be expected to have impacted environmental conditions on the Project area besides those activities described above.

1.2 Biological Resources Assessment Purpose

The purpose of the Biological Report is to identify the location and extent of sensitive biological resources within the Project area, including special-status plant and wildlife species. Additionally, this Biological Report includes an impact assessment to such sensitive biological resources based on any proposed development within the Project area. Section 6 includes avoidance, minimization, and mitigation measures to ensure that the Project area disturbance would not have a significant impact on such sensitive biological resources. This Biological Report also satisfies the City of Vacaville General Plan requirements for the development of such biological resource assessments and it includes a discussion of adhering to requirements associated with the Solano Multi-Species Habitat Conservation Plan (HCP).

2 REGULATORY OVERVIEW

2.1 Federal Regulations

2.1.1 Section 404 of the Clean Water Act

The U.S. Army Corps of Engineers ("Corps") and the Environmental Protection Agency ("EPA") regulate the discharge of dredge or fill material into "waters of the U.S." under Section 404 of the Clean Water Act. "Waters of the U.S." include wetlands and lakes, rivers, streams, and their tributaries. Wetlands are defined for regulatory purposes as areas "…inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated solid conditions" as specified in 33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3.

Generally, wetlands include swamps, marshes, bogs, and similar areas. Lakes, rivers, and streams are defined as "other waters of the U.S." Jurisdictional limits of these features are typically noted by the Ordinary High Water Mark ("OHWM"). The OHWM is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as mark a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328 and 33 CFR 329).

Isolated ponds or seasonal depressions had been previously regulated as waters of the U.S. However, in *Solid Waste Agency of Northwestern Cook County* (SWANCC) *v. USACE et al.* (January 8, 2001), the U.S. Supreme Court ruled that certain "isolated" wetlands (e.g., non- navigable, isolated, and intrastate) do not fall under the jurisdiction of the CWA and are no longer under the jurisdiction of the Corps. Some circuit courts (e.g., *U.S. v. Deaton*, 2003; *U.S. Rapanos*, 2003; *Northern California River Watch v. City of Healdsburg*, 2006), though, have ruled that SWANCC does not prevent CWA jurisdiction if a "significant nexus" such as a hydrologic connection exists, whether it be man-made (e.g., roadside ditch) or natural tributary to navigable waters, or direct seepage from the wetland to the navigable water, a surface or underground hydraulic connection, an ecological connection (e.g., the same bird, mammal, and fish populations are supported by both the wetland and the navigable water), and changes to chemical concentrations in the navigable water is present due to water from the wetland.

Areas considered to be non-jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions with no outlet for drainage (33 CFR, Part 328).

The *Clean Water Rule* is a 2015 regulation published by the EPA and Corps to clarify water resources management in the United States under a provision of the CWA. The regulation defined the scope of federal water protection in a more consistent manner, particularly over streams and wetlands, which have a significant hydrological and ecological connection to traditional navigable waters, interstate waters, and territorial seas. It is also referred to as the *Waters of the United States* rule, which defines all bodies of water that fall under U.S. federal jurisdiction. The rule has been contested in litigation and in 2017 the Trump administration announced its intent to review and rescind or revise the rule. Following a Supreme Court ruling on January 22, 2018 that lifted a nationwide stay on the rule, the Trump administration formally suspended the rule until February 6, 2020, thereby giving the EPA time to issue a draft proposal of replacement water regulatory requirements.

On October 22, 2019, the EPA and the Corps published a final rule to repeal the 2015 Clean Water Rule: Definition of "Waters of the United States" ("2015 Rule"), which amended portions of the Code of Federal Regulations (CFR), and to restore the regulatory text that existed prior to the 2015 Rule. The final rule will become effective on December 23, 2019. The EPA and the Corps will implement the pre-2015 Rule regulations informed by applicable agency guidance documents and consistent with Supreme Court decisions and longstanding agency practice.

However, on April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule to define "Waters of the United States" in the *Federal Register*. For the first time, the agencies have streamlined the definition so that it includes four simple categories of jurisdictional waters, provides clear exclusions for many water features that traditionally have not been regulated, and defines terms in the regulatory text that have never been defined before. Congress, in the CWA, explicitly directed the Agencies to protect "navigable waters." The Navigable Waters Protection Rule regulates traditional navigable waters and the core tributary systems that provide perennial or intermittent flow into them.

Under the final rule, four clear categories of waters are federally regulated:

- The territorial seas and traditional navigable waters,
- Perennial and intermittent tributaries to those waters,
- Certain lakes, ponds, and impoundments, and
- Wetlands adjacent to jurisdictional waters

Therefore, as of June 22, 2020, the final rule details 12 categories of exclusions, features that are not "waters of the United States," such as features that only contain water in direct response to rainfall (e.g., ephemeral features); groundwater; many ditches; prior converted cropland; and waste treatment systems. The final rule clarifies key elements

related to the scope of federal CWA jurisdiction, including:

- Providing clarity and consistency by removing the proposed separate categories for jurisdictional ditches and impoundments.
- Refining the proposed definition of "typical year," which provides important regional and temporal flexibility and ensures jurisdiction is being accurately determined in times that are not too wet and not too dry.
- Defining "adjacent wetlands" as wetlands that are meaningfully connected to other jurisdictional waters, for example, by directly abutting or having regular surface water communication with jurisdictional waters.

The Navigable Waters Protection Rule is the second step in a two-step process to review and revise the definition of "waters of the United States" consistent with the February 2017 Presidential Executive Order entitled "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the 'Waters of the United States.'" This final rule became effective on June 22, 2020 and will replaces the Step One Rule published in October, 2019 as outlined above.

2.1.2 Section 401 of the Clean Water Act

Section 401 of the CWA requires an applicant, for any federal permit which may result in a discharge into waters of the U.S., to obtain a certification from the state that the discharge will comply with provisions of the CWA. The nine regions of the State Water Quality Control Board administer this program. Any condition of water quality certification would be incorporated into the Corps permit. California has a policy of no-net-loss of wetlands and typically requires mitigation for impacts to wetlands before it will issue a water quality certification. This Project is located under the jurisdiction of Region 5, the Central Valley Regional Water Quality Control Board ("RWQCB").

2.1.3 Endangered Species Act of 1973

For the proposed Project, consultation with the USFWS would be necessary if a proposed action may affect a federally listed species or occupied habitat. This consultation would proceed under Section 7 of the Endangered Species Act (ESA) if a federal action is part of the proposed action or through Section 10 of the ESA if no such nexus were available (USFWS, 1973).

2.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BAGEPA) (16 USC Section 668) protects bald and golden eagles and their nests from direct "take" (i.e. harm or harassment as described above). BAGEPA prohibits the take or commerce of any part of the bald or

golden eagles (USFWS, 1940). The USFWS administers the Act and reviews actions that may affect species protected under the Act.

2.2 State Regulations

2.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) has jurisdiction over plant and wildlife species listed as threatened or endangered under section 2080 of the CDFW Code. The California Endangered Species Act (CESA) prohibits take of state-listed threatened and endangered species. The state Act differs from the federal Act in that it does not include habitat destruction in its definition of *take*. The CDFW defines *take* as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFW may authorize *take* under the CESA through Section 2081 agreements. If the results of a biological survey indicate that a state-listed species would be affected by the project, the CDFW would issue an Agreement under Section 2081 of the CDFW Code and would establish a Memorandum of Understanding for the protection of state-listed species. CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species.

2.2.2 Streambed Alteration Agreements: CDFG Code Section 1600 et seq.

CDFW has jurisdictional authority over substantial alterations to the bed or bank of rivers, streams, and lakes under Sections 1600–1616. CDFW has the authority to regulate all work under the jurisdiction of the State of California that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

2.2.3 Porter-Cologne Water Quality Control Act & Section 1601 and Section 1607 of CDFG Code

These acts and codes pertain to projects with potential impacts to water quality or waterways. The Project area does contain waters of the State as defined by the State Water Resources Board (State Board 2014).

2.2.4 State Water Resources Control Board Wetland Policy (April 2019)

On April 2, 2019, the State Water Resources Control Board (State Water Board) adopted rules to protect wetlands and other environmentally sensitive waterways throughout the state. More than 90 percent of California's historic wetlands have been lost to development and other human activity. Wetlands are a critical natural resource that

protect and improve water quality, provide habitat for fish and wildlife, and buffer developed areas from flooding and sea-level rise. The newly adopted rules provide a common, statewide definition of what constitutes a wetland. They also provide consistency in the way the State Water Board and nine regional water boards regulate activities to protect wetlands and other waterways, such as rivers and streams, and bays and estuaries. The State of California waters of the state are, by definition, broader than "waters of the United States" covered by federal regulation. The newly adopted rules do not change that and will ensure that waters of the state will continue to be protected even if protections for federal waters are narrowed by administrative actions or the courts.

The new definition clarifies what is considered a wetland – and what is not – for the entire state, provides a common framework for monitoring and reporting the quality of California's remaining wetlands, helps ensure no overall net loss, and promote an increase, in the quantity, quality, and sustainability of waters of the state, including wetlands, improves transparency and consistency across the State Water Board and the nine Regional Water Quality Control Boards in how discharges of dredged or fill material in sensitive waterways are monitored and regulated, and avoids duplicative work and streamline requirements to cover all waters of the state, so both state and federal environmental concerns are addressed at once.

2.2.5 California Department of Fish and Game Code Sections 3503, 3503.5, and 3800: Nesting Migratory Bird and Raptors

Sections 3503, 3503.5, and 3800 of the CDFG Code prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance within active nesting territories be reduced or eliminated during critical phases of the nesting cycle (approximately March 1 – August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g. killing or abandonment of eggs or young), or the loss of habitat upon which birds are dependent, is considered "taking", and is potentially punishable by fines and/or imprisonment (LCC 2013).

2.2.6 California Special Species of Concern, Fully Protected, and Special Status Species

California designates Species of Special Concern (SSC) as species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational or educational values. These species do not have the same legal protection as listed species but may be added to official lists in the future (CDFW 2014).

In the 1960's California created a designation to provide additional protection to rare species. This designation remains today and is referred to as "Fully Protected" species, and those listed "may not be taken or possessed at any time" (CDFW 2014).

California special status species are identified by the California Natural Diversity Database (CNDDB) and includes those species considered to be of greatest conservation need by the CDFW.

2.2.7 California Environmental Quality Act Guidelines Section 15380

California Environmental Quality Act (CEQA) Guidelines section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria. This section was included in the guidelines to deal primarily with situations in which a public agency is reviewing a project that may have a significant effect on, for example a "candidate species" that has not yet been listed by the USFWS or CDFW. CEQA, therefore, enables an agency to protect a species from significant project impacts until the respective government agencies have had an opportunity to list the species as protected, if warranted (CNRA 2012).

Plants appearing on the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) are considered to meet CEQA's Section 15380 criteria. Ranks include: 1A) plants presumed extirpated in California and either rare or extinct elsewhere, 1B) plant rare, threatened, or endangered in California and elsewhere, 2A) plants presumed extirpated in California, but more common elsewhere, and 2B) plants rare, threatened, or endangered in California, but more common elsewhere. Impacts to these species would therefore be considered "significant" requiring mitigation.

2.2.8 State Oak Woodland Regulations

State laws that regulate protection of oak woodlands include Professional Forester's Law (PFL) and CEQA according to Public Resources Code Section 21083.4. Oak woodlands are defined as areas having 10% oak canopy cover or greater. "Oaks" are defined in Public Resources Code Section 21083.4 as a native tree species in the genus *Quercus*, that is 5 inches diameter at breast height (DBH) or greater. The Oak Woodlands Conservation Act (SB 1334) provides funding for the conservation and protection of oak woodlands in California. Oak trees and oak woodland habitats are protected by the state per the definition above.

2.3 Local Regulations

2.3.1 Solano Multi-Species Habitat Conservation Plan (HCP)

The US Bureau of Reclamation is responsible for water management and constructed many of the dams, powerplants, and canals in the western United States. The Solano County Water Agency (SCWA) is a whole water agency providing untreated water throughout Solano County. The US Bureau of Reclamation, together with the SCWA and its eight member agency contracts with the Cities of Vacaville, Fairfield, Suisun City, and Vallejo, the Solano Irrigation District, the Maine Prairie Water District, the University of California, Davis, and the California Medical Facility/California State Prison, Vacaville, have agreed to implement conservation measures to ensure the protection of threatened and endangered species and their habitat within the SCWA contract service area. Full implementation of the conservation measures outlined in the Solano Project Water Service Contract Renewal Biological Opinion is key to the survival and recovery of listed species. As such, SCWA and the member agencies are developing the Solano Multi-Species Habitat Conservation Plan (HCP) for the Solano Project contract service area.

The HCP is intended to support the issuance of a Section 10(a)1(B) "incidental take permit" under the Endangered Species Act for activities associated with future water use in the Solano Project contract service area. The HCP participants also intend to secure incidental take authorization from CDFW for State-listed species. Once the applicable State and federal incidental take permits are issued, the HCP participants will assume primary responsibility for extending incidental take coverage for their own activities, extending coverage to third parties over which the HCP participants have direct regulatory control (e.g. through issuance of grading permits, occupancy permits, and use permits), and ensuring compliance with required avoidance, minimization, and mitigation measures. The HCP effectively shifts endangered species regulations compliance from a federal and State level to the local level under the authority of a well-regulated, regional plan.

The Solano HCP proposes to secure incidental take authorization for 37 species present within the county. The scope of the HCP includes take coverage for federally listed fish species under the jurisdiction of NMFS and species listed as threatened or endangered under the California Endangered Species Act. The HCP further addresses other species of concern, that is, species recognized by groups such as CDFW and the California Native Plant Society (CNPS) as having declining or vulnerable populations, but not officially listed as threatened or endangered species.

An additional 35 species are addressed in the HCP's Conservation Strategy as "Special Management Species." Special Management Species include species that were initially

considered for inclusion in the HCP as Covered Species and are considered under CEQA Section 15380 to be threatened or endangered. However, the life history and/or habitat associations for such species may not be fully known. While these species will benefit from the broader community conservation provided for other Covered Species, sufficient information on their biology and management is not available to allow the federal agencies to make the necessary findings under the "No Surprises" assurances that the proposed Conservation Program and Covered Activities will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

2.3.2 City of Vacaville General Plan

The following goals relevant to the proposed project regarding biological resources are set forth in Chapter 4, Conservation and Open Space Element, of the City of Vacaville General Plan. "The purpose of the Conservation and Open Space Element is to ensure the comprehensive and long-range preservation and management of open space lands in and around the City of Vacaville (City) for the protection of natural resources and as a scenic resource" (City 2015a).

Goal-1: Protect and enhance habitat for sensitive species and natural communities.

2.3.3 City of Vacaville Tree Removal Permit

To remove a street tree or heritage tree (valley oak or black walnut trees) within the City of Vacaville, a permit must be obtained from the Public Works Department. Following a site visit and review by the Park Superintendent, the application for tree removal takes approximately two weeks to be issued. Those trees removed may be required to be replaced within six months (City 2015b).

2.3.4 City of Vacaville Land Use and Development Code

Section 14.09.131 of the Vacaville Land Use and Development Code sets forth criteria for the preservation of native species, healthy trees, large specimens, and visually prominent trees. Impacts to any tree greater than 31 inches in circumference at 4.5 feet above the ground surface requires a City of Vacaville permit.

Section 14.12.174.050 of the Vacaville Land Use and Development Code sets forth criteria for the designation of development setbacks for creeks, with a minimum setback standard of 40 feet from the top of the stable bank, as determined by the City Engineer.

Section 14.09.098 of the Vacaville Land Use and Development Code establishes the permitted and conditional uses allowed in the Agricultural Hillside (AH) district, and establishes development standards for uses in this district. The AH district provides for low

intensity agricultural uses on privately held hillside lands. Lands within this designation are generally areas of steep slope, lacking the necessary public infrastructure to support urban development. Development is limited to one dwelling unit per 20 acres and other accessory uses associated with agriculture.

Section 14.09.101 of the Vacaville Land Use and Development Code establishes development standards for the Open Space (OS) district. The purpose of the OS district is to provide for the preservation of public open space lands such as hillsides, ridgelines, and scenic areas. The OS district also includes areas with limited development potential due to physical characteristics of the land or lack of access. The purposes of the OS chapter are to: promote the preservation of public open space lands in order to protect natural resources, wildlife habitat, ridgelines, and areas of scenic beauty and cultural significance; provide for continued agricultural uses; provide for low intensity outdoor recreational uses in natural environments; protect the public health and safety by limiting the use of lands which are subject to fire, landslide, or seismic hazards; and implement the goals, objectives, and policies of the Land Use and Development Code and the City of Vacaville General Plan.

3 METHODOLOGY

In order to evaluate the Project area for the presence of any sensitive biological resources, baseline information from databases and reporting for similar projects in the City of Vacaville and Solano County was collected and reviewed prior to conducting a reconnaissance-level field biological resources survey. The database searches, background research, and habitat level field survey characterized the baseline conditions of the Project area.

Based on the baseline conditions of the Project area, an assessment was implemented to determine if any special-status plant or wildlife species use the Project area at any time during their life cycle.

3.1 Sensitive Biological Resources Background Review

The following information was used to identify potential sensitive biological resources, including the presence of special-status plant and wildlife species that could be found to use the Project area:

- California Department of Fish and Wildlife's California Natural Diversity Database records search of 3-mile buffer around the Project area (CDFW, 2022);
- The California Native Plant Society's online Inventory of Rare and Endangered Plants of California for the Project area and Colusa County (CNPS, 2022);
- The U.S. Fish and Wildlife Service Information, Planning, and Consultation System (IPaC) for endangered, threatened, and proposed listed species for the Project area (USFWS, 2022);
- National Wetland Inventory map of the Project area (NWI, 2022);
- United States Department of Agriculture (USDA) Soils Mapper of the Project area (USDA, 2022);
- Natural Resources Conservation Service (NRCS) Hydric Soils List for Solano County (NRCS, 2022);
- Solano Multi-Species Habitat Conservation Plan (HCP); and
- City of Vacaville General Plan and Land Use and Development Code.

3.2 Biological Resources Field Surveys

A biological resources field survey was conducted on foot for the entirety of the Project area by Greg Matuzak, Principal Biologist and owner of Greg Matuzak Environmental Consulting LLC on the following date: December 15th, 2022. The purpose of the survey

was to identify habitat and vegetation types and to determine the potential for any special-status plant and wildlife species identified in the desktop analysis and background research to occur within the Project area. Additionally, given the biological resources surveys were not conducted during the blooming period for each of the special-status plant species with the potential to occur within the Project area, the surveys focused on the identification of suitable habitat for those special-status plant species and to determine whether the Project area contained suitable habitat for their potential presence within the Project area.

The entirety of the Project area was surveyed on foot and therefore, a list of plant and wildlife species observed during the field surveys was compiled (see Appendix E for species lists). A Photo Log is included in Appendix G, which documents the Project area during the field survey.

4 ENVIRONMENTAL SETTING

4.1 Environmental Setting

The Project is located in Solano County in the Great Central Valley Bioregion (USDA US Forest Service, 1997). This region contains the alluvial plains of the Sacramento and San Joaquin Valleys. The northern portion, the broad flat Sacramento Valley Subregion, touches nine counties extending from Sacramento to Shasta, including Solano County where the proposed Project is located.

The Project site is in the south-central portion of this region at approximately 60 feet above mean sea level (MSL), with the northern section of the Project area along the edge of I-80 being at 66 feet above MSL and the southern section of the Project area along Weber Road being at 59 feet above MSL. Drainage within the Project area is from north to south and towards the southeast where much of the drainage connects with roadside drainage ditches along Weber Road and into the Solano Irrigation District canal and drainage basin located immediately adjacent to the east of the Project area.

The climate is hot and sub-humid. The mean annual precipitation is about 14 to 18 inches; it is practically all rain. Mean annual temperature ranges from approximately 60° to 62° Fahrenheit (F). The mean freeze-free period is about 250 to 275 days (USDA Forest Service, 2022). The changing of the seasons is evident in the Sacramento Valley. Summer heat waves have temperatures over 100° F, occasionally for several consecutive days. Winter is characterized by cool air and winter fog between December and February.

Historically, the Sacramento River (before it was controlled by dams, artificial levees, and diversions) overflowed onto portions of the basin when it flooded. Today, the river is contained by levees and streams draining eastward from the northern California Coastal Ranges, which are diverted southward in overflow channels that run parallel to the Sacramento River. Most of the streams are generally dry during the summer. There are no lakes, but winter ponding occurs.

The Sacramento Valley is a prominent site for winter fowl, attracting more than 1.5 million ducks and 750,000 geese to the marshes along the Pacific Flyway (USDA Forest Service, 1997). Now predominantly agricultural, the biological communities of the Sacramento Valley once supported vast areas of grassland, marshes, riparian habitat, and woodlands. Specifically, the predominant natural plant communities in the Colusa Basin are needlegrass grasslands. Fremont cottonwood series occurs along streams. Emergent aquatic communities are common (USDA Forest Service, 1997).

Today, Solano County still contains seasonal and perennial marshes, oak woodlands, riparian forests, vernal pools and grasslands. However, the Project area is located in a principally agricultural setting and is currently vacant and used for cattle grazing.

4.2 Project Area Vegetation Communities

Vegetation community types within the Project area are described below.

Disturbed

Much of the areas along the edges of the Project area contain a mix of fill material, asphalt, and gravel that have created a mix of non-native ruderal grassland vegetation and areas of barren ground. This vegetation community type is dominant within the northwestern section of the Project area where existing structures are located.

Non-Native Annual Grassland

Non-native annual grassland are open vegetation types that are dominated by annual plant species, often nonnative. These species can occur within the understory of other vegetation types like woodlands, but where non-native annual grasslands occur within the entirety of the Project area there is no overstory or shrub cover, which is the case within the Project area covered under this Biological Report (see attached Photo Log). This vegetation type is common throughout the Project area where there has been historic development and agricultural disturbance within the entirety of the Project area for many decades.

The annual exposed grasslands within the Project area are surrounded by disturbed habitats that have undergone extensive grading and development over the decades. This extensive vegetative series is composed of many non-native and native annual species. The most common valley grasses are now annuals, whereas their native counterparts were often perennial grasses. In annual grasslands of Solano County, *Avena barbata* and *A. fatua* are common oats. Bromes include ripgut brome (*Bromus diandrus*) and red brome (*Bromus rubens*) as well as soft chess (*Bromus hordeaceus*) and foxtail chess (*Bromus madritensis*). Common filarees include *Erodium botrys* and *E. cicutarium*. *Lasthenia californica* is the common goldfield and *Lupinus bicolor* the common lupine. *Lolium multiflorum* is the common ryegrass. Additional species are listed in Appendix D.

Many wildlife species forage and hunt in annual grasslands of Solano County; however, grasslands are most productive (in terms of wildlife) when they are associated with woodlands, wetlands and/or riparian habitat, which tend to provide better cover and nesting habitat than exposed grassland (Department of Forestry, 1988). Solano County's grassland communities support bird species such as the red-tailed hawk (*Buteo jamaicensis)*, American kestrel (*Falco sparverius)*, American crow (*Corvus brachyrhynchos)*, and yellow-billed magpie jay (*Pica nuttalli)*. Common mammals include mule deer (*Odocoileus hemionus)*, striped skunk (*Mephitis mephitis)*, California ground squirrel (*Otospermophilus beecheyi)*, and Botta's pocket gopher (*Thomomys bottae)* (CCGP, 1987). However, many of these species are not likely found within the

Project area given its relative disturbance and located adjacent to I-80 and historical disturbance within and adjacent to the Project area.

Drainage Ditch

A section of a manmade drainage ditch occurs within the southern and southeastern sections of the Project area and it connects generally to existing drainage ditches along the northern side of Weber Road (see the attached Photo Log showing the manmade drainage ditch). The drainage ditch within the Project area does not contain any wetland associated vegetation and was dry at the time of the site visit and survey conducted in December 2022 after heavy rains.

The National Wetland Inventory (NWI) and National Hydrography Database (NHD) do not identify the drainage ditch within the southern/southeastern sections of the Project area (see Appendix C). The drainage ditch that runs along Weber Road and the irrigation canal and drainage basin located within the adjacent property to the east of the Project area are mapped within the NWI/NHD data. No wetland or stream resources are mapped within the NWI/NHD data covering the Project area.

4.3 Solano Multi-Species Habitat Conservation (HCP) Area Species Coverage

Below are the species included under the HCP for Valley Floor Grassland Natural Community Association, which is the natural community mapped for the Project area.

Table. HCP Covered Species and Valley Floor Grassland Natural Community Association

Natural Community	Covered Species	
	Primary Species	**Secondary Species**
Valley Floor Grassland and Vernal Pool	**Amphibians:** • California tiger salamander **Birds:** • Burrowing owl **Invertebrates:** • Conservancy fairy shrimp • Delta green ground beetle • Vernal pool fairy shrimp • Vernal pool tadpole shrimp **Plants:** • Alkali milk-vetch • Bogg's Lake hedge-hyssop • Colusa grass • Contra Costa goldfields • Ferris's milk-vetch • Legenere • San Joaquin Valley Orcutt grass[3] • Solano grass • Vernal pool smallscale	**Birds:** • Swainson's hawk • Tricolored blackbird

Table. Special Management Species for Valley Floor Grassland Natural Community Association

Natural Community	Special Management Species	
	Primary Species	**Secondary Species**
Valley Floor Grassland and Vernal Pool	**Birds:** • Grasshopper sparrow • Mountain plover **Invertebrates:** • Ricksecker's water scavenger beetle **Plants:** • Baker's navarretia • Bearded popcorn flower • Brittlescale • Carquinez goldenbush • Dwarf downingia • Ferris's goldfields • Fragrant fritillary • Heartscale • Heckard's peppergrass • Hispid bird's-beak • Hogwallow starfish • Pappose tarplant[4] • Recurved larkspur • Saline clover • San Joaquin spearscale	**Birds:** • Loggerhead shrike • Northern harrier • Short-eared owl • Yellow-headed blackbird

The species above are included under the HCP for Valley Floor Grassland Natural Community Association, which is the natural community mapped for the Project area. Most of the species included in both tables above are associated with seasonal wetlands, including vernal pools, and perennial wetlands. Additionally, many of the plant species in these tables and covered under the HCP also associate with specific soil types.

5 RESULTS

Special-status species were considered for the Project area based on a current review of the CNDDB and database information provided by the United States Fish and Wildlife Service (USFWS) and California Native Plant Society (CNPS) as well as the biological resources surveys.

5.1 Special-Status Species

For the purposes of this Biological Report, special-status species are defined as:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the Federal Register [FR] for proposed species);
- Species that are candidates for possible future listing as threatened or endangered under ESA (67 FR 40657, June 13, 2002);
- Species that are listed or proposed for listing by California as threatened or endangered under the CESA (14 CCR 670.5);
- Plants listed as rare under the California Native Plant Protection Act of 1977 (California Fish and Game Code 1900 et seq.);
- Plants considered by CNPS to be "rare, threatened, or endangered in California and elsewhere" (CNPS List 1B species);
- Species that meet the definitions of "rare" or "endangered" under State CEQA *Guidelines* Section 15380;
- Animal species of special concern to CDFW; and
- Animals fully protected in California (California Fish and Wildlife Code Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

A list of special-status plant and animal species that have the potential to occur within the Project region was compiled based on data in the CNDDB (CDFW, 2022), CNPS database, and USFWS List of Federal Endangered and Threatened Species that may occur within the Project area. Appendix G illustrates the occurrences of special status species in the CNDDB, which includes a six (6) special-status plant species and six (6) special-status wildlife species previously identified within 3 miles of the Project area. An evaluation of each of these special-status species identified from the database searches is located in the attached species evaluation in Appendix F. The list served as a starting point in determining if there were known locations of sensitive species or whether suitable habitat might actually be found in the Project area.

The Project area does not contain any mapped CDFW sensitive communities (see Appendix G for a CDFW CNDDB map of the Project area and a 3-mile buffer). Therefore, CDFW sensitive communities are not discussed within this reporting effort further given the lack of mapping provided for such sensitive communities by CDFW within and adjacent to the Project area.

Based on Project maps, aerial photography, and the reconnaissance biological resources survey and site visit, none of the 12 species identified in database search were considered to have greater than a low potential to occur within the Project area for one or more of the following reasons:

- Lack of suitable habitat in the Project area
- Project area historically operated as a small airport/glider port at various levels of activity from the late 1940s to approximately 1992.
- It also appears that with the historical agricultural disturbance and the existing of structures and historical airport and glider port uses that the Project area has been graded historically over the decades and never has shown itself to have any ponding during the late winter and spring months (February through June)

The result of this evaluation indicates that two special-status plant species, the white-tailed kite and Swainson's hawk have at least a low potential to occur within the Project area as well as potential nesting bird species. Both the white-tailed kite and Swainson's hawk have been previously identified within three miles of the Project area based on the most up to date review of the CNDDB (2022). No other special-status species, including special-status plants were identified to have at least a low potential to occur within the Project area. There is no Designated Critical Habitat (DCH) mapped for any federally listed species within 3 miles of the Project area. The Project area specific survey was conducted to determine the presence or absence of these species or their habitat in the Project area. Conclusions regarding habitat suitability and species occurrence are based on the biological resources survey conducted and existing literature and databases described previously.

The species evaluation table in the attached Appendix F identifies the special-status plant and wildlife species that are known to occur or have a potential to occur within three miles of the Project area. For each of these species the "potential for occurrence" within the Project area was evaluated as follows:

- **Very Low to Nil:** The Project area and/or immediate area do not support suitable habitat for a particular species. Project is outside the species known range.

- **Low Potential:** Project area and/or immediate area only provide limited habitat for a particular species. In addition, the known range for a particular species may be outside the immediate project area.
- **Medium Potential:** The Project area and/or immediate area provide suitable habitat for a particular species, and habitat for the species may be impacted.
- **High Potential:** The Project area and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in the immediate area and within the potential area of impact.

A description of the special-status plants and wildlife species identified as known to occur or having a potential to occur with the Project area is provided in Appendix F for Special-Status Plant Species That Are Known to Occur or Have Potential in the Region around the Project Area.

5.2 Project Area Soils

The following soil types have been mapped within the Project area per the USDA online soils mapper (USDA 2022):

- CeA - Clear Lake clay, 0 to 2 percent slopes, MLRA 17
- SfA - San Ysidro sandy loam, thick surface , 0 to 2 percent slopes
- SeA - San Ysidro sandy loam, 0 to 2 percent slopes

The NRCS Hydric Soil List for Solano County includes CeA, the Clear Lake clay as a hydric soil within the Project area. The other soil types, SfA and SeA, San Ysidro sandy loam soils, make up a majority of the Project area as mapped by USDA (see Appendix B for a soils map covering the Project area). The mapped CeA soil type is mapped within the far northeast corner of the Project area and is mapped within the northern section of the Project area. However, as part of the biological resources survey the entirety of the Project area was included in the evaluation of the Project area and there were no changes in habitat or vegetation types within the northern section of the Project area where this soil type is mapped. There is no standing water, drainage patterns, wetland associated plants (hydrophytic vegetation), or other indicators of wetland hydrology within the CeA mapped areas of the Project area.

The USDA soil mapping is historical data and may have been mapped many decades prior to site grading and development. During the December 2022 site survey, there are no indicators of wetland hydrology or the presence of hydrophytic vegetation. See Appendix

5.3 Project Area Aquatic Resources

The NWI and NHD mapping for the Project area (see Appendix C attached) does not include any aquatic resources within the Project area. Additionally, during the biological resources survey of the Project area, no standing water or other aquatic resources were identified within the Project area. An area of standing water was present adjacent to the west of the Project area and an existing drainage ditch (manmade) is located within the southern and southeastern section of the Project area. No other areas containing standing water or potential seasonal or perennial wetland features were documented. The small are of standing water along the northeastern edge of the Project area per the NWI and NHD data does not exist within the Project area boundary. The entirety of the eastern fence line of the Project area was walked during the December 2022 biological resources survey and no standing water was present and no area of seasonal ponding or drainage was identified within the Project area.

A review of Google Earth images going back to the 1990s doesn't show any signs of wetlands, seasonal wetlands, or vernal pools that may have historically existed within the Project area. The small drainage ditch within the southern and southeastern section of the Project area may have historically (pre-1990s) connected with the property immediately adjacent to the west of the Project area, but the small drainage ditch begins east of the larger eucalyptus tree located within the southwest corner of the Project area and connects to the southwestern corner of the adjacent property to the east of the Project area.

Adjacent development and disturbance, including residential and agricultural activities to the south of the Project area, I-80 along the northern border of the Project area, and the eastern adjacent property being used by the Solano Irrigation District as a drainage basin connecting to the drainage ditches along Weber Road.

6 CONCLUSIONS AND RECOMMENDATIONS:

These conclusions and recommendations are based on the findings of this Biological Report and the impact assessment based on the review of existing databases, literature, and the biological resources survey covering the Project area. Therefore, the impact assessment and recommendations below are based on any proposed disturbance within the Project area. For sensitive biological resources that have the potential to be impacted by such disturbance, avoidance, minimization, and mitigation measures are proposed to ensure that such disturbance does not cause a significant impact on any sensitive biological resources within the Project area.

Proposed Avoidance, Minimization, and Mitigation Measures

6.1 Potential Impacts to Special-Status Plant Species

The reconnaissance-level biological resources survey was conducted within the entirety of the Project area in December 2022, which is a time of the year outside the blooming period for each of the special-status plant species with potential to occur within the Project area. However, based on the analysis for special-status plant species with potential to occur in the Project area (see Appendix F), each species is considered to have a very low to nil potential to occur within the Project area based on a lack of undisturbed and otherwise suitable habitat for each of those species. Therefore, special-status plant species have a very low potential to occur within the Project area and no suitable habitat for any special-status plant species previously identified within three miles of the Project area was identified within the Project area during the December 2022 site survey. No special-status plants were documented within the Project area during the site visit and survey conducted as part of the development of this Biological Report.

Therefore, no additional special-status plant surveys are required prior to the implementation of future ground disturbing activities within the Project area. The proposed Project would have no impact on any CNPS special-status plant species and therefore, no mitigation is required.

6.2 Potential Impacts to Special-Status Wildlife Species

A special-status wildlife survey was conducted in December 2022 and the survey focused on direct observations of wildlife within the Project area and the identification of suitable habitat for such special-status species within the Project area. No special-status wildlife species were documented within the Project area during the site visit and survey conducted as part of the development of this Biological Report. Additionally, the Project area does not provide suitable habitat for any of the special-status wildlife species that have the potential to occur

regionally and within 3 miles of the Project area except for nesting birds as detailed above and within Appendix F.

Furthermore, the Project area does not contain small mammal activity and the presence of burrows that would be required for the presence of nesting burrowing owls and therefore, the Project area may be used as a stop over for the burrowing owl during its seasonal movements and potentially as foraging habitat; however, given the lack of burrow habitat the burrowing owl would not nest within the Project area.

Given there is a lack of seasonal wetland and vernal pool habitat within the Project area, vernal pool listed species and California tiger salamander would not occur within the Project area. Additionally, the lack of aquatic habitat within the Project area would preclude the presence of California red-legged frog and special-status fish species.

Below is an assessment of some special-status species not previously identified within 3 miles of the Project area and thus not included in the table located in Appendix F. Some of these species are considered within the HCP covering the Project area. Several other species covered within the HCP, including several listed plant species, are not considered here or within this Biological Report given the lack of seasonal wetland habitat and lack of vernal pool habitat within the Project area.

Giant Garter Snake

However, the drainage ditch within the Project area does not provide any suitable habitat for this species given the lack of aquatic habitat and wetland species (see Appendix E for a Photo Log). However, the adjacent property to the east of the Project area could provide marginal suitable habitat for the giant garter snake given the presence of an irrigation canal and drainage basin in the western and southwestern sections of the that property. The irrigation canal and drainage basin located adjacent to the east of the Project area do not contain the required perennial marsh and wetland habitat for this species.

Furthermore, the irrigation canal and drainage basin located directly to the east of the Project area does not contain suitable upland giant garter snake habitat given a lack of required perennial aquatic habitat along with adjacent upland small mammal burrows within 218 feet of giant garter snake aquatic habitat. The upland areas adjacent to the irrigation canal and drainage basin are located within 218 feet of the eastern border of the Project area; however, that area is heavily disturbed and the open fields adjacent to them within the Project area are compacted to the point where no burrows or openings within the surface layer of the fields was identified. Given the lack of both suitable aquatic habitat and

upland habitat within and directly adjacent to the Project area, this species would not be impacted by the proposed Project.

Tricolored Blackbird

The tricolored blackbird has not been previously identified within three miles of the Project area. The species requires open water and vibrant cattails and bulrush vegetation for nesting, which are not located within or adjacent to the Project area. Therefore, this species would not be documented within the Project area and would not be directly or indirectly impacted by the proposed Project.

Protected Nesting Birds (includes White-Tailed Kite and Swainson's Hawk)

Nesting raptors and other bird species have some potential to occur within the Project area as discussed in detail below. This includes the white-tailed kite and Swainson's hawk as these species have been previously identified nesting to the south and southeast of the Project area. The Project area does not contain any larger trees within or directly adjacent to the Project area except for a single medium sized eucalyptus tree within the southwestern section of the Project area several small to medium eucalyptus trees along the southern edge of the Project area along Weber Road (see photo log attached). The Swainson's hawk has been identified nesting in large trees, including eucalyptus trees, to the south of the Project area; however, none of the trees within or directly adjacent to the Project area are suitable for nesting by Swainson's hawk and when reviewed during the site visit in December 2022, none of the trees contained inactive nests so the species has not been nesting recently within or directly adjacent to the Project area.

Therefore, the trees within and directly adjacent to the Project area contain suitable habitat for nesting raptors (including the white-tailed kite) and other protected bird species and removal of such trees should be done outside the breeding season, if required, to avoid potential impacts to such nesting raptor and other protected bird species. Additionally, some protected bird species may also nest within the non-native annual grasslands within the Project area. The breeding season for raptors and MBTA protected bird species in the vicinity of the Project area is generally from February 1st to August 31st. Vegetation clearing or tree removal outside of the breeding season for such bird species would not require the implementation of any avoidance, minimization, or mitigation measures. However, construction or development activities during the breeding season could disturb or remove occupied nests of raptors and would require the implementation of a pre-construction survey within 500 feet of the any disturbance area within the Project area for nesting raptors within 14 days prior to disturbance.

Occurrence: The Project area contains some trees within and adjacent to the Project area and many of those trees contain suitable habitat for smaller nesting raptors and other protected bird species. In addition, the Project area also includes grasslands that provide

suitable nesting habitat for other protected bird species. The breeding season for raptors and other protected bird species in the vicinity of the Project area is generally from February 1st to August 31st but varies depending on the species and localized weather patterns.

Avoidance: Vegetation clearing or tree removal outside of the breeding season for such bird species and/or avoidance of such potential nesting habitat would not require the implementation of any avoidance, minimization, or mitigation measures.

Mitigation: Construction or disturbance activities during the breeding season could disturb or remove occupied nests of raptors and/or protected bird species and would require the implementation of a pre-construction survey within and adjacent to any proposed disturbance area within the Project area for nesting raptors and other protected bird species within fourteen (14) days prior to disturbance. The nesting survey radius around the proposed disturbance would be identified prior to the implementation of the protected bird nesting surveys by a CDFW qualified biologist and would be based on the habitat type, habitat quality, and type of disturbance proposed within or adjacent to nesting habitat but would be a minimum of 500 feet from any area of disturbance.

If any nesting raptors or protected birds are identified during such pre-construction surveys, trees or shrubs or grasslands with active nests should not be removed or disturbed and a no-disturbance buffer should be established around the nesting site to avoid disturbance or destruction of the nest site until after the breeding season or after a qualified wildlife biologist determines that the young have fledged. The extent of these buffers would be determined by a CDFW qualified wildlife biologist and would depend on the special-status species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors should be analyzed by a qualified wildlife biologist to make an appropriate decision on buffer distances based on the species and level of disturbance proposed in the vicinity of an active nest.

Swainson's Hawk Foraging Habitat

Given the Project area contains foraging habitat for special-status bird species, including for the state listed Swainson's hawk, impacts to the open grassland areas within the Project area would be subject to a City of Vacaville Avian Species Foraging Habitat Mitigation Fee based on the number of acres permanently impacted by the development of the Project area. The City of Vacaville Agricultural and Avian Species Foraging Habitat Mitigation Fee was established to provide an optional method for development to mitigate impacts to these resources. The City of Vacaville Agricultural and Avian Species Foraging Habitat Mitigation Fee program is available to projects requiring mitigation for impacts to agricultural land and/or avian species foraging habitat as determined through the development review process.

Based on the City of Vacaville's analysis, the fee for agricultural lands and for avian foraging habitat lands shall be the high-end of the estimated per acre range of costs, and for projects requiring or selecting stacked mitigation on the same parcel(s) of land the fee shall be set at the mid-point of the estimated per acre range of costs established by the Vacaville Agriculture and Avian Species Impact Mitigation Fee Study. Therefore, for the development of the Project area and depending on whether the Project area would be subject to an agricultural mitigation fee, the following mitigation fees apply at a minimum to foraging habitat for avian species (in this case for the state listed Swainson's hawk):

- Agricultural Mitigation Fee: $ 4,687 per acre
- Avian Foraging Habitat Mitigation Fee: $ 7,832 per acre
- Stacked Agriculture & Avian Foraging: $12,832 per acre

Therefore, based on the final site plan for Project area development, the mitigation fee for impacts to avian foraging habitat would be $ 7,832 per acre of the Project area containing grassland community and also planned to be disturbed and developed as part of the overall Project area site development. If an agricultural mitigation fee is also required for the development of the Project area, then the stacked mitigation fee per acre as outlined above would be required. For the purposes of this Biological Report and given the Project area does include suitable foraging habitat for avian species, including the state listed Swainson's hawk, the purchase of the Avian Foraging Habitat Mitigation Fee as listed above and by the City of Vacaville (per the City Council Resolution No. 2019-031) would fully mitigation for the impacts to any disturbance and development within the grassland portions of the Project area for avian foraging.

6.3 Potential Impacts to Clean Water Act Regulated "Waters of the U.S.," Including Wetlands and CDFW Regulated Streams and Adjacent Riparian Habitat

The Project area does not contain any Clean Water Act regulated "waters of the U.S.," including wetlands, nor does the Project area include any streams and associated riparian habitat that would be regulated by CDFW. As stated within this Biological Report, the Project area does not contain any wetland vegetation and therefore, there are no areas within the Project area that would be identified as a wetland. The irrigation/drainage ditch within the southern and southeastern sections of the Project area also would not be identified as a jurisdictional "other waters of the U.S." that would be regulated under the Clean Water Act given the ditch is manmade and has been present within the Project area presumable to drain water offsite and into the roadside ditch along Weber Road located along the frontage of the neighboring parcel to the east of the Project area. The water

entering into the manmade drainage ditch within the Project area comes from precipitation runoff. During the December 2022 site visit, the drainage ditch was dry. Therefore, based on any proposed Project area disturbance and final design, no Project related Clean Water Act permitting would be required as part of Project approvals.

Substantial alteration to perennial, intermittent, and ephemeral streams within the Project area would likely fall under CDFW jurisdiction and any proposed alteration of any stream would most likely require a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 *et. seq.* of the California Fish and Wildlife Code prior to construction. However, given the irrigation/drainage ditch is manmade and would not be classified as a Class II or Class III stream by CDFW, it would not fall under CDFW regulation and any impact to the bed or bank of the drainage ditch would not require a Section 1600 *et. seq.* Streambed Alteration Agreement permit as part of any proposed Project area development.

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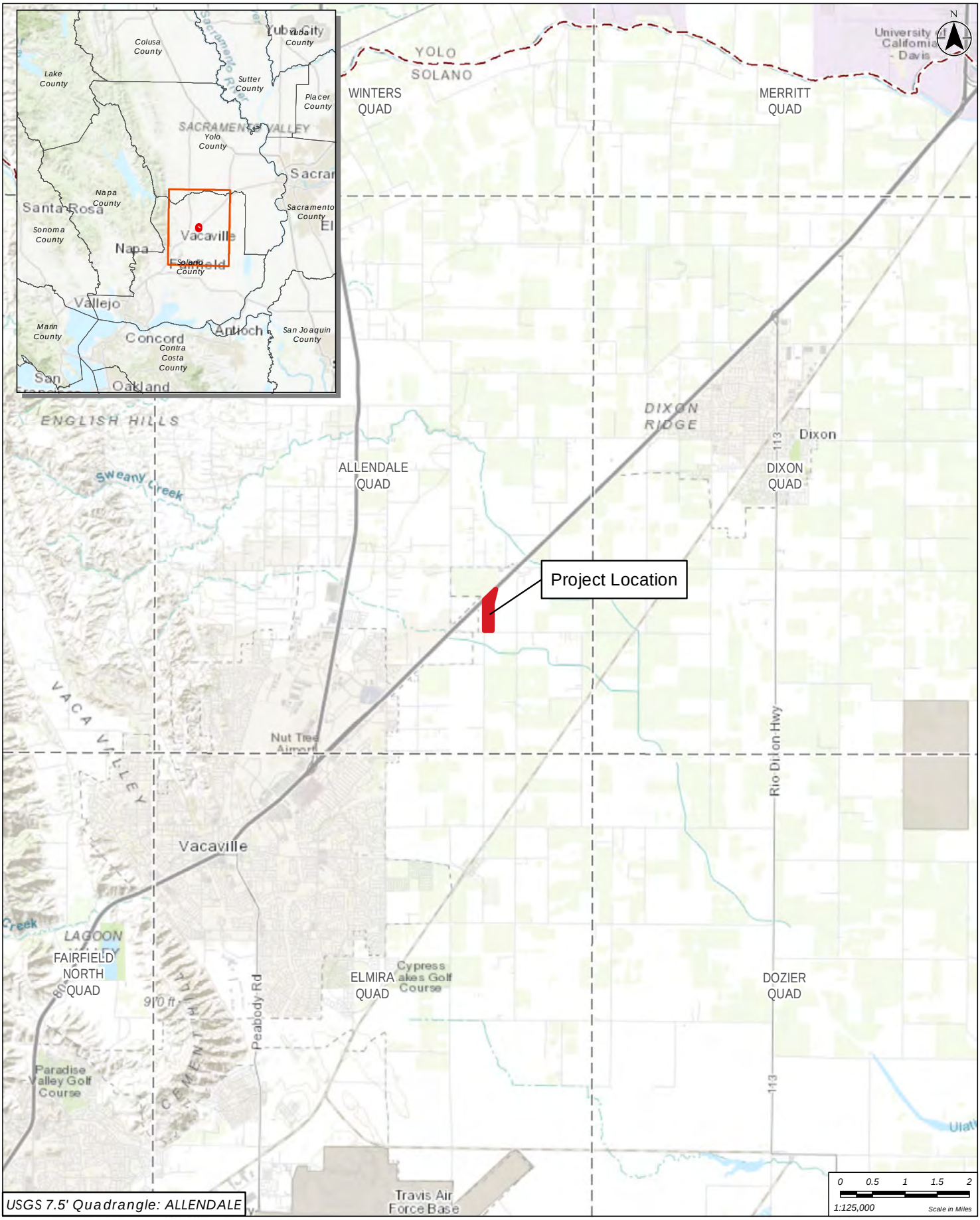
Appendix A

Project Overview Area Figures



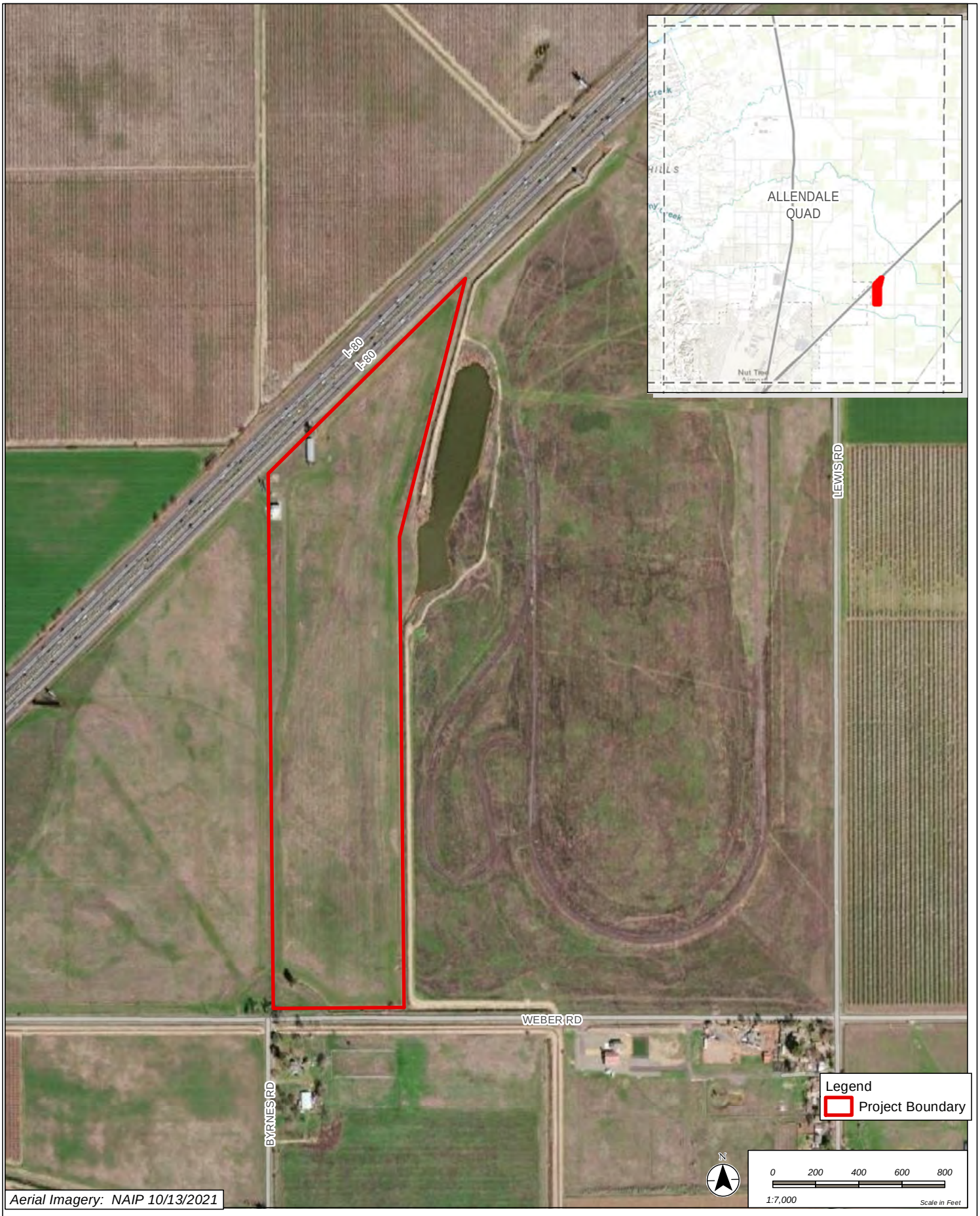
USGS 7.5' Quadrangle: ALLENDALE

GREG MATUZAK
Environmental Consulting LLC
Nevada City, CA

Weber Road Property

Figure 1. Vicinity Map

Prepared: Melissa Nugent 12/16/2022 D:__GIS_Matuzak\20221216_Solano_WeberRd\mxd\Fig1_Vicinity_Solano_WeberRd.mxd



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Environmental Consulting LLC
Nevada City, CA

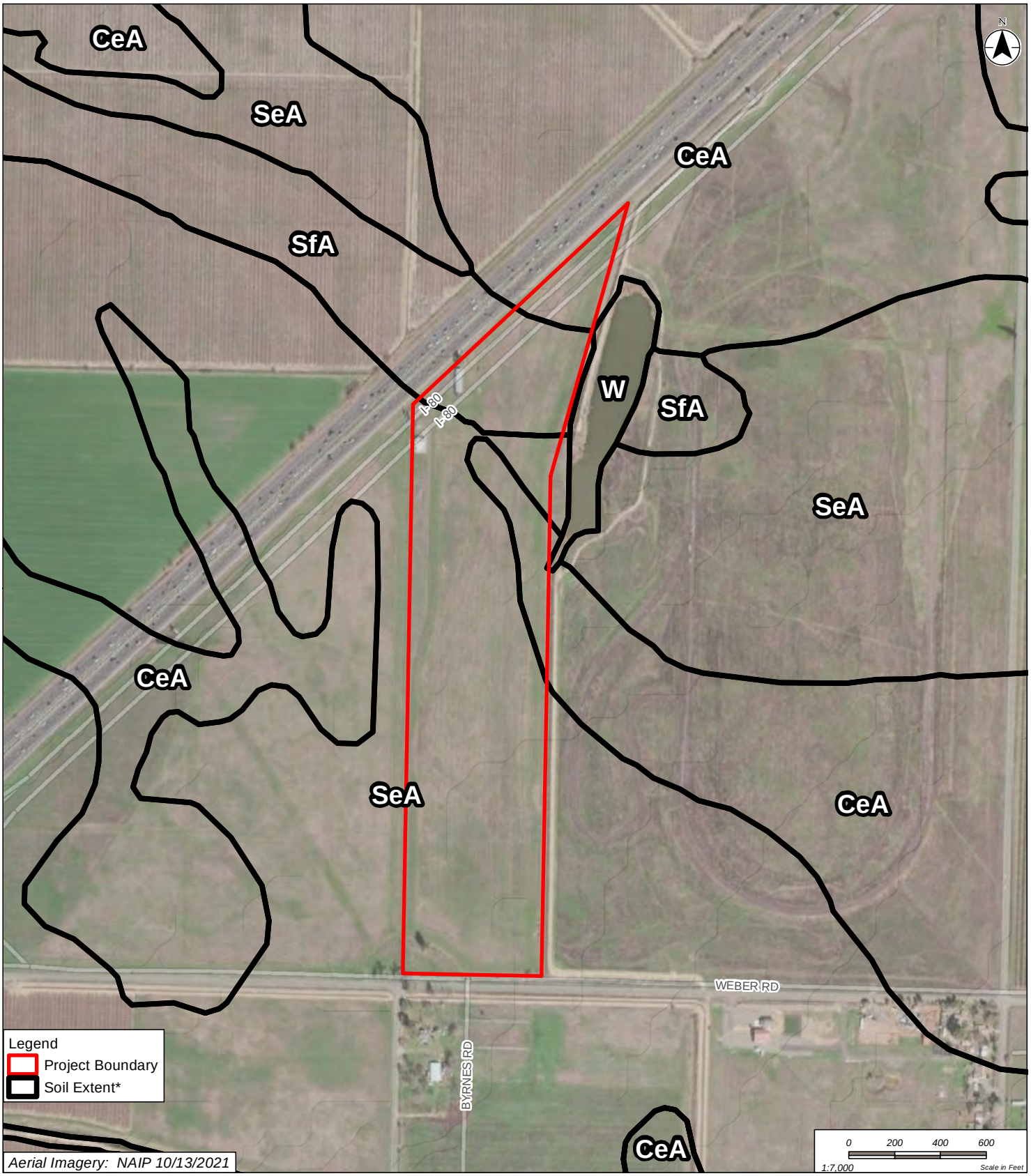
Weber Road Property

Figure 2. Project Location Map

Prepared: Melissa Nugent 12/16/2022 D:__GIS_Matuzak\20221216_Solano_WeberRd\mxd\Fig2_SiteMap_Solano_WeberRd.mxd

Appendix B

USDA Soils Maps



SOIL TYPE*

CeA - Clear Lake clay, 0 to 2 percent slopes, MLRA 17
SeA - San Ysidro sandy loam, 0 to 2 percent slopes
SfA - San Ysidro sandy loam, thick surface , 0 to 2 percent slopes
W - Water

* Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online. Accessed 11/11/2020

GREG MATUZAK
Environmental Consulting LLC
Nevada City, CA

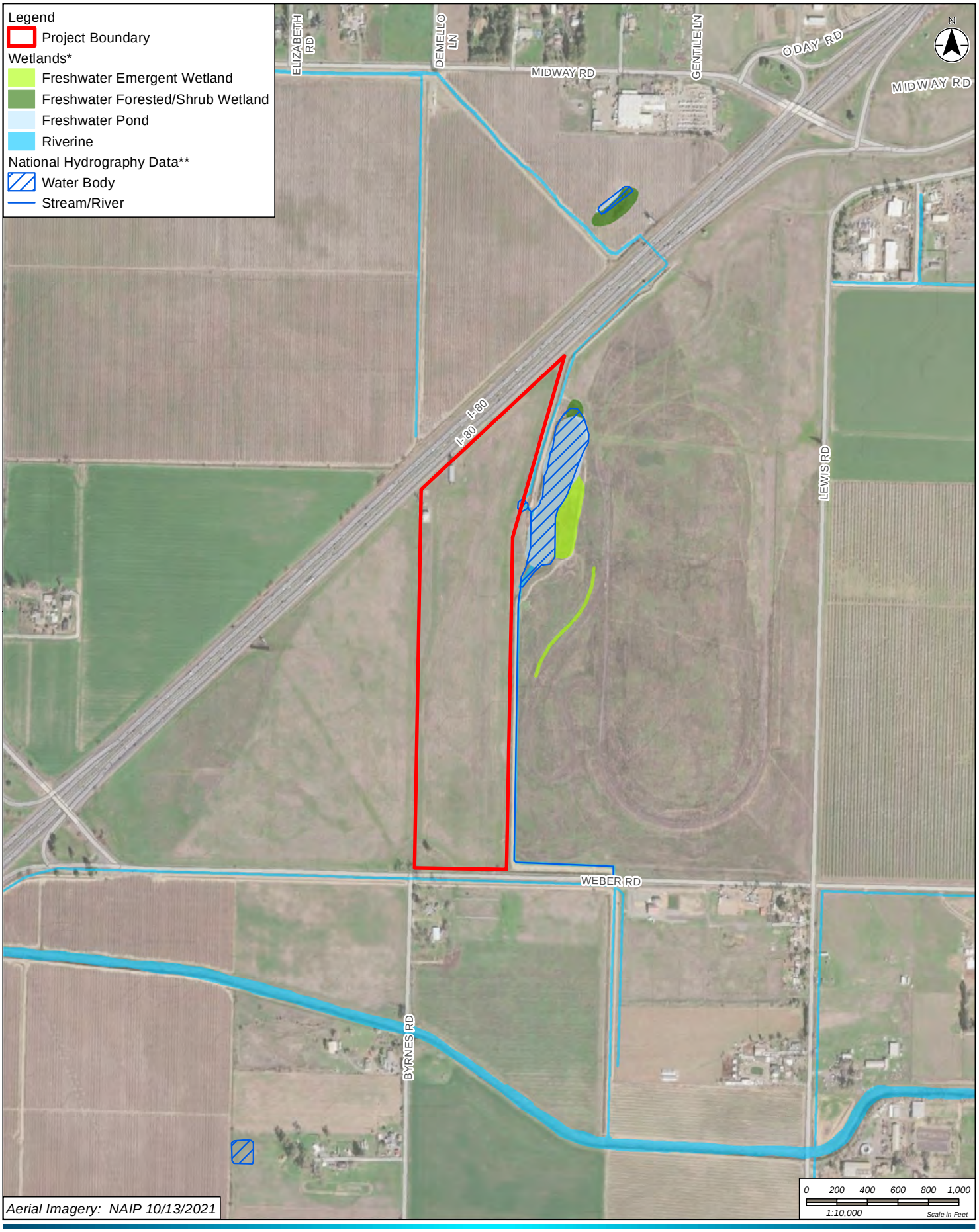
Weber Road Property

Figure 4. Soils Map

Prepared: Melissa Nugent 12/16/2022 D:__GIS_Matuzak\20221216_Solano_WeberRd\mxd\Fig4_SoilsMap_Solano_WeberRd.mxd

Appendix C

National Wetland Inventory (NWI) Maps



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Nevada City, CA

Weber Road Property

* Data downloaded from https://www.fws.gov/wetlands/Data/Data-Download.html 3/6/2019
** National Hydrography Dataset (NHD) downloaded from http://nhd.usgs.gov March, 2019

Prepared: Melissa Nugent 12/16/2022 D:__GIS_Matuzak\20221216_Solano_WeberRd\mxd\Fig5_NWI-NHD_Solano_WeberRd.mxd

Figure 5. Wetlands and Water Features Map

Appendix D

Plants and Wildlife Observed During the Site Survey

Plant and Wildlife Species Observed during the Biological Resources Survey

Common Name	Scientific Name	Status
Plants		
wild oats	*Avena* sp.	None
black mustard	*Brassica rapa*	None
brome species	*Bromus* sp.	None
clover species	*Trifolium* sp.	None
crape myrtle	*Lagerstroemia* sp.	None
cultivated radish	*Raphanus sativus*	None
filaree species	*Erodium* sp.	None
milk thistle	*Silybum marianum*	None
mistletoe	*Phoradendron* sp.	None
eucalyptus trees	*Eucalyptus* sp.	None
velvet grass	*Holcus lanatus*	None
vetch	*Vicia* sp.	None
yellow star thistle	*Centaurea solstitialis*	None
Wildlife		
American crow	*Corvus brachyrhynchos*	MBTA
American robin	*Turdus migratorius*	MBTA
European starling	*Sturnus vulgaris*	None
mourning dove	*Zenaida macroura*	MBTA
rock pigeon	*Columba livia*	None

Appendix E

Photo Log

Photos of the December 15th, 2022 Field Surveys of the Project Area

Photo 1: Entrance into the southern section of the Project area off of Weber Road. Medium sized eucalyptus trees along Weber Road at the frontage to the Project area.

Photo 2: Looking north from Weber Road into the southwestern section of the Project area. Current cattle grazing activities within the Project area. Standing water to the left is on the neighboring parcel where the two black cows are located outside the fencing.

Photo 3: Looking southeast from the southern entrance into the Project area. Cattle fencing and Project area fencing along Weber Road.

Photo 4: Project area from the southwestern section looking east. The southern section of the Project area contains a single eucalyptus tree.

Photo 5: Central section of the Project area looking west. Project area is dominated by upland non-native annual grassland and pasture species.

Photo 6: Northwestern section of the Project area along Interstate 80 with an existing building. Area contains highly disturbed vegetation and asphalt.

Photo 7: Northwestern corner of the Project area along Interstate 80 with an existing building. Area contains highly disturbed vegetation and asphalt/pavement.

Photo 8: Looking southeast along the northern section of the Project area. The Project area is dominated by non-native annual grassland and pasture species.

Photo 9: Looking east along the eastern section of the Project area. The parcel to the east contains a Solano Irrigation District drainage basin. Area is mapped as CeA, a hydric soil on the NRCS Hydric Soil List, but no wetland vegetation identified here.

Photo 10: Looking north from Weber Road into the southwest corner of the parcel to the east of the Project area that contains a Solano Irrigation District canal. Project area is located to the left on the other side of the fence heading north in the photo.

Photo 11: Looking from the southeastern corner of the Project area along Weber Road. Irrigation/drainage ditch is manmade and flows east connecting with a drainage ditch along Weber Road along the frontage with the parcel to the east of the Project area.

Photo 12: Looking north into the central section of the Project area from Weber Road. Grazing cattle and highly disturbed soils and vegetation dominate Project area.

Appendix F

Species Table for Special-Status Plant and Wildlife Species

Table 1. Special-Status Plant and Wildlife Species and their Potential to Occur within the Proposed Project Site, City of Vacaville, Solano County, California.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence within Proposed Project Site
	Federal	State	CNPS				
Plants							
bearded popcornflower *Plagiobothrys hystriculus*	-	S2	1B.1	0-900 feet (0-274 meters)	Valley and foothill grassland (mesic); vernal poos (margins).	April - May	**Very Low to Nil.** No suitable habitat in the proposed project site. A single occurrence from 2016 within three miles of the proposed project site.
dwarf downingia *Downingia pusilla*	-	S2	2B.2	5-1460 feet (1-445 meters)	Vernal pools; Valley and foothill grassland (mesic).	March - May	**Very Low to Nil.** No suitable habitat in the proposed project site. A single occurrence from 1998 within three miles of the proposed project site.
legenere *Legenere limosa*	-	S2	1B.1	3-2887 feet (1-880 meters)	Vernal pools.	April - June	**Very Low to Nil.** No suitable habitat in the proposed project site. A single occurrence from 1890 within three miles of the proposed project site.
Keck's checkerbloom *Sidalcea keckii*	E	S2	1B.1	245-2135 feet (75-650meters)	Cismontane woodland; valley and foothill grassland.	April - June	**Very Low to Nil.** No suitable habitat in the proposed project site. A single occurrence from 1983 within three miles of the proposed project site.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	-	S2	1B.1	15-5710 feet (5-1740 meters)	Valley and foothill grassland; lower montane coniferous; cismontane woodland; meadows and seeps; vernal pools.	April - July	**Very Low to Nil.** No suitable habitat in the proposed project site. Requires adobe or alkaline soils. Two occurrences from 2010 and 2011 within three miles of the proposed project site.
two-fork clover *Trifolium amoenum*	E	S1	1B.1	15-1360 feet (5-415 meters)	Coastal bluff scrub; valley and foothill grassland (sometimes serpentine).	April - June	**Very Low to Nil.** No suitable habitat in the proposed project site. A single occurrence from 1909 within three miles of the proposed project site.
Invertebrates							
California linderiella *Linderiella occidentalis*	-	S2S3	N/A	Six disjoint populations in Tehama, Butte, Jepson, Solano, Sacramento, Glenn, Merced, and Ventura Counties.	Highly turbid water of vernal pools.	Winter/Spring	**Very Low to Nil.** No suitable habitat present within proposed Project site. Two known occurrences from 1997 within three miles of proposed project site.
vernal pool fairy shrimp *Branchinecta lynchi*	T	S3	N/A	Scattered throughout Central Valley, Coast Range, and Southern California.	Vernal pools.	December - May	**Very Low to Nil.** No suitable habitat present within proposed Project site. Two known occurrences approximately three miles to the northeast of the proposed Project site and several additional occurrences within 1 – 2 miles to the west and southwest of the Project site.
Reptiles and Amphibians							
western pond turtle *Emys marmorata*	-	SSC, S3	N/A	Coastal and valley areas of California, foothill range of Sierra Nevada mountains.	Ponds, marshes, rivers, streams, and irrigation ditches.	Year-round	**Very Low to Nil.** No suitable habitat present within proposed Project site. Known from a single occurrence from 2016 within three miles of proposed Project site.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence within Proposed Project Site
	Federal	State	CNPS				
Birds							
burrowing owl *Athene cunicularia*	MBTA	SSC, S3	N/A	Southern and Central California, extending to Mexico and South America; Northern California in summers.	Inhabits open, dry annual or perennial grasslands, desert and scrublands characterized by low-growing vegetation.	Year-round in warmer valley locations.	**Very Low to Nil.** No suitable habitat within the proposed Project site. However, a single occurrence of a pair of owls in a burrow was identified in 1989 at the intersection of Lewis and Midway Roads to the northeast of proposed Project site. Other observations east of the Project site along Weber Road have been single individuals and owls located within woodpiles. Given lack of burrows and small mammal activity within the Project site, the species would not nest within the Project site.
Swainson's hawk *Buteo swainsoni*	MBTA	T, S3	N/A	Throughout California east of the Coast Range	Open habitats, agricultural areas.	Nesting, foraging	**Low.** Limited suitable nesting habitat present within proposed Project site (Single larger tree within the Project site and medium sized trees at the entrance to the Project site along Weber Road). However, occurrences within a single mile of proposed Project site are located to the south along Byrnes Road and to the east and west along Weber Road. Trees within and adjacent to the proposed Project site are eucalyptus trees and species is known to nest in 85' – 150' eucalyptus trees. Trees within and adjacent to the Project area were less than 85' tall and no active or inactive nests were observed. Project site does contain suitable foraging habitat for the species.
white-tailed kite *Elanus leucurus*	MBTA	FP, S3S4	N/A	Throughout the western United States and Mexico.	Open habitats, nests in oak, willow or other trees.	Year-round	**Low.** Limited suitable habitat present within proposed Project site (A single tree within the Project site and few small trees along the southern border of the Project site along Weber Road). Known occurrences approximately 1 to 2 miles from proposed Project site, located to the south, east, and west of the Project site.
nesting raptors and other migratory birds	MBTA	CESA	N/A	Migrants and resident species	Tree, shrub, ground, and riparian vegetation (breeding).	Nesting	**Low**: Limited suitable habitat present within the proposed Project site, including tree-nesting and ground-nesting species.

Federal

E = Endangered under the federal Endangered Species Act

T = Threatened under the federal Endangered Species Act

C = Candidate for listing under the Federal Endangered Species Act

D = Delisted under the federal Endangered Species Act

PD = Proposed for delisting

MBTA = Protected under the Migratory Bird Treaty Act

X = Designated Critical Habitat

UR = Under review

SC = Species of concern

- = No listing

State (plants and wildlife)

E = Endangered under the California Endangered Species Act

T = Threatened under the California Endangered Species Act

R = Rare under the California Native Plant Protection Act

C = Candidate for listing under the California Endangered Species Act

SSC = Species of Special Concern

FP = Fully protected

SH = State historical site

CESA = Protected under California Endangered Species Act

- = No listing

State Rank (plants and wildlife)

S1 = Critically Imperiled

S2 = Imperiled

S3 = Vulnerable

S4 = Apparently Secure

S5 = Secure

0.1 = Seriously threatened in California

0.2 = Fairly threatened in California

0.3 = Not very threatened in California

California Native Plant Society

1A = Plants presumed extirpated in CA and either rare or extinct elsewhere

1B = Plants rare, threatened, or endangered in California and elsewhere

2A = Plants presumed extirpated in CA but more common elsewhere

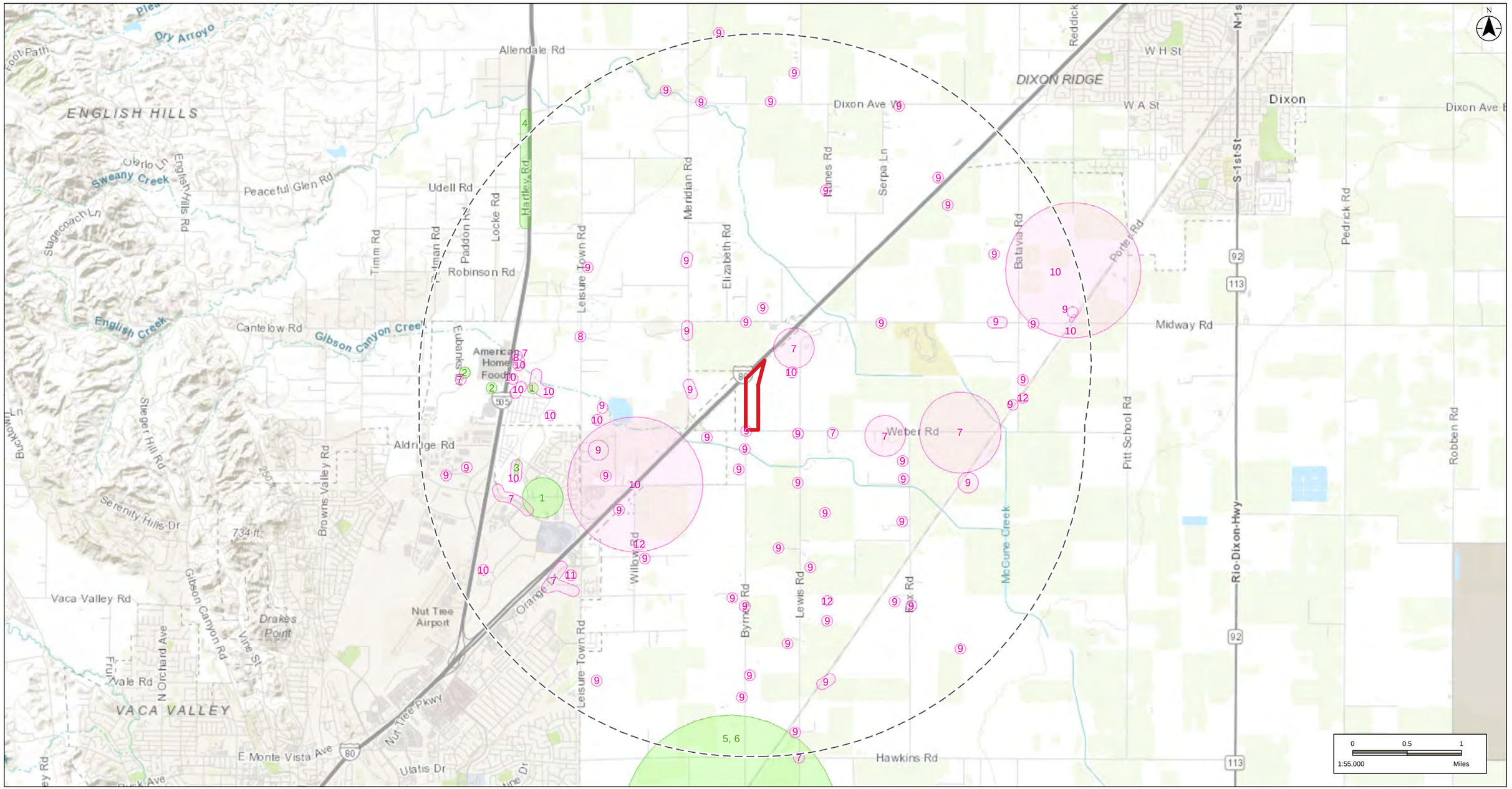
2B = Plants rare, threatened, or endangered in California but more common elsewhere

3 = Plants about which more information is needed - a review list

4 = Plants of limited distribution - a watch list

Appendix G

CNDDB 3-Mile Buffer Figure



Legend

- Study Area
- 3 mile Buffer on Project
- CNDDB Plant Occurence*
- CNDDB Wildlife Occurence*
- Critical Plant Habitat** (none)
- Critical Wildlife Habitat** (none)

** California Natural Diversity Database (CNDDB) Data: Downloaded January 5, 2021, from the California Department of Fish and Wildlife*
*** United States Fish and Wildlife Service (USFWS) Critical Habitat Data: Downloaded February 2020 from: https://ecos.fws.gov/ecp/report/table/critical-habitat.html*

CNDDB OCCURRENCES*

Plant Species

1. Baker's navarretia
2. Bearded popcornflower
3. Dwarf downingia
4. Keck's checkerbloom
5. Legenere
6. Two-fork clover

Wildlife Species

7. Burrowing owl
8. California linderiella
9. Swainson's hawk
10. Vernal pool fairy shrimp
11. Western pond turtle
12. White-tailed kite

CRITICAL HABITAT OCCURRENCES**

Plant Habitat

None

Wildlife Habitat

None

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Weber Road Property

Figure 3. CNDDB and Critical Habitat Map

Prepared: Melissa Nugent 12/16/2022 D:__GIS_Matuzak\20221216_Solano_WeberRd\mxd\Fig3_CNDDB_Solano_WeberRd.mxd

Appendix H

CNDDB and USFWS iPac Reports

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: EOndx IS (101779 OR 110297 OR 110298 OR 115180 OR 116590 OR 11953 OR 16116 OR 1752 OR 2649 OR 30612 OR 30613 OR 34030 OR 34427 OR 41972 OR 43203 OR 43588 OR 43589 OR 43590 OR 43594 OR 43612 OR 43623 OR 43630 OR 43763 OR 43778 OR 43781 OR 43782 OR 43786 OR 45955 OR 45956 OR 45958 OR 45959 OR 46097 OR 46099 OR 46163 OR 46165 OR 46171 OR 46190 OR 46195 OR 46197 OR 46200 OR 46204 OR 46520 OR 47401 OR 47402 OR 48654 OR 52077 OR 56459 OR 56461 OR 56464 OR 57411 OR 57508 OR 57522 OR 58106 OR 59109 OR 59110 OR 62335 OR 62337 OR 62338 OR 6354 OR 64660 OR 70188 OR 70220 OR 70975 OR 70976 OR 7224 OR 84701 OR 88748 OR 88776 OR 88782 OR 88801 OR 88802 OR 88804 OR 89814 OR 91265 OR 95083 OR 95088)

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 24958
EO Index: 6354
Key Quad: Dixon (3812147)
Element Code: ABNKC06010
Occurrence Number: 47
Occurrence Last Updated: 1994-01-31

Scientific Name: *Elanus leucurus*
Common Name: white-tailed kite

Listing Status: **Federal:** None
State: None
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G5
State: S3S4
Other Lists: BLM_S-Sensitive
CDFW_FP-Fully Protected
IUCN_LC-Least Concern

General Habitat:

ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS AND RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND.

Micro Habitat:

OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Last Date Observed: 1993-06-22
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1993-06-22
Occurrence Rank: Good
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

EAST SIDE OF BATAVIA ROAD, 0.7 MILE SOUTH OF MIDWAY ROAD, 6 MILES EAST OF ELMIRA.

Detailed Location:

Ecological:

HABITAT IS A MIXTURE OF PINES, EUCALYPTUS, POPLAR, WILLOW, AND PASTURE ALONG A SMALL RIPARIAN AREA.

Threats:

General:

2 ADULTS FLEDGED 3 YOUNG IN 1993. SWAINSON'S HAWKS, WHICH ALSO NEST IN THIS AREA, WERE REPEATEDLY CHASED BY THE ADULT KITES.

PLSS: T07N, R01E, Sec. 34, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4251566 E599627
Latitude/Longitude: 38.40678 / -121.85894
Elevation (feet): 60

County Summary:

Solano

Quad Summary:

Dixon (3812147)

Sources:

ERI93F0005 ERICHSEN, A.L. (UNIVERSITY OF CALIFORNIA, DAVIS) - FIELD SURVEY FORM FOR ELANUS LEUCURUS (NEST SITE) 1993-06-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 46097
EO Index: 46097
Key Quad: Allendale (3812148)
Element Code: ABNKC06010
Occurrence Number: 57
Occurrence Last Updated: 2001-10-10

Scientific Name: *Elanus leucurus*
Common Name: white-tailed kite

Listing Status: **Federal:** None
State: None
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G5
State: S3S4
Other Lists: BLM_S-Sensitive
CDFW_FP-Fully Protected
IUCN_LC-Least Concern

General Habitat:

ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS AND RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND.

Micro Habitat:

OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Last Date Observed: 2001-06-14
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2001-06-14
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

0.1 MILE NORTH OF WALNUT ROAD AND 0.1 MILE EAST OF WILLOW ROAD, ALONG THE NORTH EDGE OF VACAVILLE.

Detailed Location:

2000 NEST TREE WAS THE FOURTH TREE EAST OF THE DRIVE TO #5165. 2001 NEST TREE WAS A WILLOW NORTH OF THE BUILDINGS AND SOUTH OF THE IRRIGATION CANAL.

Ecological:

HABITAT CONSISTS OF THE SEMI-URBAN FRINGE OF VACAVILLE. SURROUNDING AREA CONSISTS OF SOME PASTURE SOUTH AND WEST; RUDERAL TO THE NORTH WITH NEW DIRT FILL.

Threats:

General:

PAIR NESTED IN 2000. NEST SITE WAS MONITORED FROM 2 MAY-14 JUN 2001 (3 VISITS); 2 CHICKS OBSERVED ON 27 MAY 2001, 2 YOUNG FLEDGED.

PLSS: T06N, R01W, Sec. 12, NE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4249341 E593982
Latitude/Longitude: 38.38734 / -121.92388
Elevation (feet): 80

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

RES01F0054 RESSEGUIE, L. - FIELD SURVEY FORM FOR ELANUS LEUCURUS (NEST SITE) 2001-06-14

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 46099
EO Index: 46099
Key Quad: Allendale (3812148)
Element Code: ABNKC06010
Occurrence Number: 58
Occurrence Last Updated: 2001-10-10

Scientific Name: *Elanus leucurus*
Common Name: white-tailed kite

Listing Status: **Federal:** None
State: None
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G5
State: S3S4
Other Lists: BLM_S-Sensitive
CDFW_FP-Fully Protected
IUCN_LC-Least Concern

General Habitat:

ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS AND RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND.

Micro Habitat:

OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Last Date Observed: 2001-07-09
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2001-07-09
Occurrence Rank: Excellent
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

0.25 MILE EAST OF LEWIS ROAD, 6 MILES SW OF DIXON.

Detailed Location:

NEST TREE IS LOCATED ON LEWIS ROAD FARMSTEAD #6654, WITHIN A ROW OF OSAGE ORANGES.

Ecological:

NEST TREE IS IN AN OSAGE ORANGE. SWHA NEST IS FOUND FURTHER DOWN IN THE SAME ROW OF TREES.

Threats:

General:

NEST SITE WAS MONITORED FROM 3 APR-9 JUL 2001 (9 VISITS); 2 CHICKS OBSERVED ON 9 JUL 2001, 2 FLEDGED.

PLSS: T06N, R01E, Sec. 08, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4248540 E596769
Latitude/Longitude: 38.37983 / -121.89208
Elevation (feet): 60

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

RES01F0055 RESSEGUIE, L. - FIELD SURVEY FORM FOR ELANUS LEUCURUS (NEST SITE) 2001-07-09

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 43588
EO Index: 43588
Key Quad: Allendale (3812148)
Element Code: ABNKC19070
Occurrence Number: 839
Occurrence Last Updated: 2013-01-07

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-07-20
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-07-20
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

ALONG MIDWAY ROAD, BETWEEN DEMELLO LANE AND GENTILE LANE, 6 MILES NE OF VACAVILLE.

Detailed Location:

RESSEGUIE SITES ALLENDALE 23 & 50, MAPPED TO PROVIDED COORDINATES. SW-MOST SITE (ALLENDALE 50) NEVER CONFIRMED, ADULTS OBSERVED DEFENDING TREE WITH POTENTIAL NEST IN JUN 2001 ONLY; TREE WAS INACTIVE IN 2002, 2004, & 2005.

Ecological:

2000-2005: NEST TREE (ALLENDALE 23) WAS A BLUE GUM EUCALYPTUS WITHIN AN E-W ROW; 2000 & 2002 NEST WAS TALLEST IN THE ROW. SURROUNDED BY A MIX OF PASTURE, CORRALS, AND LOW-DENSITY SEMI-URBAN HOUSING.

Threats:

General:

NEST MONITORED 28 JUN-19 JUL 2000; 3 FLEDGED. ACTIVE NEST OBSERVED ON 11 APR; 2 ADULTS PERCHED NEAR NEST ON 5 JUL 2001. NEST MONITORED 2 APR-24 JUL 2002; 1 FLEDGED. NO ACTIVITY OBSERVED IN 2004. NEST MONITORED 30 APR-20 JUL 2005; 3 FLEDGED.

PLSS: T07N, R01E, Sec. 30, SE (M)
Accuracy: specific area
Area (acres): 10
UTM: Zone-10 N4252849 E595763
Latitude/Longitude: 38.41876 / -121.90301
Elevation (feet): 80

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
RES00F0008	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-19
RES01F0005	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-13
RES01F0010	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-06-19
RES01F0293	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-06-19
RES01F0305	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-04
RES02F0011	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2002-XX-XX
RES04F0341	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-16
RES04F0352	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-08-14
RES05F0258	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-06-25
RES05F0270	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-20
ROC01F0030	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-04-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 43589
EO Index: 43589
Key Quad: Allendale (3812148)
Element Code: ABNKC19070
Occurrence Number: 840
Occurrence Last Updated: 2013-01-07

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-09-09
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-09-09
Occurrence Rank: Poor
Owner/Manager: UNKNOWN, PVT, SOL COUNTY
Trend: Unknown
Presence: Presumed Extant

Location:

ALONG BYRNES RD FROM WEBER RD INTERSECTION S ABOUT 0.4 MI, ON EITHER SIDE OF GIBSON CYN CREEK; 4.5 MI NE OF VACAVILLE.

Detailed Location:

3 NEST SITES MAPPED TO PROVIDED COORDINATES. NORTH NEST, MIDDLE NEST, & SOUTH NEST: RESSEGUIE SITES ALLENDALE 20, 70, & 15, RESPECTIVELY.

Ecological:

NORTH NEST: AT 95% HEIGHT OF BLACK WALNUT. MIDDLE NEST IN OAK. SOUTH NEST IN 100' EUCALYPTUS IN A LARGE GROVE OF TREES. SITE SURROUNDED BY CULTIVATED LAND, PASTURE, & RUDERAL LAND.

Threats:

General:

2 ACTIVE NESTS, 1 FLEDGED IN 2000. 1 ACTIVE NEST, 0 FLEDGED IN 2001. 2 ACTIVE NESTS, 1 FLEDGED IN 2002. 1 ACTIVE NEST, FLEDGED 1 IN 2004. 2 ACTIVE NESTS, EACH FLEDGED 1 IN 2005.

PLSS: T06N, R01E, Sec. 06, N (M)
Accuracy: specific area
Area (acres): 15
UTM: Zone-10 N4251032 E595544
Latitude/Longitude: 38.40242 / -121.90576
Elevation (feet): 70

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
RES00F0009	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-05
RES00F0011	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-28
RES01F0002	RESSEGUIE, L. - MEMO DETAILING TRS INFO FOR VARIOUS SITES AND LISTING INACTIVE BUTEO SWAINSONI NEST SITES WHICH WERE ACTIVE IN 1999. 2001-08-25
RES01F0290	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-22
RES01U0002	RESSEGUIE, L. - MEMO DESCRIBING UNOCCUPIED SWHA NEST SITES FOR 2001 AND MAPS SHOWING RESSEGUIE'S SEARCH AREAS. 2001-01-11
RES02F0007	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES02F0117	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0335	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-08-12
RES04F0339	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-06-22
RES05F0010	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2005-08-03
RES05F0267	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-14
RES05F0269	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-09-09
ROC01F0014	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-05-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43590	**EO Index:**	43590
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	841	**Occurrence Last Updated:**	2018-02-16

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2013-07-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-07-XX	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF LEWIS ROAD, 0.5 MILE SOUTH OF WEBER ROAD, 5.5 MILES NE OF VACAVILLE.

Detailed Location:

MAPPED TO COORDINATES FROM FIELD SURVEY FORMS (RESSEGUIE SITE ALLENDALE 18) AND CDFW NEST RECORDS 2000-2004; NEST TREE WAS LOCATED IN THE NE CORNER OF A FARMSTEAD.

Ecological:

2000-2004 NEST AT 75% HEIGHT OF 75-85' BLUE GUM EUCALYPTUS; SURROUNDED BY ALFALFA TO THE NORTH, RUDERAL TO THE EAST, AND CULTIVATED LAND TO THE SOUTH.

Threats:

General:

NEST SITE OCCUPIED IN 2000 & 2001, BUT NO YOUNG OBSERVED. NEST SITE UNOCCUPIED 2002-2004. NEST MONITORED 2 MAY-22 AUG 2005; INCUBATION OBSERVED ON 30 JUN 2005, BUT NO CHICKS DETECTED. 2 FLEDGLINGS IN 2012. 2 FLEDLINGS IN 2013.

PLSS:	T06N, R01E, Sec. 06, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4250280 E596311	**Latitude/Longitude:**	38.39556 / -121.89709	**Elevation (feet):**	70

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
LEN12D0001	LENIHAN, C. - SAN DIEGO BURROWING OWL NEST LOCATIONS & RAPTOR 2012 REPORT 2012-XX-XX
LEN13D0001	LENIHAN, C. - RAPTOR NEST SURVEY PGE VACA TO LAKEVILLE TRANSMISSION LINE 2013-XX-XX
RES00F0010	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-17
RES01F0003	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-02
RES01F0291	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-05-25
RES02F0008	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0338	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-06-15
RES05F0268	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-22
ROC01F0025	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-04-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43594	**EO Index:**	43594
Key Quad:	Dixon (3812147)	**Element Code:**	ABNKC19070
Occurrence Number:	845	**Occurrence Last Updated:**	2013-04-12

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2001-08-02	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-08-05	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

MCCUNE CREEK, 0.2 MILE SOUTH OF I-80, 2 MILES SW OF DIXON.

Detailed Location:

THE BEST VIEW OF THIS SITE WAS FROM THE SOUTH SHOULDER OF I-80, BUT THIS IS FORBIDDEN BY CHP WITHOUT A PERMIT. 2000 NEST TREE WAS TO THE NORTH OF THE 2001 NEST TREE. MAPPED TO COORDINATES GIVEN FOR RESSEGUIE'S DIXON 26 SITE.

Ecological:

NEST TREES WERE ISOLATED RIPARIAN WILLOWS; SURROUNDING FORAGING HABITAT INCLUDED ALFALFA TO THE NW AND ROW CROPS TO THE NE, SE, AND SW.

Threats:

General:

NEST ACTIVE IN 2000; 1 YOUNG FLEDGED. NEST ACTIVE IN 2001; 1 FLEDGED. SITE POORLY OBSERVED IN 2002 AND 2004. NEST SITE UNOCCUPIED IN 2005.

PLSS:	T07N, R01E, Sec. 21, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4254407 E598485	**Latitude/Longitude:**	38.43251 / -121.87162	**Elevation (feet):**	70

County Summary:	**Quad Summary:**
Solano	Dixon (3812147)

Sources:

RES00F0015	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-06
RES01F0043	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-02
RES01F0285	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-22
RES05F0200	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-05

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 43612
EO Index: 43612
Key Quad: Dixon (3812147)
Element Code: ABNKC19070
Occurrence Number: 852
Occurrence Last Updated: 2013-04-12

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-08-24
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-08-24
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

WEST SIDE OF BATAVIA ROAD, AT THE RAILROAD TRACK CROSSING, 2.5 MILES SW OF DIXON.

Detailed Location:

MAPPED TO COORDINATES GIVEN FOR RESSEGUIE'S DIXON 4 SITE.

Ecological:

NEST TREE WAS A BLUE GUM EUCALYPTUS. SWHA ALSO NESTED IN A BLACK WALNUT ON THE OPPOSITE SIDE OF THE ROAD (EAST) IN 2000. SURROUNDED BY MIXED TREES/ROW CROPS TO NW; MIXED TREES, RUDERAL, AND HOUSING TO NE; CULTIVATED TO SE; RUDERAL TO SW.

Threats:

General:

ADULT OBSERVED DEFENDING LATE IN 1999. NEST ACTIVE IN 2000; 1 FLEDGED. NEST ACTIVE IN 2001; 1 FLEDGED. NEST ACTIVE IN 2002; 1 FLEDGED. NEST ACTIVE 2004; NEST HIDDEN (FATE UNKNOWN). NEST ACTIVE IN 2005 (HIDDEN AGAIN); 2 FLEDGED.

PLSS: T07N, R01E, Sec. 33, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4251463 E599480
Latitude/Longitude: 38.40587 / -121.86064
Elevation (feet): 60

County Summary:

Solano

Quad Summary:

Dixon (3812147)

Sources:

RES00F0024 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-08-02
RES01F0036 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-09-02
RES01F0283 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-23
RES02F0064 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0190 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-18
RES05F0193 RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-24

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43623	**EO Index:**	43623
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	855	**Occurrence Last Updated:**	2011-09-27

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2000-08-20	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-08-03	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF BYRNES ROAD, 1 MILE SOUTH OF KILKENNY ROAD, 5 MILES SW OF DIXON.

Detailed Location:

NEST TREE WAS LOCATED ABOUT 0.1 MILE WEST OF THE ROAD, AT THE REAR OF THE FARMSTEAD. ALTHOUGH NEST WAS NOT VISIBLE, ADULT BEHAVIOR SUGGESTED THAT IT WAS BURIED IN FOLIAGE AT THE 80% HEIGHT OF THE NEST TREE.

Ecological:

NEST TREE WAS A TALL EUCALYPTUS; SURROUNDED BY MIXED AGRICULTURE.

Threats:

General:

1 FLEDGED IN 2000. SITE WAS POORLY OBSERVED IN 2001; UNOCCUPIED IN 2002, 2004, AND 2005.

PLSS:	T06N, R01E, Sec. 07, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4248566 E595362	**Latitude/Longitude:**	38.38022 / -121.90819	**Elevation (feet):**	70

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES00F0029	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-08-20
RES04F0336	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-22
RES05F0265	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43630	**EO Index:**	43630
Key Quad:	Elmira (3812138)	**Element Code:**	ABNKC19070
Occurrence Number:	861	**Occurrence Last Updated:**	2013-01-02

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2009-06-18	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2009-06-18	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF LEWIS ROAD, 0.6 MILE NORTH OF THE RAILROAD CROSSING NORTH OF HAWKINS ROAD, 1.5 MILES NORTH OF ELMIRA.

Detailed Location:

NEST TREE LOCATED WEST OF LEWIS ROAD AND SW OF THE FARMSTEAD ON THE WEST SIDE OF THE ROAD. MAPPED TO COORDINATES FROM FIELD SURVEY FORMS (RESSEGUIE SITE ELMIRA 4) AND DFG DATABASES OF SWAINSON'S HAWK NEST RECORDS.

Ecological:

NEST TREE WAS A 100' EUCALYPTUS; A WEEDY FIELD LAY BETWEEN THE NEST TREE AND THE ROAD. SURROUNDING HABITAT DESCRIBED AS CROPLAND (SUGAR BEET, WHEAT, CORN, FALLOW) WITH A FARMSTEAD TO THE NE.

Threats:

General:

NEST MONITORED 4 APR-19 JUL 2000; 2 FLEDGED. NEST MONITORED 22 MAR-23 JUL 2001; 1 FLEDGED. NO NEST FOUND IN 2002. NEST MONITORED 21 MAR-24 JUL 2004; 1 FLEDGED. NEST BUILDING, BUT NO CHICKS DETECTED IN 2005. NEST-BUILDING OBS ON 18 JUN 2009.

PLSS:	T06N, R01E, Sec. 07, SE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4247903 E596186	**Latitude/Longitude:**	38.37415 / -121.89884	**Elevation (feet):**	65

County Summary:	**Quad Summary:**
Solano	Elmira (3812138)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES00F0035	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-19
RES01F0028	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-07-23
RES01F0264	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-23
RES02F0114	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0253	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-24
RES05F0337	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-22
ROC01F0020	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-04-25

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43763	**EO Index:**	43763
Key Quad:	Dixon (3812147)	**Element Code:**	ABNKC19070
Occurrence Number:	906	**Occurrence Last Updated:**	2013-04-12

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2004-05-24	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-08-03	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

NORTH SIDE OF PORTER STREET, 0.1 MILE NE OF MIDWAY ROAD, 2 MILES SSW OF DIXON.

Detailed Location:

NEST WAS LOCATED WITHIN A SMALL GROVE OF DECIDUOUS TREES. NEST-BUILDING OBSERVED IN THE LARGEST TREE IN THE GROVE, A RELATIVELY SMALL BLACK WALNUT. MAPPED TO COORDINATES GIVEN FOR RESSEGUIE SITE DIXON 5.

Ecological:

NEST TREE WAS A BLACK WALNUT; SITE WAS SURROUNDED BY SORGHUM TO NW, CORN/RUDERAL TO NE, HOUSES/RUDERAL TO SW, AND RUDERAL AND ROW CROPS TO SE.

Threats:

General:

NEST ACTIVE IN 2000; 1 FLEDGED. NEST ACTIVE IN 2001; ABANDONED AFTER 24 JUL. NEST ACTIVE IN 2002; 0 FLEDGED. NEST ACTIVE IN 2004; 0 FLEDGED. NO SWHA OBSERVED IN 2005; RED-TAILED HAWK PRESENT IN JUL-AUG.

PLSS:	T07N, R01E, Sec. 27, S (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4252843 E600351	**Latitude/Longitude:**	38.41821 / -121.85047	**Elevation (feet):**	60

County Summary:	**Quad Summary:**
Solano	Dixon (3812147)

Sources:

RES00F0082	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-24
RES01F0037	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-07-24
RES01F0295	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-24
RES02F0065	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0192	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-18
RES05F0190	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43778	**EO Index:**	43778
Key Quad:	Dixon (3812147)	**Element Code:**	ABNKC19070
Occurrence Number:	911	**Occurrence Last Updated:**	2013-05-31

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2005-08-14	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-08-14	**Occurrence Rank:**	Good
Owner/Manager:	PVT?	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SOUTH SIDE OF MIDWAY ROAD, 0.25 MILE WEST OF BATAVIA ROAD, 2 MILES SW OF DIXON.

Detailed Location:

2000 NEST IN A ROW OF OSAGE ORANGE TREES ALONG S SHOULDER OF MIDWAY RD; NEST AT 90% HEIGHT OF TALLEST TREE. 2001 NEST TREE LOCATED W OF 2000-02 NEST TREES. 2004 NEST WAS AT 95% HEIGHT, S SIDE, NEAR CENTER OF ROW. RESSEGUIE'S DIXON 25 SITE.

Ecological:

NEST TREES WERE OSAGE ORANGES; SURROUNDED BY CULTIVATED LAND TO THE SOUTH AND ACROSS THE ROAD TO THE NORTH. TREE ROW STILL PRESENT IN 2012 GOOGLE EARTH AERIALS.

Threats:

PROPOSED REMOVAL OF ENTIRE ROW OF TREES FOR TRAFFIC VISIBILITY (2001), OR DEVELOPMENT INTO A NATIONAL CEMETERY (2004).

General:

NEST ACTIVE IN 2000; 1 FLEDGED. NEST ACTIVE IN 2001; ADULTS DEFENDING NEST TREE, BUT NO YOUNG OBSERVED. NEST ACTIVE IN 2002; 1 FLEDGED. NEST ACTIVE IN 2004; 1 FLEDGED. NEST ACTIVE IN 2005; 1 FLEDGED.

PLSS:	T07N, R01E, Sec. 33, NE (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-10 N4252681 E599243	**Latitude/Longitude:**	38.41687 / -121.86318	**Elevation (feet):**	65

County Summary:	**Quad Summary:**
Solano	Dixon (3812147)

Sources:

RES00F0087	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-16
RES01F0042	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-13
RES01F0284	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-10
RES02F0169	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0224	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-18
RES05F0185	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-14

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 43781
EO Index: 43781
Key Quad: Dixon (3812147)
Element Code: ABNKC19070
Occurrence Number: 913
Occurrence Last Updated: 2002-03-07

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2000-05-21
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2001-XX-XX
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

0.2 MILE WEST OF BATAVIA ROAD, 1.2 MILES SOUTH OF I-80, 2 MILES SW OF DIXON.

Detailed Location:

NEST TREE IS LOCATED ON ALONZO FARMS, 4781 BATAVIA ROAD. NEST TREE IS NEAR THE SE CORNER OF THE SOUTHERNMOST HOUSE OF 3 FOUND ON THE PROPERTY.

Ecological:

SITE IS SURROUNDED BY CULTIVATED LAND.

Threats:

General:

NEST-BUILDING ACTIVITY OBSERVED BETWEEN 8 MAY-21 MAY 2000 (4 VISITS); UNKNOWN IF ANY YOUNG FLEDGED. LANDOWNER IS HOSTILE TOWARD OBSERVERS, EVEN WHEN VIEWING IS FROM A PUBLIC ROAD! UNOCCUPIED IN 2001.

PLSS: T07N, R01E, Sec. 28, NE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4253689 E599179
Latitude/Longitude: 38.42596 / -121.86377
Elevation (feet): 65

County Summary:	Quad Summary:
Solano	Dixon (3812147)

Sources:

RES00F0089	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-05-21
RES01U0002	RESSEGUIE, L. - MEMO DESCRIBING UNOCCUPIED SWHA NEST SITES FOR 2001 AND MAPS SHOWING RESSEGUIE'S SEARCH AREAS. 2001-01-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43782	**EO Index:**	43782
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	914	**Occurrence Last Updated:**	2013-05-08

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2009-04-23	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2009-04-23	**Occurrence Rank:**	Poor
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF NUNES ROAD, 0.8 MILE SOUTH OF DIXON AVENUE WEST, 4 MILES WEST OF DIXON.

Detailed Location:

FEATURE REPRESENTS SEVERAL NEST SITES, NEVER CONCURRENTLY ACTIVE (POSSIBLY A SINGLE TERRITORY); MAPPED TO COORDINATES FROM FIELD SURVEY FORMS (RESSEGUIE SITE ALLENDALE 7) AND DFG SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009.

Ecological:

2000 NEST IN LARGE BLACK OAK, 2001-09 NEST(S) IN EUCALYPTUS, WITHIN A GROVE OF EUCALYPTUS & SMALL DECIDUOUS TREES. 2001: CORN TO NW, ROW CROPS TO SW/NE, PASTURE TO SE. 2002, NEW ALFALFA TO W, PASTURE TO E.

Threats:

POSSIBLE THREAT FROM LAND USE CHANGE: PROPERTY FOR SALE (2005). 2012 AERIALS INDICATE RECENT REMOVAL OF SEVERAL TREES.

General:

1 FLEDGED IN 2000, 2001, & 2002. NEST MONITORED 25 MAR-16 JUL 2004; ADULT PRESENT, BUT NEVER SEEN ON NEST. NEST SURVEYED 31 MAR-7 SEP 2005; 1 FLEDGED. NEST WITH YOUNG ON 23 APR 2009. THIS NEST LOCATION MAY BE EXTIRPATED; OTHER TREES NEARBY.

PLSS:	T07N, R01E, Sec. 20, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4254604 E596682	**Latitude/Longitude:**	38.43448 / -121.89225	**Elevation (feet):**	80

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES00F0079	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-03
RES01F0001	RESSEGUIE, L. - MEMO DETAILING TRS INFO FOR VARIOUS SITES AND LISTING INACTIVE BUTEO SWAINSONI NEST SITES WHICH WERE ACTIVE IN 1999. 2001-08-24
RES01F0289	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-03
RES02F0116	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0333	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-16
RES05F0264	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-09-07

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	43786	**EO Index:**	43786
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	915	**Occurrence Last Updated:**	2013-01-07

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2005-07-08	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-08	**Occurrence Rank:**	Fair
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

MIDWAY ROAD, 0.4 MILE EAST OF THE POINT WHERE MIDWAY ROAD CURVES SOUTH TOWARD LEWIS ROAD, 4 MILES WEST OF DIXON.

Detailed Location:

NEST TREE BASE IS ON THE SOUTH SHOULDER OF THE ROAD; NEST LIES DIRECTLY OVER THE EASTBOUND LANE. RESSEGUIE'S ALLENDALE 21 STE.

Ecological:

NEST TREE WAS A BLUE GUM EUCALYPTUS; SURROUNDED BY CORN TO THE SE AND SW, A YOUNG WALNUT ORCHARD TO THE NE AND NW.

Threats:

General:

NEST MONITORED 10 MAY-10 JUL 2000; 1 FLEDGED. NEST MONITORED 4 APR-15 AUG 2001; 1 FLEDGED. NEST MONITORED 13 APR-18 JUL 2002; 2 FLEDGED. NEST MONITORED 7 MAR-22 JUL 2004; 1 FLEDGED. NEST MONITORED 3 MAY-8 JUL 2005; 2 FLEDGED.

PLSS:	T07N, R01E, Sec. 32, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4252653 E597522	**Latitude/Longitude:**	38.41681 / -121.88289	**Elevation (feet):**	70

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES00F0080	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-10
RES01F0004	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-15
RES01F0292	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-10
RES02F0009	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0340	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-22
RES05F0263	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	45955	**EO Index:**	45955
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	945	**Occurrence Last Updated:**	2013-01-29

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2009-06-18	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2009-06-18	**Occurrence Rank:**	Good
Owner/Manager:	PVT, UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG FOX ROAD ABOUT 0.4 MILE SOUTH OF SOUTHERN PACIFIC RR TRACK, 5 MILES SW OF DIXON.

Detailed Location:

2 NEST SITES REPRESENTED, NOT CONCURRENTLY ACTIVE. W NEST SITE MAPPED TO UTMS FROM FIELD SURVEY FORMS (RESSEGUIE SITE ALLENDALE 27), IN FARMYARD AT 6645 FOX RD. E NEST SITE JUST ACROSS FOX RD; POINT FROM DFG SHAPEFILE OF NEST RECORDS, 2009.

Ecological:

2000-2002: NEST AT 85% HEIGHT OF 85-150' BLUE GUM EUCALYPTUS; SURROUNDED BY PASTURE, CORN, & ALFALFA, WITH NEARBY RESIDENCE. 2009: NEST IN 25' VALLEY OAK SURROUNDED BY ALFALFA.

Threats:

General:

2000: ADULTS SEEN BRINGING FOOD TO NEST. 1 FLEDGED IN 2001. 1 FLEDGED IN 2002. INACTIVE IN 2004. ADULTS BUT NO NEST OBSERVED, MAY-AUG 2005. ACTIVITY NEAR NEW NEST SITE (EAST) OBSERVED 18 JUN 2009, NEST SUCCESS UNKNOWN/NOT RECORDED.

PLSS:	T06N, R01E, Sec. 08, SE (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-10 N4248536 E597767	**Latitude/Longitude:**	38.37968 / -121.88066	**Elevation (feet):**	60

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES01F0006	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-03-29
RES01F0274	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-22
RES02F0012	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0342	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-22
RES05F0262	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-14
VIN00F0005	VINNEDGE, B. (JONES AND STOKES ASSOCIATES) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2000-07-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	45956	**EO Index:**	45956
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	946	**Occurrence Last Updated:**	2013-01-07

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2005-07-22	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-22	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ABOUT1 MI SW OF NICHOLAS LN AT FOX RD AND 1.3 MI NNE OF LEWIS RD AT HAWKINS RD, 6 MILES SW OF DIXON.

Detailed Location:

2000-2004 NEST TREE WAS WITHIN THE CENTRAL PART OF A ROW OF OSAGE ORANGES, WHICH RUNS FROM THE FARM BUILDINGS NEARLY TO THE SOUTH EDGE OF THE PROPERTY. 2005 NEST TREE WAS THE SOUTHERNMOST TREE IN THE ROW. RESSEGUIE SITE ALLENDALE 33.

Ecological:

NEST TREE WAS AN OSAGE ORANGE, ALTHOUGH WHICH OF SEVERAL NESTS WAS THE ACTIVE ONE COULD NOT BE DETERMINED. SUCCESSFUL NEST FOUND AT THE NORTH END OF THE SAME ROW OF OSAGE ORANGES.

Threats:

General:

NEST MONITORED 3 APR-22 AUG 2001; 1 FLEDGED. NEST MONITORED 13 APR-24 JUL 2002; 1 FLEDGED. NEST MONITORED 3 MAY-5 AUG 2004; 1 FLEDGED. NEST MONITORED 18 APR-22 JUL 2005; 1 FLEDGED.

PLSS:	T06N, R01E, Sec. 08, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4248244 E596768	**Latitude/Longitude:**	38.37716 / -121.89213	**Elevation (feet):**	65

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES01F0007	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-22
RES01F0273	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-21
RES02F0014	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0346	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-08-05
RES05F0261	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	45958	**EO Index:**	45958
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	947	**Occurrence Last Updated:**	2013-01-07

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2009-06-04	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2009-06-04	**Occurrence Rank:**	Fair
Owner/Manager:	PVT, UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG W SIDE OF FOX RD ON EITHER SIDE OF GIBSON CYN CREEK, FROM ABOUT 0.2-0.8 MI S OF WEBER RD, 4.5 MI SW OF DIXON.

Detailed Location:

REPRESENTS 3 NEST SITES, 1-2 TERRITORIES. NORTH NEST SITE ACTIVE 2001-05, ON FARMSTEAD AT 6975 FOX RD; RESSEGUIE SITE ALLENDALE 42. MIDDLE & SOUTH NEST SITES ACTIVE 2009, 0.1 & 0.5 MI FURTHER S, FROM DFG SHAPEFILE OF NEST RECORDS FROM 2009.

Ecological:

2001-2005: NORTH NEST(S) IN SLENDER BLUE GUM EUCALYPTUS; SURROUNDED BY ROW CROPS WITH PASTURE TO THE SW. 2009: MIDDLE NEST IN 30' EUCALYPTUS, SOUTH NEST IN 50' EUCALYPTUS; CROPS (ALFALFA) TO EAST AND PASTURE/FALLOW TO WEST.

Threats:

SOME TREES APPEAR TO HAVE BEEN REMOVED FROM NORTH-MOST SITE IN 2012 AERIAL.

General:

NORTH NEST: ACTIVE BUT 0 FLEDGED 2001; INACTIVE 2002; 1 OR 2 FLEDGED, 2004; ACTIVE BUT 0 FLEDGED 2005. MIDDLE NEST: NEST-BUILDING OBS 4 JUN 2009. SOUTH NEST: INCUBATION OBSERVED 14 APR 2009.

PLSS:	T06N, R01E, Sec. 05, E (M)	**Accuracy:**	specific area	**Area (acres):**	15
UTM:	Zone-10 N4249701 E597865	**Latitude/Longitude:**	38.39017 / -121.87938	**Elevation (feet):**	65

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES01F0008	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-10
RES01F0272	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-10
RES04F0348	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-29
RES05F0260	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	45959	**EO Index:**	45959
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	948	**Occurrence Last Updated:**	2013-01-07

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2001-08-15	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-22	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

AT FARMSTEAD ON E SIDE OF LEWIS RD ABOUT 1 MILE SSW OF WEBER RD AT LEWIS RD, 6 MILES SW OF DIXON.

Detailed Location:

NEST WAS LOCATED AT THE 90% HEIGHT OF THE LARGEST TREE (A 14-METER BLACK WALNUT), JUST WEST OF THE HOUSE AT 6751 LEWIS ROAD. SITE JUST SOUTH OF A CANAL. RESSEGUIE SITE ALLENDALE 44.

Ecological:

NEST TREE WAS A LARGE BLACK WALNUT SURROUNDED BY MANY SMALLER TREES; SURROUNDED BY ALFALFA TO THE WEST, EAST, AND SOUTH OF THE FARMSTEAD AND NORTH TO THE CANAL, WITH CORN NORTH OF THE CANAL.

Threats:

General:

NEST MONITORED 25 APR-15 AUG 2001; 1 FLEDGED. NO NESTING ACTIVITY OBSERVED IN 2002, 2004, AND 2005.

PLSS:	T06N, R01E, Sec. 07, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4249310 E596038	**Latitude/Longitude:**	38.38685 / -121.90035	**Elevation (feet):**	70

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES01F0009	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-15
RES01F0268	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-10
RES02F0016	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0349	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-22
RES05F0259	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-06-25

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	46163	**EO Index:**	46163
Key Quad:	Dixon (3812147)	**Element Code:**	ABNKC19070
Occurrence Number:	958	**Occurrence Last Updated:**	2013-04-12

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2001-07-21	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2001-07-21	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEBER ROAD EUCALYPTUS GROVE, EAST SIDE OF RAILROAD TRACKS BETWEEN WEBER ROAD AND FOX ROAD, SW OF DIXON.

Detailed Location:

MAPPED TO COORDINATES GIVEN FOR RESSEGUIE'S SITE DIXON 60.

Ecological:

NEST TREE IS A BLUE GUM EUCALYPTUS (~32 METERS TALL); SURROUNDED BY ALFALFA/RUDERAL TO THE NE, ROW CROP/RUDERAL TO THE NW, AND PASTURE TO THE SW (ACCESS ISSUES PREVENTED SURVEY TO SE).

Threats:

General:

NESTING ACTIVITIES MONITORED FROM 3 MAY-21 JUL 2001; 1 CHICK OBSERVED ON 18 JUN, LATER CONFIRMED FLEDGED.

PLSS:	T06N, R01E, Sec. 04, NE (M)	**Accuracy:**	1/10 mile	**Area (acres):**	0
UTM:	Zone-10 N4250308 E598830	**Latitude/Longitude:**	38.39554 / -121.86824	**Elevation (feet):**	55

County Summary:	**Quad Summary:**
Solano	Dixon (3812147)

Sources:

RES01F0049	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-07-21
RES01F0286	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	46165	**EO Index:**	46165
Key Quad:	Dixon (3812147)	**Element Code:**	ABNKC19070
Occurrence Number:	960	**Occurrence Last Updated:**	2013-05-31

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2005-09-08	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-09-08	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST BANK OF MCCLURE CREEK, JUST NORTH OF THE I-80 CROSSING, 2 MILES SW OF DIXON.

Detailed Location:

MAPPED TO UTMS GIVEN FOR RESSEGUIE'S DIXON 65 SITE.

Ecological:

2001 NEST AT THE 85% HEIGHT, ON THE EAST SIDE, OF A RAGGED, 16M WILLOW. 2004-2005 NEST NOT VISIBLE, BUT WAS PRESUMED TO BE LOCATED IN A LARGER, DENSELY-LEAVED WILLOW; SURROUNDED BY WHEAT TO THE N, ALFALFA TO THE SW, AND ROW CROPS TO THE SE.

Threats:

General:

1 FLEDGED IN 2001. NEST NOT VISIBLE, BUT 1 YOUNG FLEDGED IN 2004. NEST NOT VISIBLE, BUT 1 YOUNG FLEDGED IN 2005. 1 ADULT OBSERVED CIRCLING OVERHEAD IN 2011; DID NOT SEARCH FOR NEST.

PLSS:	T07N, R01E, Sec. 21, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4254811 E598340	**Latitude/Longitude:**	38.43616 / -121.87322	**Elevation (feet):**	70

County Summary:	**Quad Summary:**
Solano	Dixon (3812147)

Sources:

MCB11F0015	MCBRIDE, E. (U.S. FISH AND WILDLIFE SERVICE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2011-04-29
RES01F0051	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-02
RES01F0287	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-22
RES04F0229	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-08-08
RES05F0180	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-09-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	46171	**EO Index:**	46171
Key Quad:	Dixon (3812147)	**Element Code:**	ABNKC19070
Occurrence Number:	961	**Occurrence Last Updated:**	2013-04-12

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2004-07-18	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-17	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST SIDE OF BATAVIA ROAD, IN BATAVIA, SW OF DIXON.

Detailed Location:

NEST TREE WAS LOCATED ON THE EAST SIDE OF THE ROAD, NEAR THE NORTH EDGE OF TREES; NEST LOCATED AT THE 80% HEIGHT OF THE NEST TREE. MAPPED TO COORDINATES GIVEN FOR RESSEGUIE'S SITE DIXON 66.

Ecological:

NEST TREE WAS A BLACK WALNUT ABOUT 19 METERS IN HEIGHT; SURROUNDED BY BEANS TO THE NE, CORN TO THE NW, AND MIXED TREES/RUDERAL/HOUSES TO THE SE AND SW.

Threats:

General:

NEST MONITORED 18 JUN-2 SEP 2001; 2 CHICKS OBSERVED ON 18 JUN 2001, 1 FLEDGED. NEST MONITORED 13 APR-25 AUG 2002; 1 FLEDGED. NEST MONITORED 8 MAR-18 JUL 2004; INCUBATING ON 19 APR AND 24 MAY, BUT OUTCOME UNKNOWN. UNOCCUPIED IN 2005.

PLSS:	T07N, R01E, Sec. 34, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4251834 E599624	**Latitude/Longitude:**	38.40920 / -121.85893	**Elevation (feet):**	65

County Summary:	**Quad Summary:**
Solano	Dixon (3812147)

Sources:

RES01F0052	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-09-02
RES01F0288	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-09-02
RES02F0190	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0230	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-18
RES05F0179	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-17

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	46190	**EO Index:**	46190
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	966	**Occurrence Last Updated:**	2011-09-27

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2001-03-31	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-26	**Occurrence Rank:**	None
Owner/Manager:	PVT	**Trend:**	Decreasing
Presence:	Possibly Extirpated		

Location:

WEST SIDE OF MILLS LANE, 0.1 MILE NORTH OF ELLSWORTH ROAD, NE OF VACAVILLE.

Detailed Location:

NEST TREE WAS LOCATED WITHIN A EUCALYPTUS GROVE 149 METERS WEST OF MILLS LANE; NEST WAS FOUND NEAR THE TOP OF THE THIRD TALLEST EUCALYPTUS FROM THE SOUTH, ALONG THE EASTERN EDGE.

Ecological:

NEST TREE WAS A BLUE GUM EUCALYPTUS; SURROUNDED BY THE EUCALYPTUS GROVE TO THE WEST, PASTURE/RUDERAL TO THE EAST, AND A RESIDENCE TO THE SOUTH.

Threats:

General:

NEST SITE WAS MONITORED FROM 31 MAR-2 AUG 2001; BIRDS WERE SEEN AT THE NEST ON 31 MAR 2001, BUT THE NEST SUBSEQUENTLY DISAPPEARED. INACTIVE IN 2002, 2004, AND 2005.

PLSS:	T06N, R01W, Sec. 01, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4250350 E593472	**Latitude/Longitude:**	38.39649 / -121.92959	**Elevation (feet):**	85

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES01F0063	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-02
RES04F0345	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-06-15
RES05F0254	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-26

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	46195	**EO Index:**	46195
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	967	**Occurrence Last Updated:**	2011-09-27

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2002-05-16	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-20	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF JAHN ROAD, 0.3 MILE NORTH OF DIXON AVENUE WEST, 3.5 MILES WEST OF DIXON.

Detailed Location:

NEST TREE WAS THE LONE EUCALYPTUS AT THE SW CORNER OF THE FARMSTEAD AT 7933 JAHN ROAD; NEST IS LOCATED AT THE 85% HEIGHT AND SLIGHTLY SOUTH OF CENTER. NEW HOUSE AND DRIVEWAY ON SE SIDE OF NEST TREE IN 2002.

Ecological:

NEST TREE IS A BLUE GUM EUCALYPTUS; SURROUNDED BY PASTURE TO THE SE, A HOUSE TO THE NORTH, AND ALFALFA TO THE WEST.

Threats:

General:

NEST MONITORED 26 MAY-20 JUL 2001; 2 FLEDGED. NEST MONITORED 2 APR-24 JUL 2002; SWHA SITTING ON NEST 16 MAY 2002, BUT NO SIGHTING AFTER THAT. INACTIVE IN 2004. NEST SITE MONITORED 17 APR-20 JUL; ADULTS OBSERVED 17 & 30 APR 2005.

PLSS:	T07N, R01E, Sec. 18, SE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4256336 E596196	**Latitude/Longitude:**	38.45014 / -121.89758	**Elevation (feet):**	85

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES01F0064	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-07-20
RES02F0017	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0350	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-16
RES05F0253	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-20

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 46197
EO Index: 46197
Key Quad: Allendale (3812148)
Element Code: ABNKC19070
Occurrence Number: 968
Occurrence Last Updated: 2011-09-28

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-08-07
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-08-22
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

SE OF I-80, 0.3 MILE EAST OF LEISURE TOWN ROAD, 6.5 MILES SW OF DIXON.

Detailed Location:

Ecological:

NEST TREE WAS A BLUE GUM EUCALYPTUS; SURROUNDED BY TREES AND A RESIDENCE TO THE EAST AND RUDERAL IN ALL OTHER DIRECTIONS.

Threats:

General:

NEST MONITORED 26 MAY-1 AUG 2001; 1 FLEDGED. INADEQUATE OBSERVATION IN 2002 AND 2004, BUT PRESUMED INACTIVE. NEST SITE MONITORED 10 JUN-22 AUG; ADULTS OBSERVED 10 JUL, 26 JUL, AND 7 AUG 2005.

PLSS: T06N, R01W, Sec. 01, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4249848 E593674
Latitude/Longitude: 38.39195 / -121.92734
Elevation (feet): 85

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

RES01F0065 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-01

RES04F0351 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-16

RES05F0252 RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	46200	**EO Index:**	46200
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	970	**Occurrence Last Updated:**	2018-02-16

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2013-XX-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-XX-XX	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST SIDE OF MERIDIAN ROAD, ABOUT 0.5 MILE SOUTH OF MIDWAY ROAD AND 5 MILES SW OF DIXON.

Detailed Location:

FEATURE REPRESENTS TWO NEST SITES, NOT CONCURRENTLY ACTIVE. MAPPED TO COORDINATES FROM FIELD SURVEY FORMS (FOR RESSEGUIE'S ALLENDALE 49 & 56), DFG DATABASE OF NEST RECORDS 2000-2004, AND 2012 SURVEY DATA TABLE.

Ecological:

2001-2002: NEST IN 75' EUCALYPTUS ON E SHOULDER OF ROAD, SURROUNDED BY ALFALFA. 2004-2005 (& 2012 SUSPECTED NEST): NEST IN E-W ROW OF BLUE GUMS ON N SIDE OF FARMSTEAD E OF ROAD, WITH ALFALFA TO THE N AND RUDERAL TO THE S & W.

Threats:

General:

NEST MONITORED 14 JUN-20 JUL 2001; 1 FLEDGED. NEST MONITORED 28 APR-24 JUL 2002; 1 FLEDGED. NEST MONITORED 22 MAR-29 JUL 2004; 3 YOUNG FLEDGED. NEST MONITORED 13 MAR-14 AUG 2005; NO CHICK SEEN. PAIR DEFENDING TERRITORY IN 2012 & 2013.

PLSS:	T07N, R01E, Sec. 31, SW (M)	**Accuracy:**	specific area	**Area (acres):**	11
UTM:	Zone-10 N4251648 E594712	**Latitude/Longitude:**	38.40806 / -121.91521	**Elevation (feet):**	80

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
LEN12D0001	LENIHAN, C. - SAN DIEGO BURROWING OWL NEST LOCATIONS & RAPTOR 2012 REPORT 2012-XX-XX
LEN13D0001	LENIHAN, C. - RAPTOR NEST SURVEY PGE VACA TO LAKEVILLE TRANSMISSION LINE 2013-XX-XX
RES01F0068	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-07-20
RES02F0018	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0006	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-29
RES04F0010	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-16
RES05F0250	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-14
ROC01F0012	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-05-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	46204	**EO Index:**	46204
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	971	**Occurrence Last Updated:**	2018-02-16

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive, IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2013-XX-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-XX-XX	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF MERIDIAN ROAD, JUST SOUTH OF MIDWAY RD AND ABOUT 0.8 MILE NORTH OF I-80; 5.3 MILES SOUTHWEST OF DIXON.

Detailed Location:

2001 NEST IN 1ST LARGE EUCALYPTUS S OF WINDING WAY. 2005 NEST 65' SOUTH, AT 7273 MERIDIAN RD. 2012 NEST JUST N OF WINDING WAY. MAPPED PER FIELD SURVEY FORMS (RESSEGUIE SITE ALLENDALE 51), CDFW NEST RECORDS 2000-04, & 2012 SURVEY DATA TABLE.

Ecological:

2001: NEST AT 90% HEIGHT OF BLUE GUM EUCALYPTUS; SURROUNDED BY CULTIVATED LAND TO THE EAST AND LARGE RESIDENTIAL LOT TO THE WEST. 2005: NEST AT 75% HEIGHT OF TALL BLUE GUM. 2012: NEST IN EUCALYPTUS.

Threats:

General:

MONITORED 18 JUN-1 AUG 2001; 1 CHICK ON 20 JUL, & 2 ON 13 AUG; 1 FLEDGED. NO ACTIVITY OBS IN 2002 & 2004 (INADEQUATE SURVEYS). MONITORED 17 APR-2 AUG 2005; 1 FLEDGED. 2 FLEDGLINGS SEEN MAY-JUL 2012. PAIR SEEN 2013, POSSIBLE FAILED NEST.

PLSS:	T07N, R01W, Sec. 36, NE (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-10 N4252451 E594655	**Latitude/Longitude:**	38.41529 / -121.91576	**Elevation (feet):**	85

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

BARNDF0002	BARTLETT - FIELD SURVEY FORM FOR BUTEO SWAINSONI XXXX-XX-XX
DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
LEN12D0001	LENIHAN, C. - SAN DIEGO BURROWING OWL NEST LOCATIONS & RAPTOR 2012 REPORT 2012-XX-XX
LEN13D0001	LENIHAN, C. - RAPTOR NEST SURVEY PGE VACA TO LAKEVILLE TRANSMISSION LINE 2013-XX-XX
RES01F0069	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-01
RES04F0353	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-06-09
RES05F0249	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	47401	**EO Index:**	47401
Key Quad:	Elmira (3812138)	**Element Code:**	ABNKC19070
Occurrence Number:	994	**Occurrence Last Updated:**	2013-05-08

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2009-04-06	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2009-04-06	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST SIDE OF RAILROAD TRACKS, ABOUT 0.4 MILE SW OF LEWIS ROAD AT ULATIS CREEK CROSSING AND 1.6 MI NNE OF ELMIRA.

Detailed Location:

NEST TREES WERE BETWEEN THE RAILROAD TRACK AND A DIRT ROAD EAST ALONG A FIELD EDGE. MAPPED TO COORDINATES FROM FIELD SURVEY FORM (RESSEGUIE SITE ELMIRA 15) AND POINT FROM DFG SHAPEFILE OF SWHA NEST RECORDS FROM 2009.

Ecological:

2001: NEST IN A 70' EUCALYPTUS; SURROUNDED BY FIELDS PLANTED IN CORN. THE TWO BLUE GUMS THAT WERE THE CENTER OF ACTIVITY WERE REMOVED PRIOR TO 18 APR 2004. 2009: NEST IN 50' COTONWOOD SURROUNDED BY ALFALFA.

Threats:

THREATENED BY TREE REMOVAL (TREES ARE MARKED), PROBABLY DUE TO POWER LINE INTERFERENCE (2001).

General:

NEST SITE MONITORED 23 APR-25 AUG 2001; NEST WAS NOT VISIBLE, NO FLEDGLINGS DETECTED. NEST SITE MONITORED 11 MAY-18 JUL 2002; NEST NOT VISIBLE, NO FLEDGLINGS DETECTED. INACTIVE IN 2004 AND 2005. NEST WITH YOUNG OBSERVED 4 JUN 2009.

PLSS:	T06N, R01E, Sec. 17, NW (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-10 N4247382 E596818	**Latitude/Longitude:**	38.36938 / -121.89168	**Elevation (feet):**	60

County Summary:	**Quad Summary:**
Solano	Elmira (3812138)

Sources:

DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES01F0032	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-08-25
RES01F0265	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-20
RES02F0110	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0143	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-04-18
RES05F0333	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 47402
EO Index: 47402
Key Quad: Elmira (3812138)
Element Code: ABNKC19070
Occurrence Number: 995
Occurrence Last Updated: 2013-06-10

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-07-11
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-07-11
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

ALONG BYRNES ROAD, BETWEEN THE TWO FORKS OF ULATIS CREEK, ABOUT1.3 MILES NORTH OF ELMIRA.

Detailed Location:

2 NEST SITES; NORTH SITE (RESSEGUIE SITE ELMIRA 17) ACTIVE IN 2001 AND SOUTH SITE (ELMIRA 23) ACTIVE 2004 & 2005. MAPPED TO COORDINATES FROM FIELD SURVEY FORMS.

Ecological:

2001: NEST AT 80% HEIGHT IN 16' ENGLISH WALNUT; SURROUNDED BY ROW CROPS TO THE N, FARMSTEAD & RAGGED WALNUT ORCHARD TO THE S. 2004-05: NEST IN 75% HEIGHT OF EUCALYPTUS NORTH OF BARN; ALFALFA W/N & ABANDONDED ORCHARD/RUDERAL/RESIDENCES TO E.

Threats:

AERIAL PHOTOS INDICATE 2004-05 NEST TREE MAY HAVE BEEN REMOVED.

General:

2001: NORTH NEST MONITORED 4 MAY-23 JUL 2001; 2 FLEDGED. N NEST APPARENTLY INACTIVE '02, '04, & '05. 2004: S NEST INCUBATION OBSERVED. 2005: S NEST MONITORED MAY-AUG; DEFENSIVE ADULT & 1 FLEDGLING OBSERVED.

PLSS: T06N, R01E, Sec. 18, N (M)
Accuracy: specific area
Area (acres): 10
UTM: Zone-10 N4247414 E595613
Latitude/Longitude: 38.36981 / -121.90546
Elevation (feet): 70

County Summary:

Solano

Quad Summary:

Elmira (3812138)

Sources:

RES01F0033	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2001-07-23
RES01F0266	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-08-20
RES02F0111	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0087	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-22
RES04F0257	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-22
RES05F0325	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-03
RES05F0332	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	52077	**EO Index:**	52077
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1253	**Occurrence Last Updated:**	2011-09-27

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2005-08-03	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-08-03	**Occurrence Rank:**	Good
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF BYRNES ROAD, 1.1 MILES SOUTH OF KILKENNY ROAD, 4.5 MILES ENE OF VACAVILLE.

Detailed Location:

NEST IS LOCATED AT THE 85% HEIGHT OF THE NEST TREE, VISIBLE FROM THE SOUTH. NEST TREE IS THE THIRD FROM THE NORTH, ALONG THE WEST SHOULDER.

Ecological:

NEST TREE WAS A TALL EUCALYPTUS; SURROUNDED BY CULTIVATED LAND TO THE EAST, PASTURE TO THE NW, AND RUDERAL TO THE SW.

Threats:

General:

RED-TAILED HAWK NEST IN 2001. NEST MONITORED 13 APR-24 JUL 2002; 1 FLEDGED. NEST MONITORED 18 APR-12 AUG 2004; 1 FLEDGED. NEST MONITORED 12 MAR-3 AUG 2005; 1 FLEDGED.

PLSS:	T06N, R01E, Sec. 07, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4248444 E595549	**Latitude/Longitude:**	38.37909 / -121.90606	**Elevation (feet):**	72

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES02F0001	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2002-XX-XX
RES04F0337	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-08-12
RES05F0248	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	56443	**EO Index:**	56459
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1317	**Occurrence Last Updated:**	2013-01-07

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2009-06-04	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2009-06-04	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST SIDE OF LEWIS ROAD, 0.9 MILE S OF THE GIBSON CANYON CREEK CANAL JUNCTION WITH LEWIS ROAD, 5.5 MILES SW OF DIXON.

Detailed Location:

ABOUT 1.6 AIR MIILES SE OF I-80 AT WEBER RD. MAPPED TO UTMS FROM FIELD SURVEY FORM (RESSEGUIE SITE ALLENDALE 35) & POINT FROM DFG SHAPEFILE OF NEST SITES RECORDED IN 2009.

Ecological:

2004-2005: NEST AT 90% HEIGHT OF A BLACK WALNUT WITH CROPS S AND PASTURE N. 2009: NEST IN 30' TREE CODED AS "OTHER EXOTIC" NOT WALNUT OR EUCALYPTUS), SURROUNDED BY PASTURE, ORCHARD, ALFALFA, AND OTHER CROPS.

Threats:

General:

ACTIVE NEST MONITORED MAR-AUG 2004, SUCCESS UNKNOWN. 2 FLEDGED IN 2005. INCUBATION OBSERVED ON 4 JUN 2009.

PLSS:	T06N, R01E, Sec. 08, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4249033 E596510	**Latitude/Longitude:**	38.38430 / -121.89497	**Elevation (feet):**	65

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES04F0002	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-08-10
RES05F0245	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 56445
EO Index: 56461
Key Quad: Allendale (3812148)
Element Code: ABNKC19070
Occurrence Number: 1318
Occurrence Last Updated: 2011-09-27

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2004-07-22
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-07-08
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

EAST SIDE OF LEWIS ROAD, 0.5 MILE SOUTH OF THE CANYON CREEK CANAL JUNCTION WITH LEWIS ROAD, 5 MILES SW OF DIXON.

Detailed Location:

RESSEGUIE'S ALLENDALE 52. 2004 NEST LOCATED AT THE 95% HEIGHT, ON THE EAST SIDE, OF A LARGE BLUE GUM NEAR THE BACK OF THE HOUSE (NOT VISIBLE FROM ROAD).

Ecological:

NEST TREE WAS A BLUE GUM EUCALYPTUS.

Threats:

General:

THIS SITE WAS PROBABLY OCCUPIED IN 2002; INADEQUATE OBSERVATION TO DETERMINE STATUS. NEST MONITORED 3 MAY-22 JUL 2004; 2 BROKEN EGGS ON THE GROUND BELOW NEST ON 22 JUN 2004. INACTIVE IN 2005; 2004 NEST TREE OCCUPIED BY GREAT-HORNED OWL.

PLSS: T06N, R01E, Sec. 05, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4249836 E596720
Latitude/Longitude: 38.39151 / -121.89246
Elevation (feet): 70

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

RES04F0003 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-22

RES05F0244 RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	56448	**EO Index:**	56464
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1321	**Occurrence Last Updated:**	2011-09-27

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2004-06-09	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-08-02	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SOUTH SIDE OF DIXON AVENUE WEST, 0.1 MILE EAST OF SERPA AVENUE, 3 MILES WEST OF DIXON.

Detailed Location:

RESSEGUIE'S ALLENDALE 57. NEST IS LOCATED AT THE 95% HEIGHT OF A TREE WITHIN A DOUBLE ROW OF DECIDUOUS TREES.

Ecological:

NEST TREE IS AN EXOTIC (CHINESE ELM OR BOX ELDER).

Threats:

General:

NEST MONITORED 25 MAR-29 JUL 2004; SWHA OBSERVED ON NEST, 14 APR-9 JUN 2004, BUT BY 16 JUL 2004, TREES HAD BEEN DEFOLIATED BY A BEETLE INFESTATION AND THE NEST WAS DESERTED. INACTIVE IN 2005.

PLSS:	T07N, R01E, Sec. 20, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4255860 E597751	**Latitude/Longitude:**	38.44567 / -121.87982	**Elevation (feet):**	75

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

RES04F0007	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-29
RES05F0242	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 57395
EO Index: 57411
Key Quad: Dixon (3812147)
Element Code: ABNKC19070
Occurrence Number: 1381
Occurrence Last Updated: 2011-09-22

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-08-13
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-08-13
Occurrence Rank: Good
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

SOUTH SIDE OF MIDWAY ROAD, 0.15 MILE EAST OF BATAVIA ROAD, 2.5 MILES SW OF DIXON.

Detailed Location:

2004 NEST LOCATED AT THE 85% HEIGHT OF THE NEST TREE, NEAR THE MIDDLE OF THE ROW.

Ecological:

NEST TREE WAS A BLACK WALNUT; SURROUNDED BY CULTIVATED LAND TO THE NORTH AND SOUTH.

Threats:

General:

SUSPECTED NEST SITE IN 2002, BUT NOT CONFIRMED. NEST MONITORED 21 MAR-18 JUL 2004; 2 YOUNG FLEDGED. NEST MONITORED 18 APR-13 AUG 2005; 1 FLEDGED.

PLSS: T07N, R01E, Sec. 34, NW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4252670 E599772
Latitude/Longitude: 38.41671 / -121.85712
Elevation (feet): 60

County Summary:

Solano

Quad Summary:

Dixon (3812147)

Sources:

RES04F0077 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-18

RES05F0159 RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-13

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 57492
EO Index: 57508
Key Quad: Dozier (3812137)
Element Code: ABNKC19070
Occurrence Number: 1387
Occurrence Last Updated: 2011-09-27

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-07-22
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-07-22
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

0.5 EAST OF FOX ROAD, 1.9 MILES SOUTH OF WEBER ROAD, 5.5 MILES SSW OF DIXON.

Detailed Location:

2004-2005 NEST TREE LOCATED ON THE NORTH SIDE OF A PRIVATE DIRT ROAD; 2004 NEST WAS LOCATED AT THE 90% HEIGHT OF A WILLOW.

Ecological:

NEST TREE WAS A WILLOW; SURROUNDED BY RUDERAL JUST SOUTH AND CULTIVATED ALL AROUND.

Threats:

General:

PROBABLE UNSUCCESSFUL NEST IN 2001(BASED ON ACCOUNT BY FARMER). NEST SITE MONITORED 18 APR-24 JUL 2004; NEST OCCUPIED ON 18 APR 2004, BUT THE NEST BLEW OUT BEFORE 24 MAY 2004. NEST MONITORED 18 APR-22 JUL 2005; 1 FLEDGED.

PLSS: T06N, R01E, Sec. 16, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4247852 E598744
Latitude/Longitude: 38.37341 / -121.86957
Elevation (feet): 55

County Summary:	Quad Summary:
Solano	Dozier (3812137)

Sources:

RES04F0083 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-07-24

RES05F0275 RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-07-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	57506	**EO Index:**	57522
Key Quad:	Elmira (3812138)	**Element Code:**	ABNKC19070
Occurrence Number:	1390	**Occurrence Last Updated:**	2013-01-02

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2009-06-18	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2009-06-18	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF LEWIS ROAD, JUST SOUTH OF THE RAILROAD TRACKS, 0.2 MILE NORTH OF HAWKINS ROAD, 4.5 MILES EAST OF VACAVILLE.

Detailed Location:

2004 NEST LOCATED AT THE 90% HEIGHT, ON THE EAST SIDE OF THE TALLEST TREE. MAPPED TO COORDINATES FROM FIELD SURVEY FORMS, RESSEGUIE SITE ELMIRA 22.

Ecological:

2004, 2005: NEST IN BLACK WALNUT, ON E SIDE AT 90% HEIGHT; SURROUNDED BY CULTIVATED LAND TO THE S & E & TUNA (CACTUS FRUIT) FARM TO THE NE. BURROWING OWLS ALSO SEEN IN 2005. 2009: NEST IN 25' NATIVE TREE WITH ALFALFA TO S & CROPS TO N.

Threats:

General:

NEST MONITORED 18 APR-12 AUG 2004; 1 FLEDGED. NEST MONITORED 1 APR-3 AUG 2005; 1 FLEDGED, ANOTHER JUVENILE FOUND DEAD UNDER NEST ON 3 AUG. ACTIVITY OBSERVED NEAR NEST ON 18 JUN 2009, ACTIVE NEST PRESUMED.

PLSS:	T06N, R01E, Sec. 18, SE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4246594 E596314	**Latitude/Longitude:**	38.36234 / -121.89756	**Elevation (feet):**	60

County Summary:	**Quad Summary:**
Solano	Elmira (3812138)

Sources:

DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES04F0086	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2004-08-12
RES05F0326	RESSEGUIE, L. (UNIVERSITY OF CALIFORNIA, BERKELEY) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2005-08-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	62298	**EO Index:**	62335
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1442	**Occurrence Last Updated:**	2013-01-04

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2005-07-20	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-20	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF MERIDIAN ROAD, 0.25 MILE NORTH OF GRIFFEN LANE, 4.7 MILES WSW OF DIXON.

Detailed Location:

2 NEST TREES INDICATED: 2001 NEST TREE NEAR S END OF ROW OF TREES; 2005 NEST TREE ABOUT 85 M TO N, OPPOSITE #7486 MERIDIAN RD. MAPPED PER FIELD SURVEY FORMS FOR RESSEGUIE'S SITE ALLENDALE 67 AND DFG DATABASE OF SWHA NEST RECORDS, 2000-2004.

Ecological:

2001: NEST IN 50' EUCALYPTUS, WITH RESIDENTIAL TO EAST AND CROPLAND TO WEST. 2005: NEST AT 80% HEIGHT OF TALLEST TREE NEAR N END OF ROW OF BLUE GUM EUCALYPTUS.

Threats:

General:

NEST BUILDING OBSERVED ON 1 MAY 2001; NO ACTIVITY OBSERVED DURING REVISIT ON 12 JUL. NEST MONITORED 30 APR-20 JUL 2005; 3 FLEDGED.

PLSS:	T07N, R01W, Sec. 25, NE (M)	**Accuracy:**	specific area	**Area (acres):**	8
UTM:	Zone-10 N4253597 E594645	**Latitude/Longitude:**	38.42562 / -121.91572	**Elevation (feet):**	90

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
RES05F0009	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2005-07-20
ROC01F0015	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-05-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 62300
EO Index: 62337
Key Quad: Allendale (3812148)
Element Code: ABNKC19070
Occurrence Number: 1444
Occurrence Last Updated: 2005-08-15

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2005-07-20
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-07-20
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

NORTH SIDE OF DIXON AVENUE WEST, 0.3 MILE WEST OF JAHN AVENUE, 4 MILES WEST OF DIXON.

Detailed Location:

RESSEGUIE'S ALLENDALE 72. NEST WAS LOCATED AT THE 90% HEIGHT OF THE SE BLUE GUM EUCALYPTUS.

Ecological:

NEST TREE IS A BLUE GUM EUCALYPTUS; SURROUNDED BY ALFALFA TO THE SE, CULTIVATED LAND TO THE SW, ORCHARD TO THE EAST, AND PASTURE TO THE WEST.

Threats:

General:

NEST MONITORED 26 MAY-20 JUL 2005; 2 FLEDGED.

PLSS: T07N, R01E, Sec. 18, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4255906 E595848
Latitude/Longitude: 38.44630 / -121.90161
Elevation (feet): 90

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

RES05F0011 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2005-07-20

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	62301	**EO Index:**	62338
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1445	**Occurrence Last Updated:**	2013-05-17

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2006-07-27	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2006-07-27	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SOUTH SIDE OF WEBER ROAD, 0.35 MILE WEST OF BYRNES AVENUE NEAR MERIDIAN & I-80, 4 MILES WEST OF DIXON.

Detailed Location:

MAPPED TO COORDINATES FROM FIELD SURVEY FORMS (RESSEGUIE SITE ALLENDALE 74) AND DFG DATABASE OF SWAINSON'S HAWK NEST RECORDS 2000-2004. NEST WAS LOCATED IN THE SECOND TREE FROM THE SOUTH.

Ecological:

2001: NEST IN LONE 30' EUCALYPTUS WITH CROPLAND TO E, GRASSLAND SW, COMMERCIAL (FREEWAY) NW. 2005: NEST IN BLUE GUM EUCALYPTUS SURROUNDED BY RUDERAL VEGETATION BETWEEN AND AROUND TREES.

Threats:

THREATS FROM DEVELOPMENT, VANDALISM/DUMPING NOTED IN 2001. ALL TREES WERE REMOVED BETWEEN 5/19/2012 & 8/23/12 AERIALS.

General:

NEST-BUILDING OBSERVED ON 10 MAY 2001, NO ACTIVITY ON RETURN VISIT 3 JUL. NEST MONITORED 10 JUL-2 AUG 2005; 1 FLEDGED. ACTIVE NEST FLEDGED 1 IN 2006. TREES CUT DOWN IN BETWEEN MAY AND AUG 2012; SITE VISIT NEEDED.

PLSS:	T06N, R01E, Sec. 06, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4250935 E594962	**Latitude/Longitude:**	38.40160 / -121.91244	**Elevation (feet):**	80

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
RES05F0012	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2005-08-02
RES06F0001	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2006-07-27
ROC01F0008	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-05-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 70109
Key Quad: Allendale (3812148)
Occurrence Number: 1698
EO Index: 70975
Element Code: ABNKC19070
Occurrence Last Updated: 2013-01-04

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
CNDDB Element Ranks: **Global:** G5
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2001-04-05
Last Survey Date: 2001-04-05
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

BETWEEN SWEANY SLOUGH AND DIXON AVENUE WEST, 0.1 MILE EAST OF MERIDIAN ROAD, 4.5 MILES WEST OF DIXON.

Detailed Location:

MAPPED TO COORDINATES FROM CDFW DATABASE OF NEST RECORDS 2000-2004.

Ecological:

NEST TREE WAS A 50' WILLOW, SURROUNDED BY ROW CROPS WITH RESIDENTIAL LAND USE TO THE SE.

Threats:

General:

NEST-BUILDING OBSERVED ON 5 APR 2001; NO ACTIVITY OBSERVED WHEN THIS SITE WAS REVISITED ON 5 JUL 2001.

PLSS: T07N, R01E, Sec. 18, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4255893 E594822
Latitude/Longitude: 38.44629 / -121.91337
Elevation (feet): 101

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
ROC01F0031	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-04-05

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 70110
EO Index: 70976
Key Quad: Allendale (3812148)
Element Code: ABNKC19070
Occurrence Number: 1699
Occurrence Last Updated: 2013-01-04

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2001-04-05
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2001-07-05
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

NORTH SIDE OF SWEANY SLOUGH, 0.2 MILE WEST OF THE JUNCTION OF DIXON AVENUE WEST & MERIDIAN ROAD, 5 MILES WEST OF DIXON.

Detailed Location:

MAPPED TO COORDINATES FROM CDFW DATABASE OF NEST RECORDS 2000-2004.

Ecological:

NEST TREE WAS A 70' COTTONWOOD; SURROUNDED BY ROW CROPS IN ALL DIRECTIONS WITH RESIDENTIAL TO NW.

Threats:

General:

NEST-BUILDING OBSERVED ON 5 APR 2001; NO ACTIVITY OBSERVED WHEN THIS SITE WAS REVISITED ON 5 JUL 2001.

PLSS: T07N, R01W, Sec. 13, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4256056 E594297
Latitude/Longitude: 38.44781 / -121.91937
Elevation (feet): 101

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
ROC01F0032	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-04-05

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	87785	**EO Index:**	88748
Key Quad:	Elmira (3812138)	**Element Code:**	ABNKC19070
Occurrence Number:	1920	**Occurrence Last Updated:**	2013-01-02

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2001-08-13	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2001-08-13	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG ULATIS CREEK, ABOUT 0.4 MILE SSE OF LEISURE TOWN RD AT SEQUOIA DR AND 1.4 MILES E OF I-80 AT NUT TREE RD.

Detailed Location:

MAPPED TO COORDINATES FROM FIELD SURVEY FORMS AND CDFW DATABASE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004.

Ecological:

NEST IN 50' COTTONWOOD IN RIPARIAN STRIP, SURROUNDED BY CROPS AND FALLOW LAND.

Threats:

General:

2001: ACTIVE NEST OBSERVED APR-AUG ON MULTIPLE OCCASIONS; FLEDGED 1.

PLSS:	T06N, R01W, Sec. 13, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4247323 E593371	**Latitude/Longitude:**	38.36922 / -121.93114	**Elevation (feet):**	80

County Summary:	**Quad Summary:**
Solano	Elmira (3812138)

Sources:

BARNDF0003	BARTLETT, T. - FIELD SURVEY FORM FOR BUTEO SWAINSONI XXXX-XX-XX
DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
ROC01F0023	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-04-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	87810	**EO Index:**	88776
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1932	**Occurrence Last Updated:**	2013-01-04

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2003-06-11	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2003-06-11	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ABOUT 0.3 MILE NE OF MERIDIAN RD AT ALLENDALE RD & 0.8 MI SW OF SILVEYVILLE RD AT OSAGE RD, 2 MI ENE OF ALLENDALE.

Detailed Location:

MAPPED TO COORDINATES FROM FIELD SURVEY FORMS AND CDFW DATABASE OF 2000-2004 SWAINSON'S HAWK NEST RECORDS.

Ecological:

NEST IN 40' WILLOW SURROUNDED BY CROPLAND WITH SOME RESIDENTIAL TO NW.

Threats:

General:

ADULT FEEDING A FLEDGLING ON 5 JUL 2001. ADULT OBS CARRYING FOOD TO NEST ON 11 JUN 2002.

PLSS:	T07N, R01E, Sec. 18, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4256912 E595073	**Latitude/Longitude:**	38.45544 / -121.91036	**Elevation (feet):**	95

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
ROC01F0022	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-05

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	87815	**EO Index:**	88782
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1933	**Occurrence Last Updated:**	2013-02-25

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2001-04-25	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2001-07-05	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG MELISSA LN JUST E OF LEISURE TOWN RD & 1.5 MI SSE OF ALLENDALE.

Detailed Location:

MAPPED TO COORDINATES FROM FIELD SURVEY FORM AND CDFW DATABASE OF 2000-2004 SWAINSON'S HAWK NEST RECORDS.

Ecological:

NEST IN 75' EUCALYPTUS SUROUNDED BY CROPLAND WITH (EUCALYPTUS DOMINATED) RIPARIAN TO SW.

Threats:

General:

COPULATION AND NEST-BUILDING OBSERVED 25 APR, NO ACTIVITY OBS ON RETURN VISIT 5 JUL 2001.

PLSS:	T07N, R01W, Sec. 25, W (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4253425 E593173	**Latitude/Longitude:**	38.42423 / -121.93259	**Elevation (feet):**	100

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
ROC01F0019	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-04-25

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	87827	**EO Index:**	88801
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1935	**Occurrence Last Updated:**	2013-01-07

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2002-07-23	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2002-07-23	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG GIBSON CANYON CREEK, ABOUT 0.5 MI SSE OF LEISURE TOWN RD AT VICTOR LN & 0.8 MI WNW OF I-80 AT N MERIDIAN RD.

Detailed Location:

FEATURE REPRESENTS 1-2 NEST SITES, NOT ACTIVE CONCURRENTLY (POSSIBLY A SINGLE TERRITORY). MAPPED TO COORDINATES FROM CDFW DATABASE OF 2000-2004 SWAINSON'S HAWK NEST RECORDS AT "LEISURE TOWN RD SEWAGE TREATMENT PLANT."

Ecological:

2001-2002: NEST IN COTTONWOOD SURROUNDED BY PASTURE/GRASSLAND. TRACT HOUSING BEING DEVELOPED ABOUT 0.3 MILE TO SW, ACROSS LEISURE TOWN RD (2006-2012).

Threats:

DEVELOPMENT IS REDUCING NEARBY FORAGING HABITAT AS PER 2006-2012 AERIAL PHOTOS.

General:

2001: PAIR SEEN REPEATEDLY VISITING NEST TREE, BUT COULD NOT CONFIRM NEST OR YOUNG DUE TO ACCESS ISSUES. 2002: NESTING PAIR OBSERVED 23 JUL.

PLSS:	T07N, R01W, Sec. 36, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4251352 E593415	**Latitude/Longitude:**	38.40553 / -121.93010	**Elevation (feet):**	90

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

BARNDF0005	BARTLETT, T. - FIELD SURVEY FORM FOR BUTEO SWAINSONI XXXX-XX-XX
DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	87828	**EO Index:**	88802
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1936	**Occurrence Last Updated:**	2016-10-21

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2016-06-15	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-06-15	**Occurrence Rank:**	Fair
Owner/Manager:	UNKNOWN, PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG BOTH SIDES OF COTTING LN AND WEST OF CROKER DR, ABOUT 0.3 MILES WNW OF VACA VALLEY PKWY AT I-505, VACAVILLE.

Detailed Location:

SW POLYGON MAPPED TO COORDINATES FROM CDFW DATABASE OF 2000-2004 SWAINSON'S HAWK NEST RECORDS. NE POLYGON MAPPED TO COORDINATES GIVEN FOR 2016 NEST SITE.

Ecological:

2001: NEST IN 60' EUCALYPTUS, WITH COMMERCIAL DEVELOPMENT TO NORTH AND GRASSLAND TO SOUTH. 2016: NEST IN SMALL EUCALYPTUS GROVE IN EMPTY LOT ADJACENT TO GAS STATION.

Threats:

SURVEYOR NOTED POTENTIAL THREATS FROM DEVELOPMENT AND ROAD MAINTENANCE, THOUGH NO DETAILS WERE GIVEN (2001).

General:

NEST WITH 1 PARTIALLY-FEATHERED YOUNG OBSERVED 5 JUL 2001. TWO ADULTS OBSERVED CARRYING NESTING MATERIAL BACK TO EUCALYPTUS GROVE ON 15 JUN 2016.

PLSS:	T06N, R01W, Sec. 3, NE (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-10 N4250332 E591125	**Latitude/Longitude:**	38.39657 / -121.95647	**Elevation (feet):**	109

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
MEJ16F0001	MEJIA, J. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2016-06-15
ROC01F0001	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-07-05

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	87830	**EO Index:**	88804
Key Quad:	Allendale (3812148)	**Element Code:**	ABNKC19070
Occurrence Number:	1937	**Occurrence Last Updated:**	2013-02-26

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2001-05-30	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2001-07-03	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

S SIDE OF WALNUT RD ABOUT 0.1 MI E OF WILLOW RD INTERSECTION, 0.6 MI ESE OF I-80 AT LEISURE TOWN RD; NE OF VACAVILLE.

Detailed Location:

MAPPED TO COORDINATES GIVEN ON FIELD SURVEY FORM AND IN CDFW DATABASE OF 2000-2004 SWAINSON'S HAWK NEST RECORDS.

Ecological:

NEST IN 50' EUCALYPTUS SUROUNDED BY RESIDENTIAL WITH CROPS TO THE EAST.

Threats:

General:

NEST WITH 2 PARTIALLY-FEATHERED YOUNG OBSERVED ON 30 MAY 2001; NO ACTIVITY WHEN REVISITED ON 3 JUL.

PLSS:	T06N, R01W, Sec. 12, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4249137 E594062	**Latitude/Longitude:**	38.38549 / -121.92299	**Elevation (feet):**	80

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
ROC01F0002	ROCCO, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2001-05-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A8507
EO Index: 110297
Key Quad: Allendale (3812148)
Element Code: ABNKC19070
Occurrence Number: 2748
Occurrence Last Updated: 2018-02-16

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2013-07-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2013-07-XX
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

JUST SW OF THE INTERSECTION OF WEBER ROAD AND LEWIS ROAD, EAST OF I-80, BETWEEN VACAVILLE AND DIXON.

Detailed Location:

Ecological:

NEST TREE WAS A EUCALYPTUS.

Threats:

General:

2 FLEDGLINGS SEEN IN 2013.

PLSS: T06N, R01E, Sec. 6, NE (M)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-10 N4251007 E596309
Latitude/Longitude: 38.40211 / -121.89702
Elevation (feet): 73

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

LEN13D0001 LENIHAN, C. - RAPTOR NEST SURVEY PGE VACA TO LAKEVILLE TRANSMISSION LINE 2013-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A8508
Key Quad: Allendale (3812148)
Occurrence Number: 2749

EO Index: 110298
Element Code: ABNKC19070
Occurrence Last Updated: 2018-02-16

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened

CNDDB Element Ranks: **Global:** G5
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2013-06-21
Last Survey Date: 2013-06-21
Owner/Manager: PVT
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

0.4 MILE NNW OF THE INTERSECTION OF MILLS LANE AND ELLSWORTH ROAD, NORTHEASTERN VACAVILLE.

Detailed Location:

Ecological:

Threats:

General:

PAIR OBSERVED COURTING AND COPULATING ON 1 AND 2 APR, AND THEN OCCUPYING TERRITORY ON 10 APR 2013. 4 INDIVIDUALS OBSERVED HUNTING ON 21 JUN 2013, POSSIBLY A PAIR WITH 2 FLEDGLINGS, BUT OBSERVER WAS TOO FAR AWAY TO ACCURATELY AGE.

PLSS: T06N, R01W, Sec. 1, NW (M)
UTM: Zone-10 N4250731 E593359

Accuracy: 1/10 mile
Latitude/Longitude: 38.39993 / -121.93083

Area (acres): 18
Elevation (feet): 91

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

LEN13D0001 LENIHAN, C. - RAPTOR NEST SURVEY PGE VACA TO LAKEVILLE TRANSMISSION LINE 2013-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 17337
Key Quad: Allendale (3812148)
Occurrence Number: 120
EO Index: 11953
Element Code: ABNSB10010
Occurrence Last Updated: 1991-01-23

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 1989-03-12
Last Survey Date: 1989-03-12
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location:
OLD VACA VALLEY RACEWAY, SW OF THE INTERSECTION LEWIS AND MIDWAY RDS, JUST EAST OF I-80, NE OF VACAVILLE.

Detailed Location:
OWLS FOUND IN BURROWS MADE BY GROUND SQUIRRELS.

Ecological:
HABITAT IS MADE UP OF MOUNDS OF DIRT THAT IS HEAVILY SODDED.

Threats:
POTENTIAL THREAT OF DEVELOPMENT.

General:

PLSS: T07N, R01E, Sec. 31, NE (M)
UTM: Zone-10 N4252267 E596234
Accuracy: 1/5 mile
Latitude/Longitude: 38.41347 / -121.89770
Area (acres): 0
Elevation (feet): 75

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:
LEO89F0005 LEONG, R. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA BURROW SITE 1989-03-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 23879
EO Index: 16116
Key Quad: Allendale (3812148)
Element Code: ABNSB10010
Occurrence Number: 172
Occurrence Last Updated: 1993-07-28

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 1989-07-01
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1989-07-01
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
SOUTH SIDE OF WEBER ROAD, 0.8 MILE EAST OF LEWIS ROAD, 6.5 MILES NE OF VACAVILLE.

Detailed Location:

Ecological:
HABITAT CONSISTS OF ANNUAL GRASSLAND, DOMINATED BY WILD OATS.

Threats:

General:
ONE ADULT OBSERVED.

PLSS: T06N, R01E, Sec. 05, NE (M)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-10 N4250986 E597596
Latitude/Longitude: 38.40178 / -121.88228
Elevation (feet): 65

County Summary:
Solano

Quad Summary:
Allendale (3812148)

Sources:
WHI89F0006 WHISLER, E. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 1989-07-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 39425
EO Index: 34427
Key Quad: Allendale (3812148)
Element Code: ABNSB10010
Occurrence Number: 272
Occurrence Last Updated: 2004-11-09

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2002-06-08
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2004-07-29
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:
NORTH SIDE OF VACA VALLEY PARKWAY, APPROXIMATELY 100 YDS WEST OF INTERSECTION WITH ACKERLY DRIVE, NORTH OF VACAVILLE.

Detailed Location:
BURROWS ARE LOCATED BENEATH ROWS OF PLANTED TREES ADJACENT TO THE ROADWAYS.

Ecological:
HABITAT SURROUNDING BURROWS CONSISTS OF DISTURBED, NON-NATIVE GRASSLAND. GROUND HAS BEEN PLOWED TO WITHIN FEET OF TREES. AREA IS FUTURE SITE OF DEVELOPMENT.

Threats:
POSSIBLE THREATS INCLUDE PARKWAY WIDENING AND DEVELOPMENT.

General:
2 ADULTS AND 4 JUVENILES OBSERVED ON 22 JUNE 1998. 2 ADULTS OBSERVED ABOUT 400 FT NORTH OF VACA VALLEY PARKWAY ON 8 JUN 2002. SPECIES NOT OBSERVED ON 29 JUL 2004.

PLSS: T06N, R01W, Sec. 02 (M)
Accuracy: non-specific area
Area (acres): 28
UTM: Zone-10 N4249994 E592103
Latitude/Longitude: 38.39343 / -121.94531
Elevation (feet): 95

County Summary:
Solano

Quad Summary:
Allendale (3812148)

Sources:

GRA02F0002	GRAY, F.B. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-REGION 2) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2002-06-08
HIN98F0001	HINDMARSH, P. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 1998-06-22
HOL04F0001	HOLMES, L. & D. WARENYCIA (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2004-07-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 43203
EO Index: 43203
Key Quad: Allendale (3812148)
Element Code: ABNSB10010
Occurrence Number: 361
Occurrence Last Updated: 2000-07-12

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2000-06-18
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2000-06-18
Occurrence Rank: Excellent
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
NE OF THE INTERSECTION OF I-505 AND GIBSON CANYON CREEK (NORTH FORK), 2 MILES WEST OF VACA VALLEY RACEWAY.

Detailed Location:
BURROWS ARE LOCATED AT THE TOP OF THE BANK OF AN INCISED CHANNEL.

Ecological:
BURROWS ARE SURROUNDED BY GRAZED NON-NATIVE GRASSLAND, WITH NUMEROUS GROUND SQUIRRELS IN THE VICINITY.

Threats:
THREATS INCLUDE DEVELOPMENT AND EROSION OF CREEK CHANNEL (CAUSING BURROW COLLAPSE).

General:
SITE HAS BEEN ACTIVE SINCE AT LEAST 1997, WITH 1-2 PAIRS PRESENT. 2 PAIRS OBSERVED, ONE WITH 2 YOUNG, ON 18 JUN 2000.

PLSS: T07N, R01W, Sec. 35, NW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4252104 E592139
Latitude/Longitude: 38.41243 / -121.94462
Elevation (feet): 110

County Summary:
Solano

Quad Summary:
Allendale (3812148)

Sources:
DRE00F0001 DREIER, J. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2000-06-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 48654
EO Index: 48654
Key Quad: Dixon (3812147)
Element Code: ABNSB10010
Occurrence Number: 482
Occurrence Last Updated: 2002-08-22

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G4
State: S3
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: XXXX-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1989-07-01
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:
3.8 MILES SW OF DIXON; ALONG WEBER ROAD BETWEEN BATAVIA ROAD AND FOX ROAD.

Detailed Location:

Ecological:

Threats:

General:
HISTORIC SITE. INDIVIDUALS NOT DETECTED ON 1 JUL 1989.

PLSS: T06N, R01E, Sec. 04 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-10 N4251049 E598706
Latitude/Longitude: 38.40223 / -121.86956
Elevation (feet): 60

County Summary:
Solano

Quad Summary:
Dixon (3812147), Allendale (3812148)

Sources:
WHI89F0007 WHISLER, E. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA 1989-07-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 58070
Key Quad: Allendale (3812148)
Occurrence Number: 713
EO Index: 58106
Element Code: ABNSB10010
Occurrence Last Updated: 2004-11-15

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2004-07-29
Last Survey Date: 2004-07-29
Owner/Manager: PVT
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Poor
Trend: Unknown

Location:
ALONG SOUTH SIDE OF WEBER ROAD, 1.25 MILES EAST OF INTERSTATE 80, 6 MILES NORTHEAST OF VACAVILLE.

Detailed Location:

Ecological:
BURROW CONSISTS OF A WOODPILE.

Threats:
RELOCATION OF WOODPILE.

General:
2 INDIVIDUALS AND MANY FEATHERS OBSERVED AT WOODPILE ON 29 JUL 2004.

PLSS: T06N, R01E, Sec. 05 (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4251020 E596823
Latitude/Longitude: 38.40217 / -121.89112
Elevation (feet): 70

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

HOL04F0009 HOLMES, L. & D. WARENYCIA (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2004-07-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 64581
EO Index: 64660
Key Quad: Allendale (3812148)
Element Code: ABNSB10010
Occurrence Number: 789
Occurrence Last Updated: 2006-05-01

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2006-04-27
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2006-04-27
Occurrence Rank: Poor
Owner/Manager: CITY OF VACAVILLE
Trend: Unknown
Presence: Presumed Extant

Location:
ALONG THE EAST EDGE OF EUBANKS ROAD, 0.55 MILE SOUTH OF MIDWAY ROAD, VACAVILLE.

Detailed Location:
BURROW WAS LOCATED IN THE INTERCHANGE BUSINESS PARK.

Ecological:
BURROW WAS LOCATED IN A SINK HOLE ALONG THE ROAD EDGE; SURROUNDED BY A VACANT LOT THAT IS RAPIDLY MOVING TOWARD DEVELOPMENT (MOST LOTS HAVE BEEN GRADED AND FILLED).

Threats:
THREATENED BY FUTURE INDUSTRIAL PARK DEVELOPMENT, TRAFFIC, AND ROAD MAINTENANCE.

General:
2 ADULTS PRESENT, 19-23 APR 2006; 1 ADULT (PRESUMABLY, THE MALE) WAS GUARDING THE BURROW ENTRANCE, 24-27 APR 2006.

PLSS: T07N, R01W, Sec. 34 (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4251752 E591313
Latitude/Longitude: 38.40934 / -121.95412
Elevation (feet): 115

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:
FOR06F0001 FOREMAN, S. (LSA ASSOCIATES, INC.) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2006-04-21

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	69412	**EO Index:**	70188
Key Quad:	Allendale (3812148)	**Element Code:**	ABNSB10010
Occurrence Number:	952	**Occurrence Last Updated:**	2007-06-13

Scientific Name: *Athene cunicularia*

Common Name: burrowing owl

Listing Status: **Federal:** None

State: None

CNDDB Element Ranks: **Global:** G4

State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:

SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed:	2005-07-08	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-07-08	**Occurrence Rank:**	Fair
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

NORTH AND SOUTH OF GILLEY WAY, BETWEEN LEISURE TOWN ROAD AND ORANGE DRIVE, VACAVILLE.

Detailed Location:

ACTIVE BURROWS FOUND IN FIVE LOCATIONS IN 2005; TWO BURROWS CONTAINED ACTIVE JUVENILES.

Ecological:

HABITAT CONSISTS OF A MOWED AREA ADJACENT TO A GOLF COURSE, DOMINATED BY BERMUDA GRASS AND YELLOW STAR THISTLE. BURROWS WERE LOCATED QUITE CLOSE TOGETHER, AND SOME WERE LOCATED ADJACENT TO ROADWAYS.

Threats:

THREATENED BY TRAFFIC ASSOCIATED WITH THE GOLF COURSE AND GOLF MAINTENANCE ACTIVITIES.

General:

ON 8 JUL 2005, 5 ADULTS/3+ JUVENILES OBSERVED AT ONE LOCATION, 2 ADULTS/2 JUVENILES OBSERVED AT A SECOND LOCATION, AND SINGLE ADULTS OBSERVED AT BURROWS AT THE OTHER THREE SITES.

PLSS:	T06N, R01W, Sec. 11, SE (M)	**Accuracy:**	non-specific area	**Area (acres):**	34
UTM:	Zone-10 N4248797 E592718	**Latitude/Longitude:**	38.38257 / -121.93842	**Elevation (feet):**	87

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

LEE05F0001	LEE, C. (SOLANO COUNTY WATER AGENCY) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-07-08
LEE05F0002	LEE, C. (SOLANO COUNTY WATER AGENCY) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-07-08
LEE05F0003	LEE, C. (SOLANO COUNTY WATER AGENCY) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-07-08
LEE05F0004	LEE, C. (SOLANO COUNTY WATER AGENCY) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-07-08
LEE05F0005	LEE, C. (SOLANO COUNTY WATER AGENCY) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-07-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 69441
EO Index: 70220
Key Quad: Elmira (3812138)
Element Code: ABNSB10010
Occurrence Number: 962
Occurrence Last Updated: 2007-05-31

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2005-11-30
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2005-11-30
Occurrence Rank: Fair
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
JUST SW OF THE INTERSECTION OF LEWIS ROAD AND HAWKINS ROAD, 0.9 MILE NE OF ELMIRA.

Detailed Location:
BURROW WAS LOCATED AT THE TOP OF A DRAINAGE DITCH, ADJACENT TO A FALLOW FIELD.

Ecological:
HABITAT SURROUNDING BURROW CONSISTS OF AN ALFALFA FIELD ACROSS THE ROAD AND A FALLOW FIELD DOMINATED BY 2-4' TALL INVASIVE WEEDS.

Threats:
THREATENED BY BUSY TRAFFIC ROADS ADJACENT TO BURROW.

General:
BUOW OBSERVED FEEDING ON A SMALL RODENT ON 29 NOV; ON 30 NOV 2005, HEAVY DROPPINGS WERE OBSERVED AROUND THE BURROW ENTRANCE.

PLSS: T06N, R01E, Sec. 20, NW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4246213 E596374
Latitude/Longitude: 38.35890 / -121.89692
Elevation (feet): 63

County Summary:	Quad Summary:
Solano	Elmira (3812138)

Sources:
LEE05F0006 LEE, C. (SOLANO COUNTY WATER AGENCY) - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-11-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A0216	**EO Index:**	101779
Key Quad:	Allendale (3812148)	**Element Code:**	ARAAD02030
Occurrence Number:	1280	**Occurrence Last Updated:**	2016-07-25

Scientific Name: *Emys marmorata*

Common Name: western pond turtle

Listing Status: **Federal:** None

State: None

CNDDB Element Ranks: **Global:** G3G4

State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed:	2016-03-23	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-03-23	**Occurrence Rank:**	Fair
Owner/Manager:	DFG, DOD-COE, SOL COUNTY	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ABOUT 0.2 MILES NE OF ORANGE DR AT GILLEY WAY & 0.3 MILES SSW OF I-80 AT THE LEISURE TOWN RD OVERPASS, NE OF VACAVILLE.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

ULATIS CREEK FLOOD CONTROL CHANNEL. STEP-POOL BENEATH MANMADE BARRIER IN CHANNELIZED CREEK. PART CONCRETE & RIPRAP-LINED, PART GRASS-LINED WITH INTERMITTENT CATTAILS. "SUBJECT TO AGGRESSIVE CHANGES IN HYDROGRAPH." SURROUNDED BY DEVELOPMENT.

Threats:

RED-EARED SLIDERS ALSO FOUND.

General:

1 ADULT AND 1 SUBADULT/JUVENILE OBSERVED BASKING ON 23 MAR 2016.

PLSS:	T06N, R01W, Sec. 11, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-10 N4248878 E592975	**Latitude/Longitude:**	38.38328 / -121.93548	**Elevation (feet):**	82

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

HAN16F0004 HANSHEW, B. - FIELD SURVEY FORM FOR EMYS MARMORATA 2016-03-23

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	33218	**EO Index:**	2649
Key Quad:	Allendale (3812148)	**Element Code:**	ICBRA03030
Occurrence Number:	19	**Occurrence Last Updated:**	2014-12-26

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	1995-02-17	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1995-02-17	**Occurrence Rank:**	Poor
Owner/Manager:	PVT-CHEVRON	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.75 MILE NORTH OF THE INTERSECTION OF I-80 AND I-505, NORTH OF VACAVILLE.

Detailed Location:

POOL #33.

Ecological:

HABITAT CONSISTS OF A VERNAL POOL SURROUNDED BY ANNUAL GRASSLAND. AREA WAS DISKED ABOUT 1990.

Threats:

DEVELOPMENT (1995); AIR PHOTOS SHOW DEVELOPMENT IN AREA SINCE TIME OF SURVEY MAY HAVE ELIMINATED SUITABLE HABITAT.

General:

1S OBSERVED ON 20 JAN, 3 FEB, & 17 FEB 1995; ESTIMATED TOTAL POPULATION SIZE LESS THAN 50; 2 MALES AND 1 FEMALE COLLECTED AND DEPOSITED AT CAS (CASIZ #103094).

PLSS:	T06N, R01W, Sec. 11 (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-10 N4248942 E591681	**Latitude/Longitude:**	38.38399 / -121.95028	**Elevation (feet):**	90

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

CRO95F0001	CROWE, D. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 1995-01-20
CRO95S0006	CROWE, D. - CASIZ #103094, COLLECTED FROM "ALLENDALE CALIFORNIA QUADRANGLE T6N, R1W, POOL 3, 1/2 MILE NORTH OF HIGHWAYS 80/505 J." 1995-01-20
SIM95R0001	SIMPSON ENVIRONMENTAL - 1994-1995 USFWS PROTOCOL VERNAL POOL CRUSTACEAN SURVEY - CHEVRON VACA VALLEY BUSINESS PARK 1995-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 32547
EO Index: 1752
Key Quad: Dixon (3812147)
Element Code: ICBRA03030
Occurrence Number: 98
Occurrence Last Updated: 1995-11-13

Scientific Name: *Branchinecta lynchi*
Common Name: vernal pool fairy shrimp

Listing Status: **Federal:** Threatened
Rare Plant Rank:
State: None
Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed: 1993-02-07
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1993-02-07
Occurrence Rank: Unknown
Owner/Manager: PVT-SPRR
Trend: Unknown
Presence: Presumed Extant

Location:

SW OF DIXON; IMMEDIATELY NORTH OF SOUTHERN PACIFIC ROADROAD CROSSING AT MIDWAY ROAD.

Detailed Location:

IN RAILROAD DITCH BETWEEN RAILROAD AND ROAD.

Ecological:

TURBID VERNAL POOL WITH ALGAE; RIPARIAN BRUSH; RAILROAD RIGHT-OF-WAY.

Threats:

General:

20+ INDIVIDUALS OBSERVED IN POOL.

PLSS: T07N, R01E, Sec. 27, S (M)
Accuracy: specific area
Area (acres): 1
UTM: Zone-10 N4252752 E600349
Latitude/Longitude: 38.41739 / -121.85050
Elevation (feet): 60

County Summary:	Quad Summary:
Solano	Dixon (3812147)

Sources:

KOF93F0001 KOFORD, E. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 1993-02-07

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 33702
EO Index: 30612
Key Quad: Allendale (3812148)
Element Code: ICBRA03030
Occurrence Number: 172
Occurrence Last Updated: 1997-03-20

Scientific Name: *Branchinecta lynchi*
Common Name: vernal pool fairy shrimp

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed: 1993-02-04
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1993-02-04
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

NORTHEAST OF THE INTERSECTION OF LEISURE TOWN ROAD AND I-80, NORTHEAST OF VACAVILLE.

Detailed Location:

SEASONAL WETLANDS LOCATED SOMEWHERE IN SECTION 1.

Ecological:

NATURAL SEASONAL WETLANDS.

Threats:

General:

B. LYNCHI OBSERVED IN THE ONE FEATURE INSPECTED. SUGNET RECORD #55. NO LEPIDURUS PACKARDI OBSERVED.

PLSS: T06N, R01W, Sec. 01 (M)
Accuracy: 3/5 mile
Area (acres): 0
UTM: Zone-10 N4250227 E593907
Latitude/Longitude: 38.39534 / -121.92462
Elevation (feet): 80

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

SUG93U0001 SUGNET & ASSOCIATES - PRINTOUT OF LOCATION (T-R-S) OF FAIRY SHRIMP SAMPLING. (OBTAINED FROM THE US FISH AND WILDLIFE SERVICE) 1993-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	33703	**EO Index:**	30613
Key Quad:	Dixon (3812147)	**Element Code:**	ICBRA03030
Occurrence Number:	173	**Occurrence Last Updated:**	1997-03-20

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	1993-02-07	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1993-02-07	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

NORTHWEST OF THE INTERSECTION OF PITT SCHOOL ROAD AND MIDWAY ROAD, SOUTHWEST OF DIXON.

Detailed Location:

VERNAL POOLS LOCATED SOMEWHERE IN SECTION 27.

Ecological:

NATURAL VERNAL POOLS.

Threats:

General:

B. LYNCHI OBSERVED IN THE ONE FEATURE INSPECTED. SUGNET RECORD #54. NO LEPIDURUS PACKARDI OBSERVED.

PLSS:	T07N, R01E, Sec. 27 (M)	**Accuracy:**	3/5 mile	**Area (acres):**	0
UTM:	Zone-10 N4253465 E600348	**Latitude/Longitude:**	38.42381 / -121.85041	**Elevation (feet):**	65

County Summary:	**Quad Summary:**
Solano	Dixon (3812147)

Sources:

SUG93U0001	SUGNET & ASSOCIATES - PRINTOUT OF LOCATION (T-R-S) OF FAIRY SHRIMP SAMPLING. (OBTAINED FROM THE US FISH AND WILDLIFE SERVICE) 1993-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	41972	**EO Index:**	41972
Key Quad:	Allendale (3812148)	**Element Code:**	ICBRA03030
Occurrence Number:	225	**Occurrence Last Updated:**	2019-06-14

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2017-01-29	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2017-01-29	**Occurrence Rank:**	Fair
Owner/Manager:	PVT, CNLM	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST SIDE OF I-505, 0.3 TO 0.6 MILE WEST OF LEISURE TOWN ROAD & 0.4 TO 0.9 MILE SOUTH OF MIDWAY ROAD, VACAVILLE.

Detailed Location:

1997: NORTH VILLAGE PROJECT SITE, N & E PORTIONS, EXACT DETECTION LOCATIONS UNKNOWN. 2011-2017: REMY NORTH (N021) PRESERVE, MAPPED TO LOCATIONS GIVEN FOR OCCUPIED POOLS. 2016: DETECTED HERE & IN POOLS VP-2 (EO #793) & VP-17 (EO #919).

Ecological:

1997: ANNUAL GRASSLAND WITH SEASONALLY PONDED WETLANDS GRAZED BY CATTLE; LINDERIELLA OCCIDENTALIS CO-OCCURRED IN 2 BASINS. 2011-2012: NEW WETLANDS CONSTRUCTED, AREA PROTECTED AS PRESERVE. 2017:17.86 AC OF SEASONAL WETLAND HABITAT.

Threats:

GRAZING, AGRICULTURE PRACTICES, POTENTIAL DEVELOPMENT (1997).

General:

FOUND IN 26 OF 649 POOLS SAMPLED, 1997. 100S IN 3 POOLS, 19 JAN 2011. 100S IN 4 POOLS, 30 MAR 2012. 1000 IN 3 POOLS, 20 DEC 2012. 5 IN 2 OF 10 POOLS, 9 JAN 2015. 243 IN 9 OF 45 POOLS (7 MAPPED HERE), 2016. 50 IN 4 OF 5 POOLS, 29 JAN 2017.

PLSS:	T07N, R01W, Sec. 35, SE (M)	**Accuracy:**	specific area	**Area (acres):**	45
UTM:	Zone-10 N4251660 E592356	**Latitude/Longitude:**	38.40841 / -121.94219	**Elevation (feet):**	99

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

ARN97F0011	ARNOLD, R.A. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI (VERNAL POOL FAIRY SHRIMP) 1997-03-XX
ARN97R0003	ARNOLD, R. (ENTOMOLOGICAL CONSULTING SERVICES) - PRT-797233 FOR VERNAL POOL CRUSTACEANS, NORTH VILLAGE PROJECT IN VACAVILLE, CA: NORTHERN AND EASTERN PORTIONS. 1997 VERNAL POOL CRUSTACEAN WET SEASON SURVEY REPORT. 1997-06-11
LIT11F0001	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2011-01-19
LIT12F0004	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2012-03-30
LIT12F0007	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2012-12-20
LIT15F0005	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2015-01-09
LIT15R0003	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - REMY NORTH PRESERVE (N021) 2015 NON-GUIDELINE WET-SEASON VERNAL POOL BRANCHIOPOD SURVEY RESULTS. 2015-XX-XX
LIT16F0003	LITTLE, C. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2016-02-04
LIT16R0003	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - REMY NORTH PRESERVE (N021) 2016 NON-GUIDELINE WET-SEASON VERNAL POOL BRANCHIOPOD SURVEY RESULTS. 2016-XX-XX
LIT17F0004	LITTLE, C. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2017-01-29
LIT17R0003	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - REMY NORTH PRESERVE (N021) 2017 NON-GUIDELINE WET-SEASON VERNAL POOL BRANCHIOPOD SURVEY RESULTS. 2017-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 93956
EO Index: 95083
Key Quad: Allendale (3812148)
Element Code: ICBRA03030
Occurrence Number: 793
Occurrence Last Updated: 2019-06-14

Scientific Name: *Branchinecta lynchi*
Common Name: vernal pool fairy shrimp

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed: 2016-02-08
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2016-02-08
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

0.4 MILE NE OF VACA VALLEY PARKWAY OVERPASS ON I-505, WEST OF NORTH VILLAGE PARKWAY, VACAVILLE.

Detailed Location:

1997: NORTH VILLAGE PROJECT SITE, SOUTHERN PORTION. 2011-2012: REMY NORTH (N021) PRESERVE. 2016: VP-2; ALSO DETECTED IN 8 OTHER POOLS (EOS #225, 919).

Ecological:

1997: ANNUAL GRASSLAND WITH SEASONALLY PONDED WETLANDS GRAZED BY CATTLE. 2011-2012: NEW WETLANDS CONSTRUCTED, AREA PROTECTED AS PRESERVE.

Threats:

GRAZING, AGRICULTURE PRACTICES, POTENTIAL DEVELOPMENT (1997).

General:

FEWER THAN 100 DETECTED IN WETLAND #16 ON 7 JAN 1997. NONE FOUND IN 2011 OR 2012. 243 IN 9 OF 45 POOLS (1 MAPPED HERE), 2016.

PLSS: T06N, R01W, Sec. 02, NW (M)
Accuracy: specific area
Area (acres): 12
UTM: Zone-10 N4250460 E592144
Latitude/Longitude: 38.39762 / -121.94477
Elevation (feet): 100

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

ARN97F0012	ARNOLD, R. (ENTOMOLOGICAL CONSULTING SERVICES) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI (VERNAL POOL FAIRY SHRIMP) 1997-01-07
ARN97R0002	ARNOLD, R. (ENTOMOLOGICAL CONSULTING SERVICES) - PRT-797233 FOR VERNAL POOL CRUSTACEANS, NORTH VILLAGE PROJECT SITE IN VACAVILLE, CA: SOUTHERN PORTION. 1997 VERNAL POOL CRUSTACEAN WET SEASON SURVEY REPORT. 1997-04-09
LIT11F0001	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2011-01-19
LIT12F0004	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2012-03-30
LIT12F0007	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2012-12-20
LIT16F0003	LITTLE, C. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2016-02-04
LIT16R0003	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - REMY NORTH PRESERVE (N021) 2016 NON-GUIDELINE WET-SEASON VERNAL POOL BRANCHIOPOD SURVEY RESULTS. 2016-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 93961
EO Index: 95088
Key Quad: Allendale (3812148)
Element Code: ICBRA03030
Occurrence Number: 794
Occurrence Last Updated: 2014-10-27

Scientific Name: *Branchinecta lynchi*
Common Name: vernal pool fairy shrimp

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed: 2011-01-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2011-01-12
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

WEST SIDE OF LEWIS ROAD, ABOUT 0.4 MILE SOUTH OF I-80 AT MIDWAY ROAD, NW OF VACAVILLE.

Detailed Location:

MAPPED TO PROVIDED LOCATION.

Ecological:

POOL IN OLD FIRE BREAK. SURVEYOR NOTED TIRE RUTS FROM OFF-ROAD VEHICLES AT EDGES OF POOL. VISIBLE DISTURBANCE FROM PLOWING.

Threats:

COMMERCIAL DEVELOPMENT (2011).

General:

100 ADULTS OBSERVED ON 12 JAN 2011.

PLSS: T07N, R01E, Sec. 31, NE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4251911 E596212
Latitude/Longitude: 38.41026 / -121.89800
Elevation (feet): 70

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

WOO11F0004 WOOD, T. (HELM BIOLOGICAL CONSULTING) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2011-01-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	B3265	**EO Index:**	115180
Key Quad:	Allendale (3812148)	**Element Code:**	ICBRA03030
Occurrence Number:	919	**Occurrence Last Updated:**	2019-06-14

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2016-02-08	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-02-08	**Occurrence Rank:**	Good
Owner/Manager:	PVT, CNLM	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

REMY NORTH PRESERVE, 0.5 MI SSE OF LEISURE TOWN RD AT VICTOR LN & 1.2 MI NE OF I-505 AT VACA VALLEY PKWY, VACAVILLE.

Detailed Location:

POOL VP-17, ALSO DETECTED IN 8 OTHER POOLS (EOS #225 & #793).

Ecological:

PRESERVE DOMINATED BY NON-NATIVE ANNUAL GRASSLAND WITH NATURAL AND CONSTRUCTED VERNAL POOLS AND WETLANDS. THE PRESERVE IS BORDERED BY I-505, A BUSINESS PARK, RESIDENCES, AND AGRICULTURAL LAND.

Threats:

General:

243 DETECTED AT 9 OUT OF 45 POOLS SAMPLED IN 2016 (1 MAPPED HERE).

PLSS:	T07N, R01W, Sec. 36, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-10 N4251178 E593339	**Latitude/Longitude:**	38.40396 / -121.93101	**Elevation (feet):**	92

County Summary:	**Quad Summary:**
Solano	Allendale (3812148)

Sources:

LIT16F0003	LITTLE, C. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2016-02-04
LIT16R0003	LITTLE, C. (CENTER FOR NATURAL LANDS MANAGEMENT) - REMY NORTH PRESERVE (N021) 2016 NON-GUIDELINE WET-SEASON VERNAL POOL BRANCHIOPOD SURVEY RESULTS. 2016-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 59073
EO Index: 59109
Key Quad: Allendale (3812148)
Element Code: ICBRA06010
Occurrence Number: 236
Occurrence Last Updated: 2005-01-03

Scientific Name: *Linderiella occidentalis*
Common Name: California linderiella

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.

Micro Habitat:

WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TOTAL DISSOLVED SOLIDS.

Last Date Observed: 1997-02-11
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1997-02-11
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

ABOUT 0.1 MILE SOUTH OF INTERSECTION OF LEISURE TOWN ROAD AND MIDWAY ROAD, NE OF VACAVILLE.

Detailed Location:

IN POOLS #2 AND #3, NORTH VILLAGE PROJECT SITE.

Ecological:

ANNUAL GRASSLAND WITH SEASONALLY PONDED WETLANDS GRAZED BY CATTLE.

Threats:

GRAZING, AGRICULTURE PRACTICES, POTENTIAL DEVELOPMENT.

General:

UNKNOWN NUMBER OBSERVED BETWEEN 7 JAN & 11 FEB 1997.

PLSS: T07N, R01W, Sec. 36 (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4252406 E593074
Latitude/Longitude: 38.41505 / -121.93386
Elevation (feet): 95

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

ARN97R0003 ARNOLD, R. (ENTOMOLOGICAL CONSULTING SERVICES) - PRT-797233 FOR VERNAL POOL CRUSTACEANS, NORTH VILLAGE PROJECT IN VACAVILLE, CA: NORTHERN AND EASTERN PORTIONS. 1997 VERNAL POOL CRUSTACEAN WET SEASON SURVEY REPORT. 1997-06-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 59074
EO Index: 59110
Key Quad: Allendale (3812148)
Element Code: ICBRA06010
Occurrence Number: 237
Occurrence Last Updated: 2005-01-03

Scientific Name: *Linderiella occidentalis*
Common Name: California linderiella

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:
SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.

Micro Habitat:
WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TOTAL DISSOLVED SOLIDS.

Last Date Observed: 1997-02-11
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1997-02-11
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 0.1 MILE EAST OF THE INTERSECTION OF I-505 AND GIBSON CANYON CREEK (NORTH FORK), NE OF VACAVILLE.

Detailed Location:
IN POOL #7 AT NORTH VILLAGE PROJECT SITE.

Ecological:
ANNUAL GRASSLAND WITH SEASONALLY PONDED WETLANDS GRAZED BY CATTLE.

Threats:
GRAZING, AGRICULTURE PRACTICES, POTENTIAL DEVELOPMENT.

General:
UNKNOWN NUMBER OBSERVED BETWEEN 7 JAN & 11 FEB 1997.

PLSS: T07N, R01W, Sec. 35 (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4252038 E592170
Latitude/Longitude: 38.41183 / -121.94427
Elevation (feet): 100

County Summary:
Solano

Quad Summary:
Allendale (3812148)

Sources:

ARN97R0003 ARNOLD, R. (ENTOMOLOGICAL CONSULTING SERVICES) - PRT-797233 FOR VERNAL POOL CRUSTACEANS, NORTH VILLAGE PROJECT IN VACAVILLE, CA: NORTHERN AND EASTERN PORTIONS. 1997 VERNAL POOL CRUSTACEAN WET SEASON SURVEY REPORT. 1997-06-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 88800
EO Index: 89814
Key Quad: Allendale (3812148)
Element Code: PDBOR0V0H0
Occurrence Number: 27
Occurrence Last Updated: 2020-05-08

Scientific Name: *Plagiobothrys hystriculus*
Common Name: bearded popcornflower

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:
VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
WET SITES. 1-275 M.

Last Date Observed: 2016-04-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2016-04-12
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
NEAR PG&E RIGHT-OF-WAY WEST OF INTERSTATE 505 BETWEEN MIDWAY ROAD AND ALDRIDGE ROAD, NORTH OF VACAVILLE.

Detailed Location:
2 POLYGONS MAPPED ON EITHER SIDE OF THE RAILROAD LINE, BASED ON 2011 BARTOSH COORDINATES AND 2016 HUGHES COORDINATES.

Ecological:
IN VERNAL POOL HABITAT WITH PLAGIOBOTHRYS STIPITATUS VAR. STIPITATUS, P. GREENEI, FESTUCA BROMOIDES, TRIGLOCHIN SCILLOIDES, LIMNANTHES DOUGLASII SSP. ROSEA, MIMULUS TRICOLOR, AND GRATIOLA EBRACTEATA.

Threats:
SITE APPEARS TO BE DISKED OR MOWED PERIODICALLY. W POLY DESIGNATED FOR DEVELOPMENT BY THE CITY OF VACAVILLE.

General:
175 PLANTS OBSERVED IN EASTERN POLYGON IN 2011. 7 PLANTS OBSERVED IN WESTERN POLYGON IN 2016.

PLSS: T07N, R01W, Sec. 34, NE (M)
Accuracy: specific area
Area (acres): 10
UTM: Zone-10 N4251814 E591438
Latitude/Longitude: 38.40989 / -121.95269
Elevation (feet): 115

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

BAR11F0033	BARTOSH, H. (NOMAD ECOLOGICAL CONSULTING) - FIELD SURVEY FORM FOR PLAGIOBOTHRYS HYSTRICULUS 2011-04-15
HUG16F0003	HUGHES, C. - FIELD SURVEY FORM FOR PLAGIOBOTHRYS HYSTRICULUS 2016-04-12
HUG16S0002	HUGHES, C. - HUGHES #449 DAV #167603 & #219259 2016-04-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 39023
EO Index: 34030
Key Quad: Allendale (3812148)
Element Code: PDCAM060C0
Occurrence Number: 92
Occurrence Last Updated: 1998-06-22

Scientific Name: *Downingia pusilla*
Common Name: dwarf downingia

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 2B.2
Other Lists:

CNDDB Element Ranks: **Global:** GU
State: S2

General Habitat:
VALLEY AND FOOTHILL GRASSLAND (MESIC SITES), VERNAL POOLS.

Micro Habitat:
VERNAL LAKE AND POOL MARGINS WITH A VARIETY OF ASSOCIATES. IN SEVERAL TYPES OF VERNAL POOLS. 1-490 M.

Last Date Observed: 1998-05-08
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1998-05-08
Occurrence Rank: Fair
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 1.5 MILES WSW OF VACA DIXON SUBSTATION, 0.2 MILE EAST OF I-505, 0.6 MILE WEST OF LEISURE TOWN ROAD.

Detailed Location:

Ecological:
AMONG DENSE ELEOCHARIS MACROSTACHYA, CALLITRICHE MARGINATA, AND LASTHENIA GLABERRIMA.

Threats:
PROPOSED DEVELOPMENT, CATTLE GRAZING; PROPERTY HAS BEEN DRY-FARMED IN THE PAST.

General:
250,000 PLANTS ESTIMATED IN 1998.

PLSS: T06N, R01W, Sec. 02 (M)
Accuracy: specific area
Area (acres): 3
UTM: Zone-10 N4250466 E592153
Latitude/Longitude: 38.39767 / -121.94467
Elevation (feet): 95

County Summary:
Solano

Quad Summary:
Allendale (3812148)

Sources:
HOL98F0001 HOLLAND, R. - FIELD SURVEY FORM FOR DOWNINGIA PUSILLA 1998-05-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 23957
Key Quad: Elmira (3812138)
Occurrence Number: 3
EO Index: 7224
Element Code: PDCAM0C010
Occurrence Last Updated: 1993-07-22

Scientific Name: *Legenere limosa*
Common Name: legenere

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G2
State: S2

Rare Plant Rank: 1B.1
Other Lists: BLM_S-Sensitive
SB_UCBG-UC Botanical Garden at Berkeley

General Habitat:
VERNAL POOLS.

Micro Habitat:
IN BEDS OF VERNAL POOLS. 1-1005 M.

Last Date Observed: 1890-05-XX
Last Survey Date: 1983-05-22
Owner/Manager: UNKNOWN
Presence: Extirpated

Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:
LOWER SACRAMENTO VALLEY, NEAR ELMIRA.

Detailed Location:

Ecological:
OBSERVED GROWING IN FIELDS IN 1890.

Threats:
AGRICULTURAL DEVELOPMENT HAS ELIMINATED HABITAT FOR LEGENERE IN THIS VICINITY.

General:
TYPE LOCALITY. SEARCHED FOR IN 1983 BUT NOT FOUND; SITE EXTIRPATED ACCORDING TO HOLLAND (1983).

PLSS: T06N, R01E, Sec. 19 (M)
UTM: Zone-10 N4245237 E595374
Accuracy: 1 mile
Latitude/Longitude: 38.35022 / -121.90850
Area (acres): 0
Elevation (feet): 70

County Summary:
Solano

Quad Summary:
Elmira (3812138)

Sources:

GRE90S0010	GREENE, E. - GREENE SN JEPS #2634 1890-05-02
GRE90S0011	GREENE, E. - GREENE SN JEPS #4941 1890-05-05
GRE90S0012	GREENE, E. - GREENE SN UC #336562 1890-05-01
HOL83F0005	HOLLAND, R. - FIELD SURVEY FORM FOR LEGENERE LIMOSA 1983-05-22
HOL83U0002	HOLLAND, R. - ENDANGERMENT STATUS OF LEGENERE LIMOSA IN CALIFORNIA 1983-06-30
MCV43A0001	MCVAUGH, R. - CAMPANULALES - NORTH AMERICAN FLORA 32A:1:13-14. 1943-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 23957
Key Quad: Elmira (3812138)
Occurrence Number: 12
EO Index: 46520
Element Code: PDFAB40040
Occurrence Last Updated: 2011-08-16

Scientific Name: *Trifolium amoenum*
Common Name: two-fork clover

Listing Status: **Federal:** Endangered
State: None
CNDDB Element Ranks: **Global:** G1
State: S1
Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_UCBG-UC Botanical Garden at Berkeley
SB_USDA-US Dept of Agriculture

General Habitat:
VALLEY AND FOOTHILL GRASSLAND, COASTAL BLUFF SCRUB.

Micro Habitat:
SOMETIMES ON SERPENTINE SOIL, OPEN SUNNY SITES, SWALES. MOST RECENTLY CITED ON ROADSIDE AND ERODING CLIFF FACE. 5-310 M.

Last Date Observed: 1909-05-04
Last Survey Date: 1909-05-04
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
ELMIRA.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS CENTERED ON THE TOWN OF ELMIRA.

Ecological:
IN RICH SWALES.

Threats:

General:
"DENSE COLONIES" NOTED IN 1903 BY BAKER. ONLY SOURCES OF INFORMATION ARE TWO HISTORICAL COLLECTIONS FROM 1903 AND 1909. NEEDS FIELDWORK.

PLSS: T06N, R01E, Sec. 19 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-10 N4245237 E595374
Latitude/Longitude: 38.35022 / -121.90850
Elevation (feet):

County Summary:
Solano

Quad Summary:
Elmira (3812138)

Sources:

BAK03S0001	BAKER, C. - BAKER #2901 UC #74965, POM #18458, CAS #60214 1903-05-06
BRA09S0014	BRANDEGEE, K. - BRANDEGEE SN UC #148549, CAS 1909-05-04

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B3677
Key Quad: Allendale (3812148)
Occurrence Number: 23

EO Index: 116590
Element Code: PDMAL110D0
Occurrence Last Updated: 2019-08-16

Scientific Name: *Sidalcea keckii*
Common Name: Keck's checkerbloom

Listing Status: **Federal:** Endangered
State: None

CNDDB Element Ranks: **Global:** G2
State: S2

Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

General Habitat:

CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

GRASSY SLOPES IN BLUE OAK WOODLAND. ON SERPENTINE-DERIVED, CLAY SOILS, AT LEAST SOMETIMES. 85-505 M.

Last Date Observed: 1983-05-01
Last Survey Date: 1983-05-01
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

ALONG HARTLEY ROAD SOUTH OF ALLENDALE STORE.

Detailed Location:

MAPPED AS BEST GUESS ALONG HARTLEY ROAD SOUTH OF ALLENDALE BASED ON LOCATION DESCRIPTION PROVIDED.

Ecological:

ZAMORA CLAY LOAM.

Threats:

General:

ONLY SOURCES OF INFORMATION FOR THIS SITE ARE 1980 AND 1983 CRAMPTON COLLECTIONS; "NOT COMMON" IN 1980. COLLECTIONS IDENTIFIED AS SIDALCEA KECKII BY STEVEN HILL IN 2015.

PLSS: T07N, R01W, Sec. 23 (M)
UTM: Zone-10 N4254876 E592238

Accuracy: non-specific area
Latitude/Longitude: 38.4374 / -121.94313

Area (acres): 69
Elevation (feet): 115

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

CRA80S0003	CRAMPTON, B. - CRAMPTON #9720 DAV #34329, AHUC #37703 1980-05-05
CRA83S0001	CRAMPTON, B. - CRAMPTON SN DAV #39508, AHUC #42848 1983-05-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 83672
EO Index: 84701
Key Quad: Allendale (3812148)
Element Code: PDPLM0C0E1
Occurrence Number: 48
Occurrence Last Updated: 2011-09-12

Scientific Name: *Navarretia leucocephala ssp. bakeri*
Common Name: Baker's navarretia

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:

CISMONTANE WOODLAND, MEADOWS AND SEEPS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro Habitat:

VERNAL POOLS AND SWALES; ADOBE OR ALKALINE SOILS. 3-1680 M.

Last Date Observed: 2010-05-04
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2010-05-04
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

NORTH SIDE OF VACA VALLEY PARKWAY; 0.1 MILE WEST OF ITS JUNCTION WITH CRESCENT DRIVE, NE OF VACAVILLE.

Detailed Location:

MAPPED BY CNDDB AS BEST GUESS JUST WEST OF THE JUNCTION OF VACA VALLEY PARKWAY AND CRESCENT DRIVE AROUND THE OPEN FIELDS IN THIS AREA.

Ecological:

VERY LARGE AREA OF DISTURBED SOIL DOMINATED BY INTRODUCED GRASSES AND ADJACENT TO A WET DEPRESSION. A SMALL, DRY DEPRESSION IN A GRASSY FLAT.

Threats:

AREA SURROUNDED BY DEVELOPMENT.

General:

SITE BASED ON A 2010 HELMKAMP & HELMKAMP COLLECTION; MENTIONED AS "SCARCE" IN 2010.

PLSS: T06N, R01W, Sec. 02, SE (M)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-10 N4250017 E592544
Latitude/Longitude: 38.39359 / -121.94026
Elevation (feet): 100

County Summary:	Quad Summary:
Solano	Allendale (3812148)

Sources:

HEL10S0001 HELMKAMP, G. & E. HELMKAMP - HELMKAMP #15952 UCR #216927 2010-05-04

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 90251
EO Index: 91265
Key Quad: Allendale (3812148)
Element Code: PDPLM0C0E1
Occurrence Number: 53
Occurrence Last Updated: 2013-09-05

Scientific Name: *Navarretia leucocephala ssp. bakeri*
Common Name: Baker's navarretia

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:

CISMONTANE WOODLAND, MEADOWS AND SEEPS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro Habitat:

VERNAL POOLS AND SWALES; ADOBE OR ALKALINE SOILS. 3-1680 M.

Last Date Observed: 2011-05-24
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2011-05-24
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

SOUTH SIDE OF GIBSON CANYON CREEK, EAST OF HIGHWAY 505, ABOUT 1.2 AIR MILES WNW OF VACA DIXON SUBSTATION.

Detailed Location:

MAPPED IN THE NW 1/4 OF THE SE 1/4 OF SECTION 35. INCLUDES BOTH VERNAL POOLS AND CREATED WETLANDS.

Ecological:

VERNAL POOLS IN LEVEL PASTURE LAND. ASSOCIATED WITH LASTHENIA FREMONTII, L. GLABERRIMA, PSILOCARPHUS BREVISSIMUS BREVISSIMUS, CONVOLVULUS ARVENSIS, FESTUCA PERENNIS, LYTHRUM HYSSOPIFOLIA, DOWNINGIA ORNATISSIMA ORNATISSIMA, ETC.

Threats:

General:

8000 PLANTS OBSERVED IN 2011. MITIGATION LAND MANAGED BY THE CENTER FOR NATURAL LANDS MANAGEMENT.

PLSS: T07N, R01W, Sec. 35, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4251637 E592380
Latitude/Longitude: 38.40820 / -121.94191
Elevation (feet): 100

County Summary:

Solano

Quad Summary:

Allendale (3812148)

Sources:

MCD11F0005 MCDERMOTT, E. (NOMAD ECOLOGICAL CONSULTING) - FIELD SURVEY FORM FOR NAVARRETIA LEUCOCEPHALA SSP. BAKERI 2011-05-24

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

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Location

Solano County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Amphibians

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NAME	STATUS
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

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Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2246

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on

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your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker *Picoides nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20

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Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

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Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be

breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and

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requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

There are no known coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

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This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Appendix D ARCHEOLOGICAL RESOURCE MANAGEMENT REPORT

ARCHAEOLOGICAL RESOURCE MANAGEMENT REPORT FOR THE WEBER ROAD INDUSTRIAL AND CONSTRUCTION YARD IN VACAVILLE, SOLANO COUNTY, CA (APNS 0109-270-050 AND 0109-220-060)

A CULTURAL RESOURCE INVENTORY

PREPARED BY
Andrew Von Pinnon, M.A.

SUBMITTED BY
ARCHAEOLOGICAL RESOURCE SERVICE

SUBMITTED FOR
Brian Griggs, Weber Road Industrial, LLC

February 21, 2023

A.R.S. Project 23-005

Prepared under the authority of the City of Vacaville.

This project is located on the *Allendale, Calif*. USGS 7.5' quadrangle and consists of about 40 acres.

I certify that I am a Registered Professional Archaeologist (RPA certification number 15428) and I am listed by the California Office of Historic Preservation for statewide consulting services.

William G. Roop, M.A., RPA
Consulting Archaeologist
Archaeological Resource Service

Archaeological Resource Service
50 Executive Avenue, Suite A
Rohnert Park, Ca 94928
(707) 586-2577 ☎ FAX (707) 586-2580

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INTRODUCTION

As requested and authorized, Archaeological Resource Service has conducted an archaeological evaluation of the parcel described below. The following tasks were accomplished as part of this project:

1. A check of the information on file with our office and the Regional Office of the California Historical Resources Information System, to determine the presence or absence of previously recorded historic or prehistoric cultural resources,
2. A check of appropriate historic references to determine the potential for historic era archaeological deposits, and;
3. Contact with the Native American Heritage Commission to determine the presence or absence of listed Sacred Lands within the project area;
4. Contact with all appropriate Native American organizations or individuals designated by the Native American Heritage Commission as interested parties for the project area;
5. A surface reconnaissance of all accessible parts of the project area to locate any visible signs of potentially significant historic or prehistoric cultural deposits.
6. Preparation of a report describing the work accomplished, the results of the research, and making appropriate recommendations for further action, if warranted.

PROJECT DESCRIPTION

The applicant is proposing to improve the existing parcel for a construction and materials yard, as it is an approved use pursuant to the current Industrial Park (IP) zoning for the property. The archaeological component of this proposed undertaking involves a field reconnaissance of the parcel to determine the presence or absence of potentially significant archaeological resources within the property or in close proximity.

PROJECT LOCATION

The project area is located at an unspecified address along Weber Road in Vacaville, Solano County, California. Consisting of two parcels (APN 0109-270-050 and 0109-220-060) that measure a combined total of approximately 41.2 acres, the project area is an open, agricultural property previously used for cattle grazing that is bounded by similar landscapes to the east and west, Weber Road to the south, and Interstate 80 to the north.

The project area lies in the east half of the SW quarter within Section 31 of Township 7 North, Range 1 East, Mt. Diablo Base and Meridian, as shown on the USGS 7.5' Allendale Quadrangle Map (1953; photorevised 1988). The Universal Transverse Mercator Grid coordinates to the approximate center of the project area, as determined by measurement from Google Earth are:

4251510 Meters North,
595615 Meters East,
Zone 10 South

REGULATORY SETTING

There are no previously recorded prehistoric or historic resources located within the project area. Archaeological resources, once identified, are evaluated using criteria established in the California Environmental Quality Act (CEQA) (14 CCR 15064.5 and PRC 21084.1). Significant historical resources need to be addressed before environmental mitigation guidelines are developed and approved. A “significant historical resource” (including both a prehistoric and historic resource) is one that is found eligible for listing in the California Register of Historical Resources. As per Title 14, California Code of Regulations Section 15064.5, historical resources are those that are:

- Listed in, or eligible for listing in, the California Register of Historic Resources (Public Resources Code 5024.1, Title 14 CCR, Section 4850 et. seq.);
- Listed in, or eligible for listing in, the National Register of Historic Places (CRHR);
- Included in a local register of historical resources, as defined in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resource Code; or
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

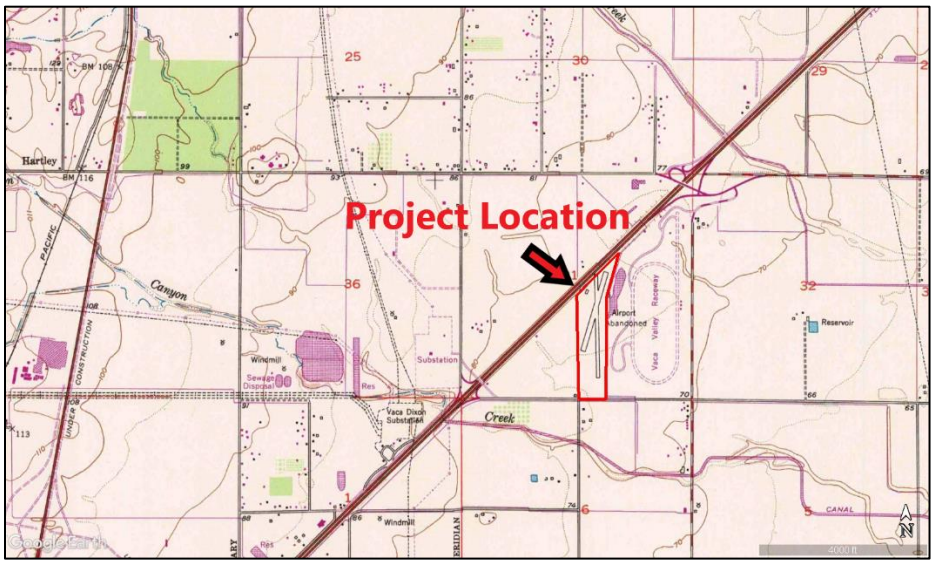

FIGURE 1 -- PROJECT LOCATION

The project site lies within the USGS 7.5' Allendale topographic quadrangle.

Additionally, historical resources and historic districts designated or listed as city or county landmarks or historic properties or districts pursuant to any city or county ordinance can also be listed in the California Register, if the criteria for listing under the ordinance have been determined by the Office of Historic Preservation to be consistent with California Register criteria adopted by the commission (pursuant to Section 5024.1(e) of the PRC).

A resource may be listed as an historical resource in the California Register if it has integrity and meets any of the following National Register of Historic Places criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of our history; or
2) Is associated with the lives of persons important in our past; or
3) Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possesses high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
4) Has yielded, or may be likely to yield, information important in prehistory or history.

CEQA (PRC 21083.2) also distinguishes between two classes of archaeological resources: archaeological sites that meet the definition of a historical resource as above, and "unique archaeological resources." A "unique archaeological resource" has been defined in CEQA as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

FIGURE 2 – THE PROJECT AREA, OUTLINED IN RED, AS SHOWN THROUGH AERIAL IMAGERY VIA GOOGLE EARTH.

1) Contains information needed to answer important scientific research questions and that there is a demonstratable public interest in that information,
2) Has a special and particular quality such as being the oldest of its type or the best available example of its type, or
3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Buildings, sites, structures, objects, and districts representative of California and United States history, architecture, archaeology, engineering, and culture convey significance when they also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A resource has integrity if it retains the characteristics that were present during the resource's period of significance. Enough of these characteristics must remain to convey the reasons for its significance.

Tribal cultural resources and Tribal cultural landscapes can be any of a variety of cultural sites as defined by the individual tribe. These resources, once identified, are treated as significant resources under CEQA.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, or included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC sections 5020.1(j) or 5024.1.

SACRED LANDS INVENTORY / NATIVE AMERICAN CONSULTATION

The California Native American Heritage Commission (NAHC) works to identify, catalogue, and protect places of special religious or social significance, graves, and cemeteries of Native Americans per the authority given the Commission in Public Resources Code 5097.9. A check with the NAHC was conducted on February 2nd to determine if there are sites listed in the Sacred Lands file that lie within or near the current project area.

As of this date, the agency is still processing our query, and the timeframe of the response is unknown due to staffing shortages they are currently facing. Archaeological Resource Service recommends that the permitting agency consult with any tribes that have requested consultation on planning projects. Based on recent inquiries with the NAHC within or near the general vicinity, tribes considered to be representative of Solano County are Yocha Dehe Wintun Nation and the Cortina Indian Rancheria of Wintun Indians.

RESULTS OF LITERATURE CHECK

Prior to performing the fieldwork, a literature search was conducted to assess the archaeological sensitivity of the project area (NWIC File No.: 22-1217; dated to February 8th, 2023). The literature search was conducted using information on file at Archaeological Resource Service and the California Historical Resources Inventory Systems office located in Rohnert Park, CA. Information was consulted regarding all previously recorded archaeological sites, historic properties, and previously evaluated properties within a half-mile radius of the current project area. This research was used to assess the project area's archaeological sensitivity and determine if any known cultural resource might be impacted by the proposed project.

PREHISTORIC SETTING

A temporal framework for the cultural development of the San Francisco Bay Area is provided by Milliken et al. (2007), which is based on data such as population densities, social organization, settlement systems, trade, mortuary patterns, and symbolic expressions. An overview of this schema is provided in Table 2.

Table 1 -- Cultural Chronology of the San Francisco Bay Area (Milliken et al. 2007)

Period	Temporal Range	Description
Paleo-Indian Period	11,500-8,000 B.C.	Clovis big-game hunters presumably occupied the San Francisco Bay Area during this period. However, evidence for this period has yet to be discovered.
Early Holocene (Lower Archaic)	8,000-3,500 B.C.	This period is defined by a generalized mobile forager pattern, which is characterized by the millingslab and handstone and a variety of large wide-stemmed and leaf-shaped projectile points.
Early Period (Middle Archaic)	3,500-500 B.C.	New ground stone technology and the first cut shell beads in mortuaries signal sedentism, regional symbolic integration, and increased regional trade. The mortar and pestle are first documented in the Bay Area shortly after 4,000 cal. B.C. In the central Bay Area, the Lower Berkeley Pattern, marked by mortars and pestles and a burial complex with ornamental grave associations, represents a movement from forager to semi-sedentary land use at shell mound sites such as West Berkely, Ellis Landing, and Pacheco.
Lower Middle Period (Initial Upper Archaic)	500 B.C.-A.D. 430	A major disruption in symbolic integration systems occurs by about 500 B.C. Bead Horizon M1 marks a cultural climax in the San Francisco Bay Area. Although rectangular shell beads disappeared *Olivella* saucer beads become common and new circular *Haliotis* ornaments appeared. New bone tools and ornaments also appeared, including barbless fish spears, elk femur spatula, tubes, and whistles. Basketry awls (split cannon bones) with shouldered tips appeared in the Central and North Bay. Mortars and pestles continued to be the sole grinding tools during Bead Horizon M1 in the Central Bay, while mixed mortars and millingslabs continued in use around the peripheries. Net sinkers disappeared at most sites around the bay around this time.

Period	Temporal Range	Description
Upper Middle Period (Late Upper Archaic)	A.D. 430-1,050	A dramatic cultural disruption occurred in central California, including the San Francisco Bay Area, around A.D. 430., in which the Olivella saucer bead trade network suddenly collapsed, several M1 sites were abandoned, sea otter bones spiked in a number of sites, and the Meganos extended burial mortuary pattern began to spread in the interior East Bay. These changes co-occurred with the inception of a series of Olivella shell bead horizons: M2a (rough-edged full saddle Olivella beads with remarkably small perforations), M2b (mixed Olivella saddle beads with tiny 1.0- to 1.5-millimeter perforations that date to cal. A.D. 430-600), M3 (small, delicate square saddle Olivella beads in burials, occasionally with small, poorly shaped Olivella saucer beads, often in off-village single component cemeteries; cal. A.D. 600-800), and M4 (marked by the devolution of the Olivella saddle bead template into a variety of wide and tall bisymmetrical forms, and by the appearance of distinctive Haliotis ornament styles like unperforated rectangles and horizontally perforated half ovals; cal. A.D. 800-1,050).
Initial Late Period (Lower Emergent)	A.D. 1,050-1,550	Cultural complexity during this period shifted from that of collectors who buried their dead with diverse and numerous (but simple) ornaments to collectors who invested large amounts of time in the creation of finely wrought wealth objects. In addition, there appeared a new level of sedentism, status ascription, and ceremonial integration in lowland central California. The beginning of this period is marked by the Middle/Late Transition (MLT) bead horizon (cal. A.D. 1,000), which saw the appearance of fully shaped show mortars, new Olivella bead types, and an array of multiperforated and bar-scored Haliotis ornaments.
Terminal Late Period	Post- A.D. 1,550	Although the L1 Bead Horizon abruptly disappeared at around cal. A.D. 1,500 to 1,550, the L2 Bead Horizon (characterized by Clamshell disk beads) began to spread across the North Bay during the same time frame. From cal. A.D. 1,500 to cal A.D. 1,650, the only shell beads in South Bay and Central Bay mortuaries were Olivella lipped and spire-lopped beads. In fact, the North Bay was the seat of innovation during the L2 Horizon in the Bay Area, which saw the appearance of toggle harpoons, hopper mortar, plain, corner-notched, arrow-sized projectile points, clamshell disk beads, magnesite tube beads and secondary cremation.

Prehistoric sites are often marked by midden soil, a result of the build-up of decomposed organic matter, or by concentrations of obsidian and chert debitage, shellfish remains, obsidian tools (such as projectile points, knives and scrapers), various kinds of ground stone, and midden soil with charcoal, fire-affected rock, and other constituents. Evidence of prehistoric activity may be found between the open areas where basic subsistence activities occurred and the more upland position of sites that reflect their more permanently occupied settlements. Hunting implements such as projectile points are often found in these isolated contexts as well as certain types of implements used to procure and/or process various kinds of raw material into food, clothing, or other items.

ETHNOGRAPHIC SETTING

The project area lies within the ethnographic boundaries of the Southern Patwin, a southern division of the Wintun people belonging to the broader Penutian language family (Kroeber 1925, 1932; Johnson 1978; Heizer 1953). The Patwin occupied the southern Sacramento River Valley west of the river and their territory extended westward into the southeastern reaches of the northern Coast Ranges, and from the town of Princeton south to San Pablo and Suisun bays (Johnson 1978). The territory of the Southern Patwin stretched from central Yolo County to Suisun Bay and as far west as the lower Napa River (Golla 2011: 145). There are no known villages within the immediate vicinity of the project site.

The Patwin divided themselves into smaller autonomous village-communities, or tribelets, that made use of designated tracts of land. These smaller tribal communities moved within their areas and sometimes, with permission, would cross into the territories of other groups in order to take advance of the range of seasonally available natural resources that they needed for their subsistence and what they could obtain in exchange with other tribal groups. For instance, raw tool stone material such as obsidian cobbles and tools made from various different kinds of

obsidian that comes mainly from geographically delineated source areas located in Napa, Lake, or Sonoma Counties. These obsidian sources were 'owned' and managed by other tribal groups such as the Wappo, Southern Pomo (in Sonoma County), or Lake Miwok or Pomo tribelets from Lake County) and the Southern Patwin and Wintun groups would often exchange items from their territory (such as birds and plants that come from the marsh and wetlands) for finished items such as obsidian projectile points and knives (Heizer 1953).

The Patwin based their subsistence around a hunting and gathering economy that took advantage of a diverse range of inland and estuarine resources that could be gathered and/or obtained through trade and exchange amongst other tribal people who lived in other nearby areas. Up to five species of acorns provided the main vegetable staple, while a number of other nuts, berries, seeds, roots and tubers were also relied upon for food or making items such as fish poison, basketry, and other non-comestible materials. Tule elk and deer were the chief large game animals that were hunted, but a number of other mammals and birds, including antelope, bear, squirrels and rabbits, and ducks, geese, quail, and native or migratory shore birds also were also eaten. Fish were also a major part of the Patwin diet and included the usual taxa that were taken that included salmon, sturgeon, perch, pike, and trout, among other species that were once very prevalent in the Sacramento River drainage or its main tributaries or minor streams such as Gibson Creek or Ulatis Creek that flooded out onto the plane from the north and western foothills. In the areas where vernal pool terrain once persisted, the presence of marshes near the former perennial streams as well as seasonal wetlands were important even though they did not support a native fishery, these wetland environments did provide access to fresh-water mollusks, invertebrates, and amphibians and many varieties of wildfowl that in addition to fish were a major component of the native diet (Flynn 1994; Roop et al., 1989).

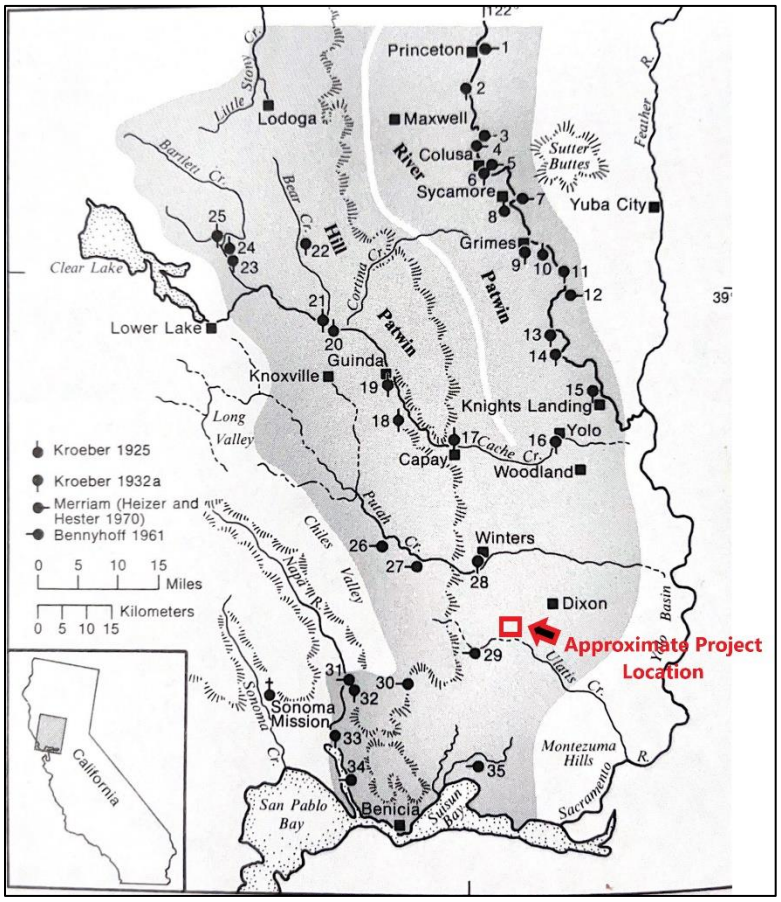

FIGURE 3 -- MAP OF PATWIN TERRITORY (JOHNSON 1978)

The project site lies within the territory of the Southern Patwin, whose territory stretched from central Yolo County to Suisun Bay and as far west as the lower Napa River. There are no known villages within the immediate vicinity of the parcels.

In the early years of the twentieth century the ethnographer S.A. Barrett traveled around the northern Bay area region, recording the linguistic boundaries of native tribal groups and the locations of both active and 'old' village sites. These are locations that had been lost, abandoned, or otherwise deserted by their Native inhabitants before or during the first official recording by

ethnographers in the early 1910s or 1920s (Barrett 1908; Kroeber 1925, 1932). Barrett's purpose was to reconstruct the cultural geography and social relationships of the various Native groups that had formerly inhabited the region. Among the village sites recorded by Barrett for the Patwin; three villages are within about 15-20 miles' distance from the project area. According to Barrett's description, these three villages were 'Old Village Sites,' and included *yu'lyul*, approximately two miles south of Suisun City; ***hesa'la***, at Suisun City, and *li'wai*, located near the town of Winters on the north bank of Putah Creek. *Li'wai*, or 'waving,' was the aboriginal name of Putah Creek, and Powers (1877) assigned the name '*Lowai'to*" to the people who lived on the creek in the foothills. It is interesting that it appears that the word *Lihuatyos*, a Spanish pluralization of Power's 'Liwai'to' was the other name given for the Los Putos land grant in which the project lies (Gudde 1998).

HISTORIC SETTING

The early history of Vacaville traces to the Mexican period when two individuals, Juan Manuel Vaca and Juan Felipe Peña, settled within the area encompassing today's Vaca Valley in 1841, followed by several other families including the Lyons, the Longs, the Hollingsworth, the Dollarhides, Edward McGreary, John Fisk, Mason Wilson, J.G. Parks, W.R. Miller, and W.A. Dunn (Gregory 1912: 75; Limbaugh and Payne 1978: 17). By 1842, Vaca and Peña petitioned the Mexican government for 44,380 acres of land that would be known as *Rancho los Putos* (Thompson & West 1878: 12). Vaca later deeded nine square miles of his rancho to rancher and land developer William McDaniel in 1850 to lay out a townsite bearing the former's name (hence "Vacaville") (Munro-Fraser 1879: 317). The town's early development is as follows:

> *McDaniel set apart for M.C. Vaca two hundred lots and sold L.B. Mizner an undivided half of the tract, three English miles square. The town was surveyed by E.H. Rowe, and the first building of Vacaville was erected that year by McDaniel. The second building was a small hotel kept by James McGuire, and the first store was run by E.F. Gillespie. This was the beginning of the beautiful town sitting on both sides of the Ulattis creek. In 1869, the Vaca Valley and Clear Lake Railway connected the town and township with the outside world… Costly buildings, public and private, adorn its streets, notably its noble Union High School, brick public school and public library* (Gregory 1912: 76).

The American Period and the California Gold Rush drew in a large influx of settlers, which, in turn, a great deal of prosperity to the city of Vacaville, as the fertile land of Vaca Valley, as well as much of Solano County, proved to be favorable for the development of agriculture. Among the most renowned industries to emerge within the area during this period were those dealing with fruit and grain production and the raising of livestock, particularly sheep and cattle (Limbaugh and Payne 1978: 44-50). In 1892, the city of Vacaville became officially incorporated (City of Vacaville 2023).

Among Vacaville's most significant features is the "Nut Tree" wayside place along Interstate 80 (Hoover et al. 1990: 472). Established in 1921 as a small roadside fruit stand by Edwin Bunny and his wife, Helen (the location of Nut Tree is the site of the 225-acre ranch of Josiah Allison, Helen's grandfather and a pioneer of 1854, who planted a black walnut on his property, hence the name "Nut Tree"), this location is a nod to the city's agricultural past (Zimmerman 2021: 3). Today, Nut Tree is a mixed-development and shopping center consisting of a family park (the Nut Tree Train) and several retail businesses.

A review of historic maps and other resources reveals that, like much of the vicinity, the project site has been associated with agriculture since at least the mid-19th century. As shown on historic maps from the last quarter of the 19th century, the parcels were part of the property of Mary Reynolds, who, according to patent data via the General Land Office (GLO) website, was deeded the property in 1869 (Figure 4) (Thompson and West 1878; Eager 1890; General Land Office

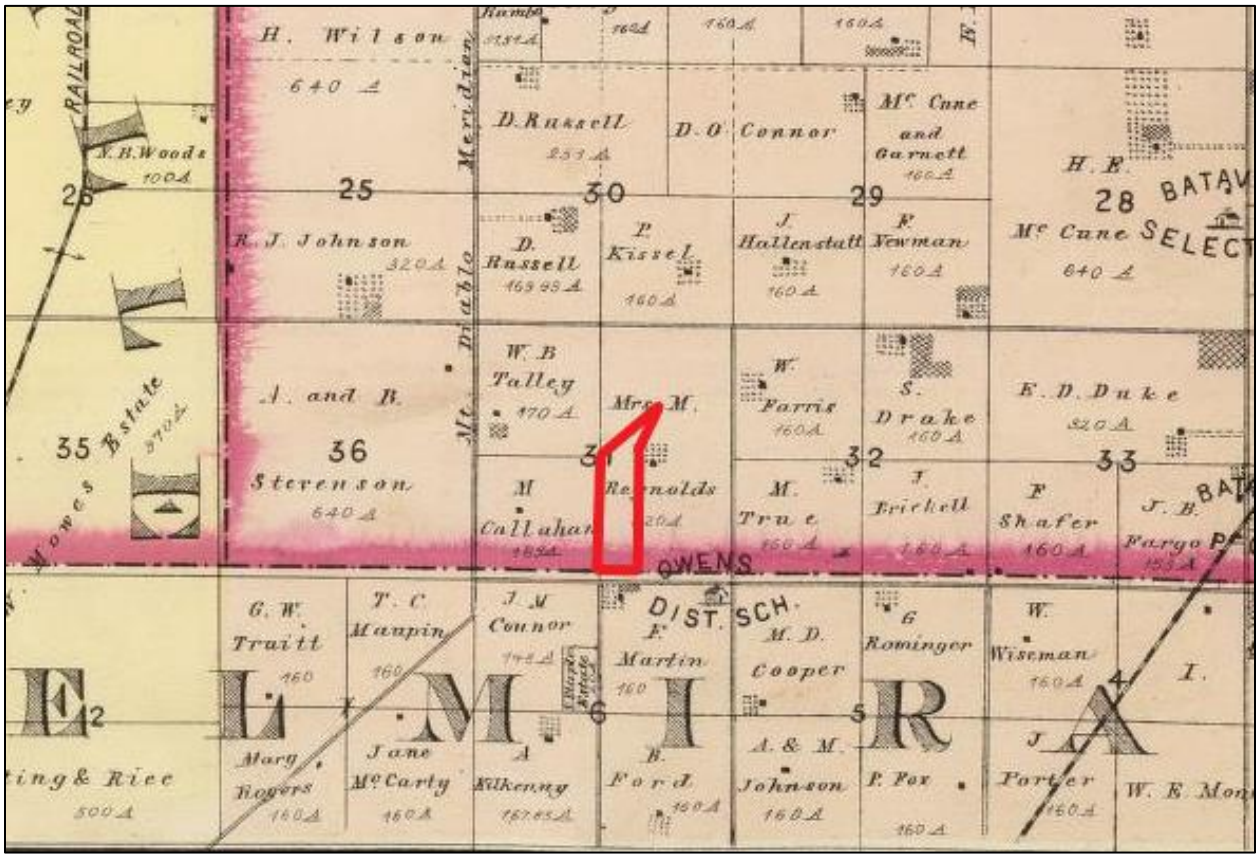

FIGURE 4 -- 1878 THOMPSON & WEST MAP OF SOLANO COUNTY

The project site lies within the 320-acre property of Mary Reynolds, who held the property through the late 19th or early 20th century.

2023). However, there is no information regarding previous buildings or structures specifically within the project area until at least the mid-20th century. The 1953 USGS Allendale 7.5' topographic quadrangle, coupled with aerial imagery from the late 1940s, indicates that the parcels are the site of the Vaca-Dixon Airport, which was installed in the years following World War II (ca. 1945-1948) (Regents of the University of California 1949; United States Geological Survey 1953; Freeman 2002). A former building was constructed in the northwest corner of the project site around this same time frame, having later been demolished before or during the 21st century (ca. 1993-2003; the remnants and foundation of this feature are still visible in modern aerial imagery) (NETRonline 2023). Additional features installed between the late 1930s and 1950s include a metal hangar building (ca. 1949-1957), a pathway spanning much of the western boundary of the project site (ca. 1937-1949), an ancillary shed (ca. 1949-1957), and an elongated farmhouse (ca. 1949-1957) (Figure 5) (Regents of the University of California; Freeman 2002).

GEOLOGIC SETTING AND BURIED SITE SENSITIVITY

Knowledge of the overarching geology of a particular region is essential when evaluating a project site's potential for containing buried archaeological resources. Generally, buried sites are found within landforms dating to the Holocene era (11,800 calibrated years before the present), during which humans first settled in California, although those dating to the latest Pleistocene may also

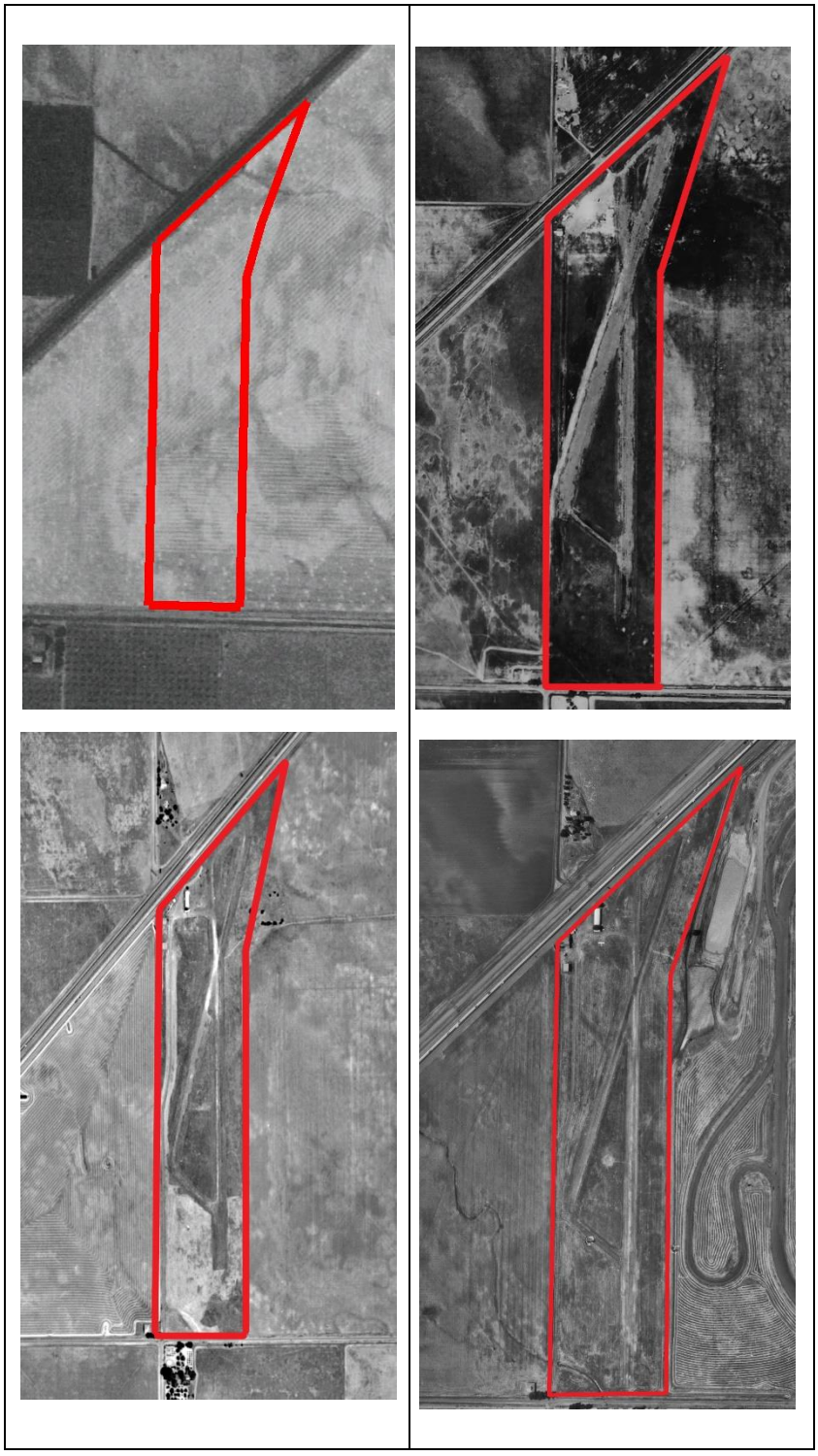

FIGURE 5 – LANDSCAPE EVOLUTION OF THE PROJECT AREA.

The following images provide an aerial overview of the development of the project site from the 1930s through the 1960s. From top to bottom, left to right, the years are as follows: 1937, 1949, 1957, and 1965.

contain archaeological deposits (Meyer and Rosenthal 2007: 15, 26). Alluvial fans and other landforms, namely those where water plays a large role in geomorphic processes (i.e., estuarine deposits, floodplains, basins, terraces), are also more likely to contain such resources, as flowing water creates a dynamic environment for the transportation, deposition, and burial of sediments that help to preserve (or, in some cases, disturb) artifactual material; these types of environments have also been used by humans intensively through time for activities such as hunting, gathering, and farming (Waters 1992: 115). According to Meyer and Rosenthal, "[b]uried archaeological potential can be conceptualized as a set of factors that either encouraged or discouraged human occupation of certain landforms (e.g., aspect, extent, setting, slope), and those factors that affected the subsequent preservation (i.e., erosion or burial) of those landforms" (2007: 25).

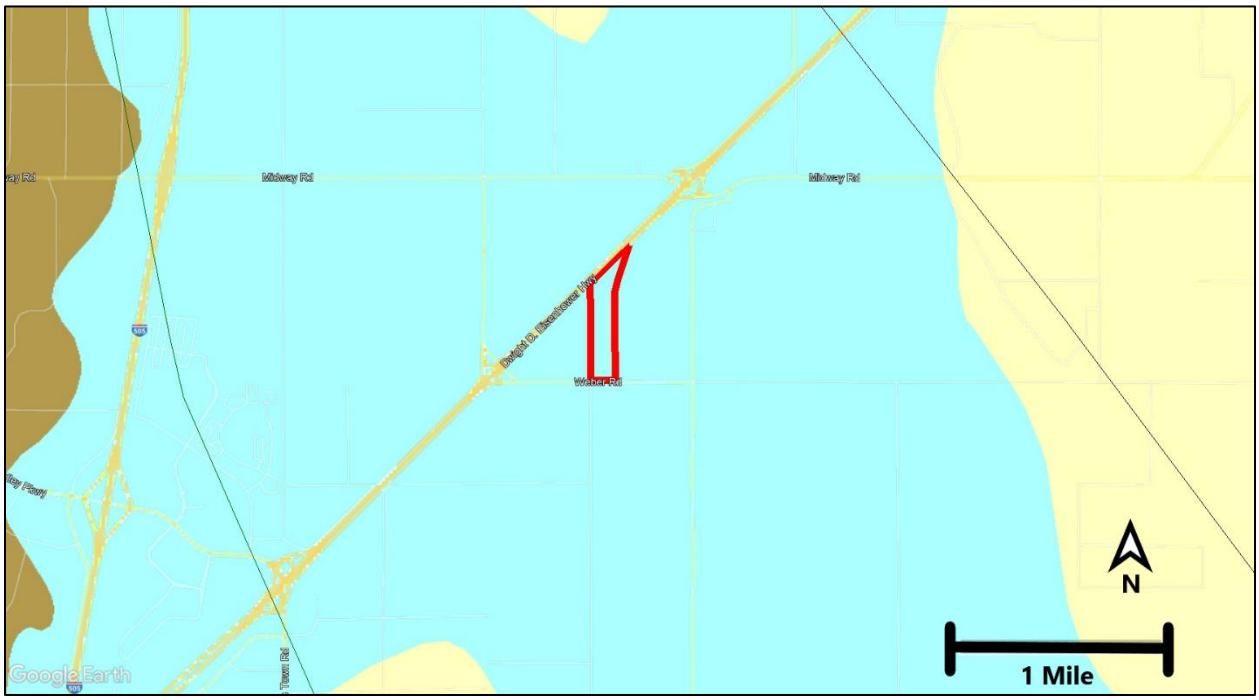

FIGURE 6 -- GEOLOGIC MAP OF CALIFORNIA (JENNINGS 2010) VIA GOOGLE EARTH.

The project site, which is indicated by the red polygon, lies within the unit *Qoa* (light blue area), which represents older alluvium from the Pleistocene era. Other units shown are *QPc* ("Pliocene and/or Pleistocene sandstone, shale, and gravel deposits; mostly loosely consolidated"; light brown area) and *Q* ("Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine, but includes marine deposits near the coast"; cream-colored area).

Based on a review of geologic data and related material, the project site does in fact lie within an alluvial floodplain largely dating to the Pleistocene era (Strand and Koenig 1965; Sims et al. 1973; Jennings 1977; Jennings et al. 2010a, 2010b; Wagner et al. 1981). As shown on the updated version of Jennings' geologic map of California, the parcel is largely comprised of the unit *Qoa,* which is characterized as "[o]lder alluvium, lake, playa, and terrace deposits" (Pleistocene in age) (Figure 8). According to Jennings,

> *The depiction of Quaternary geologic units on the original map by Jennings (1977) was simplified by the author who noted that "various surficial deposits of Quaternary age are lumped into the unit 'Q'." Since Jennings' work, subdivisions of these deposits have been found to have very different potential for liquefaction and for amplification of seismic shaking. Relative age of Quaternary*

> *alluvial fan deposits have also been found to correlate with potential for flooding. Since these units are important for evaluation of geologic hazards, the 2010 update of the geologic map includes a subdivision of Jennings "Q" into younger alluvium "Q" and older alluvium "Qoa"* (2010b).

Given this information, it is evident that the project area would have a lower potential for yielding buried archaeological sites based on the age of the soils, having been deposited before the point in geologic history when the earliest humans arrived in California.

PREVIOUS STUDIES

A search of the reports and site records on file at ARS and the NWIC indicates that there have been at least seven major studies conducted within a half-mile of the project area, two of which consisted of one or more sub-studies (S-023674 and S-044434). The only one that appears to have touched upon the project site, or at least portions of it, was conducted by Dana McGowan Seldner of the Archaeological Study Center at California State University, Sacramento as part of a preliminary archaeological study for the northeast sector of the city of Vacaville. However, no official resources were noted during this study; as such, there are none within the project site. In fact, the records search results from the NWIC do not indicate any resources within the established ½-mile radius. The nearest recorded resources, however, are historic-era properties and/or features that are reflective of Vacaville's farming history (e.g., P-48-000710, P-48-000711, CA-SOL-000382H, CA-SON-000383H). No prehistoric resources have been noted, which, in addition to the age of the alluvial deposits in the vicinity (see "Geologic Setting and Buried Site Sensitivity"), can possibly be attributed to decades of plowing and other farming activities that have disturbed much of the natural soil and any potential Native American resources.

Table 2 -- Reports/Studies within Half-Mile of Project Area

NWIC File No.	Date	Report Title	Authors	Affiliation	Includes Project Area?
S-007675	1985	A Preliminary Archeological Study of the Northeast Sector, Vacaville, Solano County, California.	Dana McGowan Seldner	Archeological Study Center, California State University, Sacramento	Yes
S-016740	1993	Archaeological Survey Report, proposed replacement of two bridge structures (Bridges #23-83L and 23-83R), 10-Sol-80 P.M. 31.0/40.0 10-110 39180K	Virginia D. Lee and Susan E. Page	Caltrans	No
S-021618	1996	Negative Historic Property Survey for the Proposed Replacement of the Bridge at Gibson Creek (Br. No. 23C-125) on Byrnes Road (04-SOL-CR-0) in Solano County, California	Steve Heipel	KEA Environmental, Inc.	No
S-023674	1994	Archaeological Investigations, PGT-PG&E Pipeline Expansion Project, Idaho, Washington, Oregon, and California: Volume 1 Project Overview, Research Design and Archaeological Inventory	Michael J. Moratto et al.	INFOTEC Research, Inc., Far Western Anthropological Research Group, Inc.	No

NWIC File No.	Date	Report Title	Authors	Affiliation	Includes Project Area?
S-023674a	1995	Volume IIC, Book 1 and 2 Summary Reports: Prehistoric Sites, California	Hildebrandt et al.	INFOTEC Research, Inc., Far Western Anthropological Research Group, Inc.	No
S-023674b	1995	Volume III Summary Reports: Historic Sites, Archaeological Investigations, PGT- PG&E Pipeline Expansion Project, Idaho, Washington, Oregon, and California	Gary C. Bowyer et al.	INFOTEC Research Inc.	No
S-023674c	1995	Volume IV Synthesis of Findings: Archaeological Investigations, PGT-PG&E Pipeline Expansion Project, Idaho, Washington, Orgeon, and California	Ricky G. Atwell et al.	INFOTEC Research Inc. and Far western Anthropolical Research Group Inc.	No
S-023674d	1995	Volume V Technical Studies: Archaeological Investigations, PGT-P&E Pipeline Expansion Project, Idaho, Washington, Oregon, and California	Robert U. Bryson et al.	INFOTEC Research Inc. and Far Western Anthropological Research Group Inc.	No
S-023674e	1995	Volume V Technical Studies Appendices Book 1-3: Archaeological Investigations, PGT- PG&E Pipeline Expansion Project, Idaho, Washington, Oregon, and California	Richard M. Pettigrew et al.	INFOTEC Research Inc. and Far Western Anthropological Research Group	No
S-023674f	1994	37.0 Site CA-CCO-368	Sharon Waechter et al.	*Far Western Anthropological Research Group, Inc.; **INFOTEC Research, Inc.	No
S-023674g	1992	36.0 Site CA-SOL-348	C Kristina Roper and Barry A. Price	INFOTEC Research, Inc	No
S-030043	2005	Cultural Resources Investigation of the Proposed Sacramento Area National Cemetery, Solano County, California; VA Project Number 921PC2001, Contract Number V786P-714	John W. Dougherty, Cindy Baker, and Mary L. Maniery	PAR Environmental Services, Inc.	No
S-034250	2007	Cultural Resources Survey Report for the Proposed Potable Water Pipeline for the National Cemetery Project (W.O. #07-1717), Solano County, California	Jason A. Coleman	Solano Archaeological Services	No
S-044434	2013	Historic Property Survey Report, District 4, Solano County, Route 80, 0412000483; EA 4G510	Andrew Hope and Jennifer Blake	Caltrans, District 04	No

NWIC File No.	Date	Report Title	Authors	Affiliation	Includes Project Area?
S-044434a	2013	Archaeological Survey Report for the Proposed Seismic Restoration and Bridge Replacement Project, Solano County, California, 4-SOL-80, PM 31.36/32.62, EA 4G510	Jennifer Blake	Caltrans, District 04	No

RESULTS OF SURFACE EXAMINATION

FIGURE 7 – THE NOTED REMNANTS OF THE CONCRETE RUNWAY OF THE VACA-DIXON AIRPORT.

The left image is the southwestern end of the extant portion of the concrete runway (looking northeast); the right image shows the northeastern end (looking southwest).

On February 2nd, 2023, the author and Brehn Erskine conducted a field survey of the entire project site via a series of transects spaced roughly 5 meters (16 feet) apart. As previously mentioned, the project area is an agricultural property that has largely been used for cattle grazing. Within the southern section, there is a small canal spanning from east to west. Although the topsoil was for the most part visible, dense grasses also proved to be an impediment; as such, a trowel was used every few meters in order to view the soil in areas obscured by vegetation. In general, the soil observed was largely a light/yellowish (10YR 5/4) to grayish brown (10YR 5/2) sandy loam, although some clay material was also apparent. The soil also showed heavy levels of disturbance as a result of being trampled by cattle and other livestock over the years.

Regarding cultural resources, the team did not find any indications of prehistoric occupation; the only artifactual material observed was modern trash (glass, plastic, metal, etc.). However, several mid-20th century resources were noted, all of which seem to be related to the former Vaca-Dixon Airport that was installed during the 1940s (see “Historic Setting”). The only true remnants of the airstrip were visible portions of the concrete runway spanning northeast-southwest (approximately 348 total yards; varying width of 10-18 feet). Again, dense grasses and vegetation possibly

FIGURE 8 – CLOSE-UP OF THE CONCRETE REMAINS OF THE RUNWAY OF THE FORMER VACA-DIXON AIRPORT.

obscured additional portions of the runway, although outlines of the airstrip's alignment seemed apparent within the grass (this is the case in aerial imagery). Other standing features noted include the metal hangar, an ancillary shed, the gravel pathway along the western boundary, and the elongated farmhouse along the northern boundary. Several photographs and GPS points were taken of these resources were taken during the survey.

CONCLUSIONS AND RECOMMENDATIONS

The property does not contain any archaeological resources, nor will the proposed project have any impact upon the known archaeological resources of the area. As such, further archaeological investigation is not warranted at this time. However, if a concentration of artifacts is encountered during earth disturbing activities, work should cease in that area and a qualified archaeologist should be notified and an evaluation performed to assess the material composition, scientific importance, and any possible threat from future residential development.

Artifacts that are typically found associated with prehistoric sites include humanly modified stone, shell, bone or other cultural materials such as charcoal, ash and burned rock indicative of food procurement or processing activities. Prehistoric domestic features include hearths, fire pits, or house floor depressions whereas typical mortuary features are represented by human skeletal remains. Modified cobbles or boulders of schist also might be found in buried contexts. Historic artifacts and features include all by-products of human land use greater than 50 years of age (outhouse shafts, trash pits, ceramics, glass, nails, etc.).

The extant features associated with the former Vaca-Dixon Airport do not appear to be significant; thus, there is no recommendation for preserving them. However, these resources will be properly recorded and detailed onto site records and DPR forms.

If human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission should be contacted by the Coroner so that a "Most Likely Descendant" can be designated.

FIGURE 9 – MID-CENTURY FEATURES ASSOCIATED WITH THE VACA-DIXON AIRPORT

From left to right, top to bottom: (1) The metal hangar building, (2) ancillary shed near hangar, (3) elongated farmhouse, and (4) dirt/gravel pathway beginning from entrance of property and spanning along much of the western and northern boundaries.

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Bowyer, Gary C., et al.
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APPENDIX 1— SIGNIFICANCE AND CULTURAL RESOURCES

To be significant an archaeological site must qualify for registration as an "historic resource" the following criteria must be met for this listing:

> *An archeological site may be considered an historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (PRC § 5020.1(j)) or if it meets the criteria for listing on the California Register (14 CCR § 4850). CEQA provides somewhat conflicting direction regarding the evaluation and treatment of archeological sites. The most recent amendments to the CEQA Guidelines try to resolve this ambiguity by directing that lead agencies should first evaluate an archeological site to determine if it meets the criteria for listing in the California Register. If an archeological site is an historical resource (i.e., listed or eligible for listing in the California Register) potential adverse impacts to it must be considered, just as for any other historical resource (PRC § 21084.1 and 21083.2(l)). If an archeological site is not an historical resource, but meets the definition of a "unique archeological resource" as defined in PRC § 21083.2, then it should be treated in accordance with the provisions of that section.*

If an archaeological site does not qualify for listing, the directive is clear. The Public Resources Code states:

> *(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.*

APPENDIX 2 – PROFESSIONAL STANDARDS FOR CONSULTANTS

Secretary of the Interior's Standards

The minimum professional qualifications in archeology are a graduate degree in archeology, anthropology, or closely related field plus:

1. At least one year of full-time professional experience or equivalent specialized training in archeological research, administration or management;

2. At least four months of supervised field and analytic experience in general North American archeology; and

3. Demonstrated ability to carry research to completion.

In addition to these minimum qualifications, a professional in prehistoric archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the prehistoric period. A professional in historic archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the historic period.

APPENDIX 3 – CONFIDENTIAL APPENDICES

This section consists of archaeological site record forms that cannot be distributed to the public.

Appendix E HISTORIC RESOURCE EVALUATION

HISTORIC RESOURCES EVALUATION

VACA-DIXON AIRPORT, VACAVILLE

PREPARED BY:

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ARCHAEOLOGICAL/HISTORICAL CONSULTANTS

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AUGUST 2023

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APPENDIX 1: NORTHWEST INFORMATION RECORD SEARCH

INTRODUCTION AND SUMMARY OF FINDINGS

The former Vaca-Dixon airfield at I-80 and Weber Road in Vacaville, Solano County (APN 0109-270-050 and 0109-220-060) is proposed for redevelopment as a materials storage yard facility. The two parcels total approximately 40 acres. The built environment resources at the property include two aircraft hangars, a shed, a runway, and an access road.

To ensure that the proposed project would not cause a substantial adverse change in the significance of a historical resource (as defined in the CEQA Guidelines [14 CCR §15064.5]), Archaeological/Historical Consultants (A/HC) of Oakland, California, was retained to evaluate whether the buildings are eligible for the California Register of Historic Resources (CRHR).

This report presents the results of a historic resources survey of the property completed in August 2023. Based on field recording and historical research, the hangars, shed, access road, and runway at the Vaca-Dixon Airport appear individually not eligible for the CRHR. The property as a whole also appears not eligible for the CRHR.

For an assessment of the archaeological sensitivity of the property, please see the accompanying report prepared by Archaeological Resource Service (Von Pinnon 2023).

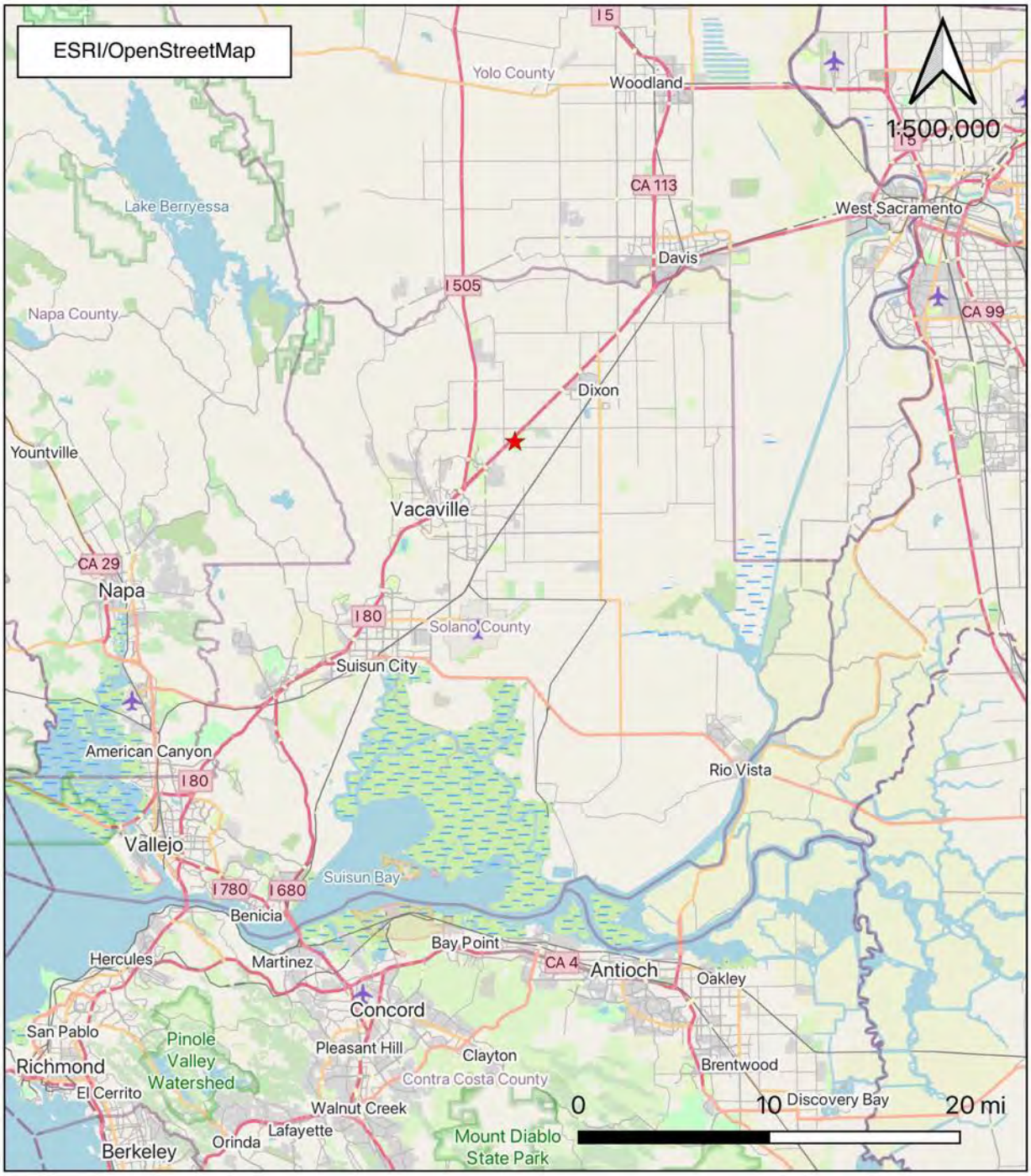

Figure 1: Location Map

Figure 2: Vicinity Map

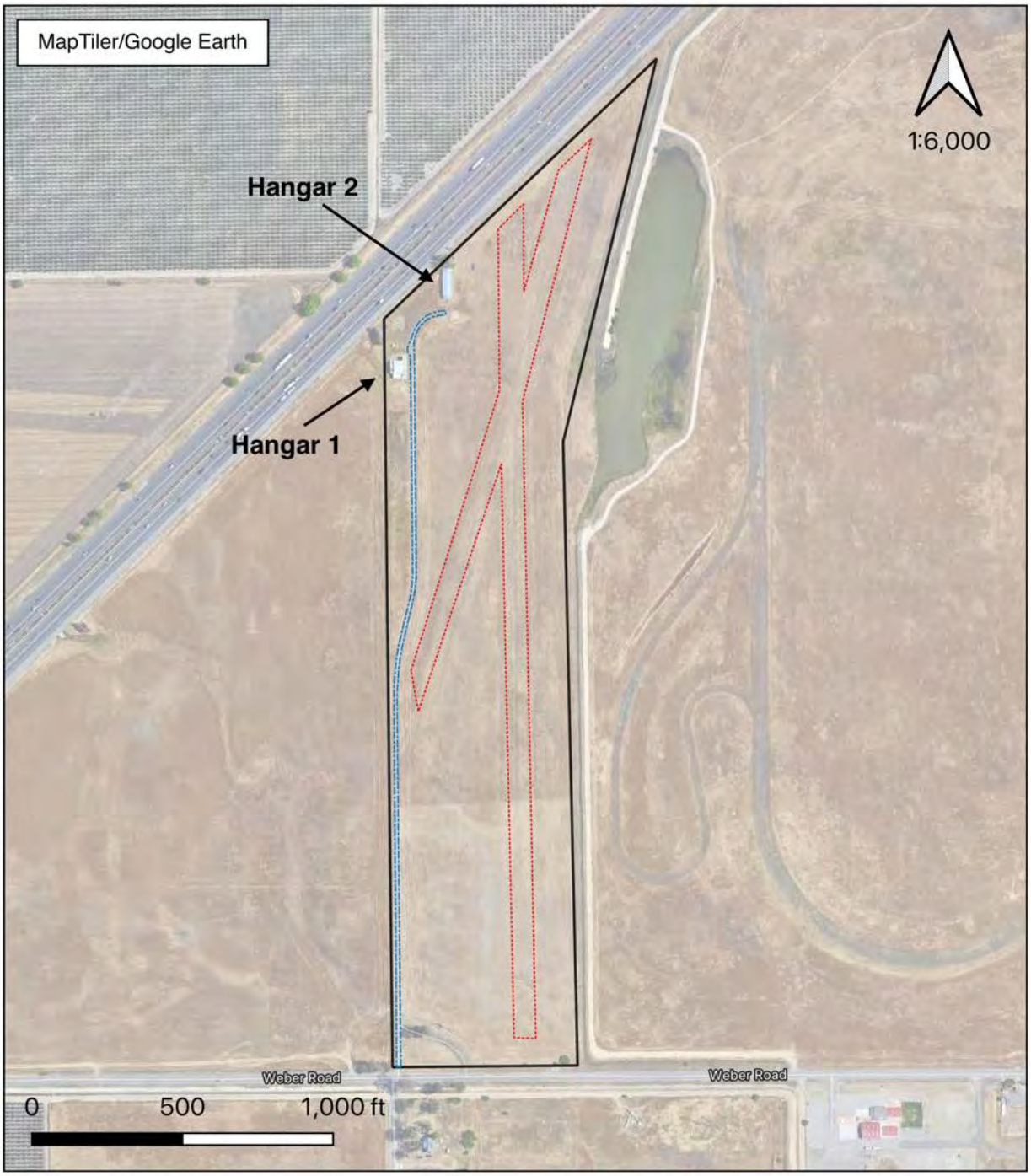

Figure 3: Project Area Limits

DESCRIPTION OF BUILT ENVIRONMENT RESOURCES

SETTING AND OVERVIEW

The project area is made up of two parcels (0109-270-050 and 0109-220-060), which total 40 acres. It is bounded on the north by I-80 and on the south by Weber Road. The project area is located at 80 feet in elevation, has a flat aspect, and is covered in grass.

Five built environment elements were recorded:

- **Hangar 1** is located at the northwest corner of the property. Constructed in the 1970s, it measures 55.5 feet by 39.5 feet and has a single central hangar space flanked by storage additions.
- **Hangar 2** is located northeast of Hangar 2 near the I-80 fence line. Constructed in the 1950s, it measures 94 by 26 feet and has five small hangar bays, two bathrooms, an office, and a storage room.
- The **compressor shed** is 8 by 10 feet and is located 40 feet north of Hangar 1.
- The **access road** connects the buildings to Weber Road along the west side of the property.
- A 750-foot remnant of the **runway** is located in the center of the project area.

Figure 4: Hangar 1 (left) and compressor shed (right), looking southwest.

Figure 5: Site Plan

Figure 6: Hangar 1 Exterior. Upper left: looking southwest. Upper right: east (front) side. Center left: looking northwest. Center right: looking northeast. Lower left: west (rear) side. Lower right: looking southeast.

HANGAR 1

Hangar 1 is a box hangar formerly used for airplane storage and, more recently, as a mechanic's shop and paint storage. It is located at the northwest corner of the project area about 200 feet south of I-80. Though no building permits are extant, aerial photographs and interviews suggest that the building was constructed in the 1970s. The plan was originally rectangular, but additions on the south and west sides have given it a shallow L-shaped plan. The building is of wood-frame construction with studs spaced at 24 inches center-to-center. The roof of the original building is gabled; the western addition has a gable that is lower than the main gable, while the southern addition has a shed roof. The sides and roof of the building are covered with 24-inch-wide corrugated steel panels that match the stud spacing. The building has a concrete slab floor throughout. The rear of the building is painted with lettering that appears to read "Travis Flight Center / [illegible] the [illegible] / Exit Weber Road 447-4184". The lettering is partially covered by plywood panels that were used to advertise a fruit stand. These signs would be easily visible to eastbound traffic on I-80.

The original building was 40 by 29.5 feet, with 14.5-foot 'wings' on either side of the front (east) façade to hold the tracks for three sliding door panels. An addition filled in the space between the "wing" and the building on the southern side, and another 10x40 foot addition is on the rear (west) side of the building. With additions, the building measures 55.5 feet north-south and 39.5 feet east-west. An oval concrete apron 12 feet wide surrounds the building.

Inside, the building has five interior spaces. The main hangar space (Room 1 on the plan below) measures 39 feet by 29 feet with an approximately 20-foot ceiling. The interior is drywalled with recessed fluorescent light panels in the ceiling. On the east side are three 14-foot-wide sliding doors. There are 3-foot-wide hinged doors on the north and south walls near the east facade. The northern hinged door leads outside, while the southern leads to two storage rooms in the southern addition. A 5-foot-wide door on the west side leads to the rear storage addition. Two exhaust fans are inset in each of the north and south walls, and a work table is on the southern wall.

The western addition (Room 2) is 10 feet wide and 39 feet long, with doors on the north and south sides leading outside, in addition to the door leading to the hangar. It has a gabled roof that is lower than the main gable. Open shelving runs along the west wall, and there is a bathroom in the southwest corner which measures 5 feet square and contains a sink and a toilet. The east wall of the addition is clad in corrugated metal, which was presumably the original exterior of the hangar. The west, north, and south sides of this space are drywalled, as is the bathroom. A wooden staircase on the east side of the room leads up to a storage loft.

The southern addition to the building contains three rooms. Room 3 measures 12 by 10 feet. It connects to the hangar on its north side, to Room 4 on the west side, and opens to the outside on the south side with a sliding panel door. Room 4 measures 14 by 12 feet and is drywalled inside. Both rooms are empty. Roof 5 is a narrow storage area on the southwest side of the building. It is 4 feet deep and 14.5 feet long and is accessed from the exterior of the building.

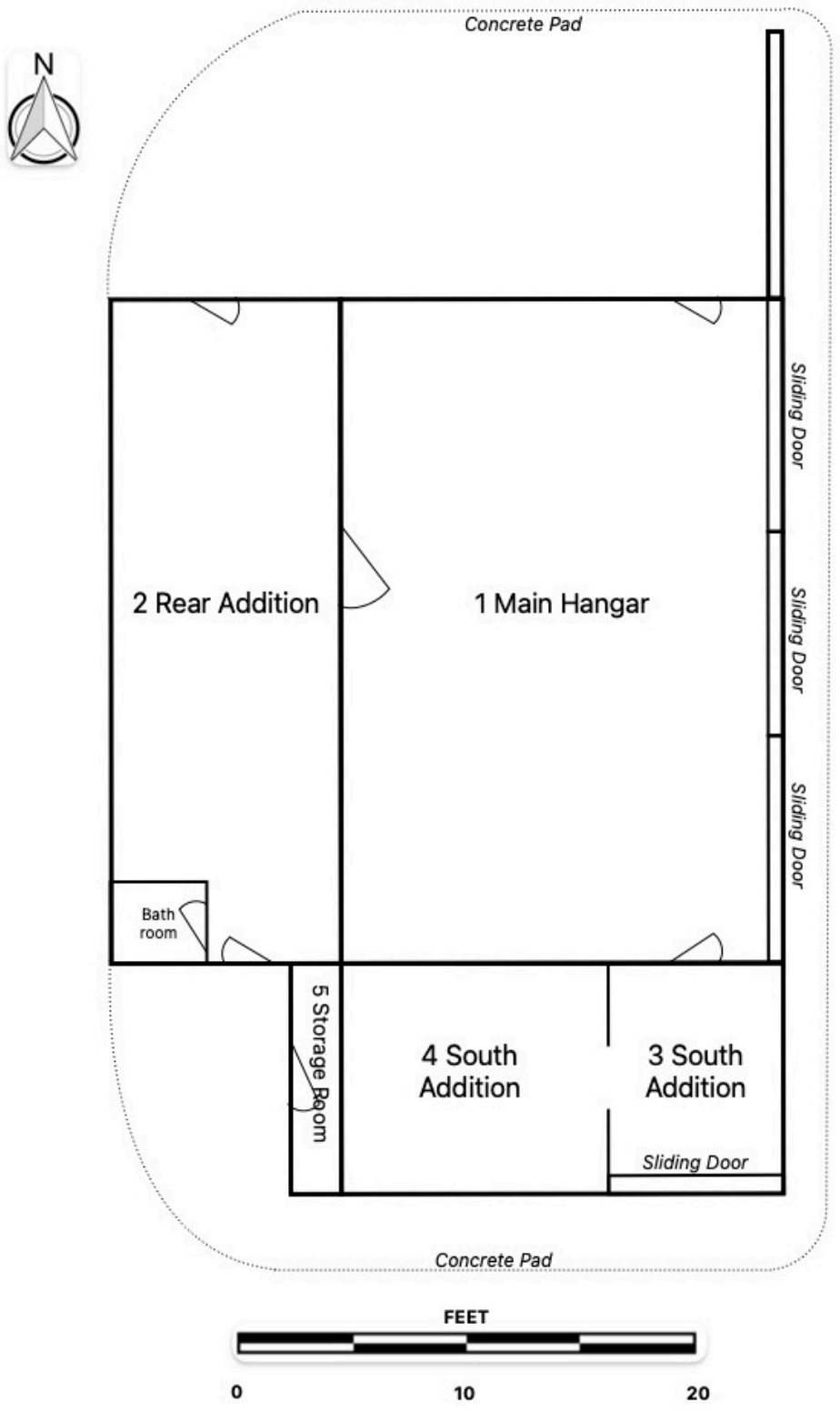

Figure 7: Hangar 1 Floor Plan

Figure 8: Hangar interior. Upper left: looking east to sliding doors. Upper right: looking northeast. Lower left: looking southwest, with doors to south addition (at left) and rear addition (at right). Lower right: exhaust fan detail.

Figure 9: Hangar 1 additions. Upper left: rear addition (Room 2), looking south. Upper right: south addition, Room 3. Lower: south addition, Room 4.

HANGAR 2

Hangar 2 is located 250 feet northeast of Hangar 1 and 20 feet south of the I-80 fence line. The rectangular plan building is 94 feet long and 26 wide, with the long axis oriented north-south. It is of timber frame construction, with exterior walls and gabled roof covered in corrugated metal. The building is visible on the 1957 aerial photograph of the area, but not on the 1949 aerial photograph, suggesting it was built in the first half of the 1950s (Fairchild Aerial Services 1949; Cartwright and Company 1957).

The south side of the hangar has a short porch roof over three doors. The two right hand doors lead to 4 by 6-foot bathrooms with drywall interiors. The door on the left leads to the main hangar space. Behind the bathrooms, a door on the east façade opens onto a storage space 8 feet wide and 13 feet deep with built-in shelves and one aluminum slider window. At the northeast corner of the hangar, a small porch roof is over a door that leads into a carpeted office room with painted plywood walls. Two aluminum slider windows open onto the office.

The remainder of the building is a hangar space divided into five bays. The bays are separated by posts that are 13 feet center on center, yielding 12.5 feet of usable space between them. The posts, which are made of joined 2x6s, support wood roof trusses connected to triangular iron plates at the roof peak. Diagonal braces on either side of the central bay run the width of the building. Above the bays is a wooden loft 10 feet high and 4 feet wide that runs the length of the building. A conduit runs under the loft, with a light fixture at each bay.

Sliding door panels 10 feet wide open on both east and west sides. On the west side, the entire length of the building except for the central bay has sliding doors. On the east side, sliding doors open onto the three central bays. The sliding doors are made of corrugated metal panels with diagonal braces.

The building has a concrete slab floor in poor condition. A worktable is at the northwest corner of the hangar.

Figure 10: Hangar 2. Upper left: east side. Upper right: south and east sides. Center left: south and west sides. Center right: west side. Lower left: north side. Lower right: Office entrance.

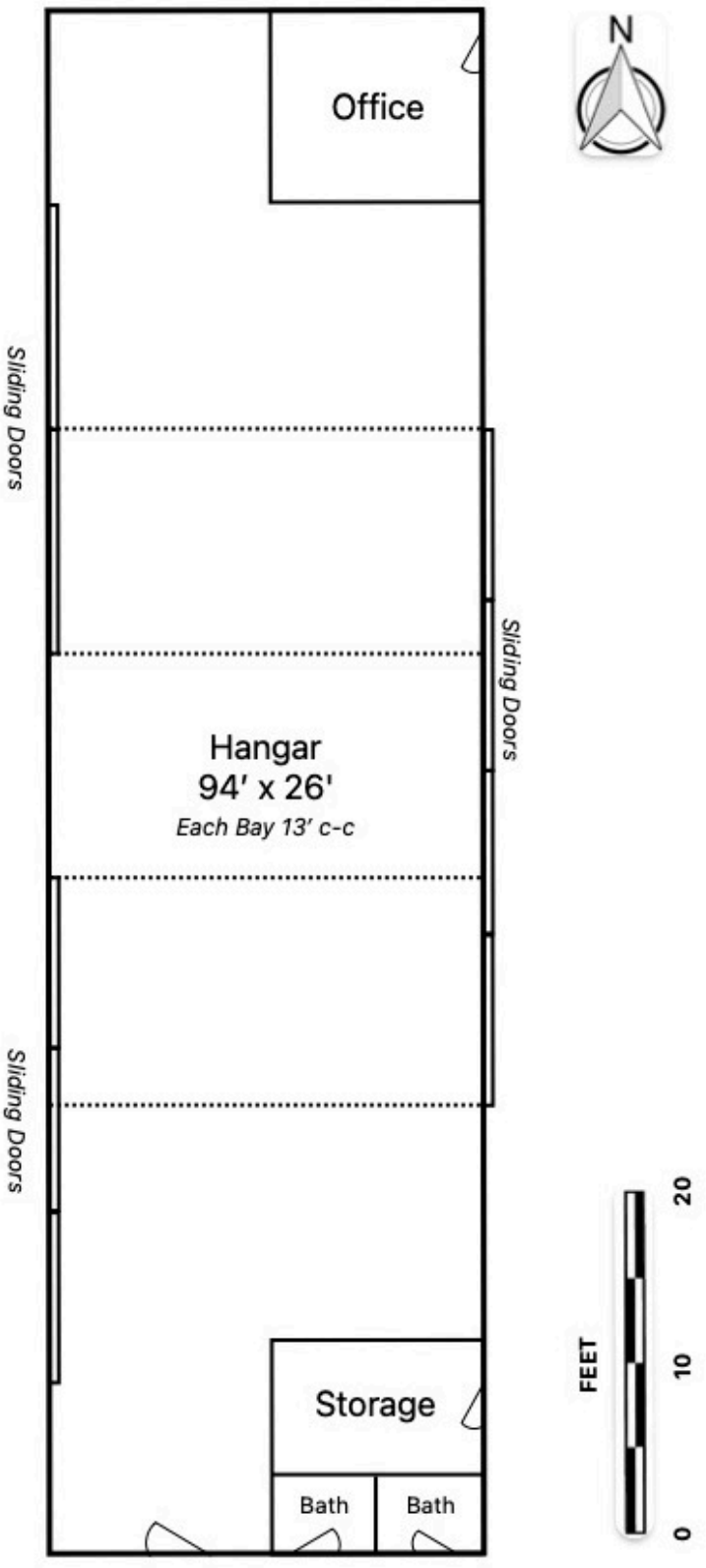

Figure 11: Hangar 2 Floor Plan

Figure 12: Hangar 2 Interior. Upper left: center bay, looking west. Upper right: looking south. Center left: looking south. Center right: looking north. Lower left: office, looking northeast. Lower right: storage room.

COMPRESSOR SHED

An 8 by 10-foot frame shed with corrugated metal sides is located 40 feet north of Hangar 1 and 210 feet southwest of Hangar 2. It has a shed roof also covered in corrugated metal and a concrete slab floor. Inside, 2x3 studs spaced 24 inches center-on-center are visible. A door is on the east side, and an opening on the west side is covered in chicken wire. The shed holds an air compressor and tank.

Figure 13: Compressor shed east and south sides (upper left), north and west sides (upper right), east side (lower left), and interior (lower right)

ACCESS ROAD

The access road runs north-south and connects the hangars to Weber Road. It is 2,400 feet long. The road is graveled and compacted. It was originally about 16 feet wide, but the edges are now overgrown.

Figure 14: Access Road, looking south toward Weber Road. Hangar 1 at left.

RUNWAY

Two runways were originally present at Vaca-Dixon Airport, which were 2000-2500 feet long. No trace of the north-south runway was located during the field visit. A 750-foot long section of the northeast-southwest runway is still visible, though the asphalt is heavily overgrown with grass and thistles. The surviving asphalt area is approximately 12 feet wide, but the runway was likely to have been wider when first paved.

Figure 15: Runway, looking northeast with hangars at upper left.

HISTORIC CONTEXT

VACAVILLE AND TRAVIS AFB

As the *Californio* rancho class grew after Mexico's independence from Spain in 1821, increasing competition for land led to the expropriation of church lands by secularization in 1834. Much of the most desirable land was given as Ranchos to people in favor with the contemporary government of California. The project area is ½ mile east of the Rancho Los Putos land grant, given to Juan Manuel Vaca and Juan Felipe Peña in 1842. Vaca and Peña and their families built houses in the lower Vaca Valley; by 1879, however, most of the grant had been sold to American settlers (Beck and Haase 1974:29; Hoover *et al.* 1966:511-512).

The nearby town of Vacaville began about 1850 when Vaca deeded nine square miles to William McDaniel on the condition that he lay out a townsite and name it. By 1870, fruit and nut growing overtook ranching as the primary agricultural activity in the Vacaville area, spurred by the 1868 completion of the California Pacific Railroad linking Sacramento and Oakland (Hoover *et al.*1966:522-523). In 1869, the Vaca Valley and Clear Lake Railroad was constructed to connect Vacaville and points north to the mainline at Elmira. Both railroad lines were later acquired by the Southern Pacific (Fickewirth 1992).

By 1878, the region around the project area was a mosaic of large-lot agricultural properties ranging from 60 to 320 acres in size, many with small orchards (Thompson and West 1878; Eager 1890). By 1915, the Vacaville City Limits had been extended to Leisure Town Road, and State Highway 560 (later US 40 and today I-80) had been constructed from downtown Vacaville to Davis. US 40 was converted into a divided freeway and renamed Interstate 80 in the late 1960s. I-80 connects the State capital of Sacramento with Lake Tahoe and the Sierra Nevada Mountains to the east and the San Francisco Bay Area to the west.

World War II brought changes to the Vacaville area. Shortly after Pearl Harbor, a military base was planned on the open prairie near the towns of Fairfield and Suisun to serve as a home for medium bombers and fighters assigned to defend the west coast. The Army Corps of Engineers built the first runway and temporary buildings in the summer of 1942, and the new base called the Fairfield-Suisun Army Air Base was opened on June 1, 1943. Its scope quickly grew, and it became a major military airport and supply transfer point, with a primary mission of servicing and ferrying tactical aircraft from California to the war in the Pacific. By 1945, it had become the West Coast's largest airport (TAFBM 2023).

In the immediate postwar period, the base continued to airlift troops and supplies to occupied Japan and Korea and serve as a processing center for GIs returning to the United States. In 1949, Strategic Air Command became the major command at the base, which was renamed Travis Air Force Base in 1952. During the postwar period, the base grew to 6,258 acres and added new structures, larger runways, and more housing to support the base's activities. In 1958, Travis' main function returned to military air transport. Travis AFB remains the largest airlift organization in the Air Force with over 13,900 active duty, reservists, and civilian employees affiliated with the base, which has become an important part of regional identity (TAFBM 2023).

THE VACA-DIXON AIRPORT

ETHEL BYRNES SAWTELLE AND RECREATIONAL AVIATION IN THE POST-WORLD WAR II PERIOD

When the Vaca-Dixon airport was built between 1945 and 1947, the property was owned by Ethel Byrnes (1903-2001), who had recently inherited it from her late husband, Fredrick Andrew Byrnes (1899-1944). Fredrick was a farmer and rancher who grew up between Vacaville and Dixon and owned at least 320 acres, including the project area. In 1940, the Byrnes lived on a farm in Elmira, Solano County (US Census 1940). In 1953, Ethel married George C. Sawtelle (1904-1972). George was a truck driver, and they also lived in Elmira. After World War II and before her marriage to George Sawtelle, the portion of Ethel's land that is now the project area was developed as a small general aviation airport.

While aviation had begun to be accessible to civilians prior to World War II, after the war there were many more trained pilots, many surplus airplanes, and new mass-production techniques that led to lower prices in aircraft construction. The war also created a generation of citizens used to the idea of air travel but whose access to flight had been limited during the war itself. Once the war was over, Americans, who had read stories, seen, and heard about heroic flights during the war, wanted to fly. The US government passed the Federal Airport Act of 1946, which helped increase funding to construct small airports throughout the country, continue training new pilots, and maintain the enthusiasm for aviation, which the government believed would be the future of the country's defense (NPS 1998; NPS 2011:201).

EARLY DEVELOPMENT OF THE AIRPORT

While the exact construction date of the Vaca-Dixon Airport is unknown, it was most likely built between 1945 and 1947. The 1945 Army Air Force Airfield Directory does not contain it on its list of active airfields, but it is mentioned in an article in the *Santa Cruz Sentinel* from July 19, 1947 (*Santa Cruz Sentinel* 1947a; Freeman 2022). The July article and a second from the same newspaper in October describe a group of 20-35 fliers from Napa County and the Vaca-Dixon Airports who flew down to the Santa Cruz-Capitola Airport for breakfast and to tour the area. The events were part of a planned round of such recreational activities that connected aviation enthusiasts from throughout the region and showed off their towns and airports (*Santa Cruz Sentinel* 1947a,b).

Recreational flights were not the only activity at Vaca-Dixon Airport in the late 1940s. According to newspaper articles and advertisements, there were also small airplane sales and flight instruction. A 1948 advertisement lists a Taylorcraft side-by-side for sale at the Vaca Dixon Airport (Oakland Tribune 1948). In 1948, a gasoline storage pit at the airport exploded, shaking the ground, throwing William L. Beeman, a 27-year-old flight instructor, into the air and seriously burning him (Long Beach Press-Telegram 1948; Santa Barbara News-Press 1948).

In 1948, the Sacramento Section Chart depicted the airport as having a 2,500-foot unpaved runway (Freeman 2022). The 1949 aerial photograph shows two unpaved runways and one structure near the western side of the property near its intersection with I-80, corresponding with an empty concrete pad visible today north of Hangar 1, which may have been an administrative building. A second larger structure that may have functioned as a hangar appears closer to the runways (Fairchild Aerial Surveys

1949). The airport's size is in keeping with the type of plane advertised as being sold there. The Taylorcraft side-by-side was an American-made light, single-engine monoplane built in large numbers in the 1930s and 1940s as general aviation planes. They were commonly used by the Civilian Pilot Training Program (CPTP), a 1938-1944 flight training sponsored by the US government to increase the number of civilian pilots, with the expectation of increased military preparedness – the effects of which were apparent in World War II (Strickland 1970). The planes were sturdy, and some made in the pre-war period are still flown today. It is not surprising that Taylorcraft planes would have been flown from an airport like Vaca-Dixon during the post-war period.

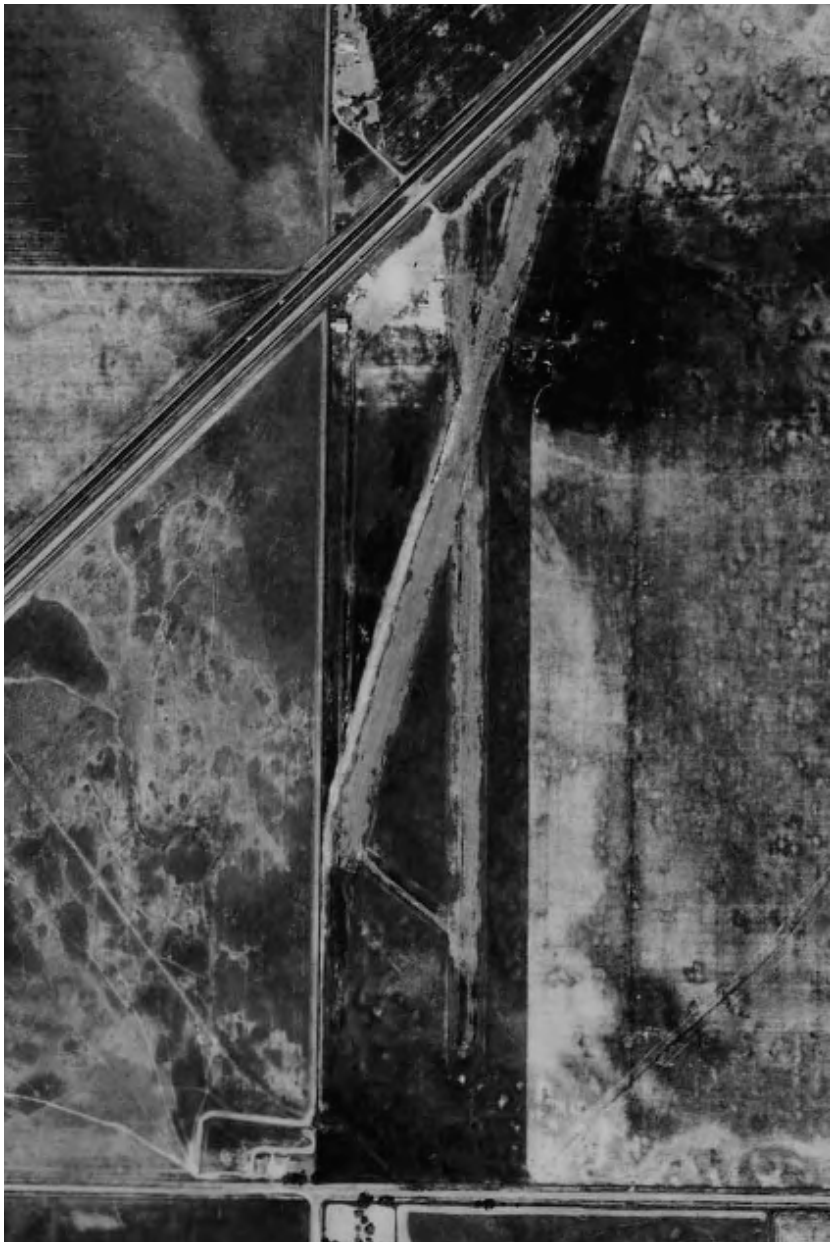

Figure 16: 1949 aerial photograph (Fairchild Aerial Surveys 1949)

TRAVIS AFB AERO CLUB (1954-1956)

The Travis AFB Aero Club briefly flew out of Vaca-Dixon Airport from 1954 to 1956 before moving to their own airport on Travis Airforce Base property (Freeman 2022). The Aero Club has always been associated with Travis, providing flight training and aircraft rentals for people associated with the base since 1954 (Travis Aero Club 2023). An article in the Sacramento Bee from 1955 recorded the crash of Airman First Class Richard Hyde of Travis AFB, who was flying a plane from the Vaca-Dixon Airport during his time off. The airport operator at the time was a man named Sidney Waldrop (Sacramento Bee 1955). During the Aero Club's tenure, the Vaca-Dixon Airport was depicted as having 2 runways oriented north-south and northeast/southwest and three structures on the property along US 40 (now I-80) (USGS 1953; Freeman 2022). The 1957 aerial photograph shows two runways with two structures near the property's western boundary. One of these is the building mentioned above; the southern one is in the same location as Hangar 1 but does not appear to have a gabled roof, suggesting that it may have been a different building. The 1957 photograph also shows Hangar 2, with a small plane parked nearby. Hangar 2 was therefore built between 1949 and 1957 (Cartwright and Company 1957).

Figure 17: 1957 aerial photograph (Cartwright and Company 1957)

1960S-1975

Depictions of the airport from the 1960s do not indicate much change to the airport during those decades. The April 1959 San Francisco Local Aeronautical Chart depicted the airport with a 2300-foot unpaved runway, while the 1962 AOPA Airport Directory described a single oiled 2,300-foot runway (Freeman 2022). In 1965, The Solano County Sheriff's Aero Squadron had a fly-in at the Vaca-Dixon airport that drew over 100 people flying approximately 40 planes, indicating the airport's continued recreational and general aviation use during this period (Napa Valley Register 1965). The aerial photograph from the same year shows the same buildings as 1957, though the I-80 right-of-way has encroached on the property. This photograph also shows the racetrack east of the project area (Cartwright Aerial Services 1965). The 1970 photograph does not show any substantial changes to the one from 1965, though there are more planes parked on the field than previous, at least four (Cartwright Aerial Services 1970).

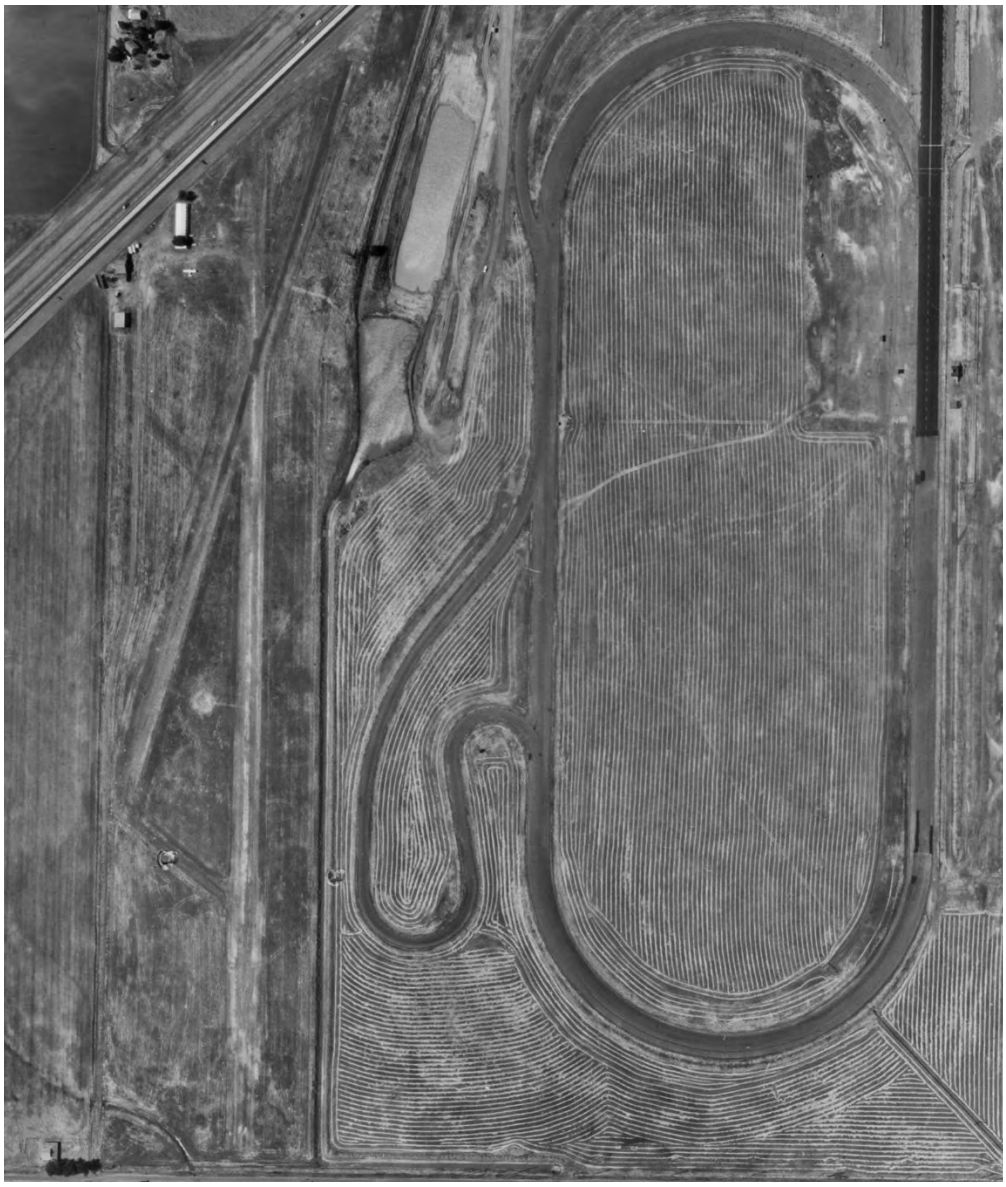

Figure 18: 1965 aerial photograph (Cartwright Aerial Services 1965)

The beginning of the 1970s appears to have been a low point for the airport as the 1973 USGS topographic maps labeled the Vaca-Dixon airport as abandoned. A newspaper article from the same year reveals a new vision for the property had been conceived. A plan had been proposed to set up a 41-acre industrial park on the Vaca-Dixon Airport land. A firm was lined up to construct a recreational vehicle factory on 15 acres of the airport. However, the project was canceled due to the energy crisis and uncertainties about the future availability of gasoline due to the Arab oil embargo that began toward the end of 1973 (Sacramento Bee 1973).

Galaxy Aviation (1974-1975)

In 1974, aviation returned to Vaca-Dixon with a company called Galaxy Aviation. Newspaper articles and advertisements show that Galaxy Aviation was active from February 1974. They used local newspapers to advertise flight lessons, airplane acrobatics lessons, and small plane sales and rentals such as Citabrias, Decathions, and Scouts (Sacramento Bee 1974). Hangar 1 may have been constructed during this time, although it is more likely that it was constructed after 1976. Galaxy Aviation's advertisements appeared almost weekly through July 30, 1975, when they ended without explanation. By December, the airport itself was for sale. Advertisements for the sale of Vaca-Dixon Airport continued in regional newspapers through January (San Francisco Examiner 1975; Contra Costa Times 1976).

WILBUR FITCH AND DUNCAN MILLER (1976-PRESENT)

In 1976, Vaca-Dixon airport was purchased by a pair of friends and business partners, Wilber J. Fitch (1917-2000) and Duncan R. Miller (1921-2014). They met in the government-sponsored Civil Pilot Training Program (CPTP) before World War II. During the war, they both taught flying and flew planes for the Army Air Forces at different bases. According to Duncan's obituary, the men met again when they were both assigned to the Fairfield-Suisun Army Airfield (now Travis AFB) after the war, where they continued instructing pilots training under the GI Bill. (The Reporter 2014).

Fitch and Miller began a successful air transport company in 1948, Air Transport Associates, which had its charter revoked by the Civil Aeronautics Board when it became too successful to fall under the category of "irregular air transport." The case was brought before the United States Court of Appeals, District of Columbia Circuit in 1952, which decided in favor of the Board (DC Cir. 1952).

After their loss in court, Fitch and Miller began U.S. Eagle, a successful government contracting company in 1956. Their love of airplanes and flying continued throughout their lives, and they both owned planes and tried to fly regularly. When Vaca-Dixon Airport was put up for sale in 1976, they saw it as an opportunity to own a private recreational airport. It was never intended as a profitable business, which they already had with U.S. Eagle; rather, they saw Vaca-Dixon Airport as a hobby (The Reporter 2014; personal communication Martin Fitch 2023). It seems most likely that Hangar 1 was constructed during Fitch and Miller's ownership; the extant runway may also have been paved at this time.

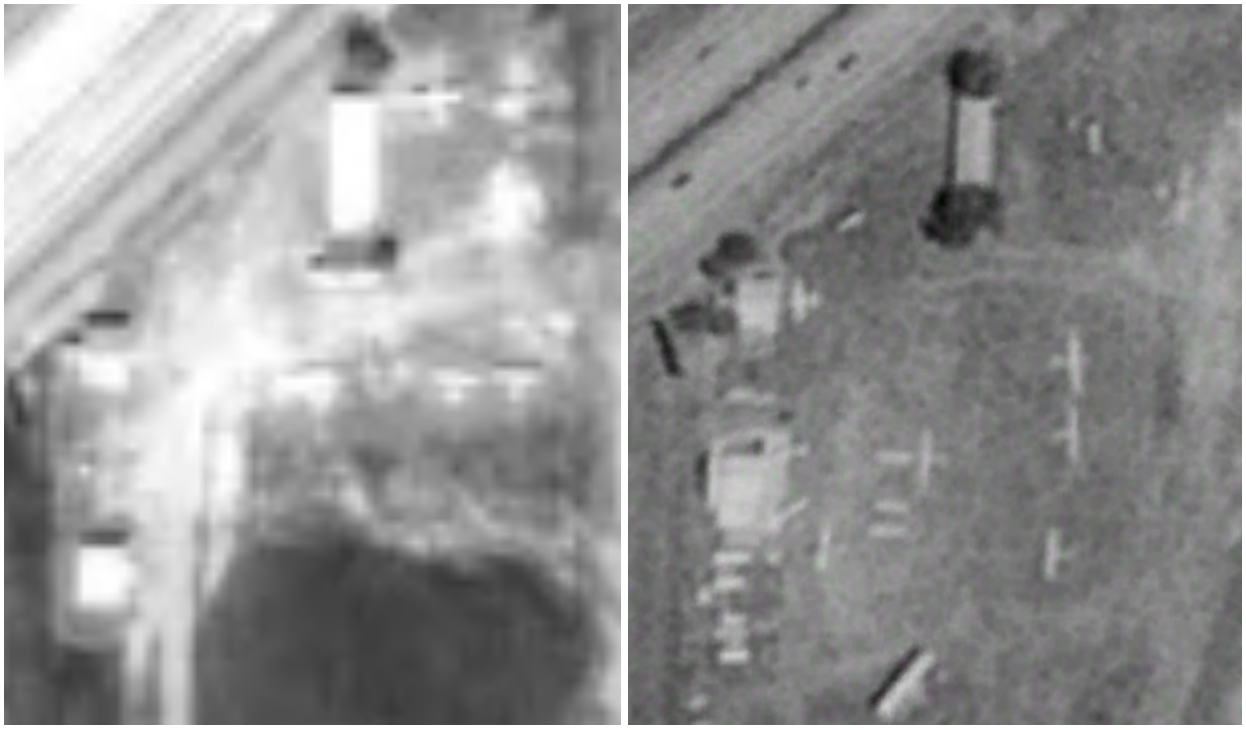

Figure 19: 1970 aerial photograph (left, Cartwright Aerial Services); 1993 aerial photograph (right; Google Earth)

While Fitch and Miller continued to use the airport for their own recreational use, they also rented it to others for small aviation endeavors. In the early 1980s, the Wright Solution Ultralight Flight Park operated at Vaca-Dixon Airport. Their spokesman, Dave Maxwell, said 14 to 16 students were trained each month to fly the planes at three nearby airfields in a program recognized by the FAA, but which was not the same as a pilot's license. Ultralights were not allowed at larger airports, as they carried no radio equipment, and were not allowed to fly over heavily congested areas. This made smaller, more rural airports good locations for such planes (Sacramento Bee 1983). Unfortunately, interest in ultralights was insufficient to sustain the business for very long.

In the early 1990s, the Vacaville City Council approved using what was described as the "abandoned Vaca-Dixon Airport" as a glider port operation (Sacramento Bee 1992). The gliders moved from the glider port south of Vacaville at Lagoon Valley and flew out of Vaca-Dixon for a few years. There were complaints from neighbors who did not like airplanes flying nearby. Additionally, the airport was immediately adjacent to Interstate 80 (previously State Highway 40), which produced concerns about safety for both planes and cars. The Federal Aviation Authority decided it should no longer function as an airport, and it was shut down to aviation for good in 1995 (Freeman 2022; Martin Fitch, personal communication 2023).

GENERAL AVIATION IN THE REGION

Vaca-Dixon Airport was one of at least eight small general aviation airports in Solano County and vicinity developed between 1939 and 1960 that have now closed. They include:

- Brennan Airpark/Fairfield Suisun Air Park, Fairfield. This airport is visible on the 1942 USGS topographic map located east of Fairfield. It was renamed Fairfield Suisun Air Park between

1944 and 1948 and, in 1948, contained a 3,500-foot unpaved runway, a few small buildings, and a grassy field. In the 1950s, the airpark manager would buy surplus planes, remove the engines, and place them in Stearman biplanes to use as crop dusters. The airpark appears to have been closed in the 1960s. (Freeman 2022).

- Travis Skypark/Travis Aero Club Airport, Fairfield. Travis Skypark is the Travis AFB airfield to which the Travis Aero Club moved after its tenure at Vaca-Dixon Airport. A brochure for the flying club from 1957 contains an image showing a single runway, a parallel taxiway, and two buildings. The 1959 San Francisco Local Aeronautical Chart shows the airfield having a 2,000-footunpaved runway. It was paved sometime before 1980, and the Aero Club continued to use the field until they moved to Rio Visita Airport in 2006 (Freeman 2022).
- Davis Airport/State Forestry Airport, Davis. This airport was developed before World War II and is visible on the 1939 Sacramento Section Chart as an auxiliary airfield. It was located near the Davis nursery, from which planes flew to distribute seedlings and plants throughout the state. Between 1939 and 1941, it was renamed the State Forestry Airfield and had 3 oiled runways, the longest 2,608 feet, and a hangar. It was abandoned between 1962 and 1967 (Freeman 2022).
- El Macero Airfield, Davis. This airport was located very near the State Forestry Airport; while its date of construction is unknown, it first appears on a 1962 Sacramento Sectional Chart. It was built as part of a golf course and country club and may have been conceived as a way for club members to easily access the facility. It is shown as having a 3,300-foot hard surface runway and being open to the public. It changed to a private field between 1962 and 1967, and the runway was described as 3,100 feet and unpaved in 1967. It did not have any facilities. The airfield was closed sometime between 1980 and 1992. (Freeman 2022).
- Jensen Airport, Sacramento, was built in the late 1940s by Charlie "Red" Jensen, who was mainly an agricultural pilot. He flew crop dusters out of the airport, others kept small planes there, and in later years, Charlie became a helicopter pilot and flew helicopters out of the airport beginning in the 1970s. It had a 1,700-foot runway. The airport had a big hangar, shop building, and office building. It closed in 1980 after Charlie's death (Freeman 2022).
- Shady Grove Airport/Vacaville Airport/Vacaville Gliderport, Vacaville. This airport was built in the 1950s as a private airfield named Shady Grove. By 1957, it had been renamed Vacaville Airport and had a 2,000-foot unpaved runway. The runway was paved by 1962, when a hangar and a couple of additional buildings were located on the northwest side. In 1971, it began to be used for gliders under the name Vacaville Soaring. In 1984, the field became the home of Lagoon Valley Soaring, as the popularity of gliding in the area peaked in the 1980s with 11,000 glider tows per year from Lagoon Valley. It appears to have been abandoned in the 1990s (Freeman 2022).
- Antioch Airport, Antioch, was established between 1946 and 1947 and consisted of two runways, both unpaved and the longer being 2,100-foot dirt. In 1949, a hangar was also present. New buildings were added in the 1950s, pilots were trained, and skydiving happened from the field in the 1960s. By 1964, the runway was paved, and there was a mechanic's shop, pilot's lounge, and office. A skydiver's club was run from the airfield, and they also towed banners and sailplanes. The airport was closed between 1990 and 1993 (Freeman 2022).

- The original Rio Vista Airport, Rio Vista, was established as a general aviation airport between 1946 and 1952 and began as a simple airstrip. In 1952, it had two runways, which were paved by 1957. Major improvements, including constructing a larger and wider primary runway, occurred in 1968, with the longest now being 3,200 feet. This airport was closed in 1995 to be replaced by the new Rio Vista Municipal Airport (Freeman 2022).

There are nine additional general aviation airports within 25 miles of Vaca-Dixon that are still in use today. Eight of them were activated between 1940 and 1961, while the ninth is the new Rio Vista Airport, established in the mid-1990s to replace the facility noted above.

Table 1: Currently Functioning General Aviation Airports within 25 miles of Vaca-Dixon Airport (Airnav.com 2023)

Airport	Location	Activation	Runways	Runway size
Watts Woodland	Woodland	1940	1	3759 x 60 ft.
Napa County	Napa	1944	3	5930 x 150 ft., 2510 x 75 ft., 5008 x 150 ft.
Buchanan Field	Concord	1944	3	5001 x 150 ft., 2798 x 75 ft., 2770 x 75 ft.
University County	Davis	1946	1	3176 x 50 ft.
Yolo County	Davis	1949	1	6000 x 100 ft.
Nut Tree	Vacaville	1955	1	4700 x 75 ft.
Sonoma Valley	Sonoma	1957	2	2700 x 45 ft., 1513 x 50 ft.
Angwin Parrett	Angwin	1961	1	3217 x 50 ft.
Rio Vista Municipal	Rio Vista	1994	2	4199 x 75 ft., 2199 x 60 ft.

Most of the airports in Solano County and its vicinity that have now closed, including Vaca-Dixon Airport, were opened between 1940 and 1960 and shuttered between 1980 and 2000. They all tended to have short runways between 1,700-3,100 feet designed to accommodate small planes and the runways were less likely to be paved. Additionally, their airport facilities were often minimal or non-existent, consisting of hangars and one or two additional structures. The still operating airports began in the same way as the closed airports, but over time they often made changes to their runways and their facilities to accommodate larger airplanes and different clientele to be successful. From the 1980s onwards, no longer were small airplanes the only ones using general aviation airports, but now wealthy individuals and companies could charter or own their own larger planes to transport more people or add additional amenities for passengers. These planes need places to land, and many of the successful airports made changes to their facilities to attract and accommodate them.

Since 1976, the Vaca-Dixon Airport was owned by Fitch and Miller, who were more interested in a recreational airport than a commercially successful one. Additionally, its location adjacent to I-80 made expanding the runways and facilities a difficult prospect and created safety concerns for both aviators and motorists. Additionally, while the vicinity is not densely populated, the increasing population in the Vacaville area did encourage additional people to build houses and live around the project area, and the new neighbors did not want the noise and traffic of an airport near their houses. When the FAA shut down the airport in the mid-1990s, there were numerous alternatives for general aviation nearby.

SIGNIFICANCE EVALUATION AND RECOMMENDATIONS

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Under the California Environmental Quality Act (CEQA), local agencies must consider whether projects will cause a substantial adverse change in the significance of a historical resource, which is considered to be a significant effect on the environment (Public Resources Code §21084.1). A "historical resource" is a resource determined eligible for the National Register of Historic Places, the California Register of Historic Resources, or local registers by a lead agency (14 Code of California Regulations §15064.5), while a "substantial adverse change" can include "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings" that impairs the significance of a historical resource in such a way as to impair its eligibility for Federal, State, or local registers.

In order for a resource to be eligible for the California Register, it must satisfy all of the following three conditions (A, B, & C):

A. A property must be significant at the local, State, or national level, under one or more of the following four "Criteria of Significance" (these are essentially the same as National Register criteria with more emphasis on California history):

1. the resource is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history and cultural heritage of California or the United States.
2. the resource is associated with the lives of persons important to the nation or to California's past.
3. the resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.
4. the resource has the potential to yield information important to the prehistory or history of the State or the nation (criterion 4 applies primarily to archaeological sites and not historic buildings).

B. the resource retains historic integrity (defined below); and,

C. it is 50 years old or older (except for rare cases of structures of exceptional significance).

The California Register regulations define "integrity" as ". . . the authenticity of a property's physical identity, evidenced by the survival of characteristics that existed during the property's period of significance," that is, it must retain enough of its historic character or appearance to be recognizable as an historical resource. Following the National Register integrity criteria, California Register regulations specify that integrity is a quality that applies to historic resources in seven ways: location, design, setting, materials, workmanship, feeling and association.[1] A property usually must retain most

[1] The definition of integrity under the California Register follows National Register of Historic Places criteria. Detailed definitions of the qualities of historic integrity are in National Register Bulletin 15, *How to Apply National Register Criteria for Evaluation*, published by the National Park Service.

of these qualities to possess integrity. The retention of specific aspects of integrity is paramount for a property to convey its significance.

HISTORIC INTEGRITY

The Vaca-Dixon Airport was constructed circa 1947 as part of a historical pattern of small general aviation airport development between World War II and circa 1960. Its original facilities included two approximately 40x40 foot buildings at the northwest corner of the property, one located where an empty concrete pad is visible today and the other at the current location of Hangar 1. Both of these buildings are no longer extant. Hangar 2, built in the 1950s, is the only remaining pre-1960 building. The airport runways are no longer visible.

Individually, Hangars 1 and 2 are in poor condition but are still recognizable as airplane hangars. However, as a whole, the property does not retain historic integrity because major features have been removed, and it therefore no longer conveys its original function as an airport.

CRHR SIGNIFICANCE EVALUATION

None of the buildings at the Vaca-Dixon Airport have been previously evaluated or listed under any local, state, or federal historic resource designation criteria.

THE FOUR CRITERIA OF SIGNIFICANCE

***Criterion 1**: The resource is associated with events or patterns of events that have made a significant contribution to the broad patterns of local and regional history.*

The Vaca-Dixon Airport is one of at least 18 small general aviation airports established within 25 miles of Vacaville in the period 1945-1960, of which 9 remain active. While it reflects the overall pattern of the development of general aviation in the post-war period, Vaca-Dixon Airport did not play a prominent role in that pattern. No important events in local or State aviation history took place there. As such, the property appears to be **not eligible** under Criterion 1 of the California Register.

***Criterion 2:** The resource is associated with the lives of persons important to the nation or to California's past.*

Persons associated with the Vaca-Dixon Airport include Esther Byrnes Sawtelle, the first owner, and Wilbur Fitch and Duncan Miller, the owners from 1976. None of these individuals were locally well-known or prominent and did not appear to have played an important role in the aviation industry or any other aspect of local, State, or national history. The property therefore appears to be **not eligible** under Criterion 2 of the California Register.

***Criterion 3:** The resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.*

The former Vaca-Dixon Airport buildings are utilitarian buildings constructed using common materials and techniques, and lack stylistic details. Both hangar buildings (constructed circa 1950-1955 and in the 1970s) are simple box hangars for small planes, from a period when may airfields were built in California using similar techniques. The access road is a common construction type that lacks distinguishing characteristics. Likewise, the runway is a simple asphalt strip that is no longer

recognizable as a runway and therefore lacks historic integrity. For these reasons the Vaca-Dixon Airport appears **not eligible** under Criterion 3.

Criterion 4: *The resource has the potential to yield information important to the prehistory or history of the state or the nation.*

This criterion is usually used to evaluate archaeological sites. In some cases, a built environment resource may contain useful information about construction techniques or the use of materials by builders. However, both hangars and the shed were constructed using materials and techniques common during their period of construction. They therefore do not have information potential and appear **not eligible** for the California Register under Criterion 4.

FINDINGS AND CONCLUSIONS

In conclusion, the buildings, runway, and access road at the Vaca-Dixon Airport are not eligible for the California Register because they are not significant under California Register Criteria 1, 2, 3 or 4. The buildings also are not contributing resources to a California Register-eligible historic district. The proposed project therefore does not appear to have the potential to cause a substantial adverse change in the significance of a historical resource as defined in the CEQA Guidelines (14 CCR §15064.5).

For an assessment of the archaeological sensitivity of the property, please see the accompanying report prepared by Archaeological Resource Service (Von Pinnon 2023).

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APPENDIX 1: DPR 523 FORMS

State of California – The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #

PRIMARY RECORD

Trinomial
NRHP Status Code 6Z

Other Listings

Review Code _____ Reviewer _____ Date _____

Page 1 **of** 28 ***Resource Name or #:** Vaca-Dixon Airport

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**

***a. County** Solano **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Allendale, CA **Date** 1953 (photorevised 1998) **T** 7N; **R** 1E; E ½ S 31; MD **B.M.**

c. Address Weber Road City Vacaville, CA Zip 95678

d. UTM: Zone 10 S; 595644 mE / 4251704 mN; 595551 mE / 4251664 mN; 595536 mE / 4251756 mN; 595532 mE /4251780 mN; 595537 mE / 4251804 mN; 595585 mE/ 4251841 mN

e. Other Locational Data: APNs 0109-270-050 and 0109-220-060

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The following resource is the remnants of the former Vaca-Dixon Airport, which was constructed at some point following World War II (ca. 1945-1948) (Freeman 2002). Situated near Interstate 80 at an unspecified address along Weber Road, the following extant features comprise this resource: **Hangar 1** is located at the northwest corner of the property. Constructed in the 1970s, it measures 55.5 feet by 39.5 feet and has a single central hangar space flanked by storage additions. **Hangar 2** is located northeast of Hangar 2 near the I-80 fence line. Constructed in the 1950s, it measures 94 by 26 feet and has five small hangar bays, two bathrooms, an office, and a storage room. The **compressor shed** is 8 by 10 feet and is located 40 feet north of Hangar 1. The **access road** connects the buildings to Weber Road along the west side of the property. A 750-foot remnant of the **runway** is located in the center of the project area.

(See continuation sheet)

***P3b. Resource Attributes:** AH2 (Foundations/structure pads); AH7 (Roads/trails/railroad grades) HP4 (Ancillary building) HP8 (Industrial building) HP39 (Other, Airport)

***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo:
Vaca-Dixon Airport (looking south)

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
Mid-1940 to 1990s

***P7. Owner and Address:**
Brian Griggs
Weber Road Industrial, LLC
250 Lafayette Circle
Lafayette, CA.94549

***P8. Recorded by:**
Daniel Shoup & Molly Fierer-Donaldson
609 Aileen Street
Oakland, CA 94609
www.ahc-heritage.com

***P9. Date Recorded:** August 2023

P10. Survey Type: Architectural

***P11. Report Citation:** Shoup, Daniel, Molly Fierer-Donaldson, and Ward Hill (2023) Historic Resources Evaluation: Vaca-Dixon Airport, Vacaville, Solano County, CA.

***Attachments:** ☐ NONE ☒ Location Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** Vaca-Dixon Airport ***NRHP Status Code** 6Z
Page 2 **of** 28

B1. Historic Name: Vaca-Dixon Airport
B2. Common Name: Vaca-Dixon Airport
B3. Original Use: General Aviation Airport B4. Present Use: Abandoned

***B5. Architectural Style:** Industrial

***B6. Construction History:** At least one runway had been constructed by 1947. By 1949 there were two dirt runways and a small square structure along the western property line, which only remains today as a concrete pad. By 1957 a rectangular hangar with five hangar bays, bathroom, and an office (Hangar 2), had been built closer to the north-south runway and a second small square structure had been built farther south along the western property line. In the 1970s this second smaller square structure was replaced by a rectangular hangar (Hangar 1), which was then remodeled to include additional rooms for storage. After 1970, at least the northeast-southwest runway was paved with concrete (Santa Cruz Sentinel 1947a,b; Fairchild Aerial Services 1949; Cartwright and Company 1957; Cartwright Aerial Services 1965, 1970).

***B7. Moved?** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** None

B9a. Architect: Unknown b. Builder: G. Unknown

***B10. Significance:** **Theme** n/a **Area** n/a
Period of Significance n/a **Property Type** n/a **Applicable Criteria** n/a

Historical Context and Site History
As the *Californio* rancho class grew after Mexico's independence from Spain in 1821, increasing competition for land led to the expropriation of church lands by secularization in 1834. Much of the most desirable land was given as Ranchos to people in favor with the contemporary government of California. The project area is ½ mile east of the Rancho Los Putos land grant, given to Juan Manuel Vaca and Juan Felipe Peña in 1842. Vaca and Peña and their families built houses in the lower Vaca Valley; by 1879, however, most of the grant had been sold to American settlers (Beck and Haase 1974:29; Hoover *et al.* 1966:511-512).
[SEE CONTINUATION SHEET]

B11. Additional Resource Attributes:

***B12. References:** [SEE CONTINUATION SHEETS]

B13. Remarks:

***B14. Evaluator:** Daniel Shoup and Ward Hill

***Date of Evaluation:** August, 2023

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

***P3a. Description (Continued):**

Hangar 1

Hangar 1 is a box hangar formerly used for airplane storage and, more recently, as a mechanic's shop and paint storage. It is located at the northwest corner of the project area about 200 feet south of I-80. Though no building permits are extant, aerial photographs and interviews suggest that the building was constructed in the 1970s. The plan was originally rectangular, but additions on the south and west sides have given it a shallow L-shaped plan. The building is of wood-frame construction with studs spaced at 24 inches center-to-center. The roof of the original building is gabled; the western addition has a gable that is lower than the main gable, while the southern addition has a shed roof. The sides and roof of the building are covered with 24-inch-wide corrugated steel panels that match the stud spacing. The building has a concrete slab floor throughout. The rear of the building is painted with lettering that appears to read "Travis Flight Center / [illegible] the [illegible] / Exit Weber Road 447-4184". The lettering is partially covered by plywood panels that were used to advertise a fruit stand. These signs would be easily visible to eastbound traffic on I-80.

The original building was 40 by 29.5 feet, with 14.5-foot 'wings' on either side of the front (east) façade to hold the tracks for three sliding door panels. An addition filled in the space between the "wing" and the building on the southern side, and another 10x40 foot addition is on the rear (west) side of the building. With additions, the building measures 55.5 feet north-south and 39.5 feet east-west. An oval concrete apron 12 feet wide surrounds the building.

Inside, the building has five interior spaces. The main hangar space (Room 1 on the plan below) measures 39 feet by 29 feet with an approximately 20-foot ceiling. The interior is drywalled with recessed fluorescent light panels in the ceiling. On the east side are three 14-foot-wide sliding doors. There are 3-foot-wide hinged doors on the north and south walls near the east facade. The northern hinged door leads outside, while the southern leads to two storage rooms in the southern addition. A 5-foot-wide door on the west side leads to the rear storage addition. Two exhaust fans are inset in each of the north and south walls, and a work table is on the southern wall.

The western addition (Room 2) is 10 feet wide and 39 feet long, with doors on the north and south sides leading outside, in addition to the door leading to the hangar. It has a gabled roof that is lower than the main gable. Open shelving runs along the west wall, and there is a bathroom in the southwest corner which measures 5 feet square and contains a sink and a toilet. The east wall of the addition is clad in corrugated metal, which was presumably the original exterior of the hangar. The west, north, and south sides of this space are drywalled, as is the bathroom. A wooden staircase on the east side of the room leads up to a storage loft.

The southern addition to the building contains three rooms. Room 3 measures 12 by 10 feet. It connects to the hangar on its north side, to Room 4 on the west side, and opens to the outside on the south side with a sliding panel door. Room 4 measures 14 by 12 feet and is drywalled inside. Both rooms are empty. Roof 5 is a narrow storage area on the southwest side of the building. It is 4 feet deep and 14.5 feet long and is accessed from the exterior of the building.

***P3a. Description (Continued):**

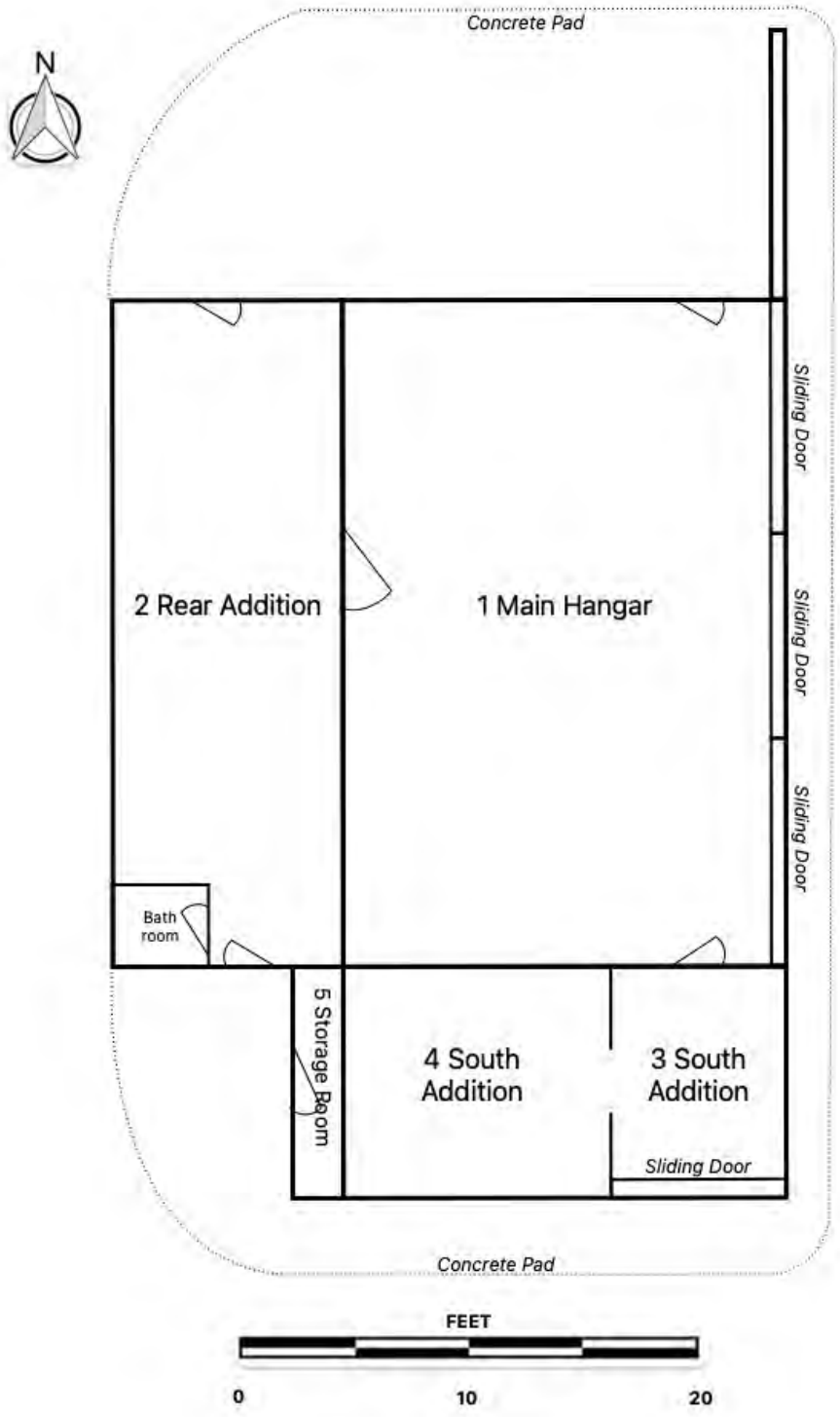

Figure 1: Hangar 1 Floor Plan

***P3a. Description (Continued):**

Figure 2: Hangar interior. Upper left: looking east to sliding doors. Upper right: looking northeast. Lower left: looking southwest, with doors to south addition (at left) and rear addition (at right). Lower right: exhaust fan detail.

Figure 3: Hangar 1 additions. left: rear addition (Room 2), looking south. Right: south addition, Room 3.

***P3a. Description (Continued):**

Figure 4: Hangar 1 additions. South addition, Room 4.

Hangar 2

Hangar 2 is located 250 feet northeast of Hangar 1 and 20 feet south of the I-80 fence line. The rectangular plan building is 94 feet long and 26 wide, with the long axis oriented north-south. It is of timber frame construction, with exterior walls and gabled roof covered in corrugated metal. The building is visible on the 1957 aerial photograph of the area, but not on the 1949 aerial photograph, suggesting it was built in the first half of the 1950s (Fairchild Aerial Services 1949; Cartwright and Company 1957).

The south side of the hangar has a short porch roof over three doors. The two right hand doors lead to 4 by 6-foot bathrooms with drywall interiors. The door on the left leads to the main hangar space. Behind the bathrooms, a door on the east façade opens onto a storage space 8 feet wide and 13 feet deep with built-in shelves and one aluminum slider window. At the northeast corner of the hangar, a small porch roof is over a door that leads into a carpeted office room with painted plywood walls. Two aluminum slider windows open onto the office.

The remainder of the building is a hangar space divided into five bays. The bays are separated by posts that are 13 feet center on center, yielding 12.5 feet of usable space between them. The posts, which are made of joined 2x6s, support wood roof trusses connected to triangular iron plates at the roof peak. Diagonal braces on either side of the central bay run the width of the building. Above the bays is a wooden loft 10 feet high and 4 feet wide that runs the length of the building. A conduit runs under the loft, with a light fixture at each bay.

Sliding door panels 10 feet wide open on both east and west sides. On the west side, the entire length of the building except for the central bay has sliding doors. On the east side, sliding doors open onto the three central bays. The sliding doors are made of corrugated metal panels with diagonal braces.

The building has a concrete slab floor in poor condition. A worktable is at the northwest corner of the hangar.

***P3a. Description (Continued):**

Figure 5: Hangar 2. Upper left: east side. Upper right: south and east sides. Center left: south and west sides. Center right: west side. Lower left: north side. Lower right: Office entrance.

***P3a. Description (Continued):**

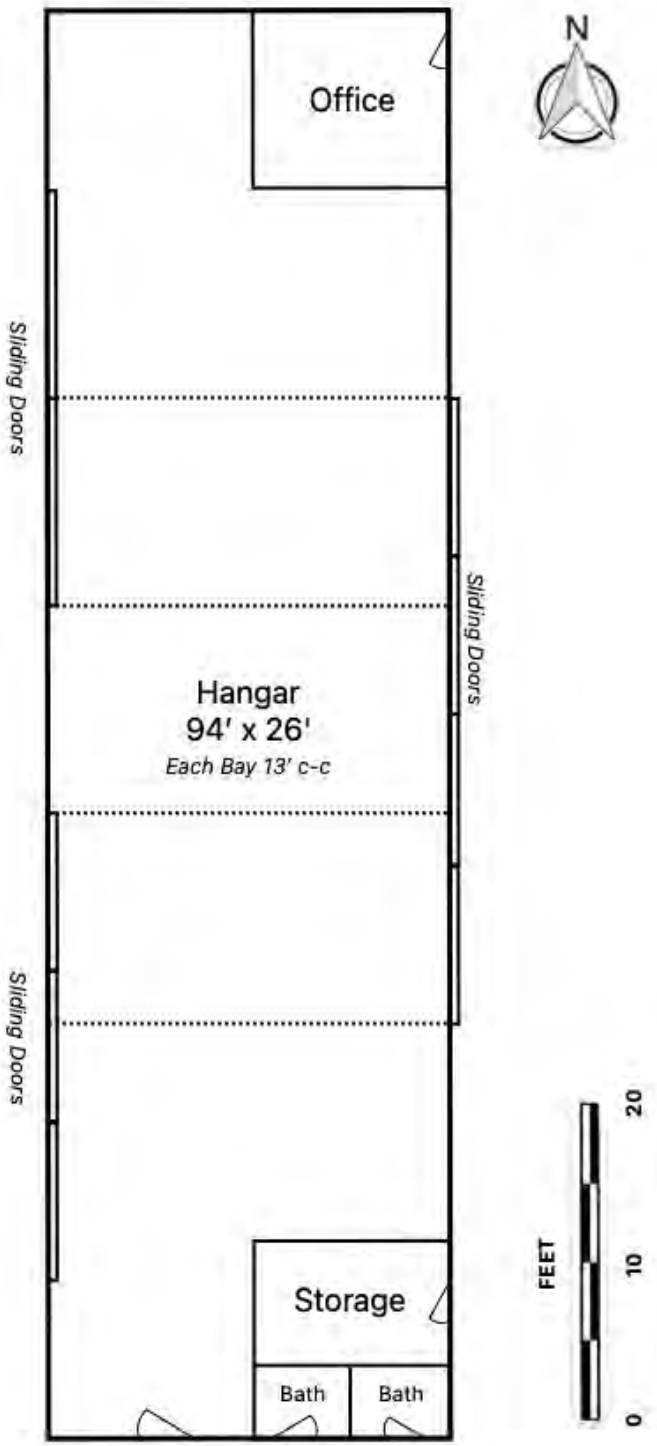

Figure 6: Hangar 2 Floor Plan

***P3a. Description (Continued):**

Figure 7: Hangar 2 Interior. Upper left: center bay, looking west. Upper right: looking south. Center left: looking south. Center right: looking north. Lower left: office, looking northeast. Lower right: storage room.

***P3a. Description (Continued):**

Compressor Shed

An 8 by 10-foot frame shed with corrugated metal sides is located 40 feet north of Hangar 1 and 210 feet southwest of Hangar 2. It has a shed roof also covered in corrugated metal and a concrete slab floor. Inside, 2x3 studs spaced 24 inches center-on-center are visible. A door is on the east side, and an opening on the west side is covered in chicken wire. The shed holds an air compressor and tank.

Figure 8: Compressor shed east and south sides (upper left), north and west sides (upper right), east side (lower left), and interior (lower right)

***P3a. Description (Continued):**

Access Road

The access road runs north-south and connects the hangars to Weber Road. It is 2,400 feet long. The road is graveled and compacted. It was originally about 16 feet wide, but the edges are now overgrown.

Figure 9: Access Road, looking south toward Weber Road. Hangar 1 at left.

***P3a. Description (Continued):**

Runway

Two runways were originally present at Vaca-Dixon Airport, which were 2000-2500 feet long. No trace of the north-south runway was located during the field visit. A 750-foot long section of the northeast-southwest runway is still visible, though the asphalt is heavily overgrown with grass and thistles. The surviving asphalt area is approximately 12 feet wide, but the runway was likely to have been wider when first paved.

Figure 10: Runway, looking northeast with hangars at upper left.

***B10. Significance (Continued):**

Vacaville and Travis AFB

The nearby town of Vacaville began about 1850 when Vaca deeded nine square miles to William McDaniel on the condition that he lay out a townsite and name it. By 1870, fruit and nut growing overtook ranching as the primary agricultural activity in the Vacaville area, spurred by the 1868 completion of the California Pacific Railroad linking Sacramento and Oakland (Hoover et al.1966:522-523). In 1869, the Vaca Valley and Clear Lake Railroad was constructed to connect Vacaville and points north to the mainline at Elmira. Both railroad lines were later acquired by the Southern Pacific (Fickewirth 1992).

By 1878, the region around the project area was a mosaic of large-lot agricultural properties ranging from 60 to 320 acres in size, many with small orchards (Thompson and West 1878; Eager 1890). By 1915, the Vacaville City Limits had been extended to Leisure Town Road, and State Highway 560 (later US 40 and today I-80) had been constructed from downtown Vacaville to Davis. US 40 was converted into a divided freeway and renamed Interstate 80 in the late 1960s. I-80 connects the State capital of Sacramento with Lake Tahoe and the Sierra Nevada Mountains to the east and the San Francisco Bay Area to the west.

World War II brought changes to the Vacaville area. Shortly after Pearl Harbor, a military base was planned on the open prairie near the towns of Fairfield and Suisun to serve as a home for medium bombers and fighters assigned to defend the west coast. The Army Corps of Engineers built the first runway and temporary buildings in the summer of 1942, and the new base called the Fairfield-Suisun Army Air Base was opened on June 1, 1943. Its scope quickly grew, and it became a major military airport and supply transfer point, with a primary mission of servicing and ferrying tactical aircraft from California to the war in the Pacific. By 1945, it had become the West Coast's largest airport (TAFBM 2023).

In the immediate postwar period, the base continued to airlift troops and supplies to occupied Japan and Korea and serve as a processing center for GIs returning to the United States. In 1949, Strategic Air Command became the major command at the base, which was renamed Travis Air Force Base in 1952. During the postwar period, the base grew to 6,258 acres and added new structures, larger runways, and more housing to support the base's activities. In 1958, Travis' main function returned to military air transport. Travis AFB remains the largest airlift organization in the Air Force with over 13,900 active duty, reservists, and civilian employees affiliated with the base, which has become an important part of regional identity (TAFBM 2023).

The Vaca-Dixon Airport

Ethel Byrnes Sawtelle and Recreational Aviation in the Post-World War II Period

When the Vaca-Dixon airport was built between 1945 and 1947, the property was owned by Ethel Byrnes (1903-2001), who had recently inherited it from her late husband, Fredrick Andrew Byrnes (1899-1944). Fredrick was a farmer and rancher who grew up between Vacaville and Dixon and owned at least 320 acres, including the project area. In 1940, the Byrnes lived on a farm in Elmira, Solano County (US Census 1940). In 1953, Ethel married George C. Sawtelle (1904-1972). George was a truck driver, and they also lived in Elmira. After World War II and before her marriage to George Sawtelle, the portion of Ethel's land that is now the project area was developed as a small general aviation airport.

***B10. Significance (Continued):**

While aviation had begun to be accessible to civilians prior to World War II, after the war there were many more trained pilots, many surplus airplanes, and new mass-production techniques that led to lower prices in aircraft construction. The war also created a generation of citizens used to the idea of air travel but whose access to flight had been limited during the war itself. Once the war was over, Americans, who had read stories, seen, and heard about heroic flights during the war, wanted to fly. The US government passed the Federal Airport Act of 1946, which helped increase funding to construct small airports throughout the country, continue training new pilots, and maintain the enthusiasm for aviation, which the government believed would be the future of the country's defense (NPS 1998; NPS 2011:201).

Early Development of the Airport

While the exact construction date of the Vaca-Dixon Airport is unknown, it was most likely built between 1945 and 1947. The 1945 Army Air Force Airfield Directory does not contain it on its list of active airfields, but it is mentioned in an article in the *Santa Cruz Sentinel* from July 19, 1947 (*Santa Cruz Sentinel* 1947a; Freeman 2022). The July article and a second from the same newspaper in October describe a group of 20-35 fliers from Napa County and the Vaca-Dixon Airports who flew down to the Santa Cruz-Capitola Airport for breakfast and to tour the area. The events were part of a planned round of such recreational activities that connected aviation enthusiasts from throughout the region and showed off their towns and airports (*Santa Cruz Sentinel* 1947a,b).

Recreational flights were not the only activity at Vaca-Dixon Airport in the late 1940s. According to newspaper articles and advertisements, there were also small airplane sales and flight instruction. A 1948 advertisement lists a Taylorcraft side-by-side for sale at the Vaca Dixon Airport (Oakland Tribune 1948). In 1948, a gasoline storage pit at the airport exploded, shaking the ground, throwing William L. Beeman, a 27-year-old flight instructor, into the air and seriously burning him (Long Beach Press-Telegram 1948; Santa Barbara News-Press 1948).

In 1948, the Sacramento Section Chart depicted the airport as having a 2,500-foot unpaved runway (Freeman 2022). The 1949 aerial photograph shows two unpaved runways and one structure near the western side of the property near its intersection with I-80, corresponding with an empty concrete pad visible today north of Hangar 1, which may have been an administrative building. A second larger structure that may have functioned as a hangar appears closer to the runways (Fairchild Aerial Surveys 1949). The airport's size is in keeping with the type of plane advertised as being sold there. The Taylorcraft side-by-side was an American-made light, single-engine monoplane built in large numbers in the 1930s and 1940s as general aviation planes. They were commonly used by the Civilian Pilot Training Program (CPTP), a 1938-1944 flight training sponsored by the US government to increase the number of civilian pilots, with the expectation of increased military preparedness – the effects of which were apparent in World War II (Strickland 1970). The planes were sturdy, and some made in the pre-war period are still flown today. It is not surprising that Taylorcraft planes would have been flown from an airport like Vaca-Dixon during the post-war period.

***B10. Significance (Continued):**

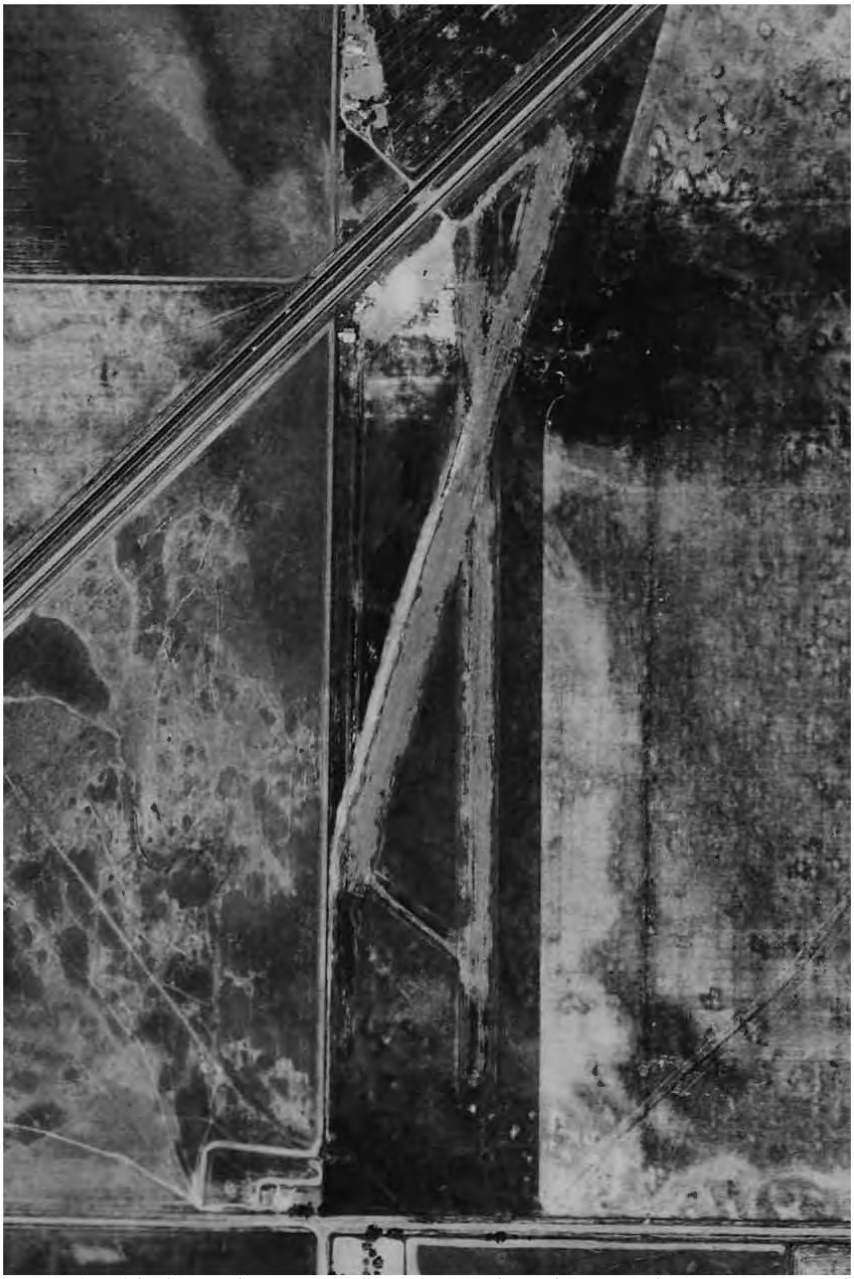

Figure 11: 1949 aerial photograph (Fairchild Aerial Surveys 1949)

Travis AFB Aero Club (1954-1956)

The Travis AFB Aero Club briefly flew out of Vaca-Dixon Airport from 1954 to 1956 before moving to their own airport on Travis Airforce Base property (Freeman 2022). The Aero Club has always been associated with Travis, providing flight Travis, providing flight training and aircraft rentals for people associated with the base since 1954 (Travis Aero Club 2023).

***B10. Significance (Continued):**

An article in the Sacramento Bee from 1955 recorded the crash of Airman First Class Richard Hyde of Travis AFB, who was flying a plane from the Vaca-Dixon Airport during his time off. The airport operator at the time was a man named Sidney Waldrop (Sacramento Bee 1955). During the Aero Club's tenure, the Vaca-Dixon Airport was depicted as having 2 runways oriented north-south and northeast/southwest and three structures on the property along US 40 (now I-80) (USGS 1953; Freeman 2022). The 1957 aerial photograph shows two runways with two structures near the property's western boundary. One of these is the building mentioned above; the southern one is in the same location as Hangar 1 but does not appear to have a gabled roof, suggesting that it may have been a different building. The 1957 photograph also shows Hangar 2, with a small plane parked nearby. Hangar 2 was therefore built between 1949 and 1957 (Cartwright and Company 1957).

Figure 12: 1957 aerial photograph (Cartwright and Company 1957)

***B10. Significance (Continued):**

1960s–1975

Depictions of the airport from the 1960s do not indicate much change to the airport during those decades. The April 1959 San Francisco Local Aeronautical Chart depicted the airport with a 2300-foot unpaved runway, while the 1962 AOPA Airport Directory described a single oiled 2,300-foot runway (Freeman 2022). In 1965, The Solano County Sheriff's Aero Squadron had a fly-in at the Vaca-Dixon airport that drew over 100 people flying approximately 40 planes, indicating the airport's continued recreational and general aviation use during this period (Napa Valley Register 1965). The aerial photograph from the same year shows the same buildings as 1957, though the I-80 right-of-way has encroached on the property. This photograph also shows the racetrack east of the project area (Cartwright Aerial Services 1965). The 1970 photograph does not show any substantial changes to the one from 1965, though there are more planes parked on the field than previous, at least four (Cartwright Aerial Services 1970).

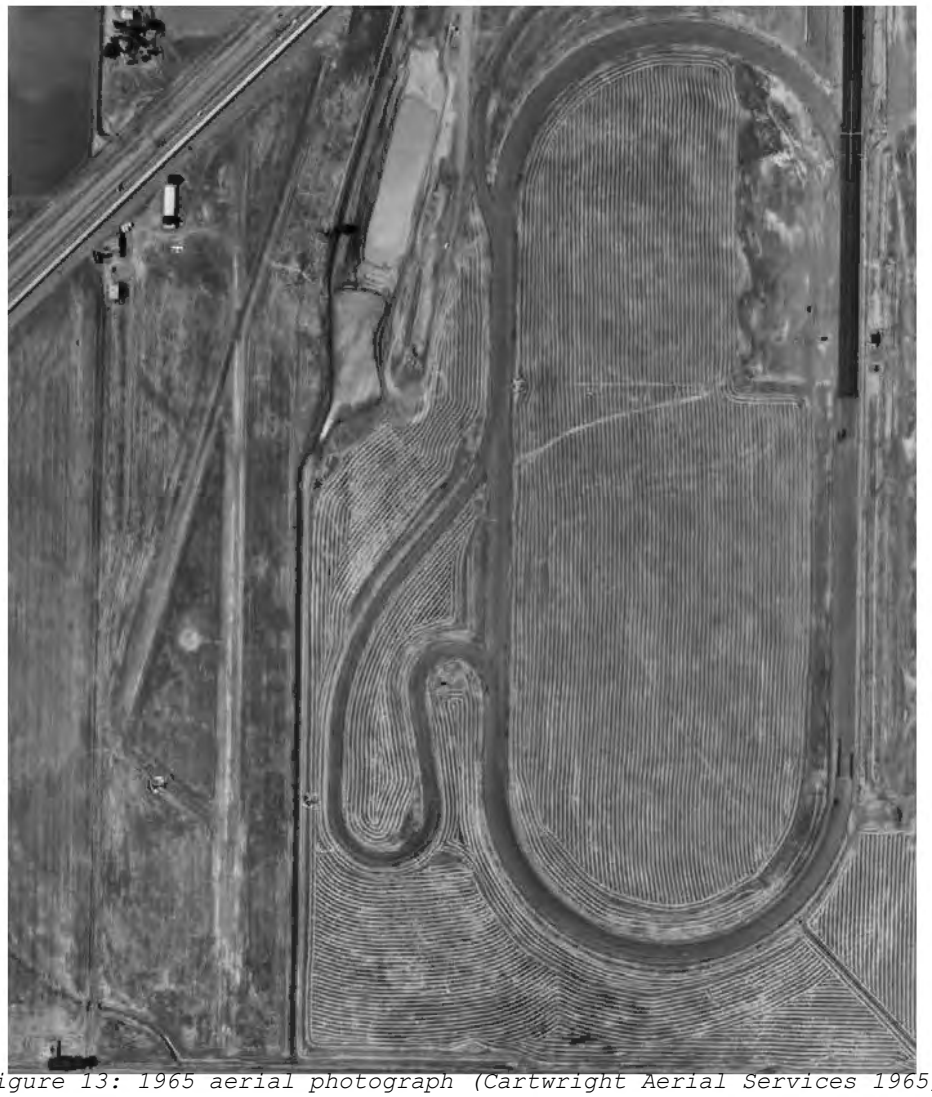

Figure 13: 1965 aerial photograph (Cartwright Aerial Services 1965)

***B10. Significance (Continued):**

The beginning of the 1970s appears to have been a low point for the airport as the 1973 USGS topographic maps labeled the Vaca-Dixon airport as abandoned. A newspaper article from the same year reveals a new vision for the property had been conceived. A plan had been proposed to set up a 41-acre industrial park on the Vaca-Dixon Airport land. A firm was lined up to construct a recreational vehicle factory on 15 acres of the airport. However, the project was canceled due to the energy crisis and uncertainties about the future availability of gasoline due to the Arab oil embargo that began toward the end of 1973 (Sacramento Bee 1973).

Galaxy Aviation (1974-1975)
In 1974, aviation returned to Vaca-Dixon with a company called Galaxy Aviation. Newspaper articles and advertisements show that Galaxy Aviation was active from February 1974. They used local newspapers to advertise flight lessons, airplane acrobatics lessons, and small plane sales and rentals such as Citabrias, Decathlons, and Scouts (Sacramento Bee 1974). Hangar 1 may have been constructed during this time, although it is more likely that it was constructed after 1976. Galaxy Aviation's advertisements appeared almost weekly through July 30, 1975, when they ended without explanation. By December, the airport itself was for sale. Advertisements for the sale of Vaca-Dixon Airport continued in regional newspapers through January (San Francisco Examiner 1975; Contra Costa Times 1976).

Wilbur Fitch and Duncan Miller (1976-present)
In 1976, Vaca-Dixon airport was purchased by a pair of friends and business partners, Wilber J. Fitch (1917-2000) and Duncan R. Miller (1921-2014). They met in the government-sponsored Civil Pilot Training Program (CPTP) before World War II. During the war, they both taught flying and flew planes for the Army Air Forces at different bases. According to Duncan's obituary, the men met again when they were both assigned to the Fairfield-Suisun Army Airfield (now Travis AFB) after the war, where they continued instructing pilots training under the GI Bill. (The Reporter 2014).

Fitch and Miller began a successful air transport company in 1948, Air Transport Associates, which had its charter revoked by the Civil Aeronautics Board when it became too successful to fall under the category of "irregular air transport." The case was brought before the United States Court of Appeals, District of Columbia Circuit in 1952, which decided in favor of the Board (DC Cir. 1952).

After their loss in court, Fitch and Miller began U.S. Eagle, a successful government contracting company in 1956. Their love of airplanes and flying continued throughout their lives, and they both owned planes and tried to fly regularly. When Vaca-Dixon Airport was put up for sale in 1976, they saw it as an opportunity to own a private recreational airport. It was never intended as a profitable business, which they already had with U.S. Eagle; rather, they saw Vaca-Dixon Airport as a hobby (The Reporter 2014; personal communication Martin Fitch 2023). It seems most likely that Hangar 1 was constructed during Fitch and Miller's ownership; the extant runway may also have been paved at this time.

***B10. Significance (Continued):**

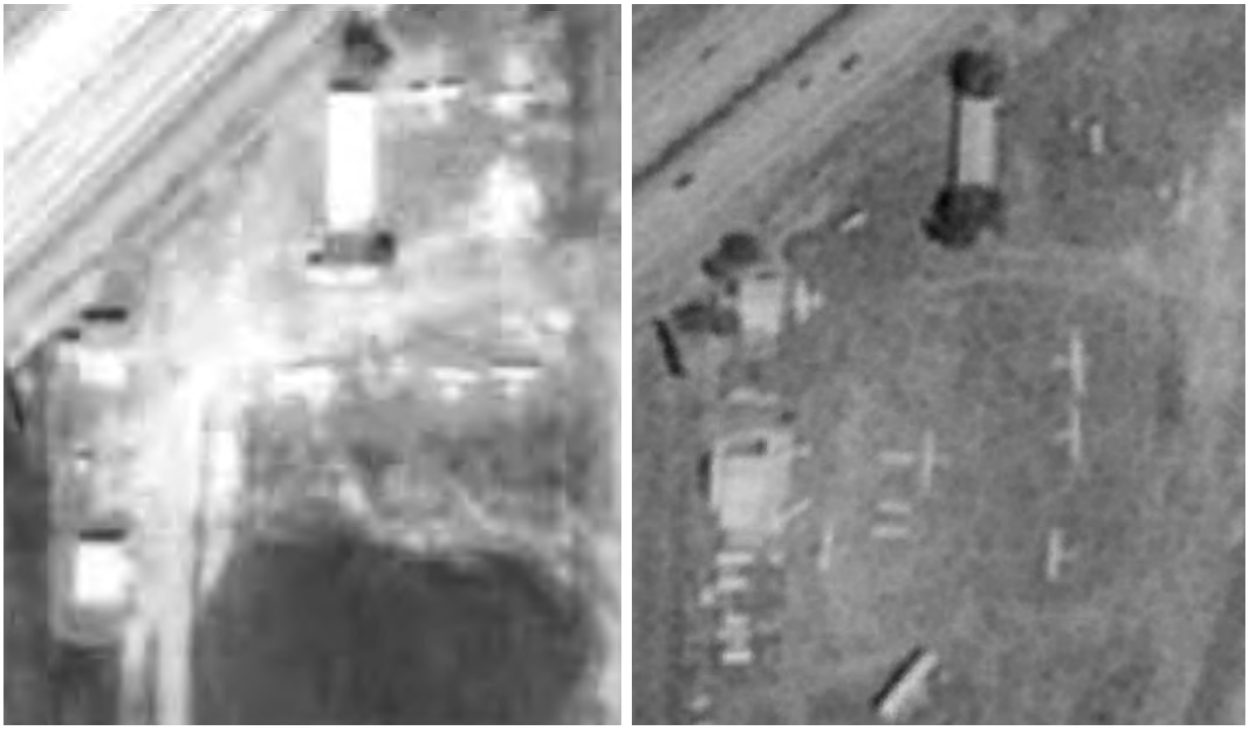

Figure 14: 1970 aerial photograph (left, Cartwright Aerial Services); 1993 aerial photograph (right; Google Earth)

While Fitch and Miller continued to use the airport for their own recreational use, they also rented it to others for small aviation endeavors. In the early 1980s, the Wright Solution Ultralight Flight Park operated at Vaca-Dixon Airport. Their spokesman, Dave Maxwell, said 14 to 16 students were trained each month to fly the planes at three nearby airfields in a program recognized by the FAA, but which was not the same as a pilot's license. Ultralights were not allowed at larger airports, as they carried no radio equipment, and were not allowed to fly over heavily congested areas. This made smaller, more rural airports good locations for such planes (Sacramento Bee 1983). Unfortunately, interest in ultralights was insufficient to sustain the business for very long.

In the early 1990s, the Vacaville City Council approved using what was described as the "abandoned Vaca-Dixon Airport" as a glider port operation (Sacramento Bee 1992). The gliders moved from the glider port south of Vacaville at Lagoon Valley and flew out of Vaca-Dixon for a few years. There were complaints from neighbors who did not like airplanes flying nearby. Additionally, the airport was immediately adjacent to Interstate 80 (previously State Highway 40), which produced concerns about safety for both planes and cars. The Federal Aviation Authority decided it should no longer function as an airport, and it was shut down to aviation for good in 1995 (Freeman 2022; Martin Fitch, personal communication 2023).

***B10. Significance (Continued):**

General Aviation in The Region

Vaca-Dixon Airport was one of at least eight small general aviation airports in Solano County and vicinity developed between 1939 and 1960 that have now closed. They include:

- Brennan Airpark/Fairfield Suisun Air Park, Fairfield. This airport is visible on the 1942 USGS topographic map located east of Fairfield. It was renamed Fairfield Suisun Air Park between 1944 and 1948 and, in 1948, contained a 3,500-foot unpaved runway, a few small buildings, and a grassy field. In the 1950s, the airpark manager would buy surplus planes, remove the engines, and place them in Stearman biplanes to use as crop dusters. The airpark appears to have been closed in the 1960s. (Freeman 2022).

- Travis Skypark/Travis Aero Club Airport, Fairfield. Travis Skypark is the Travis AFB airfield to which the Travis Aero Club moved after its tenure at Vaca-Dixon Airport. A brochure for the flying club from 1957 contains an image showing a single runway, a parallel taxiway, and two buildings. The 1959 San Francisco Local Aeronautical Chart shows the airfield having a 2,000-footunpaved runway. It was paved sometime before 1980, and the Aero Club continued to use the field until they moved to Rio Vista Airport in 2006 (Freeman 2022).

- Davis Airport/State Forestry Airport, Davis. This airport was developed before World War II and is visible on the 1939 Sacramento Section Chart as an auxiliary airfield. It was located near the Davis nursery, from which planes flew to distribute seedlings and plants throughout the state. Between 1939 and 1941, it was renamed the State Forestry Airfield and had 3 oiled runways, the longest 2,608 feet, and a hangar. It was abandoned between 1962 and 1967 (Freeman 2022).

- El Macero Airfield, Davis. This airport was located very near the State Forestry Airport; while its date of construction is unknown, it first appears on a 1962 Sacramento Sectional Chart. It was built as part of a golf course and country club and may have been conceived as a way for club members to easily access the facility. It is shown as having a 3,300-foot hard surface runway and being open to the public. It changed to a private field between 1962 and 1967, and the runway was described as 3,100 feet and unpaved in 1967. It did not have any facilities. The airfield was closed sometime between 1980 and 1992. (Freeman 2022).

- Jensen Airport, Sacramento, was built in the late 1940s by Charlie "Red" Jensen, who was mainly an agricultural pilot. He flew crop dusters out of the airport, others kept small planes there, and in later years, Charlie became a helicopter pilot and flew helicopters out of the airport beginning in the 1970s. It had a 1,700-foot runway. The airport had a big hangar, shop building, and office building. It closed in 1980 after Charlie's death (Freeman 2022).

- Shady Grove Airport/Vacaville Airport/Vacaville Gliderport, Vacaville. This airport was built in the 1950s as a private airfield named Shady Grove. By

***B10. Significance (Continued):**

1957, it had been renamed Vacaville Airport and had a 2,000-foot unpaved runway. The runway was paved by 1962, when a hangar and a couple of additional buildings were located on the northwest side. In 1971, it began to be used for gliders under the name Vacaville Soaring. In 1984, the field became the home of Lagoon Valley Soaring, as the popularity of gliding in the area peaked in the 1980s with 11,000 glider tows per year from Lagoon Valley. It appears to have been abandoned in the 1990s (Freeman 2022).

- Antioch Airport, Antioch, was established between 1946 and 1947 and consisted of two runways, both unpaved and the longer being 2,100-foot dirt. In 1949, a hangar was also present. New buildings were added in the 1950s, pilots were trained, and skydiving happened from the field in the 1960s. By 1964, the runway was paved, and there was a mechanic's shop, pilot's lounge, and office. A skydiver's club was run from the airfield, and they also towed banners and sailplanes. The airport was closed between 1990 and 1993 (Freeman 2022).

- The original Rio Vista Airport, Rio Vista, was established as a general aviation airport between 1946 and 1952 and began as a simple airstrip. In 1952, it had two runways, which were paved by 1957. Major improvements, including constructing a larger and wider primary runway, occurred in 1968, with the longest now being 3,200 feet. This airport was closed in 1995 to be replaced by the new Rio Vista Municipal Airport (Freeman 2022).

There are nine additional general aviation airports within 25 miles of Vaca-Dixon that are still in use today. Eight of them were activated between 1940 and 1961, while the ninth is the new Rio Vista Airport, established in the mid-1990s to replace the facility noted above.

Table 1: Currently Functioning General Aviation Airports within 25 miles of Vaca-Dixon Airport (Airnav.com 2023)

Airport	Location	Activation	Runways	Runway size
Watts Woodland	Woodland	1940	1	3759 x 60 ft.
Napa County	Napa	1944	3	5930 x 150 ft., 2510 x 75 ft., 5008 x 150 ft.
Buchanan Field	Concord	1944	3	5001 x 150 ft., 2798 x 75 ft., 2770 x 75 ft.
University County	Davis	1946	1	3176 x 50 ft.
Yolo County	Davis	1949	1	6000 x 100 ft.
Nut Tree	Vacaville	1955	1	4700 x 75 ft.
Sonoma Valley	Sonoma	1957	2	2700 x 45 ft., 1513 x 50 ft.
Angwin Parrett	Angwin	1961	1	3217 x 50 ft.
Rio Vista Municipal	Rio Vista	1994	2	4199 x 75 ft., 2199 x 60 ft.

Most of the airports in Solano County and its vicinity that have now closed, including Vaca-Dixon Airport, were opened between 1940 and 1960 and shuttered between 1980 and 2000. They all tended to have short runways between 1,700-3,100 feet designed to accommodate small planes and the runways were less likely to be paved. Additionally, their airport facilities were often minimal or non-existent, consisting of hangars and one or two additional structures. The still operating airports began in the same way as the closed airports, but over time they often made changes to their runways and their facilities to accommodate larger airplanes and different clientele to be successful. From the 1980s onwards, no longer were

***B10. Significance (Continued):**

small airplanes the only ones using general aviation airports, but now wealthy individuals and companies could charter or own their own larger planes to transport more people or add additional amenities for passengers. These planes need places to land, and many of the successful airports made changes to their facilities to attract and accommodate them.

Since 1976, the Vaca-Dixon Airport was owned by Fitch and Miller, who were more interested in a recreational airport than a commercially successful one. Additionally, its location adjacent to I-80 made expanding the runways and facilities a difficult prospect and created safety concerns for both aviators and motorists. Additionally, while the vicinity is not densely populated, the increasing population in the Vacaville area did encourage additional people to build houses and live around the project area, and the new neighbors did not want the noise and traffic of an airport near their houses. When the FAA shut down the airport in the mid-1990s, there were numerous alternatives for general aviation nearby.

Significance Evaluation

The Vaca-Dixon Airport was constructed circa 1947 as part of a historical pattern of small general aviation airport development between World War II and circa 1960. Its original facilities included two approximately 40x40 foot buildings at the northwest corner of the property, one located where an empty concrete pad is visible today and the other at the current location of Hangar 1. Both of these buildings are no longer extant. Hangar 2, built in the 1950s, is the only remaining pre-1960 building. The airport runways are no longer visible.

Individually, Hangars 1 and 2 are in poor condition but are still recognizable as airplane hangars. However, as a whole, the property does not retain historic integrity because major features have been removed, and it therefore no longer conveys its original function as an airport.

The Vaca-Dixon Airport is one of at least 18 small general aviation airports established within 25 miles of Vacaville in the period 1945-1960, of which 9 remain active. While it reflects the overall pattern of the development of general aviation in the post-war period, Vaca-Dixon Airport did not play a prominent role in that pattern. No important events in local or State aviation history took place there. As such, the property appears to be **not eligible** under Criterion 1 ((“associated with events that have made a significant contribution to the broad patterns of our history”) of the California Register. Persons associated with the Vaca-Dixon Airport include Esther Byrnes Sawtelle, the first owner, and Wilbur Fitch and Duncan Miller, the owners from 1976. None of these individuals were locally well-known or prominent and did not appear to have played an important role in the aviation industry or any other aspect of local, State, or national history. The property therefore appears to be **not eligible** under Criterion 2 (“associated with the lives of significant persons in our past”) of the California Register. The former Vaca-Dixon Airport buildings are utilitarian buildings constructed using common materials and techniques, and lack stylistic details. Both hangar buildings (constructed circa 1950-1955 and in the 1970s) are simple box hangars for small planes, from a period when may airfields were built in California using similar techniques. The access road is a common construction type that lacks distinguishing characteristics. Likewise, the runway is a simple asphalt strip that is no longer recognizable as a runway and therefore lacks historic integrity. For these reasons the Vaca-Dixon

***B10. Significance (Continued):**

Airport appears **not eligible** under Criterion 3 ("embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values"). This criterion is usually used to evaluate archaeological sites. In some cases, a built environment resource may contain useful information about construction techniques or the use of materials by builders. However, both hangars and the shed were constructed using materials and techniques common during their period of construction. They therefore do not have information potential and appear **not eligible** for the California Register under Criterion 4 ("have yielded or may be likely to yield, information important in history or prehistory"). In conclusion, the buildings, runway, and access road at the Vaca-Dixon Airport are **not eligible** for the California Register because they are not significant under California Register Criteria 1, 2, 3 or 4. The buildings also are not contributing resources to a California Register-eligible historic district.

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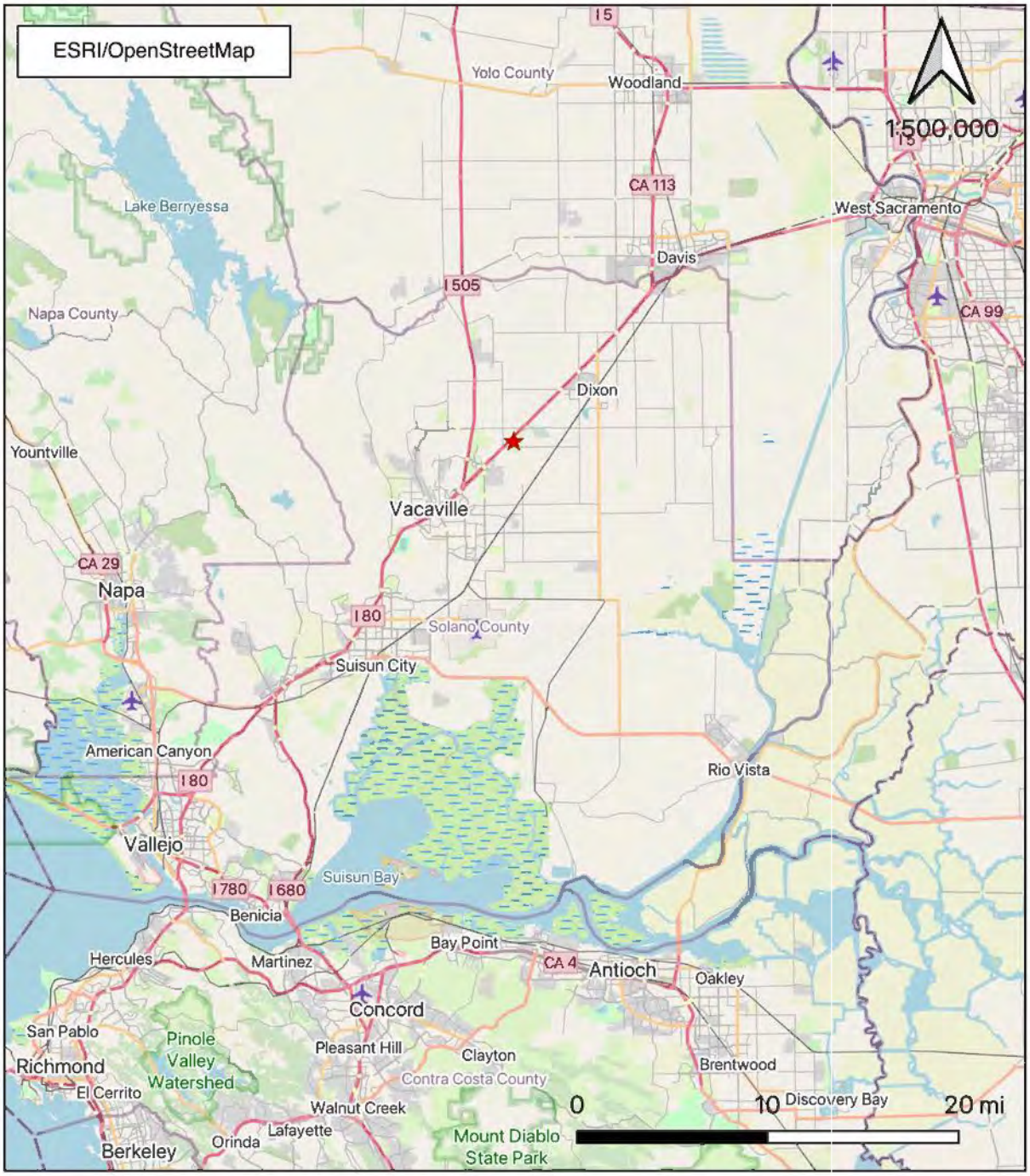
State of California □ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

 ***Resource Name or #** Vaca-Dixon Airport
***Map Name:** Project Area Limits ***Scale:** 1:6,000 ***Date of map:** August 16, 2023



Project Location Map
Vaca-Dixon Airport

Legend
★ Project Location

Project Vicinity Map

Vaca-Dixon Airport

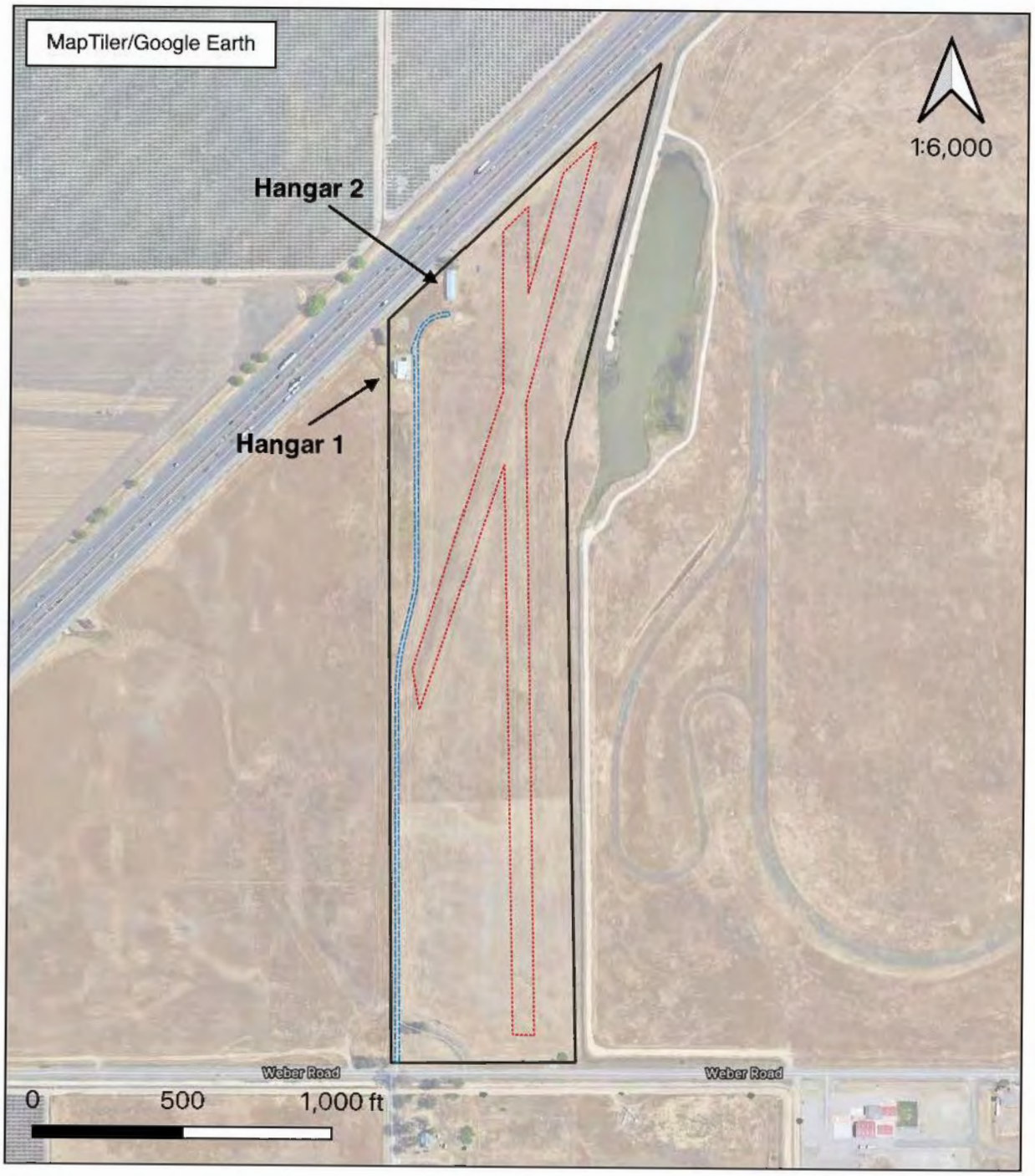
Legend

Project Area

State of California □ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

 ***Resource Name or #** Vaca-Dixon Airport
***Map Name:** Project Area Limits ***Scale:** 1:6,000 ***Date of map:** August 16, 2023



Project Area Limits
Vaca-Dixon Airport

Legend
Project Area Limit
Runways
Access Road

 *** Required information**

Appendix F GEOTECHNICAL EXPLORATION REPORT

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8798 Airport Road
Redding, California 96002
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KC ENGINEERING COMPANY
A SUBSIDIARY OF MATERIALS TESTING, INC.
www.mti-kcgeotech.com

Project No. VV5409
22 August 2022

Mr. Brian Griggs
Weber Road Industrial, LLC
250 Lafayette Circle, Suite 100
Lafayette, CA 94549

Subject: Proposed 40 Acre Laydown Yard
APN: 109-027-050 & 109-022-060
Weber Road, Vacaville, California
GEOTECHNICAL EXPLORATION & SUPPLEMENTAL RECOMMENDATIONS

Reference: Geotechnical Investigation Report, VV5409
By *KC Engineering Co*., dated 29 July 2022

Dear Mr. Griggs:

At your request, **KC ENGINEERING COMPANY** has performed an additional subsurface exploration at the subject site. The purpose of the field work was to further identify the subsurface materials within the proposed storm water bio-filtration ponds.

Field Exploration

The supplemental field exploration was performed on 8/17/2022 and included a reconnaissance of the site and the excavation of three additional test pits at the approximate locations shown on Figure 2A, "Site Plan" included in the Appendix. In addition, two field saturated hydraulic conductivity/permeability tests were performed in the areas of proposed storm water bio-filtration areas. It should be noted that the exploratory test pits were loosely backfilled with the excavated trench spoils.

Exploratory Test Pits

The test pits were excavated to a maximum depth of 16 feet. The excavation was performed with a track mounted Caterpillar 320 GC excavator equipped with a 48 inch wide bucket. Visual classifications were made from the spoils and the trench walls. As the excavation proceeded, bulk samples were obtained from representative soil layers and examined for identification

purposes, and labeled. The samples were then transported to our laboratory. The stratification of the soils are shown on the Test Pit Logs in the Appendix.

Percolation Testing

To evaluate the deeper soil permeability and infiltration rate at the proposed storm water retention ponds, we performed two field saturated hydraulic conductivity/permeability tests within Test Pits 7 and 8 at a depth of 7.5 and 9 feet below surface grade. We utilized an ETC Pask constant head permeameter for in-situ field saturated hydraulic conductivity measurement of the soils. The field data and field saturated hydraulic conductivity/permeability results of Test Pit 7 are presented in the Appendix of this report and indicate a rate of Kfs of 6.4×10^{-5} cm/s. The value obtained in the hard clay layer of Test Pit 8 was similar and confirmed the previous tested rates.

Subsurface Conditions

Based on our field exploration the surface and subsurface soil conditions are generally uniform across the site. The upper 2 to 3 feet consists of relatively stiff to hard, moderately to highly expansive fat black clay. The clay is underlain by light brown hard sandy clay to approximately 6 feet on the south at Test Pit 7 and 11 feet to the central and north end in Test Pit 8. Underlying the sandy clay is loose to medium dense yellowish brown clayey sand to the termination of the exploratory test pits at 16 feet. It is noted that the clayey sand in Test Pit 8 was denser.

Groundwater was encountered in the test pits at various depths. The northern and central test pits encountered water and seepage at 15 feet below existing grade with water to the south at Test Pit 7 at 9 feet below grade. Fluctuations in the groundwater conditions can occur with variations in seasonal rainfall, canal irrigation and variations in subsurface stratification.

A more thorough description and stratification of the soils encountered are presented on the respective Test Pit Logs in the Appendix. The approximate locations of the test pits are shown on Figure 2A, “Site Plan”.

Storm Water Swales & Basins

As discussed in the “Field Exploration” section above, the soil permeability at the proposed storm water retention ponds was evaluated by performing a deeper field saturated hydraulic conductivity/permeability test within the underlying sand layer of Test Pit 7. At this location, a shallow test pit was hand augured to 12 inches below the benched test pit bottom. We utilized an ETC Pask constant head permeameter for in-situ field saturated hydraulic conductivity measurement of the soils. The field data and field saturated hydraulic conductivity/permeability results are presented in the Appendix of this report and indicate a Kfs of 6.4×10^{-5} cm/s at Test Pit 7 to the south. Using a Factor of Safety of 2, these values generally correlate to percolation test rate of fall or Percolation Times of 40 MPI at Test Pit 7 and 9. The sand layer encountered in Test Pit 8 was denser than the northern and southern test pits. The

percolation test rate of fall or Percolation Times of 65 MPI should be used in the central bio swales at Test Pit 8.

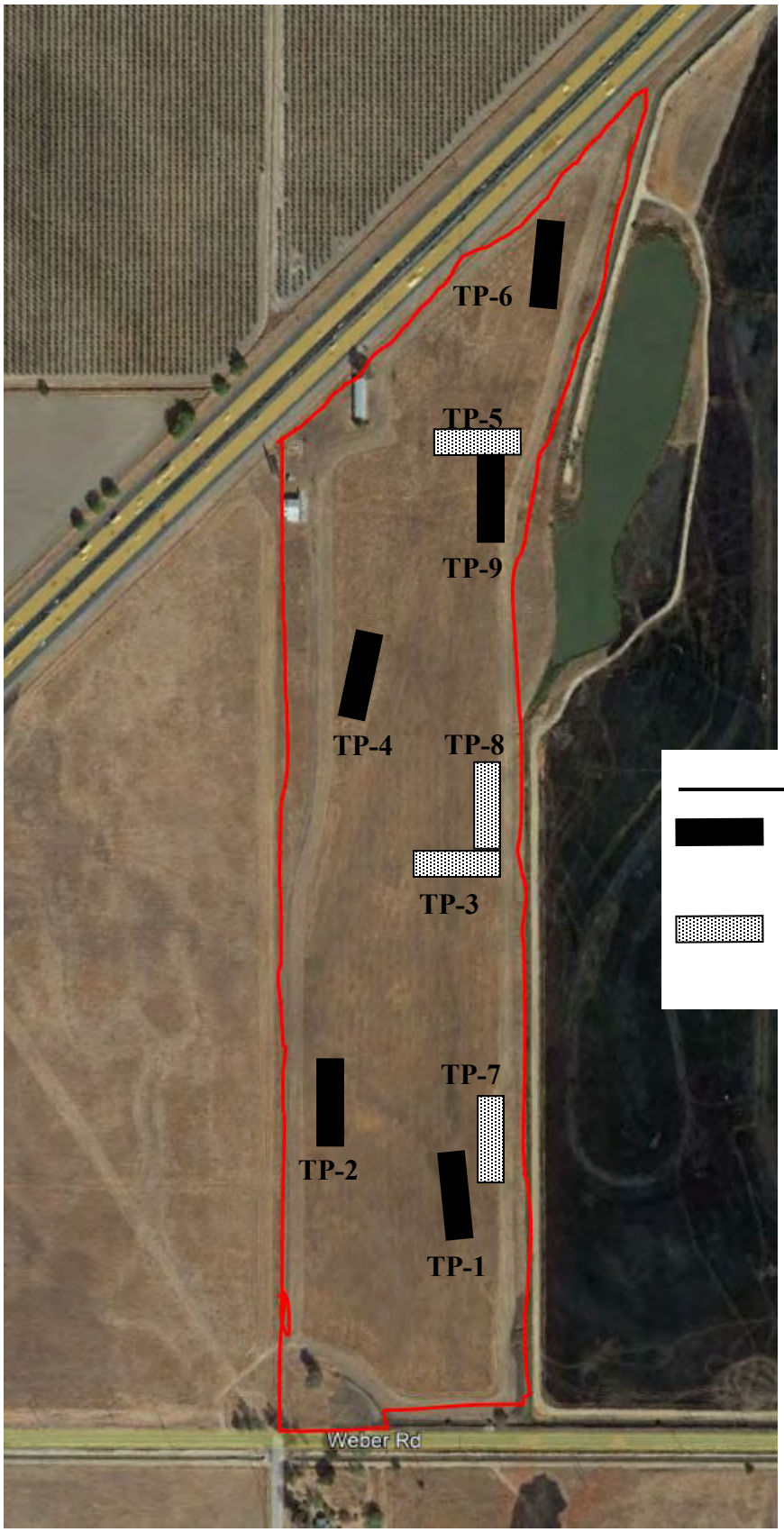
The sandy layer was generally encountered at 11 feet below grade on the north and 6 feet deep on the south. Should you have any questions or require additional information, please contact our office at your convenience.

Respectfully submitted,
KC ENGINEERING COMPANY

Andrew L. King, P.E.
Principal Engineer

Copies: 1 email to Client
1 email to CSA

Appendix:
Site Plan, Figure 2A
Test Pit Logs, TP7-9
Hydraulic Conductivity Data, #3



KC ENGINEERING COMPANY
865 Cotting Lane, Suite A
Vacaville, CA 95688
707.447.4025

Project No. VV5409
Proposed 40 Acre Laydown Yard
Weber Road, Dixon, Solano County, CA
Figure 2A – "Site Plan"

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 3.0'	Black CLAY, dry, loose to hard	CH	Water at 9'
	Qp > 4.5 tsf @ 1.0'		
3.0 - 6.0'	Light Brown Sandy CLAY, moist, hard	CL	
	Qp > 4.5 tsf @ 4.0'		
6.0 - 9.0'	Yellowish Brown Clayey SAND, moist to wet, medium dense	SC	
	Qp = 2.0 tsf @ 7.0'		

KC ENGINEERING COMPANY

TEST PIT LOG NO. 7 FIGURE NO.

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Dixon, Solano County, California
PROJECT NO. VV5409

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

N - S

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

08/17/2022

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 3.0'	Black CLAY, dry, hard	CH	Seepage at 15'
	Qp > 4.5 tsf @ 1.0'		
3.0 - 11'	Light Brown Coarse Sandy CLAY, moist, hard	CL	
11 - 16'	Yellowish Brown Clayey SAND, moist to wet, dense	SC	

KC ENGINEERING COMPANY

TEST PIT LOG NO. 8 FIGURE NO.

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Dixon, Solano County, California
PROJECT NO. VV5409

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

N - S

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

08/17/2022

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 3.0'	Black CLAY, dry, hard	CH	Water at 15'
3.0 - 10.5'	Light Brown Sandy CLAY, moist, hard	CL	
10.5 - 15'	Yellowish Brown Clayey SAND, moist to wet, medium dense	SC	

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Dixon, Solano County, California
PROJECT NO. VV5409

KC ENGINEERING COMPANY

TEST PIT LOG NO. 9 FIGURE NO.

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

N - S

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

08/17/2022

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KC ENGINEERING COMPANY
A SUBSIDIARY OF MATERIALS TESTING, INC.
www.mti.kcgeotech.com

TEST PIT: 7
DATE: 08/17/2022

OWNER'S NAME: Weber Road Industrial, LLC
SITE LOCATION: Weber Road, Vacaville CA
PID #: ---
TECHNICIAN: Andy King
WEATHER/TEMPERATURE: Overcast and Breezy / 84 °F

FIELD PERMEABILITY TEST #: **3**

D - reservoir diameter (cm) Slow
d – well hole diameter (cm) 8 cm
H – height of water in well (cm) 15 cm
Depth below ground surface (cm) 7.5'

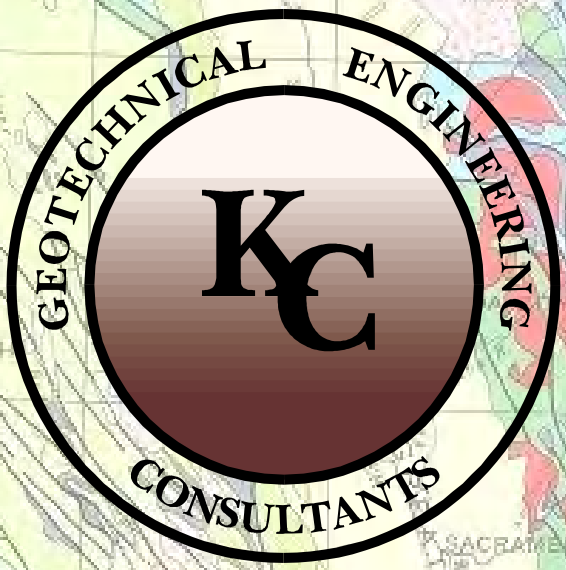
Soil Texture medium and fine sand
Soil Structure unstructured
α* (cm-1) 0.12
C- Factor 1.36

TIME (min) 10:49	(1) CHANGE IN TIME (min)	RESERVOIR WATER LEVEL (WL) (cm)	(2) CHANGE IN WL (cm)	(2)/(1) RATE OF FALL (R) (cm/min)
11:21	Continued…	45	Continued…	
11:23	2	44.1	0.9	0.45
11:25	2	43.1	1	0.5
11:27	2	419	1.2	0.6
11:29	2	40.6	1.3	0.65
11:31	2	39.3	1.3	0.65
11:33	2	37.8	1.5	0.75
11:35	2	36.5	1.3	0.65
11:37	2	35.1	1.4	0.7
11:39	2	33.2	1.9	0.95
11:41	2	31.9	1.3	0.65
11:43	2	30.3	1.6	0.8
11:45	2	28.5	1.8	0.9
11:47	2	26.9	1.6	0.8
11:49	2	25.1	1.8	0.9
11:51	2	23.5	1.6	0.8
11:53	2	21.6	1.9	0.95
11:55	2	19.6	2	1.0
11:57	2	17.7	1.9	0.95
11:59	2	16.7	1	**0.5**

Field Saturated Hydraulic Permeability, Kfs = 6.4 x 10^{-5} cm/sec

approximate percolation time**, PT = 40 min/in**

GEOTECHNICAL EXPLORATION REPORT
for
PROPOSED 40 ACRE LAYDOWN YARD
at
Weber Road, Vacaville, California
APN: 109-027-050 & 109-022-060
for
WEBER ROAD INDUSTRIAL, LLC



By

KC ENGINEERING COMPANY

Project No. VV5409

29 July 2022

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A SUBSIDIARY OF MATERIALS TESTING, INC.
www.mti-kcgeotech.com

Project No. VV5409
29 July 2022

Mr. Brian Griggs
Weber Road Industrial, LLC
250 Lafayette Circle, Suite 100
Lafayette, CA 94549

Subject: Proposed 40 Acre Laydown Yard
APN: 109-027-050 & 109-022-060
Weber Road, Vacaville, California
GEOTECHNICAL EXPLORATION REPORT

Dear Mr. Griggs:

In accordance with your authorization, **KC ENGINEERING COMPANY** has explored the geotechnical conditions of the surface and subsurface soils for the proposed laydown yard to be constructed at the subject site.

The accompanying report presents our conclusions and recommendations based on our exploration. Our findings indicate that the proposed main access road, laydown yard areas and related improvements are geotechnically feasible for construction on the subject site provided the recommendations of this report are carefully followed and are incorporated into the project plans and specifications.

Should you have any questions relating to the contents of this report or should you require additional information, please contact our office at your convenience.

Reviewed by,

Andrew L. King, P.E.
Principal Engineer

Respectfully Submitted,
KC ENGINEERING COMPANY

David V. Cymanski, G.E.
Principal Engineer

Copies: 3 mail, 1 email

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- Geologic Map, Figure 3
- Log of Test Pits, Figures 4 through 9
- Subsurface Exploration Legend
- Hydraulic Conductivity Data
- Laboratory Test Results
- DCP Results

GEOTECHNICAL EXPLORATION

Purpose and Scope

The purpose of the geotechnical exploration for the proposed laydown yard was to determine the surface and subsurface soil conditions. Based on the results of the exploration, geotechnical recommendations and criteria were established for the grading of the site, drainage, pavement sections, retention ponds and the construction of other related facilities on the property.

In accordance with your authorization, our exploration services included the following tasks:

a. A review of available geotechnical and geologic literature concerning the site and vicinity;
b. Site reconnaissance by the Geotechnical Engineer to observe and map surface conditions;
c. Excavation of six exploratory test pits, logging and sampling of the subsurface soils;
d. Performing two field saturated hydraulic conductivity/permeability tests;
e. Laboratory testing of the samples obtained to determine their classification and engineering characteristics;
f. Analysis of the data and formulation of conclusions and recommendations; and
g. Preparation of this written report.

Site Location and Description

The subject site is located northeast of Weber Road and Byrnes Road in Vacaville, California as shown on Figure 1 “Aerial Vicinity Map” included in the Appendix of this report. The 40-acre property is bounded on the north by Interstate 80, on the east by an earthen ditch, a pond and the old Vaca Valley Raceway, on the south by a SID ditch and Weber Road, and on the west by a similar vacant field. The site is relatively flat and is vegetated with native grasses and weeds. The site was formerly used as a glider port and contains two metal buildings on the northwest corner. An existing gravel/earthen access road is present on the western boundary.

The above description is based on a reconnaissance of the site by our Geotechnical Engineer, a review of a Google Earth image, and a Conceptual Site Plan by Cullen-Sherry & Associates dated 6/23/22. The Google Earth image was used as the basis for our “Aerial Vicinity Map”, included as Figure 1 in the Appendix. The Conceptual Site Plan was used as the basis of our “Site Plan” included as Figure 2.

Proposed Construction

We understand that the site is planned to be developed into a number of gravel laydown yard areas as shown on Figure 2, "Site Plan". A main access road is planned along the western property line to provide access to six different fenced in laydown yards. We expect the yard areas to be used by heavy civil or utility general contractors for truck and equipment storage. The main access road and laydown yard areas are planned to have an aggregate base surface with possibly an asphalt paved entrance apron. The yard areas will be graded to sheet flow eastward to storm water retention ponds.

Field Exploration

The field exploration was performed on 6/14/2022 and included a reconnaissance of the site and the excavation of six exploratory test pits at the approximate locations shown on Figure 2, "Site Plan" included in the Appendix. In addition, two field saturated hydraulic conductivity/permeability tests were performed in the areas of proposed storm water bio-filtration areas. It should be noted that the exploratory test pits were loosely backfilled with the excavated trench spoils.

Exploratory Test Pits

The test pits were excavated to a maximum depth of 6 feet. The excavation was performed with a track mounted John Deere 35G mini excavator equipped with a 24 inch wide bucket. Visual classifications were made from the spoils and the trench walls. As the excavation proceeded, bulk samples were obtained from representative soil layers and examined for identification purposes, and labeled.

The samples were then transported to our laboratory for testing. Classifications made in the field were verified in the laboratory after further examination and testing. The stratification of the soils, descriptions and laboratory test results of specific soil samples are shown on Figures 4 through 9, "Test Pit Log" contained within the Appendix.

Percolation Testing

To evaluate the soil permeability and infiltration rate at the proposed storm water retention ponds, we performed two field saturated hydraulic conductivity/permeability tests within Test Pits 3 and 5 at a depth of 5 feet below surface grade. We utilized an ETC Pask constant head permeameter for in-situ field saturated hydraulic conductivity measurement of the soils. The field data and field saturated hydraulic conductivity/permeability results are presented in the

Appendix of this report and indicate a range of Kfs of 6.3 x 10^{-6} cm/s to 7.5 x 10^{-7} cm/s. These values correlate to percolation rate of fall or Perc Times ranging from 128 to 1076 min/inch.

DCP Testing

Representatives from Tensar International Corporation performed a number of Dynamic Cone Penetrometer (DCP) tests per ASTM D6951 at locations adjacent to our test pits. The penetrometer results are attached and indicate representative California Bearing Ratios and bearing capacity versus depth. These results were then utilized by Tensar engineers to provide a recommended geogrid reinforced aggregate base pavement section for the main access road and laydown yard areas.

Laboratory Testing

The laboratory testing program was directed towards providing sufficient information for the estimation of the engineering characteristics of the site soils so that the recommendations outlined in this report could be formulated. The laboratory test results are presented on the respective Test Pit Logs and data sheets in the Appendix.

In order to assist in the identification and classification of the subsurface soils, sieve analysis tests (ASTM D6913) and Atterberg Limits tests (ASTM D4318) were performed on selected soil samples. The Atterberg Limits test results were used to estimate the expansion potential of the near surface soils. A laboratory compaction modified proctor was performed on the near surface subgrade soils in accordance with ASTM D1557. R-Value tests per Cal Test 301 were performed on representative composite bulk sample of the native soils. The soils were also tested per ASTM D6726 to determine the percentage of lime required to achieve a stabilized soil with a minimum pH of 12.6. The strength of the soils was evaluated with a penetrometer. The penetrometer readings are recorded on the respective Test Pit Logs.

Subsurface Conditions

Based on our field exploration and laboratory testing, the surface and subsurface soil conditions are generally uniform across the site. The upper 2 to 3 feet consists of relatively stiff to hard, moderately to highly expansive fat black clay. The clay is underlain by light brown hard sandy clay to the maximum depth explored of 6 feet.

Groundwater was not encountered in the test pits. Our review of a nearby well listed on the California Department of Water Resources website indicates groundwater depths of approximately 10 feet below the surface. Fluctuations in the groundwater conditions can occur with variations in seasonal rainfall, canal irrigation and variations in subsurface stratification.

A more thorough description and stratification of the soils encountered along with the results of the laboratory tests are presented on the respective Test Pit Logs in the Appendix. The approximate locations of the test pits are shown on Figure 2, "Site Plan".

Site Geology

According to the Preliminary Geologic Map of the Lodi Quadrangle[1], the site is mapped as Pleistocene-aged alluvial fan deposits comprised of poorly sorted clays, silts, sands and gravels. The soils encountered during our exploration were found to generally correlate with geologic mapping.

The site is not located within an Alquist-Priolo Earthquake Fault Zone[2]. There are no known active faults crossing the site as mapped and/or recognized by the State of California. The geology of the site and surrounding area is shown on Figure 3, "Geologic Map".

[1] T.E. Dawson, 2009, *Preliminary Geologic Map of the Lodi 30' x 60' Quadrangle, California*, California Geological Survey

[2] Parish, J.G., 2018 *Earthquake Fault Zones,* California Geological Survey, Special Publication 42, Revised 2018.

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

General

From a geotechnical point of view, the proposed Weber Road laydown yard is considered to be feasible for construction on the subject site provided the recommendations presented in this report are incorporated into the project plans and specifications.

All grading plans for the development must be reviewed by the Geotechnical Engineer prior to contract bidding or submittal to governmental agencies to ensure that the geotechnical recommendations contained herein are properly incorporated and utilized in design.

KC ENGINEERING CO. should be notified at least two working days prior to site clearing, grading, ground improvement and/or foundation operations on the property. This will give the Soil Engineer ample time to discuss the problems that may be encountered in the field and coordinate the work with the contractor.

Field observation and testing during the grading operations must be provided by representatives of ***KC ENGINEERING CO.*** to enable them to form an opinion regarding the adequacy of the site preparation, the acceptability of fill materials, and the extent to which the earthwork construction and the degree of compaction comply with the specification requirements. Any work related to the grading and/or foundation operations performed without the full knowledge and under the direct observation of the Soil Engineer will render the recommendations of this report invalid.

Geotechnical Considerations

The primary geotechnical considerations for the proposed laydown yard are the presence of highly expansive near surface clay soils and the relatively low permeability or slow infiltration/percolation rates for the proposed storm water retention ponds. The presence of highly expansive soils can result in poor pavement or aggregate base surface performance under heavy truck traffic or use during the winter season. To mitigate this concern, we recommend that the subgrade soils of the main access road and laydown yard areas be lime treated prior to aggregate base placement. Alternatively, Tensar geogrid reinforcement could be placed on the processed and compacted subgrade followed by aggregate base. Specific recommendations are presented in the “Grading” and “Pavement Areas” sections of this report.

Grading

General Grading

Grading activities may be performed during the rainy season, however, achieving proper compaction will be difficult due to excessive moisture; and delays will occur. Grading performed during the dry months will minimize the occurrence of the above problems.

The surface of the site in areas to be graded should be stripped to remove all existing surface vegetation and/or other deleterious materials. It is estimated that stripping depths of approximately 1 to 2 inches may be necessary depending on actual conditions at the time of development. The stripped surface vegetation should be removed from the site and not mixed into the subgrade.

We expect the site to be sheet graded with cuts and fills to balance the site and to sheet drain towards the retention ponds. For general fill areas we recommended that the upper 12 inches of the exposed surface be scarified and/or disked followed by uniform moisture conditioning as needed and compacting to a minimum degree of relative compaction of 90% at least 3 percent above optimum moisture content as determined by ASTM D1557 Laboratory Test Procedure. After processing and compacting the lower 12 inches, the site may be brought up to design pad grades by placing engineered fill in lifts of 8 to 12 inches in un-compacted thickness and compacting to a relative compaction of 90% at 3 percent over optimum in accordance with the aforementioned test procedure. All soils encountered during our exploration, are suitable for use as engineered fill when placed and compacted at the recommended moisture content.

The fill materials shall be placed in uniform lifts of not more than 8 to 12 inches in uncompacted thickness depending on size and weight of equipment used. Each layer shall be spread evenly and shall be thoroughly blade mixed during the spreading to obtain uniformity of material in each layer. Before compaction begins, the fill shall be brought to a water content that will permit proper compaction by either (a) aerating the material if it is too wet, or (b) spraying the material with water if it is too dry.

Compaction shall be by footed rollers or other types of acceptable compacting rollers. Rollers shall be of such design that they will be able to compact the fill to the specified density. Rolling shall be accomplished while the fill material is within the specified moisture content range. Rolling of each layer shall be continuous over its entire area and the roller shall make sufficient trips to ensure that the required density has been obtained. No ponding or jetting shall be permitted.

The standard test used to define maximum densities and optimum moisture content of all compaction work shall be the Laboratory Test procedure ASTM D1557 and field tests shall be

expressed as a relative compaction in terms of the maximum dry density and optimum moisture content obtained in the laboratory by the foregoing standard procedure. Field density and moisture tests shall be made in each compacted layer by the Soil Engineer in accordance with ASTM D6938, respectively. When footed rollers are used for compaction, the density and moisture tests shall be taken in the compacted material below the surface disturbed by the roller. When these tests indicate that the compaction requirements for any layer of fill, or portion thereof, have not been met, the particular layer, or portion thereof, shall be reworked until the compaction requirements have been met.

Subgrade & Aggregate Base Grading

As mitigation to minimize differential heave and shrink movements and to provide a competent subgrade, we recommend that the upper 12 inches of the subgrade soils be lime treated with high-calcium quicklime as described below. Alternatively, Tensar NX750 geogrid reinforcement may be placed on the processed and untreated compacted subgrade prior to placing the aggregate base section. Where geogrid reinforcement is utilized, the Tensar installation guidelines for placement and lap splicing must be followed.

Where the lime treatment option is selected, it is recommended that the upper 12 inches of the design subgrade comprise the on-site materials modified with high calcium quicklime meeting ASTM C977. The lime treatment should consist of a 4% mixture by dry weight. Based on a unit weight of 110 p.c.f., a spread rate of 4.5 p.s.f. would apply for the 12-inch mixing depth. The lime treated soils should be compacted to at least 95% relative compaction of the maximum wet density per ASTM D1557 at a moisture content at least 4% above optimum. The lime treatment must be performed by a qualified soil stabilization contractor in general conformance with Caltrans Standard Specification Section 24. The product specification and quality control test results must be provided to us by the contractor for review and acceptance prior to the treatment operations. The lime should be spread and mixed with equipment capable of providing relatively uniform conditions. The lime treated sections must be mixed and allowed to mellow over-night followed by a second mix prior to compaction. After compaction, it is important to moist cure the lime treated soils until placement of the aggregate base.

All aggregate base material placed subsequently should be compacted to a minimum relative compaction of 95% based on the ASTM Test Procedure D1557. Aggregate base should meet the minimum requirements of Caltrans ¾" Class 2 per Section 26 and be crushed and angular. The recommended aggregate base thicknesses for asphalt concrete pavements and all AB sections are noted in the "Pavement Areas" section below.

Pavement Areas

The main access road and laydown yard areas are planned to consist of an aggregate base surface. An asphalt concrete entrance apron may also be required. Recommendations for these pavement surfaces are presented below. We emphasize that the performance of the pavement is critically dependent upon adequate and uniform compaction of the subgrade soils, as well as engineered fill and utility trench backfill within the limits of pavements. Subgrade and aggregate base grading recommendations are provided in the "Grading" section above.

The R-value of the site soils was tested per CTM 301 and values of less than 5 and 11 were determined. In addition, Atterberg Limits testing indicates the near surface soils are highly expansive. Due to these conditions, we have recommended the subgrade soils be modified by lime treatment or Tensar geogrid reinforcement be utilized as presented above. Where lime treatment is used, we expect that the clay soils will be improved with an R-value of 40 or greater.

Should the subgrade soils be lime treated, we are providing sections based on a minimum R-value of 40. Based on an R-Value of 5 for untreated clay soils and use of Tensar NX750 geogrid, the recommended pavement sections for asphalt concrete and all aggregate base surfaces are summarized in the table below. Asphalt concrete shall conform with Section 39 of Caltrans Standard Specifications and shall be per City of Vacaville or Solano County Standards.

Traffic Condition	Traffic Index (TI)	Asphalt Concrete (inches)	Class II Aggregate Base[1] (inches)
Laydown Yard Areas	5.0	0.0 0.0	9.0* 10.5**
Main Access Road	7.0	4.0 4.0 0.0 0.0	7.5* 7.0** 12.0* 14.5**

NOTES:
(1) Minimum R-Value = 78
(2) All layers in compacted thickness to CalTrans Standard Specifications.
* AB underlain with Tensar NX750 Geogrid
** Lime Treated Subgrade (R-Value = 40 min)

Surface Drainage

Positive drainage must be provided by the project Civil Engineer to remove all storm water from the access road and laydown yard areas to prevent storm water from ponding and eroding the surface. Site drainage should be designed by the project Civil Engineer. Civil engineering, hydraulic engineering, and surveying expertise is necessary to design proper surface drainage to assure that the flow of water is directed away from the foundations.

Storm Water Swales & Basins

As discussed in the "Field Exploration" section above, the soil permeability at the proposed storm water retention ponds was evaluated by performing two field saturated hydraulic conductivity/permeability tests at the locations shown on Figure 2. At these locations, a shallow test pit was hand augured to depths of 9.5 to 12 inches below the existing surface. We utilized an ETC Pask constant head permeameter for in-situ field saturated hydraulic conductivity measurement of the soils. The field data and field saturated hydraulic conductivity/permeability results are presented in the Appendix of this report and indicate a Kfs of 7.5×10^{-7} cm/s at Test Pit 3 to the southeast and 6.3×10^{-6} cm/s at Test Pit 5 to the northeast. These values generally correlate to percolation test rate of fall or Percolation Times of 1076 MPI at Test Pit 3 and 128 MPI at Test Pit 5.

Underground Utility and Excavations

Groundwater was reported to be at 10 feet below the surface in a nearby water well. Depending on the time of year of underground construction, groundwater may be encountered especially in deeper utilities. Temporary dewatering and shoring are the responsibility of the Contractor.

Should groundwater be encountered, the utility construction should begin at its lowest point and proceed uphill. The utility trench should be over-excavated 6 to 12 inches below the county required pipe bedding material. Open-graded 1.5-inch crushed aggregate should be placed in the bottom of the trench followed by the City/County standard bedding material. A sump pit should be excavated at the lowest point of the open excavation/trench to facilitate pumping of collected water. The collected water should be pumped to an approved discharge facility.

Utility trenches extending underneath all traffic areas must be backfilled with native or import soil materials and compacted to relative compaction of 90% to within 12 inches of the subgrade. The upper 12 inches should be compacted to 95% relative compaction in accordance with Laboratory Test Procedure ASTM D1557. Backfilling and compaction of these trenches must also meet the requirements set forth by the City of Vacaville or Solano County, Department of Public Works.

Applicable safety standards require that trenches in excess of 5 feet must be properly shored or that the walls of the trench slope back to provide safety for installation of lines. If trench wall sloping is performed, the inclination should vary with the soil type and applicable OSHA Safety Standards. The soils at the site are considered to be Type B, except where groundwater is encountered Type C should be used.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. It should be noted that it is the responsibility of the owner or his representative to notify ***KC ENGINEERING CO.***, in writing, a minimum of two working days before any clearing, grading, or foundation excavation operations can commence at the site.

2. The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the test pits and from a reconnaissance of the site. Should any variations or undesirable conditions be encountered during the development of the site, ***KC ENGINEERING CO.***, will provide supplemental recommendations as dictated by the field conditions.

3. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information and recommendations contained herein are brought to the attention of the Architect and Engineer for the project and incorporated into the plans and that the necessary steps are taken to see that the Contractor and Subcontractors carry out such recommendations in the field.

4. At the present date, the findings of this report are valid for the property investigated. With the passage of time, significant changes in the conditions of a property can occur due to natural processes or works of man on this or adjacent properties. In addition, legislation or the broadening of knowledge may result in changes in applicable standards. Changes outside of our control may render this report invalid, wholly or partially. Therefore, this report should not be considered valid after a period of two (2) years without our review, nor should it be used, or is it applicable, for any properties other than those investigated.

5. Not withstanding, all the foregoing applicable codes must be adhered to at all times.

APPENDIX

Aerial Vicinity Map

Site Plan

Geologic Map

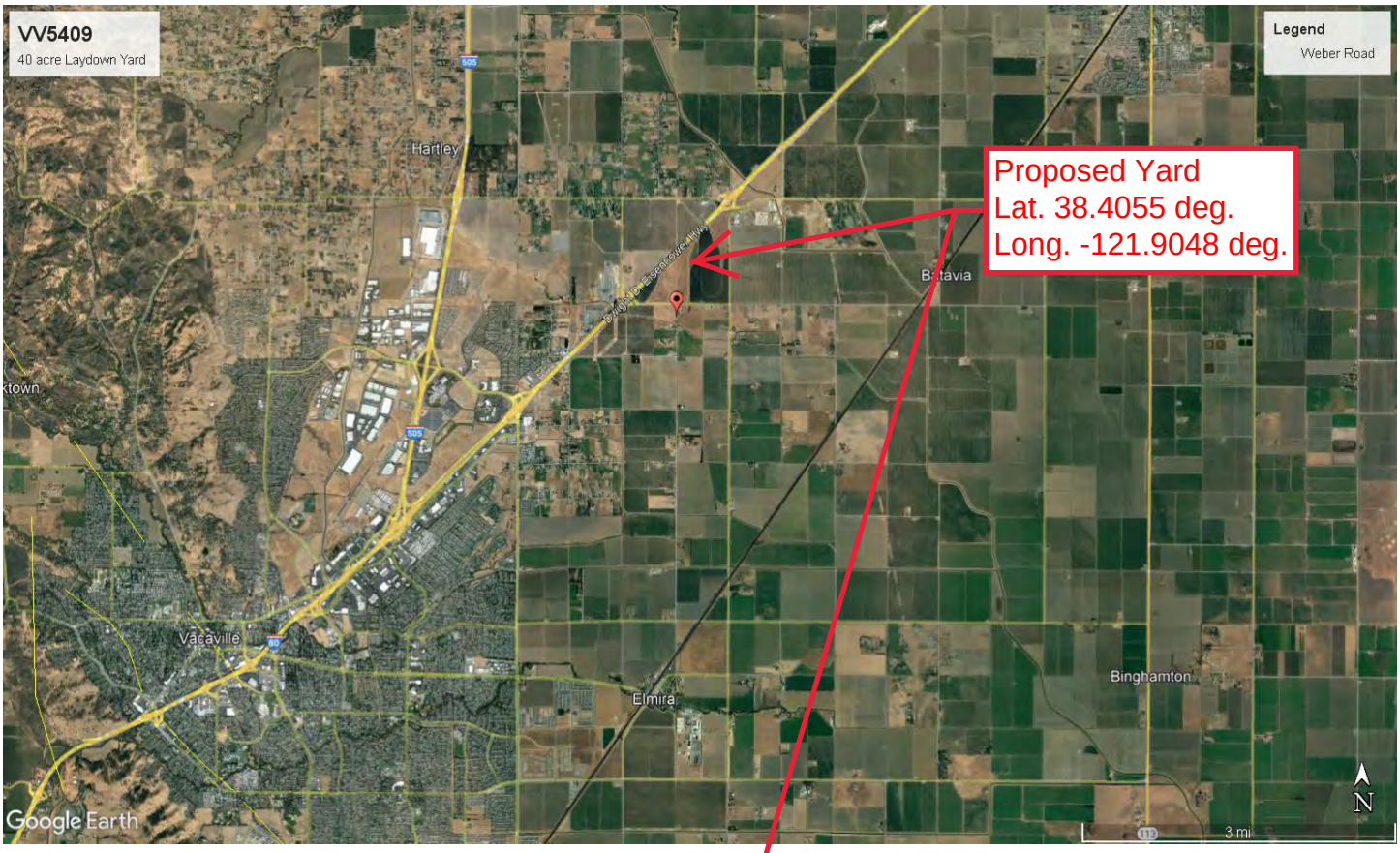
Test Pit Logs

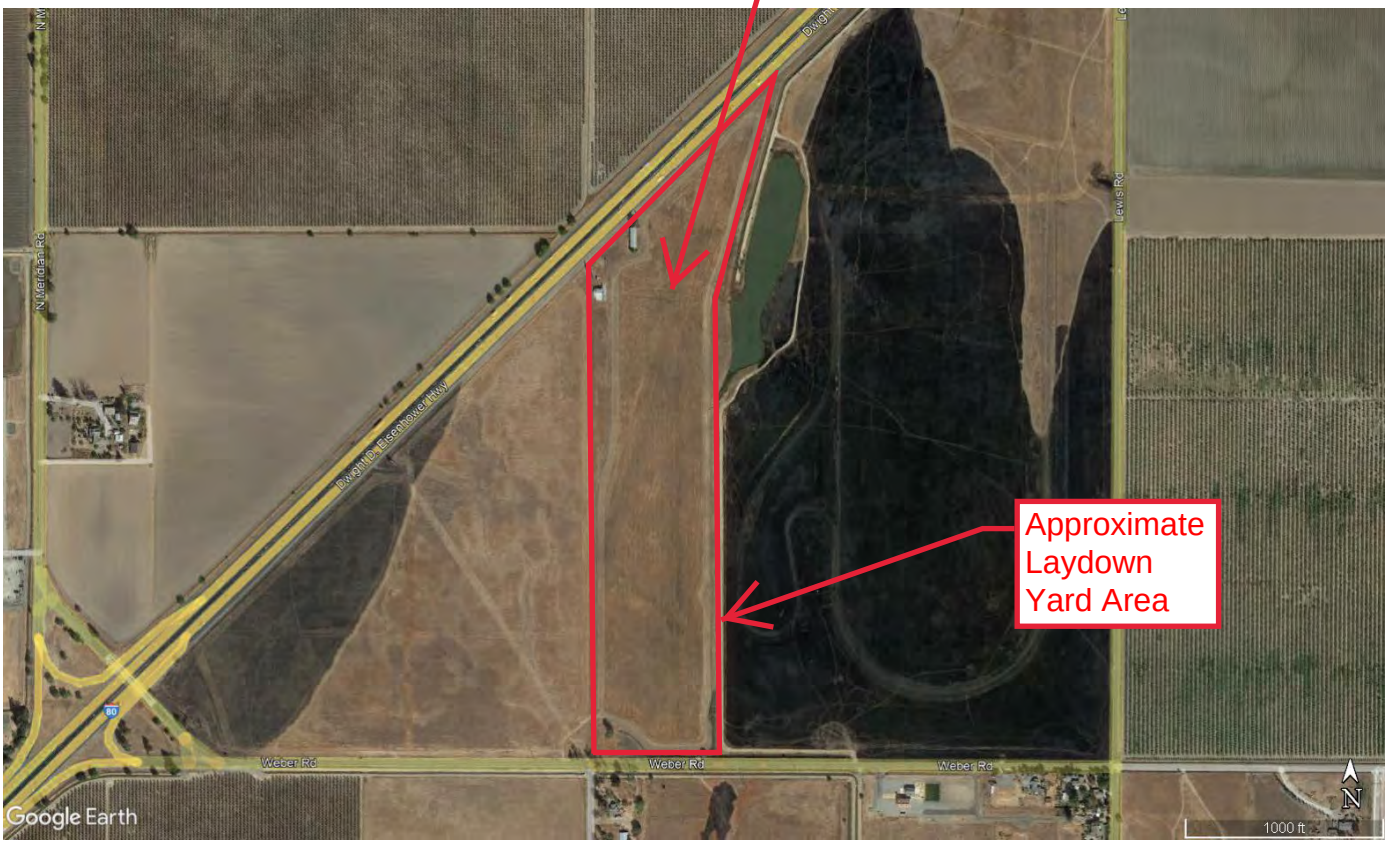
Subsurface Exploration Legend

Hydraulic Conductivity Data

Laboratory Test Results

DCP Results





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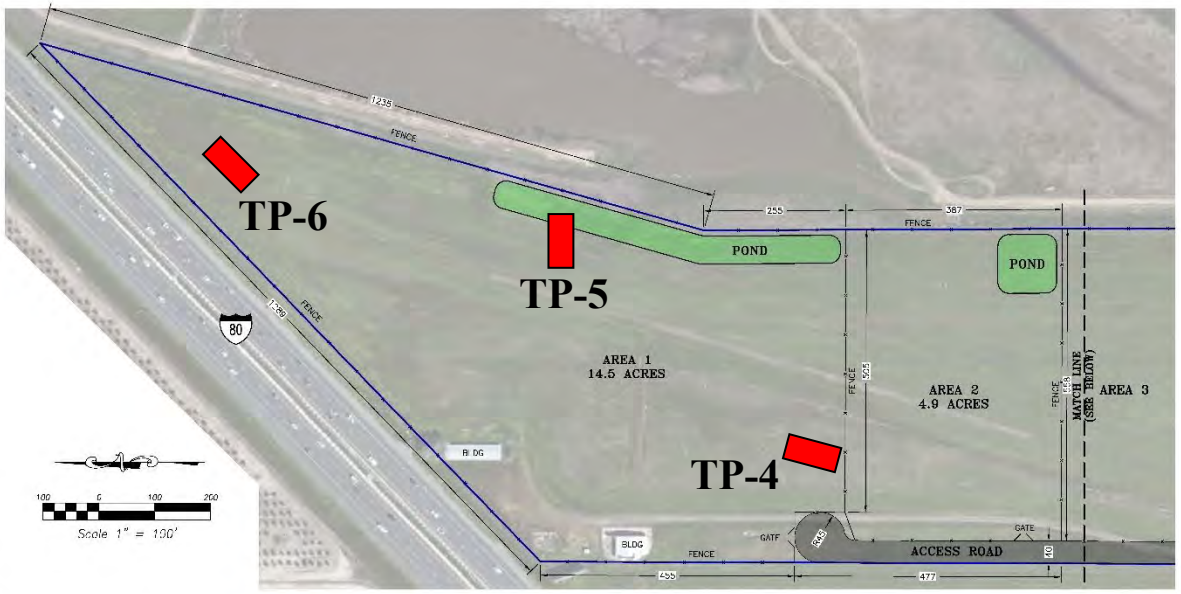
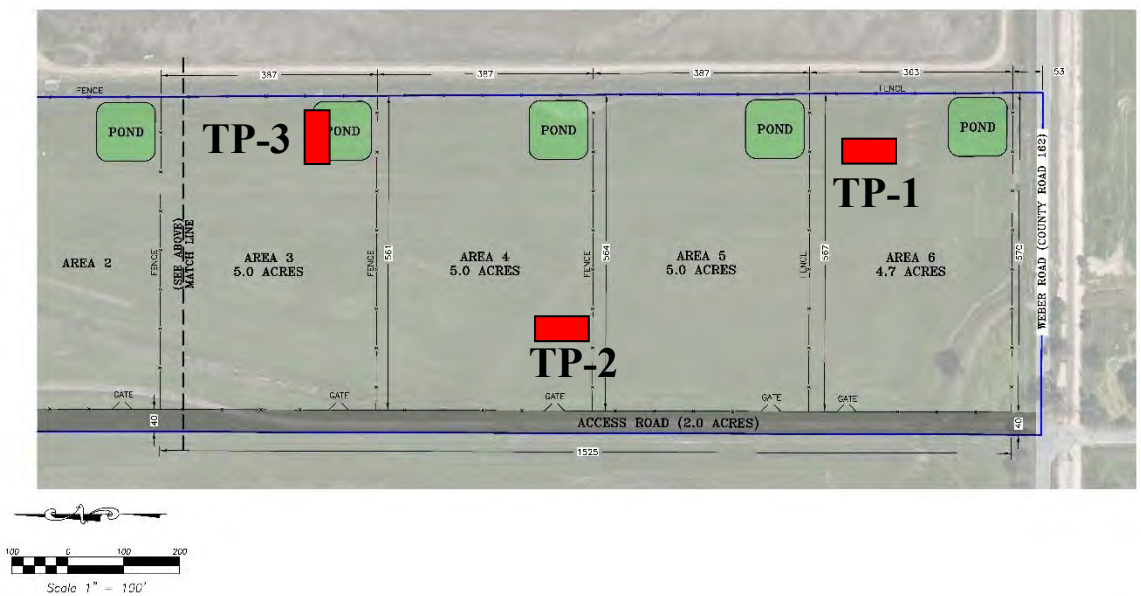
Project No. VV5409
Proposed 40 Acre Laydown Yard
Weber Road, Vacaville, Solano County, CA
Figure 1 – Aerial Vicinity Map





VICINITY MAP
NO SCALE

LEGEND

- DRAINAGE (RETENTION) POND
- ACCESS ROAD
- PROPOSED FENCE LINE
- ESTIMATED BOUNDARY
- **Approximate Test Pit Location**

AREA 1		
GROSS AREA:	15.5 ACRES	
POND AREA:	(0.7 ACRES)	
NET AREA:	14.8 ACRES	
AREA 2		
GROSS AREA:	4.9 ACRES	
POND AREA:	(0.2 ACRES)	
NET AREA:	4.7 ACRES	
AREA 3		
GROSS AREA:	5.0 ACRES	
POND AREA:	(0.2 ACRES)	
NET AREA:	4.8 ACRES	
AREA 4		
GROSS AREA:	5.0 ACRES	
POND AREA:	(0.2 ACRES)	
NET AREA:	4.8 ACRES	
AREA 5		
GROSS AREA:	5.0 ACRES	
POND AREA:	(0.2 ACRES)	
NET AREA:	4.8 ACRES	
AREA 6		
GROSS AREA:	4.7 ACRES	
POND AREA:	(0.2 ACRES)	
NET AREA:	4.5 ACRES	

PLAN PRELIMINARY
NOT FOR CONSTRUCTION

Cullen-Sherry & Associates, Inc.
Civil Engineering - Surveying
1000 Adams Street, Suite A -P.O. Box 501, Benicia, California 94510
(707) 745-3219 Fax (707) 745-9498 csa-engineers.com
Dan Cullen RCE 20162 Rod Sherry RCE 61637

CONCEPTUAL SITE PLAN
WEBER ROAD YARDS
SOLANO COUNTY A.P.No: 0109-270-050 & 0109-220-060
VACAVILLE, CALIFORNIA
PREPARED FOR: B. GRIGGS

SCALE:	AS NOTED
DATE:	06/23/2022
DESIGN BY:	R.S.
DRAWN BY:	R.S.
CHECKED BY:	
FIELD BOOK:	
SHEET NUMBER:	1 OF 1 SHEETS
PROJECT #	22151

KC ENGINEERING COMPANY
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Project No. VV5409
Proposed 40 Acre Laydown Yard
Weber Road, Vacaville, CA
Figure 2 – SITE PLAN

PRELIMINARY GEOLOGIC MAP OF
THE LODI 30' x 60' QUADRANGLE, CALIFORNIA

Qpf	Alluvial fan deposits	Qhf	Holocene alluvial fan deposits	Qhly	Latest Holocene fan levee deposits
Pth	Tehama Formation				

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Weber, Vacaville, CA
Figure 3 – GEOLOGIC MAP

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 3.0'	Black CLAY, dry, hard	CH	
	Qp > 4.5 tsf @ 1.0'		
	R-Value = Less than 5 @ 1.5'		
3.0 - 5.0'	Light Brown Sandy CLAY, moist, hard	CL	
	Qp > 4.5 tsf @ 4.0'		

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Vacaville, Solano County, California
PROJECT NO. VV5409

KC ENGINEERING COMPANY

TEST PIT LOG NO. 1 FIGURE NO. 4

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

E - W

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

06/14/2022

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 2.0'	Black CLAY, dry, hard	CH	
	Qp > 4.5 tsf @ 1.0'		
2.0 - 3.0'	Brown Sandy CLAY, moist, hard	CL	
	Qp > 4.5 tsf @ 2.0'		
3.0 - 5.0'	Light Mottled Brown Sandy CLAY, moist to wet, hard	CL	
	Qp > 4.5 tsf @ 4.0'		

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Vacaville, Solano County, California
PROJECT NO. VV5409

KC ENGINEERING COMPANY

TEST PIT LOG NO. 2 FIGURE NO. 5

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

E - W

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

06/14/2022

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 3.0'	Black CLAY, dry, hard	CH	
	Qp > 4.5 tsf @ 1.0'		
3.0 - 6.0'	Light Brown Coarse Sandy CLAY, moist, hard	CL	
	Qp > 4.5 tsf @ 4.0'		
	-#200 = 61%, LL = 34, PI = 21		

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Vacaville, Solano County, California
PROJECT NO. VV5409

KC ENGINEERING COMPANY

TEST PIT LOG NO. 3 FIGURE NO. 6

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

E - W

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

06/14/2022

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 3.0'	Black CLAY, dry, hard	CH	
	Qp > 4.5 tsf @ 1.0'		
	R-Value = 11 @ 1.5'		
3.0 - 4.0'	Light Brown Sandy CLAY, moist, hard	CL	
	Qp > 4.5 tsf @ 3.0'		

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Vacaville, Solano County, California
PROJECT NO. VV5409

KC ENGINEERING COMPANY

TEST PIT LOG NO. 4 FIGURE NO. 7

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

E - W

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

06/14/2022

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 3.0'	Black CLAY, dry, hard	CH	
	Qp > 4.5 tsf @ 1.0'		
3.0 - 5.0'	Light Brown Sandy CLAY, moist, hard	CL	
	Qp > 4.5 tsf @ 4.0'		

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Vacaville, Solano County, California
PROJECT NO. VV5409

KC ENGINEERING COMPANY

TEST PIT LOG NO. 5 FIGURE NO. 8

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

E - W

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

06/14/2022

DEPTH	MATERIALS DESCRIPTION TYPE, COLOR, MOISTURE, CONSISTENCY, ETC.	USCS	COMMENTS
0 - 2.5'	Black CLAY, dry, hard	CH	
	Qp > 4.5 tsf @ 1.0'		
2.5 - 5.0'	Light Brown Sandy CLAY, moist, hard	CL	
	Qp > 4.5 tsf @ 4.0'		

PROJECT NAME: Proposed 40 acre Laydown Yard
Weber Road, Vacaville, Solano County, California
PROJECT NO. VV5409

KC ENGINEERING COMPANY

TEST PIT LOG NO. 6 FIGURE NO. 9

SCALE

HORIZONTAL 1" = 5'
VERTICAL 1" = 5'

PIT ORIENTATION

E - W

ELEVATION:

N/A

LOGGED BY:

ALK

DATE LOGGED:

06/14/2022

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			SYMBOLS		TYPICAL NAMES
COARSE GRAINED SOILS More than half of material is retained on the No. 200 Sieve	GRAVEL More than half of coarse fraction is larger than No. 4 sieve	Clean gravels (<5% fines)	GW		Well graded gravels, gravel-sand mixtures, little or no fines (Cu>4 & 1≤Cc≤3)
			GP		Poorly graded gravels, gravel-sand mixtures, little or no fines (Cu < 4 and/or 1>Cc>3)
		Gravel with fines (>12% fines)	GM		Silty gravels and gravel-sand-silt mixtures (PI<4 or below "A" line)
			GC		Clayey gravels and gravel-sand-clay mixtures (PI>7 & on or above "A" line)
	SAND Half or more of the coarse fraction is smaller than No. 4 sieve	Clean sands (<5% fines)	SW		Well graded sands, gravelly sands, little or no fines (Cu>6 & 1≤Cc≤3)
			SP		Poorly graded sands, gravelly sands, little or no fines (Cu<6 and/or 1>Cc>3)
		Sand with fines (>12% fines)	SM		Silty sands and gravel-sand-silt mixtures (PI<4 or below "A" line)
			SC		Clayey sands and gravel-sand-clay mixtures (PI>7 & on or above "A" line)
FINE GRAINED SOILS Half or more of the material passes the No. 200 Sieve	SILTS AND CLAYS Liquid Limit is less than 50%		ML		Inorganic silts with gravel and sand having slight plasticity (PI<4 or below "A" line)
			CL		Inorganic clays of low to med. plasticity with gravel and sand (PI>7 & on or above "A" line)
			OL		Organic silts and clays of low plasticity
	SILTS AND CLAYS Liquid Limit is 50% or more		MH		Inorganic elastic silts (PI below "A" line)
			CH		Inorganic clays of high plasticity, fat clays (PI on or above "A" line)
			OH		Organic silts and clays of medium to high plasticity
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils

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SAMPLER AND LAB TESTING LEGEND

- Auger
- Bulk Sample, taken from auger cuttings
- California Sampler
- Bulk/Grab Sample
- Pitcher
- Standard Penetration Test
- Shelby Tube
- No Recovery

LL=Liquid Limit (%)
PI=Plasticity Index
¦ =Friction Angle
C=Cohesion
UCC=Unconfined Compression
R value=Resistance Value
Consol=Consolidation Test

SOIL GRAIN SIZE

U.S. STANDARD SIEVE OPENINGS

		#200		#40		#10		#4	¾"		3"		12"
CLAY	SILT	SAND							GRAVEL			COBBLES	BOULDERS
		FINE		MEDIUM		COARSE			FINE		COARSE		
	0.002		0.075		0.425		2.00	4.75		19.0		75	300

SOIL GRAIN SIZE IN MILLIMETERS

RELATIVE DENSITY (Coarse-grained soils)

SANDS & GRAVELS	BLOWS/FOOT[1]
Very Loose	0 – 4
Loose	4 – 10
Medium Dense	10 – 30
Dense	30 – 50
Very Dense	> 50

CONSISTENCY (Fine-grained soils)

SILTS & CLAYS	STRENGTH[2]	BLOWS/FOOT[1]
Very Soft	< 500	0 – 2
Soft	500 – 1,000	2 – 4
Firm	1,000 – 2,000	4 – 8
Stiff	2,000 – 4,000	8 – 15
Very Stiff	4,000 – 8,000	15 – 30
Hard	> 8,000	>30

1 – Number of blows of 140 pound hammer falling 30 inches to drive a 2-inch O.D. split spoon sampler (ASTM D1586)
2 – Unconfined compressive strength in lb/ft^2 as determined by lab testing or approximated by the standard penetration test (ASTM D1586) or pocket penetrometer.

WEATHERING (Bedrock)

Fresh	No visible sign of decomposition or discoloration; rings under hammer impact
Slightly weathered	Slight discoloration inwards from open fractures; little or no effect on normal cementation; otherwise similar to Fresh
Moderately weathered	Discoloration throughout; weaker minerals decomposed; strength somewhat less than fresh rock but cores can not be broken by hand or scraped with knife; texture preserved; cementation little to not affected; fractures may contain filling
Highly weathered	Most minerals somewhat decomposed; specimens can be broken by hand with effort or shaved with knife; texture becoming indistinct but fabric preserved; faint fractures
Completely weathered	Minerals decomposed to soil but fabric and structure preserved; specimens can be easily crumbled or penetrated

STRENGTH (Bedrock)

Plastic	Very low strength
Friable	Crumbles easily by rubbing with fingers
Weak	An unfractured specimen will crumble under light hammer blows
Moderately strong	Specimen will withstand a few heavy hammer blows before breaking
Strong	Specimen will withstand a few heavy ringing blows and will yield with difficulty only dust and small flying fragments
Very strong	Specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments

BEDDING (Bedrock) SPACING (inches)

Very thickly bedded	> 48
Thickly bedded	24 to 48
Thin bedded	2.5 to 24
Very thin bedded	5/8 to 2.5
Laminated	1/8 to 5/8
Thinly laminated	<1/8

FRACTURING (Bedrock) SPACING (inches)

Very little fractured	> 48
Occasionally fractured	12 to 48
Moderately fractured	6 to 12
Closely fractured	1 to 6
Intensely fractured	5/8 to 1
Crushed	<5/8

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TEST PIT: 3
DATE: 06/14/2022

OWNER'S NAME: Weber Road Industrial, LLC
SITE LOCATION: Weber Road, Vacaville CA
PID #: ---
TECHNICIAN: Andy King
WEATHER/TEMPERATURE: Sunny and Windy / 70 °F

FIELD PERMEABILITY TEST #: **1**

D - reservoir diameter (cm) Slow
d – well hole diameter (cm) 8 cm
H – height of water in well (cm) 15 cm
Depth below ground surface (cm) 5'

Soil Texture clay and silt
Soil Structure unstructured
α* (cm-1) 0.04
C- Factor 1.35

TIME (min)	(1) CHANGE IN TIME (min)	RESERVOIR WATER LEVEL (WL) (cm)	(2) CHANGE IN WL (cm)	(2)/(1) RATE OF FALL (R) (cm/min)
10:00	Start	40.6	Start	
10:05	5	34.2	6.4	1.28
10:10	5	34.0	0.2	0.04
10:40	30	33.5	0.5	0.02
11:15	35	33.1	0.4	0.01
11:43	28	32.8	0.3	0.01
12:15	32	32.6	0.2	0.01
1:02	52	32.3	0.3	0.01
1:33	26	32.1	0.2	0.01
2:05	32	31.9	0.2	**0.01**

Field Saturated Hydraulic Permeability, Kfs = 7.5 x 10^{-7} cm/sec

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TEST PIT: 5
DATE: 06/14/2022

OWNER'S NAME: Weber Road Industrial, LLC
SITE LOCATION: Weber Road, Vacaville, CA
PID #: ---
TECHNICIAN: Andy King
WEATHER/TEMPERATURE: Sunny and Windy / 70 °F

FIELD PERMEABILITY TEST #: **1**

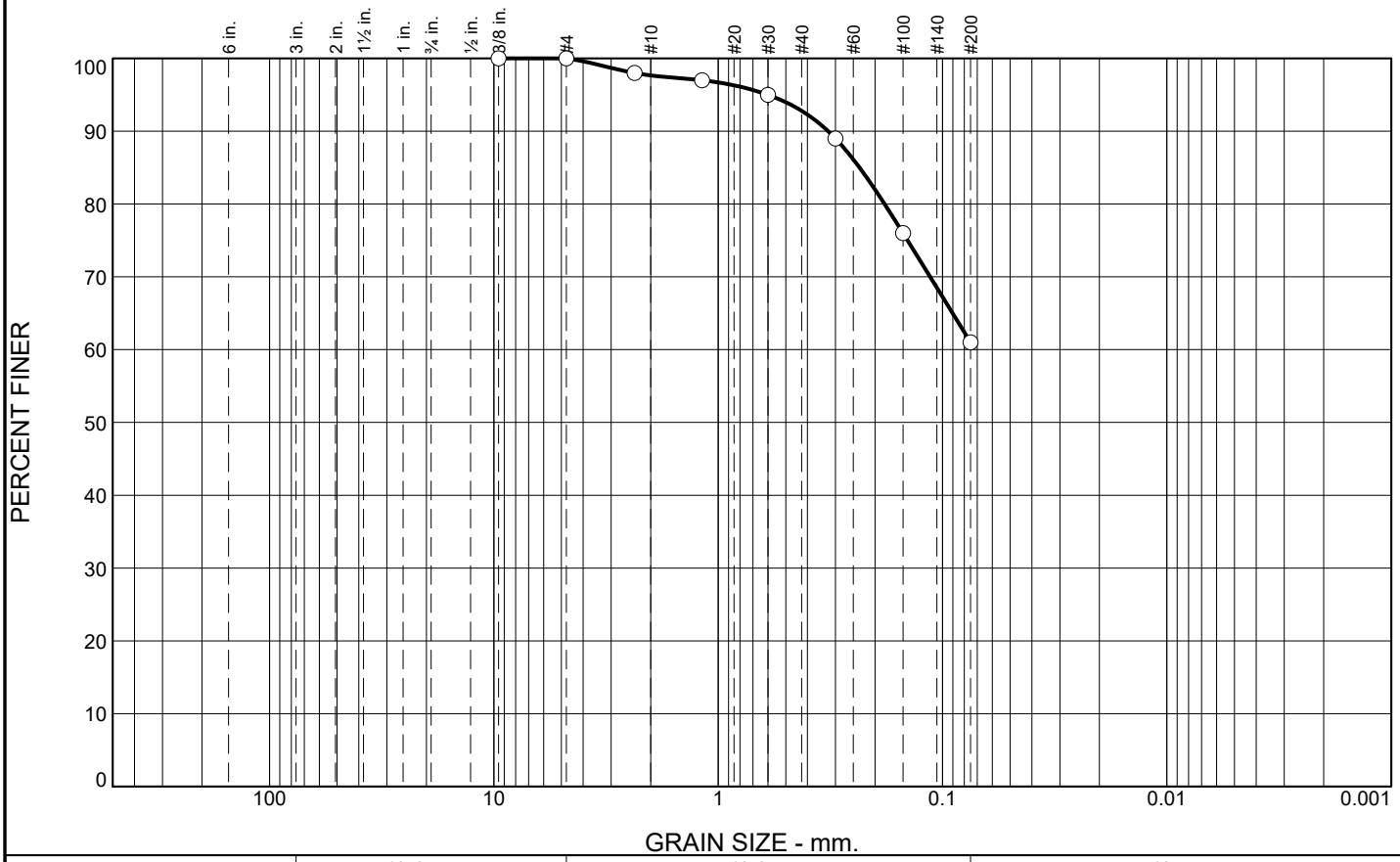
D - reservoir diameter (cm) Standard
d – well hole diameter (cm) 8 cm
H – height of water in well (cm) 15 cm
Depth below ground surface (cm) 5'

Soil Texture clay and silt
Soil Structure unstructured
α* (cm-1) 0.04
C- Factor 1.35

TIME (min)	(1) CHANGE IN TIME (min)	RESERVOIR WATER LEVEL (WL) (cm)	(2) CHANGE IN WL (cm)	(2)/(1) RATE OF FALL (R) (cm/min)
12:21	Start	405	Start	
12:24	3	398	7.0	2.33
12:26	2	397	1.0	0.50
12:37	11	394	3.0	0.27
12:46	9	392.5	1.5	0.17
12:59	13	392.0	0.5	0.04
1:26	27	391.5	0.5	**0.02**
1:36	10	387	4.5	0.45
1:54	18	382.5	4.5	0.25
2:10	16	379	3.5	0.22

Field Saturated Hydraulic Permeability, Kfs = 6.3 x 10^{-6} cm/sec

PARTICLE SIZE DISTRIBUTION REPORT



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	2	5	32	61	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100		
#4	100		
#8	98		
#16	97		
#30	95		
#50	89		
#100	76		
#200	61		

* (no specification provided)

Material Description

Light Brown Sandy Clay

Atterberg Limits

PL= 13 LL= 34 PI= 21

Coefficients

D_{90}= 0.3234 D_{85}= 0.2344 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(9)

Remarks

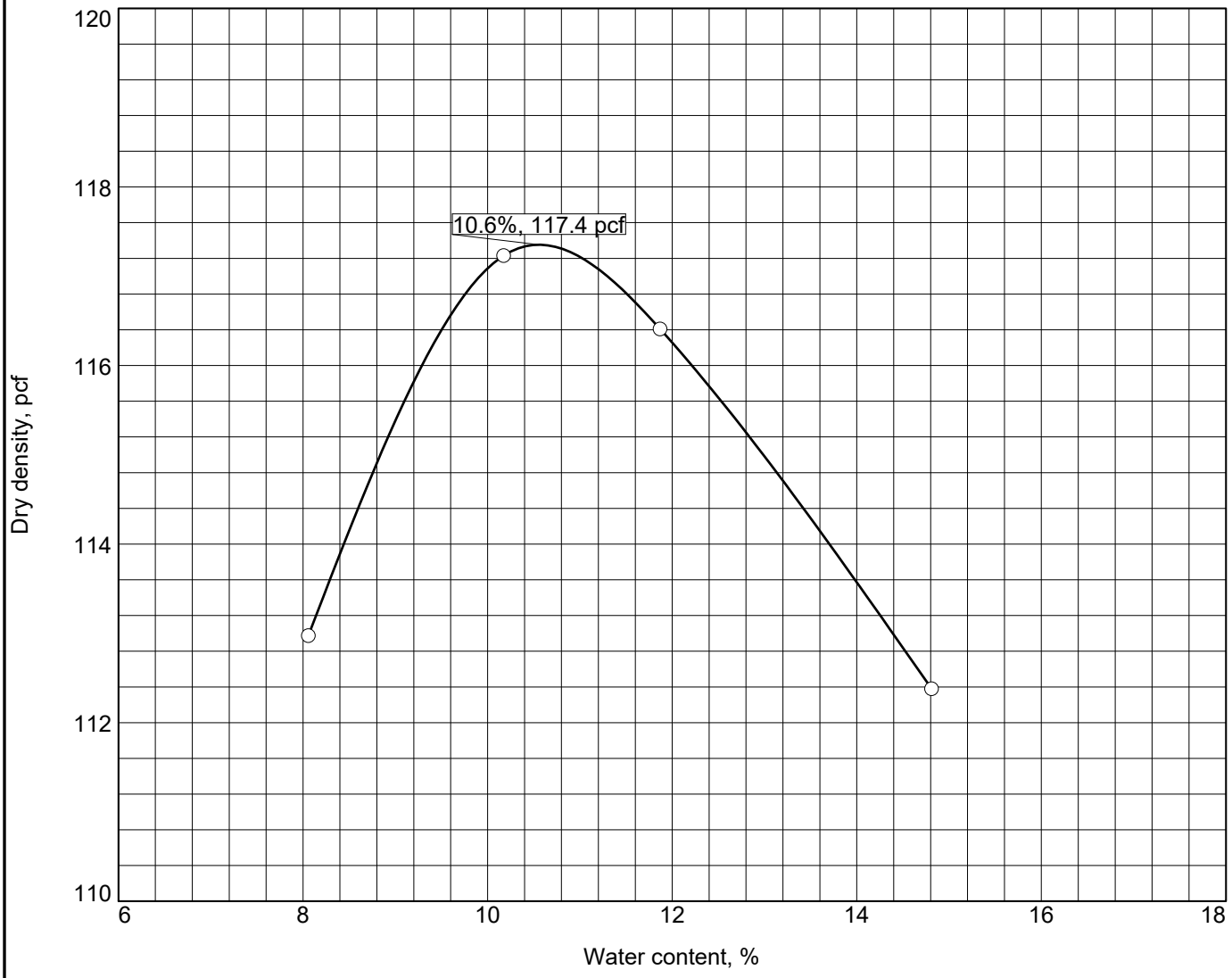
Material Tested in Accordance with ASTM D6913.

Location: TP3-3
Sample Number: 7 **Depth:** 6.0' **Date:** 07/01/2022

Client: Weber Road Industrial, LLC.
Project: 40 Acre Laydown Yard
Weber Road, Vacaville, California
Project No: VV5409 **Figure** 0300-001

Tested By: John Hubbard

COMPACTION TEST REPORT



Test specification: ASTM D1557-12 Method C Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
2.0'				2.65				

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 117.4 pcf Optimum moisture = 10.6 %	Grayish Brown Clay (visual)

Project No. VV5409 **Client:** Weber Road Industrial, LLC.
Project: 40 Acre Laydown Yard
Weber Road, Vacaville, California
○ **Location:** TP2-1 **Sample Number:** 3

Remarks:
Curve #1
07/01/2022

Figure 0300-002

Tested By: John Hubbard

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Client:	Weber Road Industrial, LLC. 250 Lafayette Circle, Suite 100 Lafayette, CA 94549	**Page:**	1 of 1
		Client No:	VV5409
		Figure No:	0300-003
		Date:	07/01/2022
Project:	40 Acre Laydown Yard Weber Road, Vacaville, California	**Submitted by:**	KC Engineering
		Date Submitted:	06/15/2022

"R" VALUE TEST REPORT
(CTM 301)

Sample: 1
Description: Black Clay
Location: TP1-1 @ 1.5' Bulk

SIEVE ANALYSIS

Sieve Size	1"	3/4"	1/2"	3/8"	#4
As Received (% Pass)	---	---	---	---	100
As Used (% Pass)	---	---	---	---	100

RESISTANCE VALUE

Specimen Number	Dry Unit Weight, PCF	Moisture (%)	Exudation Pressure (PSI)	Expansion Pressure Dial Reading & PSF		R-Value
1	---	21.2	---	---	---	---
2	---	---	---	---	---	---
3	---	---	---	---	---	---

R-Value @ 300 PSI Exudation Pressure = **Less than 5**

Notes: Material extruded under mold before 800 psi attained.

Tested by John Hubbard.

The samples were tested according to the referenced standard test procedures and relate only to the items inspected or tested.
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Client:	Weber Road Industrial, LLC. 250 Lafayette Circle, Suite 100 Lafayette, CA 94549	**Page:**	1 of 1
		Client No:	VV5409
		Figure No:	0300-004
		Date:	07/01/2022
Project:	40 Acre Laydown Yard Weber Road, Vacaville, California	**Submitted by:**	KC Engineering
		Date Submitted:	06/15/2022

"R" VALUE TEST REPORT
(CTM 301)

Sample: 8
Description: Black Clay
Location: TP4-1 @ 1.5'

SIEVE ANALYSIS

Sieve Size	1"	3/4"	1/2"	3/8"	#4
As Received (% Pass)	---	---	---	---	100
As Used (% Pass)	---	---	---	---	100

RESISTANCE VALUE

Specimen Number	Dry Unit Weight, PCF	Moisture (%)	Exudation Pressure (PSI)	Expansion Pressure Dial Reading & PSF		R-Value
1	110.4	16.7	541	12	52	20
2	110.1	17.4	465	5	22	15
3	106.4	19.4	280	1	4	11

R-Value @ 300 PSI Exudation Pressure = **11**

Notes:

Tested by John Hubbard.
The samples were tested according to the referenced standard test procedures and relate only to the items inspected or tested.
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Client:	Weber Road Industrial, LLC. 250 Lafayette Circle, Suite 100 Lafayette, CA 94549	**Pages:**	1 of 1
		Client No.	VV5409
		Report No.	0300-005
		Date:	07/01/2022
Project:	40 Acre Laydown Yard, Weber Road, Dixon, CA	**Submitted By:**	KC Engineering
Source:	Subgrade	**Date Submitted:**	06/15/2022

Standard Test Method for using pH to Estimate the Soil-Lime Proportion Requirement for Soil Stabilization

(ASTM D6726)

Sample No:	TP1-1 @ 1.5' bulk
Quicklime % for Soil Stabilization	**3% min, Recommend 4%**

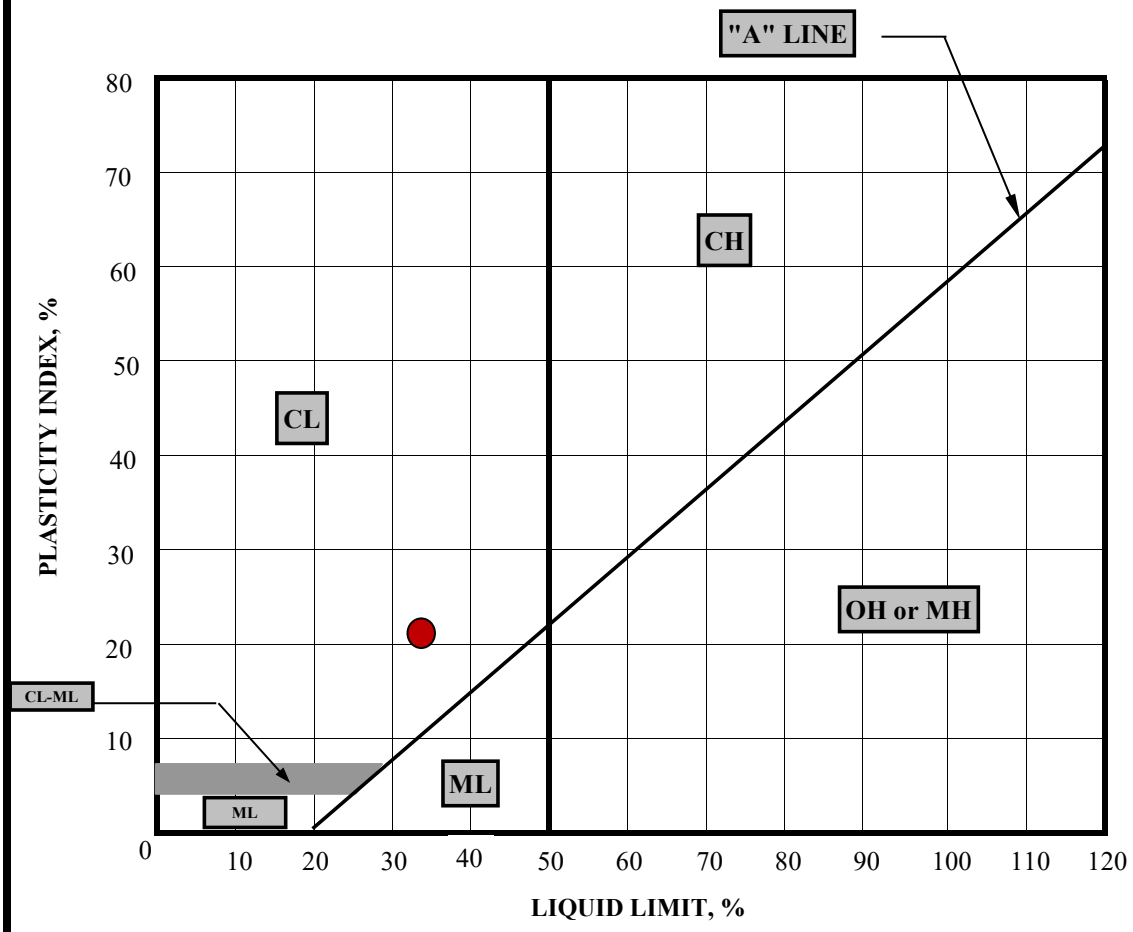
Quicklime %	pH
2	12.6
3	12.6
4	12.8
5	12.8
6	12.8

Sample No:	TP4-1 @ 1.5' bulk
Quicklime % for Soil Stabilization	**3% min, Recommend 4%**

Quicklime %	pH
2	12.0
3	12.6
4	12.8
5	12.8
6	12.9

Tested by John Hubbard.

The samples were tested according to the referenced standard test procedures and relate only to the items inspected or tested. Results are not transferable and shall not be reproduced, except in full, without written permission from MTI.



KEY SYMBOL	SAMPLE NUMBER	DEPTH	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, LL	PLASTIC LIMIT, PL	PLASTICITY INDEX, PI	LIQUIDITY INDEX	UNIFIED SOIL CLASSIFICATION SYMBOL
●	TP3-3	6.0'	N/A	34	13	21	N/A	CL

Note: Atterberg Limits tested in accordance with ASTM D4318.

Materials Testing, Inc.

PLASTICITY CHART AND DATA

40 Acre Laydown Yard
Weber Road, Vacaville, California

Project No:	Date:	Figure No:
VV5409	7/1/2022	0300-006

DCP TEST DATA

File Name:

Project: *Weber Road Laydown Yard* **Date:** 14-Jun-22

Location: DCP-1 **Soil Type(s):** Low plasticity Clay with CBR<10

Hammer
- ○ 10.1 lbs.
- ◉ 17.6 lbs.
- ○ Both hammers used

Soil Type
- ○ CH
- ◉ CL
- ○ All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	0	1
3	25	1
5	45	1
5	65	1
7	85	1
7	115	1
8	135	1
8	165	1
8	190	1
10	230	1
10	265	1
12	315	1
15	395	1
12	465	1
15	560	1
6	605	1
6	670	1
8	765	1
3	830	1
5	920	1
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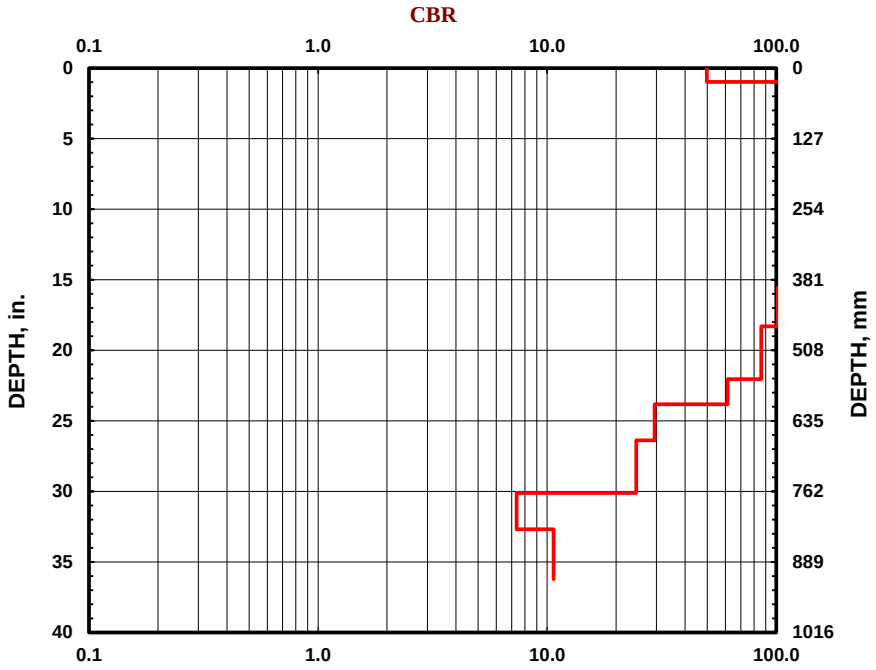

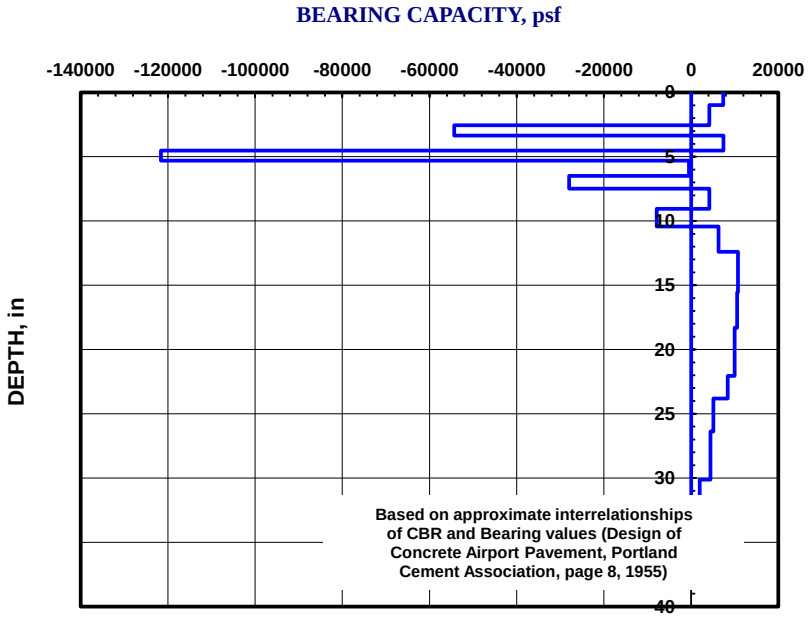

DCP TEST DATA

File Name:

Project: *Weber Road Laydown Yard* **Date:** 14-Jun-22

Location: DCP-2 **Soil Type(s):** Low plasticity Clay with CBR<10

Hammer
- ○ 10.1 lbs.
- ◉ 17.6 lbs.
- ○ Both hammers used

Soil Type
- ○ CH
- ◉ CL
- ○ All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	0	1
1	80	1
1	100	1
1	130	1
2	215	1
2	290	1
3	385	1
5	480	1
5	575	1
5	660	1
5	740	1
5	805	1
5	855	1
5	900	1
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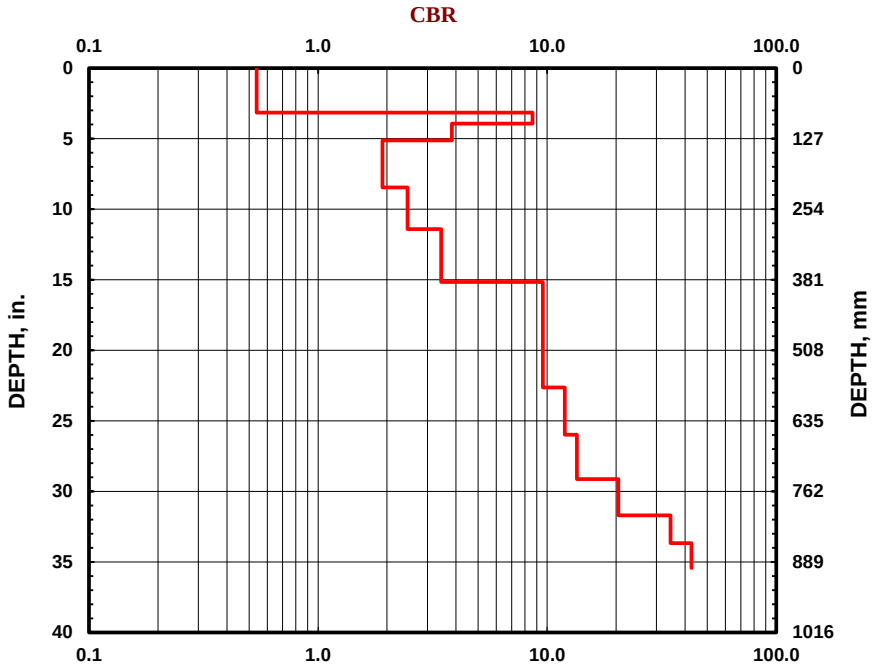

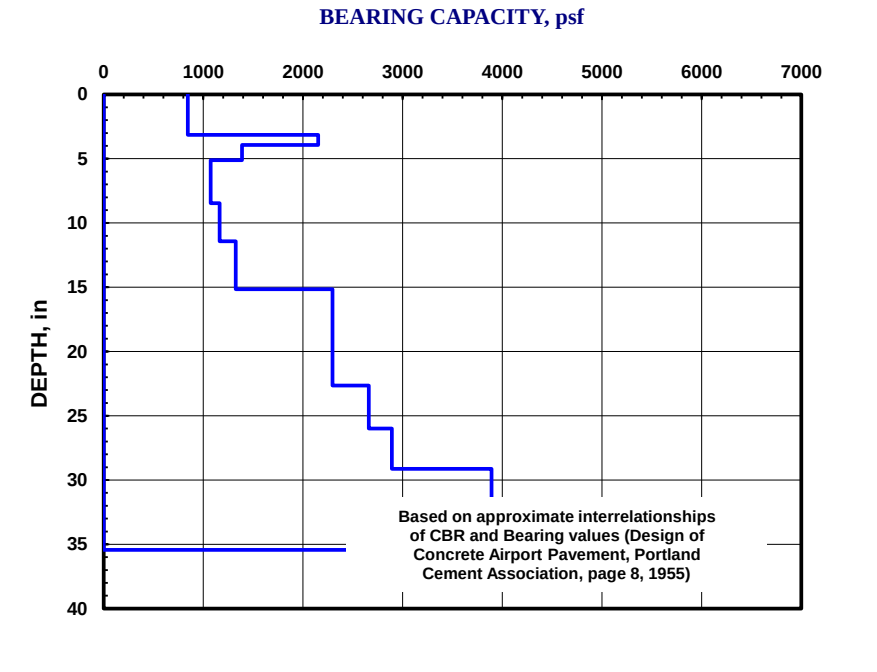

DCP TEST DATA

File Name:

Project: *Weber Road Laydown Yard* **Date:** 14-Jun-22

Location: DCP-3 **Soil Type(s):** Low plasticity Clay with CBR<10

Hammer
- ○ 10.1 lbs.
- ◉ 17.6 lbs.
- ○ Both hammers used

Soil Type
- ○ CH
- ◉ CL
- ○ All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	0	1
3	135	1
3	175	1
5	235	1
5	290	1
4	340	1
5	410	1
3	455	1
5	520	1
8	595	1
10	660	1
10	730	1
5	780	1
3	825	1
4	895	1
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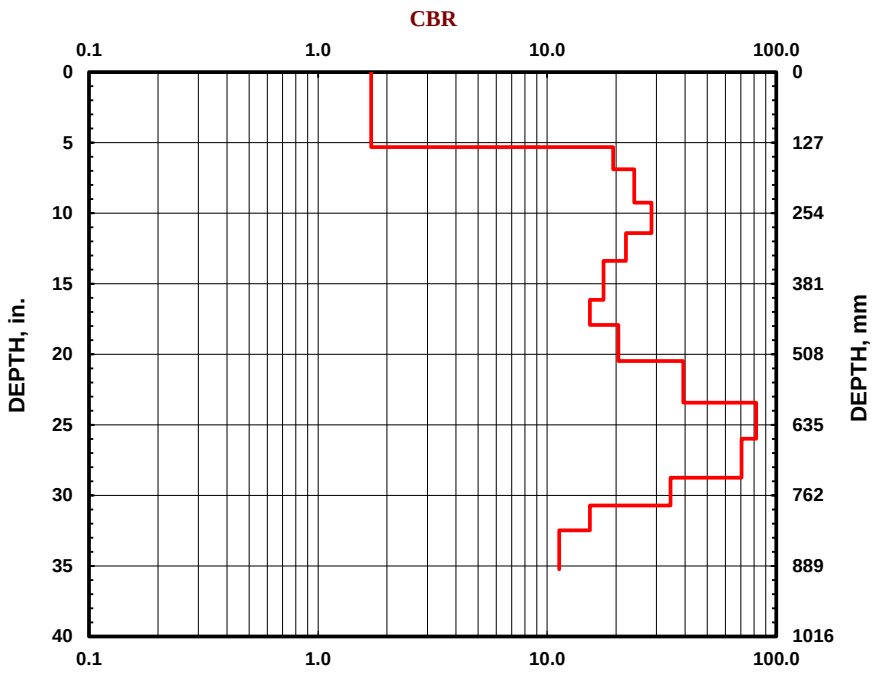

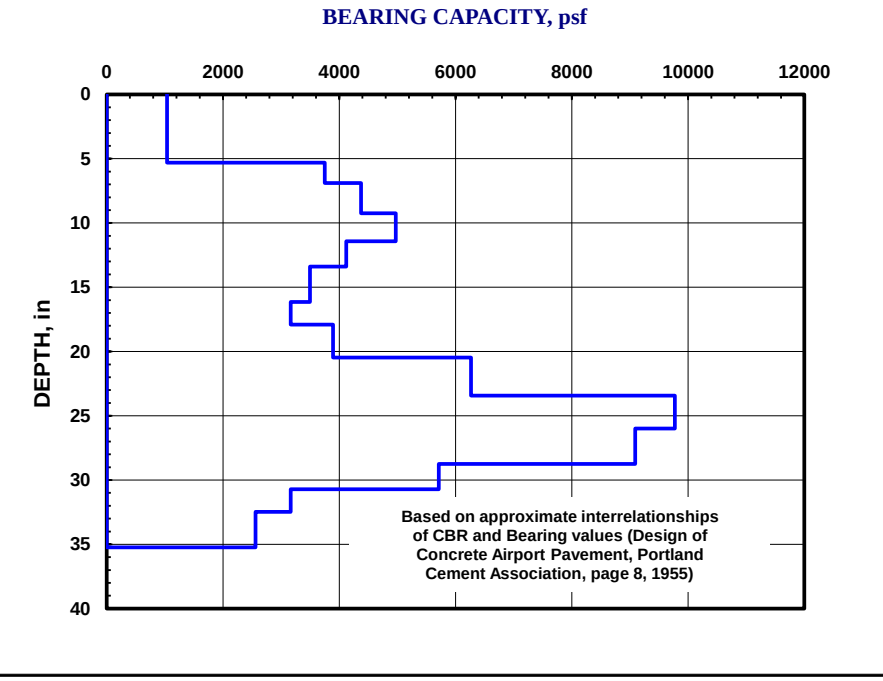

DCP TEST DATA

File Name:

Project: *Weber Road Laydown Yard* **Date:** 14-Jun-22

Location: DCP-4 **Soil Type(s):** Low plasticity Clay with CBR<10

Hammer
- ○ 10.1 lbs.
- ◉ 17.6 lbs.
- ○ Both hammers used

Soil Type
- ○ CH
- ◉ CL
- ○ All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	0	1
1	35	1
3	100	1
1	130	1
3	175	1
5	230	1
5	280	1
5	335	1
5	385	1
3	410	1
7	480	1
8	550	1
5	595	1
8	665	1
5	710	1
5	755	1
7	835	1
4	895	1
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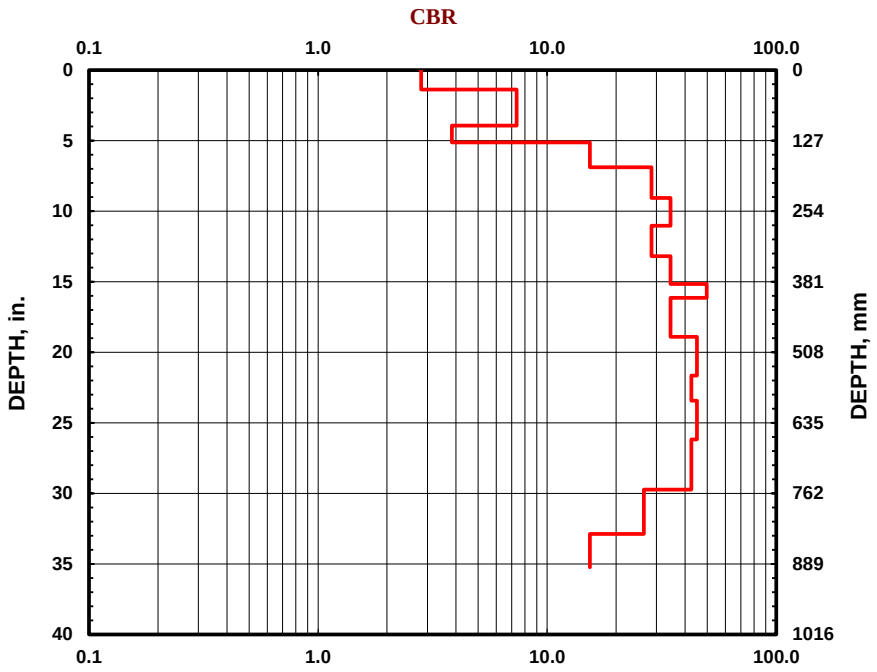

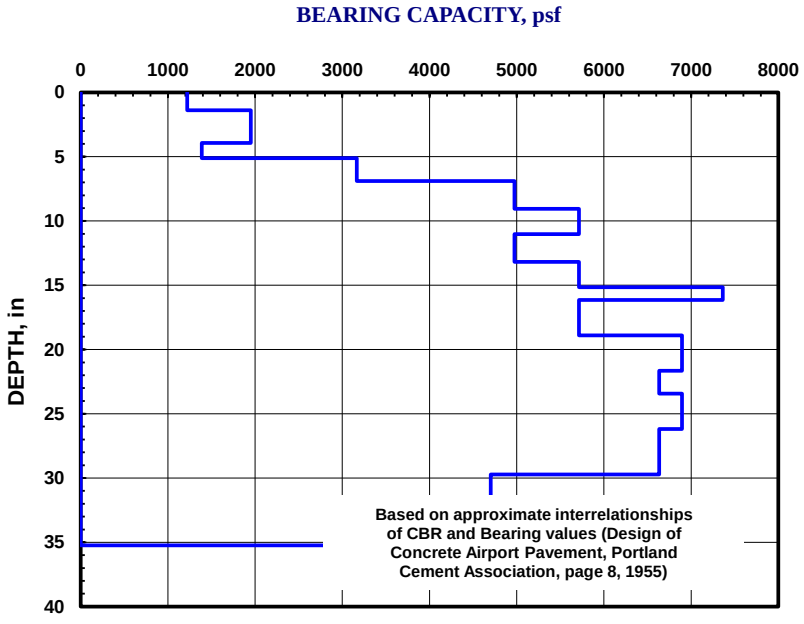

DCP TEST DATA

File Name:

Project: *Weber Road Laydown Yard* **Date:** 14-Jun-22

Location: DCP-5 **Soil Type(s):** Low plasticity Clay with CBR<10

Hammer
- ○ 10.1 lbs.
- ◉ 17.6 lbs.
- ○ Both hammers used

Soil Type
- ○ CH
- ◉ CL
- ○ All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	0	1
3	25	1
5	50	1
5	85	1
7	150	1
5	195	1
8	260	1
7	315	1
7	375	1
5	430	1
3	465	1
6	535	1
8	620	1
6	680	1
3	710	1
5	755	1
8	825	1
5	865	1
4	905	1
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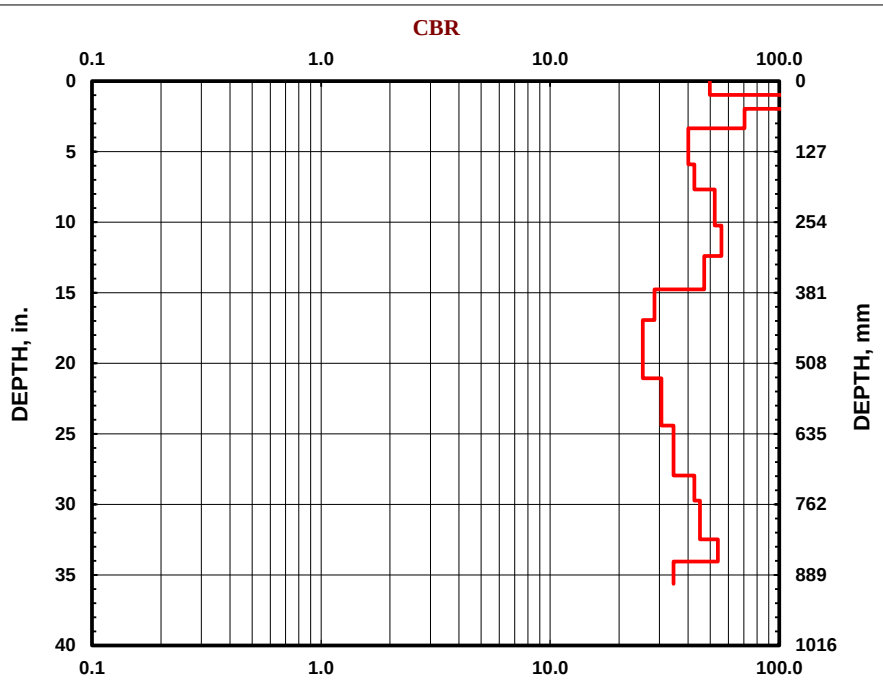

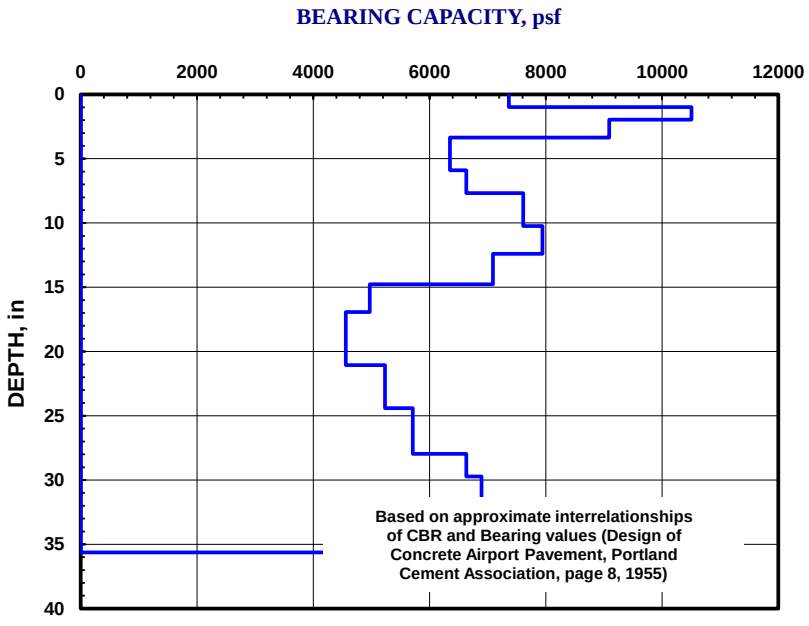

DCP TEST DATA

File Name:

Project: *Weber Road Laydown Yard* **Date:** 14-Jun-22

Location: DCP-6 **Soil Type(s):** Low plasticity Clay with CBR<10

Hammer
- ○ 10.1 lbs.
- ◉ 17.6 lbs.
- ○ Both hammers used

Soil Type
- ○ CH
- ◉ CL
- ○ All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	0	1
3	45	1
5	80	1
5	120	1
7	175	1
7	235	1
3	265	1
5	330	1
5	405	1
8	510	1
7	585	1
10	680	1
8	755	1
5	805	1
5	865	1
3	900	1
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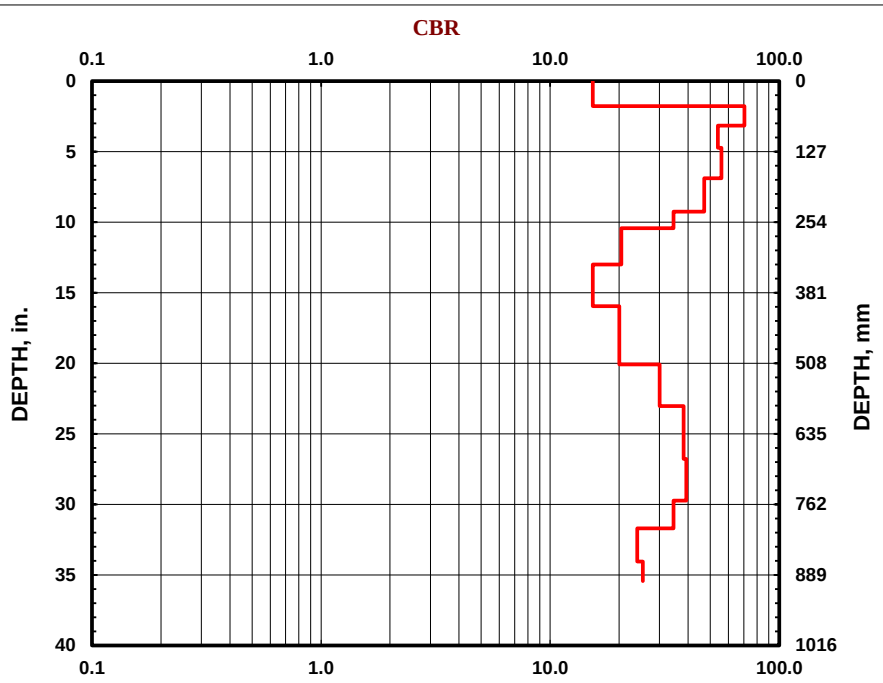

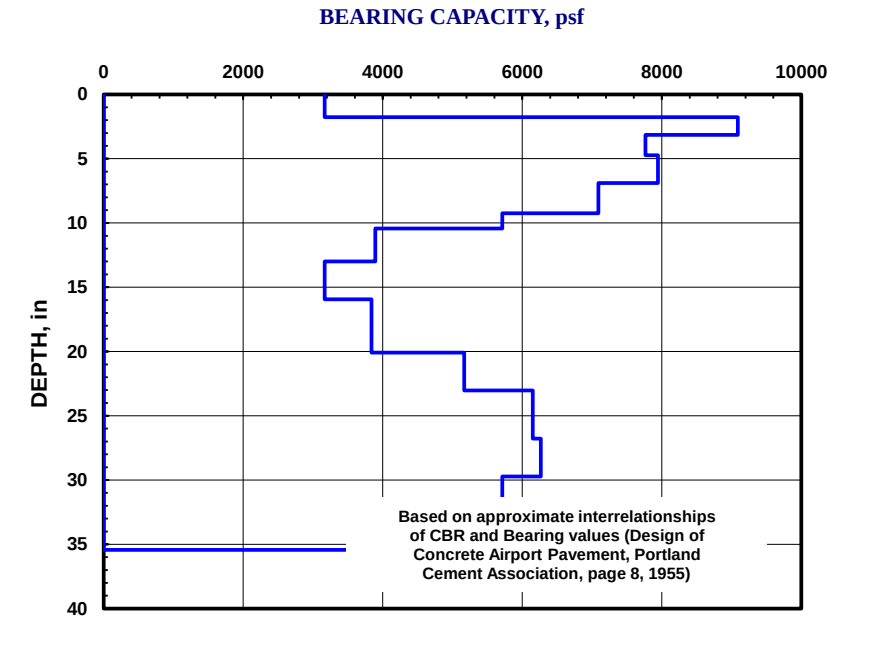

DCP TEST DATA

File Name:

Project: *Weber Road Laydown Yard* **Date:** 14-Jun-22

Location: DCP-7 **Soil Type(s):** Low plasticity Clay with CBR<10

Hammer
- ○ 10.1 lbs.
- ◉ 17.6 lbs.
- ○ Both hammers used

Soil Type
- ○ CH
- ◉ CL
- ○ All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	0	1
2	80	1
3	150	1
3	205	1
3	270	1
5	360	1
5	435	1
7	535	1
8	640	1
3	670	1
8	730	1
8	775	1
10	830	1
10	880	1
4	910	1
		1
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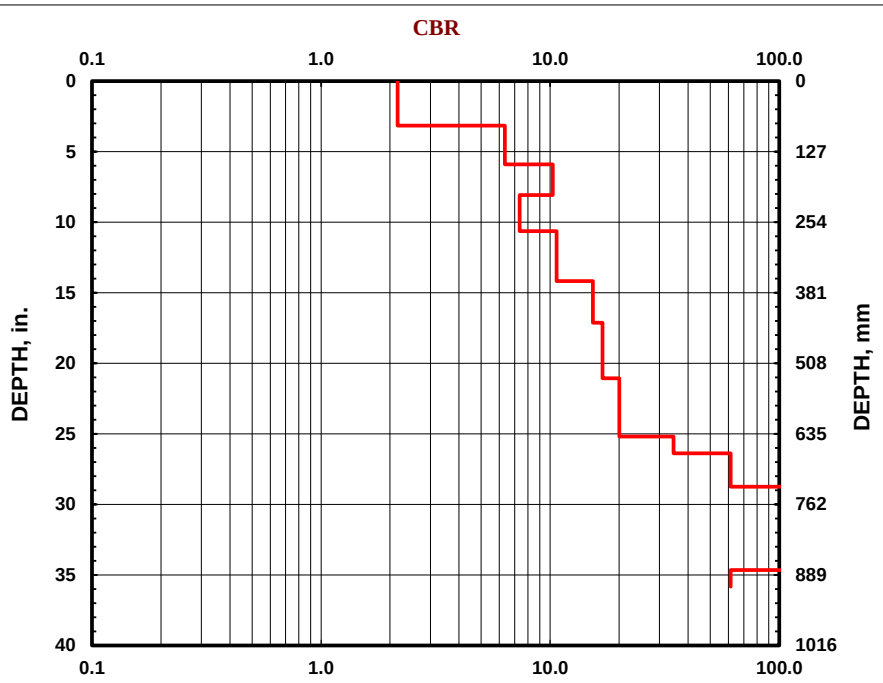

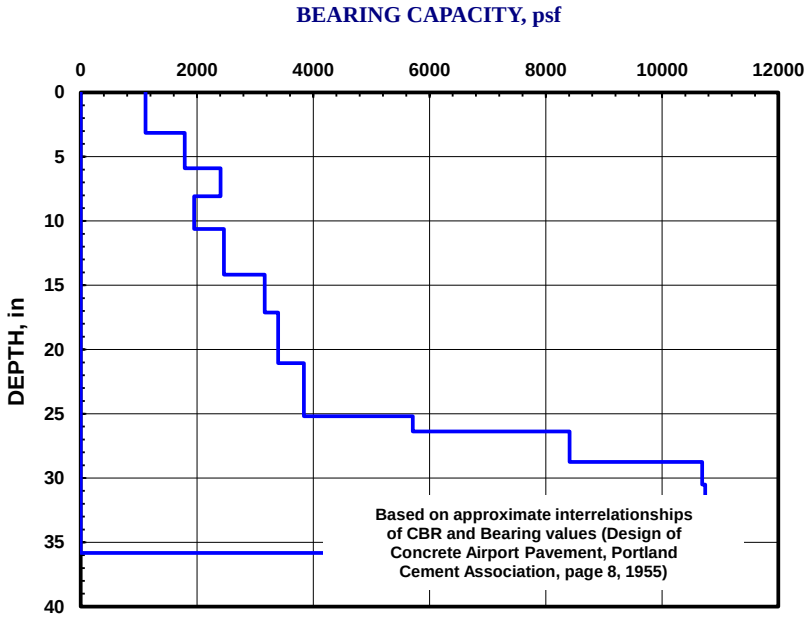

Appendix G PHASE I ENVIRONMENTAL SITE ASSESSMENT

CONFIDENTIAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT

FORMER VACA-DIXON AIRPORT PROPERTY
WEBER ROAD (APN'S 0109-270-050 & 0109-220-060)
VACAVILLE, CALIFORNIA, 95687

Prepared for:

Mr. Brian Griggs
Griggs Resource Group
250 Lafayette Circle, Suite 100
Lafayette, CA 94549

May 28, 2022

GRIBI ASSOCIATES

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GRIBI
ASSOCIATES

May 28, 2022

Mr. Brian Griggs
Griggs Resource Group
250 Lafayette Circle, Suite 100
Lafayette, CA 94549

Subject: Report of Phase I Environmental Site Assessment
Former Vaca-Dixon Airport Property
Weber Road (APN's 0109-270-050 & 0109-220-060)
Vacaville, California, 95687

Dear Mr. Griggs:

In accordance with our agreement, Gribi Associates has completed this Phase I Environmental Site Assessment (ESA) for the former Vaca-Dixon Airport property located on Weber Road (APN's 0109-270-050 & 0109-220-060) in Vacaville, California (Property). The purpose of the Phase I ESA was to identify potential onsite and offsite sources or practices (recognized environmental conditions) that could adversely impact environmental conditions on the Property. This Phase I ESA has been conducted in general conformance with the scope and limitations of *ASTM Practice E 1527-13* and with the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).

We appreciate the opportunity to present this report for your review. Please call if you have any questions or require additional information.

Very truly yours,

James E. Gribi
Professional Geologist
California No. 5843
Enclosure

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EXECUTIVE SUMMARY

Gribi Associates has conducted a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of *ASTM Standard E 1527-13* and with the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the former Vaca-Dixon Airport property located on Weber Road (APN's 0109-270-050 & 0109-220-060) in Vacaville, California (Property). Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

The purpose of the Phase I ESA has been to identify current and historical potential and actual recognized environmental conditions for the Property. Recognized environmental conditions are defined in *ASTM Standard E 1527-13* as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of future release."

FINDINGS AND CONCLUSIONS

This assessment has revealed no evidence of significant recognized environmental conditions relative to the Property.

Recognized Environmental Conditions from Current Onsite and Offsite Activities

Results of the Phase I ESA indicate no recognized environmental conditions relative to current activities on the Property. The Property is currently vacant and is occasionally used for cattle grazing. During the site inspection, we noted no hazardous waste use or storage in abandoned buildings or on open areas of the Property.

Results of the Phase I ESA indicate no recognized environmental conditions relative to current activities or businesses in the site vicinity . The Property is surrounded primarily by agricultural and rural residential properties. The Phase I ESA identified no current hazardous waste site listings within close proximity to the Property. In addition, during the site reconnaissance we noted no evidence of hazardous waste storage or handling activities associated with nearby properties.

Recognized Environmental Conditions from Historic Onsite and Offsite Activities

Results of the Phase I ESA indicate no significant recognized environmental conditions relative to historical activities on the Property. The Property operated as a small airport/glider port at various levels of activity from the late 1940s to approximately 1992. Approximately three fuel underground storage tanks (USTs) of unknown age were present on the northwest side of the Property. These USTs were removed in the mid-1980s, prior to promulgation of UST regulations, and an electromagnetic survey was conducted as part of this Phase I ESA to confirm that the USTs are no longer present on the Property. Although soil sampling was not conducted following removal of the USTs, it is unlikely that significant fuel releases occurred from the USTs or are still

present relative to the former USTs, given that: (1) The USTs were undoubtedly not heavily used (given the nature of the airport, with dirt runways and minimal services); (2) The distant age of the USTs, present on the Property more than 45 years ago (hydrocarbons tend to naturally degrade over time); and (3) Recent soil sampling at suspected UST locations by Ramcon in April 2020 showed no hydrocarbon detections. Thus, while some fuel hydrocarbon releases may have occurred on the Property in the distant past, we do not believe these releases would have been significant. In addition, there are currently no open regulatory cases relative to past activities on the Property.

The Phase I ESA revealed no past activities or sites in the site vicinity that would appear to have impacted environmental conditions on the Property. The site vicinity is and has been primarily agricultural and rural residential since at least the 1930s, and results of the Phase I ESA indicate no historic activities in the site vicinity that would be expected to have impacted environmental conditions on the Property. The Vaca Valley Raceway was present immediately east from the Property from approximately the mid-1960s to the late 1980s/early 1990s. While it is possible that fuel spills occurred on the Vaca Valley Raceway property, this property is located in an expected downgradient (southeast) direction from the Property and would not be expected to have impacted environmental conditions on the Property. No other historical activities or business types were identified which would be expected to have impacted environmental conditions on the Property.

Historical Recognized Environmental Conditions

Historical recognized environmental conditions (HRECs) refer to a past release of any hazardous substances or petroleum products that has occurred in connection with the Property and has been addressed to the satisfaction of the applicable regulatory authority or meets unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). An HREC is not a recognized environmental condition.

This Phase I ESA identified no HRECs relative to the Property.

Controlled Recognized Environmental Conditions and *De Minimis* Conditions

A Controlled Recognized Environmental Condition (CREC) is an REC which has been addressed to the satisfaction of the overseeing regulatory agency, but where hazardous substances or petroleum hydrocarbons are allowed to remain in place subject to implementation of some controls (use restrictions, institutional controls, or engineering controls).

This Phase I ESA identified no CRECs relative to the Property.

De minimis conditions, which are not RECs, include hazardous substance or petroleum releases or impacts that do not represent a threat to human health or the environment and which would not be subject to enforcement.

This Phase I ESA identified no *de minimis* conditions relative to the Property.

Opinions

Results of the Phase I ESA identified no significant recognized environmental condition on the Property relative to current or past onsite or offsite activities. Based on these results, we recommend no additional investigation or remediation relative to environmental conditions on the Property.

1.0 INTRODUCTION

In accordance with our agreement, Gribi Associates has completed this Phase I Environmental Site Assessment (ESA) for the former Vaca-Dixon Airport property located on Weber Road (APN's 0109-270-050 & 0109-220-060) in Vacaville, California (Property) (see Figure 1 and Figure 2). The purpose of the Phase I ESA was to identify potential onsite and offsite hazardous substances or petroleum products sources or practices (recognized environmental conditions) that could adversely impact the Property environment. This Phase I ESA has been prepared for Griggs Resource Group and their Assigns, as their interest may appear.

1.1 Purpose

The purpose of the Phase I ESA was to identify potential and actual onsite and offsite hazardous substance or petroleum products sources or practices (recognized environmental conditions) that may pose an environmental risk to the Property environment. The Phase I ESA consisted of three distinct tasks: (1) A review of reasonably ascertainable documents and records; (2) A site examination; and (3) Interviews with owners, occupants, and government officials. Conclusions and recommendations within this report are based solely on observed evidence and data collected during the performance of the Scope of Services. The Phase I ESA was conducted in general conformance with *ASTM Standard Practice for Environmental Site Assessments, E 1527-13* and with the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).

1.2 Scope of Services

Gribi Associates was contracted by Griggs Resource Group to conduct a Phase I Environmental Site Assessment (ESA) in accordance with *ASTM Standard Practice for Environmental Site Assessments, E 1527-13*. The Phase I ESA generally included the following scope of work:

- **Task 1 Conduct site examination.** Gribi Associates conducted a detailed site examination, to include: (1) A site inspection; and (2) A site area reconnaissance. The purpose of this task was to identify conditions on the Property and in the site vicinity which could pose a threat to the Property environment. In addition, an electromagnetic survey was conducted to confirm that former USTs are no longer present on the Property.

- **Task 2 Conduct records review.** Gribi Associates reviewed various hazardous waste records and historical records in order to identify known hazardous waste sites or releases in the Property area and to identify past land uses in the site vicinity which could impact the Property environment. The records review generally included: (1) Information provided by the current Property owner relative to past and current Property uses, environmental liens, and past environmental investigations and cleanup activities; (2) Obtaining a radius profile of federal, state, and local hazardous waste site listings from EDR; (3) Reviewing historical aerial photographs; (4) Reviewing cross telephone directories; (5) Reviewing historical maps, such as historical topographic maps; (6) Conducting regulatory files review; (7) Conducting interviews with the Property owner and Property tenants.

- **Task 3 Prepare report of findings.** Gribi Associates prepared this report summarizing results of Phase I ESA activities, and presenting conclusions regarding potential recognized environmental conditions. This report generally follows the recommended report format contained in *ASTM Standard Practice for Environmental Site Assessments, E 1527-13*.

1.3 Significant Assumptions

There is a possibility that even with the proper application of these methodologies there may exist on the Property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Gribi Associates believes that the information obtained from the record review and the interviews concerning the site is reliable. However, Gribi Associates cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all-inclusive or comprehensive results, but rather to provide Griggs Resource Group with information relating to the Property.

1.4 Limitations and Exceptions

This report has been prepared for the exclusive use of Griggs Resource Group and their Assigns, as their interests may appear, with specific application to the Property parcels located in Vacaville, California. The use of this report, its contents, or any part of it by a party, or its agents, other than the ones for whom this report was prepared, is herewith disallowed.

In part, these findings, conclusions and recommendations are based on the best available information known or made available at the time of the assessment by regulators, other consultants, or other sources. Over time, the surficial evidence of some activities are obscured or obliterated entirely. It is possible that certain adverse conditions could exist at the site which were not detected in this assessment.

The services provided under this contract as described in this report include professional opinions and judgments based on data collected. These services have been provided according to generally accepted engineering practices. The opinions and conclusions contained in this report are typically based on information obtained from:

1. Observations and measurements made by our field staff.
2. Discussions with regulatory agencies and others.
3. Review of available hazardous substance or solid waste lists.
4. Opinions and judgments of Gribi Associates based on the information available.

This task did not include a formal assessment of possible asbestos containing building materials (ACM), possible lead based paint surfaces, or possible radon gas occurrence.

1.5 Special Terms and Conditions

There are none.

1.6 User Reliance

In the professional judgment of Gribi Associates, the services performed pursuant to the Scope of Services are an adequate basis to collect data for a preliminary evaluation of the site and upon which to draw the conclusions stated in this report.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Descriptions

The Property is located in the northeast corner of Vacaville, Solano County, California. The Property comprises an approximately 40-acres nominally rectangular-shaped property located on the north side of Weber Road, immediately northeast of the intersection of Weber Road and Byrnes Road. Solano County records list no street addresses for the Property parcels.

According to the USGS Allendale, California 7.5-Minute Quadrangle Map, the Property is located at latitude of approximately 38° 22' 22.55" North, and longitude of 121° 54 16.93" West. The Property is located in the gently southeast-sloping west-central Sacramento Valley. The Property elevation is approximately 80 feet above mean sea level.

2.2 Site and Site Vicinity General Characteristics

The Property is located in a primarily agricultural area near the northeast corner of Vacaville. A According to the USGS Allendale, California 7.5-Minute Quadrangle Map, the Property is located in the gently southeast-sloping west-central Sacramento Valley. Based on topography and location, we would expect groundwater flow in the site area to be to the southeast.

2.3 Current Uses of the Property

The Property generally consists of vacant pasture land. The north half of the Property is currently vacant and unused. The south half of the Property, which is separated from the north half by temporary fencing, is currently used to graze cattle.

2.4 Description of Property Structures and Improvements

The Property includes three abandoned corrugated iron buildings and an advertising billboard on the northwest corner of the Property (see Figure 3). The three buildings include a well house, an airplane hangar, and a shop/hanger building. Site photographs are included in Appendix A.

2.5 Current Uses of the Adjoining Properties

Current land uses surrounding the Property include the following:

- **North** Immediately north of the Property is US Interstate 80, followed by agricultural land and, further north by agricultural and rural residential properties.
- **East** East from the Property is a Solano Irrigation District (SID) drainage channel and basin, followed by vacant land that shows surface traces of a former oval dirt race track.
- **South** South from the Property across Weber Road is a farm/ranch headquarters and agricultural/pasture land.
- **West** West from the Property is agricultural/pasture land.

3.0 USER PROVIDED INFORMATION

3.1 Title Records

The Client did not provide a title report for the Property; however, Environmental Data Resources (EDR) records list the Property owner as Vaca Dixon Properties LLC.

3.2 Environmental Liens or Activities and Use Limitations

The Client has reported to Gribi Associates no environmental liens encumbering the Property that would provide important information about previous ownership or uses of the Property that may be material to identifying recognized environmental conditions regarding the Property.

This report has been prepared for the exclusive use of Griggs Resource Group and their Assigns, as their interests may appear, with specific application to the Property located in Vacaville, California. The use of this report, its contents, or any part of it by a party, or its agents, other than the ones for whom this report was prepared, is herewith disallowed.

In part, these findings, conclusions and recommendations are based on the best available information known or made available at the time of the assessment by regulators, other consultants, or other sources. Over time, the surficial evidence of some activities are obscured or obliterated entirely. It is possible that certain adverse conditions could exist at the site which were not detected in this assessment.

The services provided under this contract as described in this report include professional opinions and judgments based on data collected. These services have been provided according to generally accepted engineering practices. The opinions and conclusions contained in this report are typically based on information obtained from:

1. Observations and measurements made by our field staff.
2. Discussions with regulatory agencies and others.
3. Review of available hazardous substance or solid waste lists.
4. Opinions and judgments of Gribi Associates based on the information available.

In the professional judgment of Gribi Associates, the services performed pursuant to the Scope of Services are an adequate basis to collect data for a preliminary evaluation of the site and upon which to draw the conclusions stated in this report.

3.3 Specialized Knowledge

The Client has reported to Gribi Associates no specialized knowledge for the Property that would provide important information about recognized environmental conditions regarding the Property.

3.4 Commonly Known or Reasonably Ascertainable Information

The Client has reported to Gribi Associates no commonly known or reasonably ascertainable information for the Property that would provide important information about recognized environmental conditions regarding the Property.

3.5 Valuation Reduction for Environmental Issues

The Client has reported to Gribi Associates no environmental issues for the Property that could result in valuation reduction relative to the Property.

3.6 Information Provided by Owners and Occupants

The Property owner, Mr. Martin Fitch, provided the following additional information relative to environmental conditions on the Property.

- **June 19, 1978:** Hand-drawn maps showing approximate locations of former Property airport features. One of the maps shows an apparent fuel dispenser, labelled as "Gas Pump, But Not Used" to the east of the northeast hanger building. Another note indicates that planes are "serviced & gassed elsewhere".

- **August 23, 1979:** Letter from Solano County Department of Environmental Management to the apparent Property tenant summarizing an odor complaint relative to a pet burial business on the Property. The County directs that pet burial trenches be covered with lime and states that a copy of the letter will be sent to the City of Vacaville to seek revocation of the pet cemetery City use permit.

- **September 6, 1979:** Letter from City of Vacaville referencing the August 23, 1979 County letter and indicating that the violations and use permit will be reviewed by the Vacaville Planning Commission.

- **June 11 & 12, 1980:** Permit application for two 1,000-gallon septic tanks and leach fields for the Property. A sketch map shows one of the septic tanks to be located south of the shop/hanger building and one of the septic tanks to be located south of the hanger building.

- **June 20, 1985:** California Water Resources Control Board Hazardous Substance Storage Statement. This document was filled out by Wilber Fitch on behalf of Vaca-Dixon Properties, and lists the following underground storage tanks (USTs) on the Property:

Tank No.	Volume	Product
1	2,000 gal	Empty
2	1,000 gal	Gasoline
3	550 gal	Diesel
4	200 gal	Waste Oil

  The forms include no information about the tank construction, location, or ages.

- **August 23, 2017:** A letter from Diepenbrock Elkin Gleason LLP to Solano County Department of Resource Management requests information on USTs, if any, and septic tanks, if any. Solano County responded on August 23, 2017, providing records regarding two septic systems present on the Property. The response includes an application by U.S. Eagle Co (listed as property owner) for a permit to install two septic systems on the Property. The application is dated June 11 & 12, 1980. The County response also includes a letter and map from SCDEM to the City of Vacaville Planning Division dated October 8, 1991 discussing the possibility of making parts of the Vaca-Dixon Airport public, which would likely have required changes to at least one of the septic systems and testing and possible changes to the Property water well system to meet public water system requirements. The County response also includes an apparent public complaint record, dated July 3, 1979, regarding a dumpster located on the Property.

- **March 16, 2020:** Proposal contract from Ramcon to Vaca Dixon Properties LLC, signed by Martin Fitch on March 23, 2020. The scope of work was to include a trench investigation at possible UST locations.

- **May 1, 2020:** Laboratory data report from California Laboratory Services (CLS) to Ramcon for the Vaca Dixon Properties LLC project. As denoted on the laboratory Chain of Custody, three soil samples were collected on April 23, 2020 from UST excavation trenches on the Property. The samples were labelled as follows:

  - **Well Shed Bldg, DF@8'** [Well Shed Building, Diesel Fuel, 8 feet in depth]

  - **Hanger Bldg PF-South@8'** [Hanger Building, Plane Fuel, South end of excavation, 8 feet in depth]

  - **Hanger Bldg PF-North@8'** [Hanger Building, Plane Fuel, North end of excavation, 8 feet in depth]

All three soil samples were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPHg), Total Petroleum Hydrocarbons as Diesel/Motor Oil (TPHd/mo), and Volatile Organic Compounds (VOCs). The Well Shed DF sample was additionally analyzed for Semi-Volatile Organic Compounds (SVOCs) and Polychlorinated Biphenyls (PCBs). The three soil samples showed no detectable concentrations of any of the analytes.

- **2020 Google Image:** Google aerial photo of southeast portion of east Property hanger building. The image is marked and annotated by Mr. Fitch to show features encountered during the March 2020 Ramcon investigation. According to the image, Ramcon uncovered the buried hanger vent pipe extending about 54 feet eastward and a buried electrical conduit approximately 76 feet from the hanger building.

4.0 RECORDS REVIEW

The records review includes a review of environmental records, physical setting sources, and historical records. Copies of historical topographic maps and aerial photos are included in Appendix B and Appendix C, respectively. The EDR hazardous sites radius report is contained in Appendix D.

4.1 Standard Environmental Records Sources

Gribi Associates reviewed hazardous waste information from the following governmental agency sources: (1) Federal lists; and (2) State and regional lists. The purpose of this review was to provide information about reported hazardous waste sites and incidents in the project site vicinity. In order to facilitate our review of Federal, State and regional lists, Gribi Associates obtained and reviewed a radius site profile for the project site area from Environmental Data Resources, Inc. (EDR). The EDR report includes a computer-generated listing of the following regulated hazardous waste sites within a specified radius from the Property. The EDR report is contained in Appendix D.

Results of the regulatory lists review are summarized below, and are discussed, along with file review information, in the following sections of this report.

SUMMARY OF REGULATORY LISTS REVIEW		
Regulatory List	**Search Radius[1]**	**Listed Sites of Potential Interest[2]**
STANDARD FEDERAL LISTS		
NPL Sites NPL, Proposed NPL, NPL Liens, Delisted NPL	1 mile	0
CERCLIS / CERCLIS NFRAP Federal Facility, SEMS, SEMS-ARCHIVE	0.5 mile	0
RCRA CORRACTS CORRACTS	1 mile	0
RCRA NON-CORRACTS TSDF RCRA TSDF	0.5 mile	0

SUMMARY OF REGULATORY LISTS REVIEW		
Regulatory List	**Search Radius[1]**	**Listed Sites of Potential Interest[2]**
RCRA GENRATORS LIST LQG, SQG,CESQGC	0.25 mile	0
Federal Institutional Controls/Engineering Controls LUCIS, US ENG CONTROLS, US INST CONTROL	0.5 mile	0
ERNS List	Site	0
STANDARD CALIFORNIA LISTS		
State and Tribal-Equivalent NPL CA RESPONSE	1 mile	0
State and Tribal -Equivalent CERCLIS CA ENVIROSTOR	1 mile	0
State and Tribal Landfill and Solid Waste Disposal Sites CA SWF/LF	0.5 mile	0
State and Tribal Leaking Underground Storage Tanks CA LUST, INDIAN LUST, RGA LUST	0.5 mile	0
State and Tribal Registered Storage Tanks FEMA UST, CA UST, CA AST, INDIAN UST	0.25 mile	0
State Cleanup Program Sites CA CPS, CA SC, CA SLIC	0.5 mile	0
State and Tribal Voluntary Cleanup CA VCP, INDIAN VCP	0.5 mile	0
State and Tribal Brownfields CA BROWNFIELDS	0.5 mile	0
ADDITIONAL CALIFORNIA LISTS		
Local Brownfield CA BROWNFIELDS	0.5 mile	0
Local Landfill/Solid Waste Disposal Sites CA WMUDS/SWAT, CA SWRCY, CA HAULERS, INDIAN ODI, DEBRIS RGION 9, ODI	0 to 0.5 mile	0
Local Hazardous Waste/Contaminated Sites US HIST CDL, CA HIST Cal-Sites, CA SCH, CACDL, CA Toxic Pits, US CDL; Contra Costa Co. Site List	0 to 1 mile	0
Local Registered Storage Tanks CA SWEEPS UST, CA HIST UST, CA FID UST Solano Co. UST	0.25 mile	**Vacaville Aero Service, 5419 Weber Road, Subject Property**
Local Land Records CA LIENS, LIENS 2, CA DEED	0 to 0.5 mile	0
Records of Emergency Release Reports HMIRS, CA CHMIRS, CA LDS, CA MCS, CA SPILLS 90	Site	0
OTHER STATE AND FEDERAL RECORDS		
RCRA NonGen/NLR	0.25 mile	0
US DOD and FUDS	1 mile	0
SCRD DRYCLEANERS	0.5 mile	0
US FIN ASSUR	Site	0
EPA WATCH LIST	Site	0

SUMMARY OF REGULATORY LISTS REVIEW		
Regulatory List	**Search Radius[1]**	**Listed Sites of Potential Interest[2]**
2020 COR ACTION	0.25 mile	0
TSCA	Site	0
TRIS	Site	0
SSTS	Site	0
ROD	Site	0
ROD	1 mile	0
RMP	Site	0
RAATS	Site	0
PRP	Site	0
PADS	Site	0
ICIS	Site	0
FTTS	Site	0
MLTS	Site	0
COAL ASH DOE/EPA	0 to 0.5 mile	0
PCB TRANSFORMER	Site	0
RADINFO	Site	0
HIST FTTS	Site	0
DOT OPS	Site	0
CONSENT	1 mile	0
INDIAN RESERV	1 mile	0
FUSRAP	1 mile	0
UMTRA	0.5 mile	0
LEAD SMELTERS	Site	0
US AIRS	Site	0
US MINES	0.25 mile	0
FINDS	Site	0
DOCKET HWC	Site	0
UXO	1 mile	0
CA BOND EXP. PLAN	1 mile	0
CA Cortese	0.5 mile	0
CA CUPA Listings	0.25 mile	0
CA DRYCLEANERS	0.25 mile	0
CA EMI	Site	0
CA ENF	Site	0
CA Financial Assurance	Site	0
CA HAZNET	Site	0
CA HIST CORTESE	0.5 mile	0
CA HWP	1 mile	0
CA HWT	0.25 mile	0
NY MANIFEST	0.25 mile	0
CA MINES	Site	0
CA MWMP	0.25 mile	0
CA NPDES	Site	0

SUMMARY OF REGULATORY LISTS REVIEW		
Regulatory List	**Search Radius[1]**	**Listed Sites of Potential Interest[2]**
CA PEST LIC	Site	0
CA PROC	0.5 mile	0
CA Notify 65	1 mile	0
CA UIC	Site	0
CA WASTEWATER PITS	0.5 mile	0
CA WDS	Site	0
CA WIP	0.25 mile	0
CIWQS	Site	0
FUELS PROGRAM	0.25 mile	0
ECHO	Site	0
PROPRIETARY LISTS		
EDR MGP	1 mile	0
EDR Hist Auto	0.125 mile	0
EDR Hist Cleaner	0.125 mile	0

Table Notes

Bold results denote Property listings.
1 = Search radii are those specified pursuant to ASTM standard.
2 = Listed sites are those which may potentially impact the Property, based on distance (less than 500 feet) and direction.

4.1.1 Onsite Listings

The EDR report includes one listing for the Property. Vacaville Aero Service, listed at 5419 Weber Road, is included on the Solano County UST list. The EDR report lists three USTs on the Property. The EDR report lists the "Permit Expire/Last Service" date as March 31, 1992. The facility status is listed as Closed.

4.1.2 Offsite Listings

The EDR report identified no offsite listings in close proximity to the Property:

4.2 Additional Environmental Records Sources

Additional environmental records sources included: (1) Online review of records on the State Water Board's Geotracker online database; (2) Review of Solano County Department of Environmental Management (SCDEM) records; and (3) Online review of records of California Department of Toxic Substances Control Envirostor database. Note that we contacted SCDEM and they stated that they have no records for the Property parcels. In addition, the Envirostor database includes no sites within close proximity of the Property.

The State Water Board's Geotracker database includes no sites within close proximity to the Property; however, Gribi Associates did review records for the following sites to establish

approximate groundwater depth and gradient for the Site vicinity: (1) DK Dixon, located approximately 4,000 feet northeast from the Property at 7300 Chevron Way; (2) BP #11244, located approximately 1.8 miles southwest from the Property at 817 Leisure Town Road; and (3) KMEP Fox Road Petroleum Pipeline Release, located approximately 1.8 miles southeast from the Property on Fox Road. Groundwater depth in shallow monitoring wells on these sites generally ranged from 10 to 15 feet in depth, and groundwater flow gradient was to the east-southeast. These sites are all too distant to have impacted environmental conditions on the Property.

4.3 Physical Setting Sources

Gribi Associates obtained copies of historical topographic maps of the Property area from EDR for years 1908, 1917, 1953, 1968, 1973, 1978, 2012, 2015, and 2018. Copies of selected topographic maps are contained in Appendix B. Review of these topographic maps revealed the following.

TOPOGRAPHIC MAPS REVIEW		
Date and Scale of Map	***Feature Noted on Map***	
	Property	***Site Vicinity***
1908 (1:6,250)	• Property is vacant. • Unpaved road enters Property from Lewis Road to the east.	• Current Weber Road, Byrnes Road, Lewis Road are present. • US I-80 not present. roads not present. • Few rural buildings throughout site vicinity.
1917 (1:3,168)	• Same as previous.	• Same as previous.
1953 (1:2,400)	• Two airport runways shown on Property, labelled as Vaca Dixon Airport. • Three small buildings shown on northwest corner of Property.	• Generally same as previous. • Increased buildings (apparent rural residences) along rural roads. • US Interstate 80 is present immediately northwest of Property.
1968 (1:2,400)	• Same as previous.	• Generally same as previous. • Increased buildings (apparent rural residences) along rural roads. • Solano Irrigation District drainage channel and pond are present immediately east of Property. • Unpaved oval racetrack, labelled as Vaca Valley Raceway, present east of Property.
1973 (1:2,400)	• Generally same as previous. • Airport is labelled “Airport Abandoned”.	• Generally same as previous.
1978 (1:2,400)	• Same as previous.	• Generally same as previous.
2012 (1:2,400)	• Former airport runways, building, and airport labelling are not shown on map.	• Generally same as previous and current.
2015 (1:2,400)	• Generally same as previous and current.	• Generally same as previous and current.
2018 (1:2,400)	• Generally same as previous and current.	• Generally same as previous and current.

4.4 Historical Records Sources

Gribi Associates reviewed historical aerial photos and a city directories abstract for the Property and site vicinity.

4.4.1 Historical Aerial Photos Review

Historical aerial photos from 1937, 1952, 1968, 1974, 1984 1993, 2006, 2009, 2012, and 2016 were obtained from EDR. Copies of selected aerial photos are contained in Appendix C. Information obtained from the aerial photos review is summarized below.

AERIAL PHOTOS REVIEW		
Date and Scale of Photo	***Feature Noted on Photo***	
	Property	***Site Vicinity***
1937 (1:500)	• No buildings on Property. • Possible corral and tree on northeast side of Property.	• Site area is mostly undeveloped, with occasional rural residential building. • Predecessor roadway to US I-80 is present immediately northwest of Property.
1952 (1:500)	• Vaca Dixon Airport buildings and unpaved runways are present.	• Generally same as previous.
1968 (1:500)	• Generally same as previous. • Some airplanes are visible on airport tarmac areas.	• Generally same as previous. • Increased buildings (apparent rural residences) along rural roads. • Solano Irrigation District drainage channel and pond are present immediately east of Property. • Unpaved oval racetrack, labelled as Vaca Valley Raceway, present east of Property.
1974 (1:500)	• Generally same as previous.	• Generally same as previous.
1984 (1:500)	• Generally same as previous. • No airplanes are present on Property.	• Generally same as previous.
1993 (1:500)	• Generally same as previous. • Some airplanes are visible on airport tarmac areas.	• Generally same as previous. • Racetrack immediately east of Property appears to be no longer operating.
2006 (1:500)	• Generally same as previous and current conditions.	• Generally same as previous and current conditions
2009 (1:500)	• Generally same as previous and current conditions.	• Generally same as previous and current conditions.
2012 (1:500)	• Generally same as previous and current conditions.	• Generally same as previous and current conditions.
2016 (1:500)	• Generally same as previous and current conditions.	• Generally same as previous and current conditions.

4.4.2 Historical Sanborn Maps Review

Gribi Associates requested copies of Sanborn Fire Insurance Maps for the project site area from Environmental Data Resources (EDR). No Sanborn Maps were available for the Property or site vicinity.

4.4.3 City Directories Abstract Review

Gribi Associates obtained a City Directories Abstract for the Property and site vicinity from Environmental Data Resources (EDR), which included a search of cross directories from 1977 to

2017. There were no listings for the Property, and no relevant information was obtained for offsite addresses.

5.0 SITE RECONNAISSANCE

The site reconnaissance was conducted on Tuesday and Thursday, May 17 and 19, 2022 and consisted of touring the Property and vicinity, making observations of the environmental conditions and activities, and visually observing the Property and adjacent properties for evidence of hazardous waste practices. The purpose of the site reconnaissance was to identify, through visual observations, potential sources of adverse environmental impact at the Property and in the site vicinity. Site photographs are contained in Appendix A.

5.1 Site Observations

The Property is relatively flat and consists primarily of pasture land. The north half of the Property is currently vacant and unused. The south half of the Property, which is separated from the north half by temporary fencing, is currently used to graze cattle.

The Property includes three abandoned corrugated iron buildings and an advertising billboard on the northwest corner of the Property. The three buildings include a well house, an airplane hangar, and a shop/hanger building. The shop/hanger building has concrete slab flooring, and the hanger has either old asphalt or some version of packed dirt/rock flooring. The three buildings are vacant and include no hazardous materials or wastes. A partially broken concrete pad is present on along the east side of the shop/hanger building. In addition, a partially broken concrete pad that marks the location of a former building is present north of the shop/hanger and well house buildings.

During the site reconnaissance, we noted two vertical vent pipes typically associated with underground storage tanks. One vent pipe, located on the east outer wall of the well house, is typically associated with waste oil or diesel USTs. The other vent pipe, located on the south outer wall of the hanger building, is typically associated with gasoline USTs.

During the site inspection, no obvious evidence of the following recognized environmental conditions was observed on the Property:

- possible PCB-containing electrical transformers
- significant stains or corrosion
- stressed vegetation
- solid waste, waste water, septic systems
- strong, pungent, or noxious odors
- suspicious pools of liquid, pits, ponds, or lagoons

On May 19, 2022, Gribi Associates contracted Foresite Engineering Surveys (Foresite) to conduct a utilities/geophysical survey at the Site to attempt to determine whether or not underground storage tanks (USTs) are still present on the Property (see Figure 3). This survey generally

included scanning suspected areas with electromagnetic field induction instruments, with an electric current generated at the two visible vent pipes (one on the well house and one on the hanger building). Results of this survey clearly indicated that USTs are no longer present on the Property.

5.2 Site Vicinity Observations

During the site reconnaissance, we conducted a drive-by inspection of areas surrounding the Property. The purpose of the site area reconnaissance was to identify sites in the vicinity that may pose a risk to the Property environment.

The Property is located in a primarily agricultural area near the northeast corner of Vacaville. A According to the USGS Allendale, California 7.5-Minute Quadrangle Map, the Property is located in the gently southeast-sloping west-central Sacramento Valley. Based on topography and location, we would expect groundwater flow in the site area to be to the southeast.

Current land uses surrounding the Property include the following:

- **North** Immediately north of the Property is US Interstate 80, followed by agricultural land and, further north by agricultural and rural residential properties.
- **East** East from the Property is a Solano Irrigation District (SID) drainage channel and basin, followed by vacant land that shows surface traces of a former oval dirt race track.
- **South** South from the Property across Weber Road is a farm/ranch headquarters and agricultural/pasture land.
- **West** West from the Property is agricultural/pasture land.

No obvious business types or evidence of significant hazardous waste storage or handling activities were observed during the site area reconnaissance which would appear to pose a significant threat to environmental conditions on the Property.

6.0 INTERVIEWS

Gribi Associates staff interviewed Mr. Martin Fisch, the current Property owner. Mr. Fisch stated that his father, Wilbur Fisch, and a partner, Duncan Miller, purchased the Property in the 1970s and operated the Vaca Dixon airport for several years. The airport included two dirt runways and was used primarily as a sailplane port.

Mr. Fisch stated that there were three fuel USTs on the Property, including one diesel UST and one gasoline UST adjacent to the well house, and on aviation gasoline UST near the hanger building. According to Mr. Fisch, the USTs were removed by a friend of his father in the 1980s, with no

regulatory oversight or soil sampling. Mr. Fisch is not aware of any other significant hazardous materials handling or storage activities on the Property

7.0 FINDINGS AND CONCLUSIONS

Gribi Associates has conducted a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard E 1527-13 and with the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the former Vaca-Dixon Airport property located on Weber Road (APN's 0109-270-050 & 0109-220-060) in Vacaville, California, California. The purpose of the Phase I ESA has been to identify current and historical potential and actual recognized environmental conditions for the Property. Recognized environmental conditions are defined in *ASTM Standard E 1527-13* as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of future release."

7.1 Recognized Environmental Conditions

This assessment has revealed no evidence of significant recognized environmental conditions relative to the Property.

7.1.1 RECs from Current Onsite and Offsite Activities

Results of the Phase I ESA indicate no recognized environmental conditions relative to current activities on the Property. The Property is currently vacant and is occasionally used for cattle grazing. During the site inspection, we noted no hazardous waste use or storage in abandoned buildings or on open areas of the Property.

Results of the Phase I ESA indicate no recognized environmental conditions relative to current activities or businesses in the site vicinity . The Property is surrounded primarily by agricultural and rural residential properties. The Phase I ESA identified no current hazardous waste site listings within close proximity to the Property. In addition, during the site reconnaissance we noted no evidence of hazardous waste storage or handling activities associated with nearby properties.

7.1.2 RECs from Historic Onsite and Offsite Activities

Results of the Phase I ESA indicate no significant recognized environmental conditions relative to historical activities on the Property. The Property operated as a small airport/glider port at various levels of activity from the late 1940s to approximately 1992. Approximately three fuel underground storage tanks (USTs) of unknown age were present on the northwest side of the Property. These USTs were removed in the mid-1980s, prior to promulgation of UST regulations, and an electromagnetic survey was conducted as part of this Phase I ESA to confirm that the USTs are no longer present on the Property. Although soil sampling was not conducted following removal of the USTs, it is unlikely that significant fuel releases occurred from the USTs or are still present relative to the former USTs, given that: (1) The USTs were undoubtedly not heavily used

(given the nature of the airport, with dirt runways and minimal services); (2) The distant age of the USTs, present on the Property more than 45 years ago (hydrocarbons tend to naturally degrade over time); and (3) Recent soil sampling at suspected UST locations by Ramcon in April 2020 showed no hydrocarbon detections. Thus, while some fuel hydrocarbon releases may have occurred on the Property in the distant past, we do not believe these releases would have been significant. In addition, there are currently no open regulatory cases relative to past activities on the Property.

The Phase I ESA revealed no past activities or sites in the site vicinity that would appear to have impacted environmental conditions on the Property. The site vicinity is and has been primarily agricultural and rural residential since at least the 1930s, and results of the Phase I ESA indicate no historic activities in the site vicinity that would be expected to have impacted environmental conditions on the Property. The Vaca Valley Raceway was present immediately east from the Property from approximately the mid-1960s to the late 1980s/early 1990s. While it is possible that fuel spills occurred on the Vaca Valley Raceway property, this property is located in an expected downgradient (southeast) direction from the Property and would not be expected to have impacted environmental conditions on the Property. No other historical activities or business types were identified which would be expected to have impacted environmental conditions on the Property.

7.2 Historical Recognized Environmental Conditions

Historical recognized environmental conditions (HRECs) refer to a past release of any hazardous substances or petroleum products that has occurred in connection with the Property and has been addressed to the satisfaction of the applicable regulatory authority or meets unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). An HREC is not a recognized environmental condition.

The Phase I ESA identified no HRECs relative to the Property.

7.3 Controlled Recognized Environmental Conditions and *De Minimis* Conditions

A Controlled Recognized Environmental Condition (CREC) is an REC which has been addressed to the satisfaction of the overseeing regulatory agency, but where hazardous substances or petroleum hydrocarbons are allowed to remain in place subject to implementation of some controls (use restrictions, institutional controls, or engineering controls).

This Phase I ESA identified no CRECs relative to the Property.

De minimis conditions, which are not RECs, include hazardous substance or petroleum releases or impacts that do not represent a threat to human health or the environment and which would not be subject to enforcement.

This Phase I ESA identified no *de minimis* conditions relative to the Property.

8.0 OPINIONS

Results of the Phase I ESA identified no significant recognized environmental condition on the Property relative to current or past onsite or offsite activities. Based on these results, we recommend no additional investigation or remediation relative to environmental conditions on the Property.

9.0 DEVIATIONS AND ADDITIONAL SERVICES

This assessment did not include any deletions or deviations from *ASTM Standard E 1527-13*. This assessment included no additional services. This Phase I ESA did not include a formal asbestos survey or lead-based paint survey.

10.0 REFERENCES

During the preparation of this report, a number of sources were contacted, many individuals interviewed, and various local and state agencies and databases consulted. Documentation applicable to the Property was requested and obtained from these agencies and sources where reasonably ascertainable, as detailed in *ASTM Standard E 1527-13*.

References for site-specific information, hydrologic information, technical data, historical research data, environmental reports, and other records are identified throughout the report in corresponding sections.

11.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

I declare that, to the best of my professional knowledge and belief, I meet the definition for Environmental Professional as specified in *ASTM Standard E 1527-13*. I have the specific qualifications, based on education, training, and experience, to assess a property of the nature, history, and setting of the Property. To the best of my professional knowledge and belief, this Phase I ESA has been conducted in conformance with *ASTM Standard E 1527-13*.

James E. Gribi
Professional Geologist
California No. 5843

12.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

JAMES GRIBI, P.G.

EDUCATION

B.S., Geology, San Diego State University, 1979
Groundwater remediation and contaminant fate and transport modeling courses, University of California, Berkeley Extension Program, 1990 and 1992

REGISTRATION AND CERTIFICATION

Registered Geologist, California and Oregon Health
and safety training (40 hours)

EXPERIENCE OVERVIEW

Mr. Gribi has more than twenty years of experience applying his geological expertise to the investigation, evaluation, and remediation of soil and groundwater contamination. Projects have included soil boring investigations, groundwater investigations, aquifer testing, and geophysical testing, and use of the state-of-the-art remediation technologies.

Soil and Groundwater Remediation: Mr. Gribi has managed and/or supervised the design, construction, and implementation of numerous remediation pilot tests and full-scale projects throughout the Bay Area and the West. Remediation methods have included excavation and either onsite treatment or offsite disposal, soil vapor extraction, air sparging, groundwater extraction, in-situ bioremediation, in-situ application of electron acceptors, and passive and active free product removal.

Soil Boring Investigations: Mr. Gribi has managed and/or supervised numerous soil boring investigations on a wide variety of sites throughout the Bay Area and the West. Drilling methods have included hand auger, direct-push coring, solid stem auger, hollow stem auger, Cone Penetrometer (CPT), and air and mud rotary. Several investigations have been conducted in unusual or difficult locations, such as inside active industrial buildings, in basements, or on busy city streets.

Groundwater Investigations: Mr. Gribi has managed and/or supervised the installation of numerous groundwater monitoring wells of all types on hundreds of sites throughout the Bay Area and the West. Drilling methods used have included hand auger, direct push, hollow stem auger, air rotary, and mud rotary. Well depths have ranged from near surface to over one thousand feet, and well types have included not only standard slotted PVC wells, but also welded steel piped wells and pre-packed horizontal wells. Groundwater sampling methods have included all varieties, from hand bailing to micro purging to submersible pumping.

Aquifer Testing: Mr. Gribi has conducted numerous aquifer tests, including single well and multiple-well pump tests, laboratory evaluations of porosity and water content, percolation tests, and tracer tests. Pump test methods have ranged from single well slug tests (Bouwer and Rice method) to multiple-well pumping tests (Jacob distance drawdown method, Cooper and Jacob time drawdown method). Field measurements have included both simple hand measurements to more sophisticated pressure transducers and data loggers, and data evaluations have been conducted by both analogue and digital methods.

Geophysical Testing: Mr. Gribi has directed several projects where geophysical data was collected and evaluated to assess subsurface conditions. Geophysical projects have involved the use of ground penetrating radar (GPR) and other electromagnetic tools to locate varied structures, such as tanks or drums. More sophisticated geophysical surveys have been conducted using resistivity, gamma ray, and neutron radiation tools in open borings to assess subsurface geologic and hydrologic conditions.

REPRESENTATIVE PROJECTS AND RESPONSIBILITIES

The following are brief summaries for several projects that Mr. Gribi has directed or for which he has had lead responsibility.

Soil and Groundwater Remediation; Union City, California. At this private-sector client' site, Mr. Gribi conducted a pilot-scale soil vapor extraction test and developed criteria that he used to design, construct, and operate the full-scale unit. He prepared reports on the pilot test and the proposed design and submitted them to the regulatory agencies in support of applications for permits. He secured all equipment and performed initial system shakedown and optimization and subsequent system monitoring and performance evaluation (which is ongoing). Mr. Gribi is also monitoring the performance of the insitu bioremediation system being used at the site.

UST Site Characterization, Feasibility Studies, and Remediation, Lafayette, California. Conducted a comprehensive soil and ground water investigation that delineated a gasoline-impacted soil and ground water plume that had migrated beneath an adjacent building at shallow depths. Based on these results, we conducted a two-week vapor extraction pilot test that indicated that vapor extraction was the most viable remedial option for shallow soils beneath the site. Installed a 170-foot long horizontal vapor extraction at four feet in depth beneath the adjacent building. Conducted remediation and confirmation groundwater monitoring at the site, and site closure is expected in the near future.

UST Site Characterization and Remediation, Mountain View, California. Mr. Gribi conducted site characterization that included soil boring investigations, installation and sampling of groundwater monitoring wells, and completion of groundwater aquifer (pump) testing. Also completed a short-term dual-phase extraction pilot test for this MTBE-impacted site. Based on these results, dual-phase (groundwater and vapor) extraction remediation was conducted over a two-month period in 2001. Hydrocarbon mass removal estimates indicated removal of over 90 percent of recoverable hydrocarbon plume mass. Mr. Gribi is currently conducting confirmation groundwater monitoring, and regulatory closure is expected in 2002.

Groundwater Assessment and Remediation, Commercial Building, San Francisco, California. Conducted a remedial investigation at a diesel UST site located in a basement parking garage in downtown San Francisco. The remedial investigation revealed the presence of approximately one foot of diesel product floating on the ground water surface. Negotiated closure requirements with regulatory agencies to include removal of free product and monitoring of downgradient ground water quality. Installed, operated, and maintained a free product recovery system in the basement parking garage. Regulatory site closure is pending.

Site Investigation Oversight, Santa Rosa, California. Mr. Gribi provided third-party oversight of a field investigation that was being conducted by a property owner who was accusing one of its former tenants of responsibility for alleged soil and groundwater contamination. The property owner was directing the investigation. Representing the accused tenant, Mr. Gribi documented field activities and provided an independent assessment of the data and the findings. He prepared an oversight report and provided critical review comments on the site investigation report prepared by the environmental consultant serving the property owner.

Phase I & II ESA and UST Site Closure Activities, Emeryville, California. Mr. Gribi conducted a Phase I ESA for this former sugar products facility that spanned three city blocks in Emeryville. Reviewed Phase II ESA results conducted by other consultants, and, for one of the parcels, conducted extensive soil and groundwater characterization relative to chlorinated solvents in groundwater. Also conducted soil and groundwater investigations relative to a former leaking USTs on another of the parcels, and negotiated regulatory closure requirements for this UST site. Conducted risk assessment activities for three separate site parcels, and obtained regulatory closure for two of the parcels. Also assisted in negotiations relative to regulatory approval for planned residential development of one of the site parcels.

Stormwater Management Issues, Wood Treatment Facility, Jasper, Oregon. Mr. Gribi prepared a Spill Prevention Control and Countermeasure Plan (SPCCP) and a Stormwater Pollution Control Plan (SWPCP) for this facility. Also conducted a Preliminary Groundwater Assessment (PGA), and based on results of the PGA, conducted a Hydrologic Characterization for the facility. The Hydrologic Investigation included the drilling and sampling of eight investigative borings, collection of wetlands benthic sediment samples, and collection of stormwater channel soil samples. Results from these investigative activities indicated no significant impacts from CCA (copper, chromium, and arsenic) treatment activities.

Cleaning Products Facility Investigation and Remediation, Oakland, California. Conducted a CPT/hydropunch investigation at this former cleaning products facility where tetrachloroethene (PCE) had been handled in bulk. Results indicated significant soil impacts, but only local shallow groundwater impacts. Conducted soil excavation in PCE source areas installed shallow, intermediate, and deep groundwater monitoring wells. Also conducted detailed groundwater aquifer testing to assess groundwater flow capabilities in the deep sand aquifer. Based on results of these activities, it appears that regulatory closure will be possible after one to two years of quarterly groundwater monitoring.

Soil Bioremediation Project, Eugene, Oregon. Conducted soil sampling and laboratory analysis of a 1,800-cubic yard hydrocarbon-impacted soil stockpile. Laboratory results showed that: (1) the soil was impacted with diesel-range hydrocarbons only; and (2) approximately 90% of the

soil was below the DEQ Level 2 Soil Matrix Cleanup Level. Mr. Gribi negotiated with DEQ to allow onsite burial and covering of the "clean" 90% of soil, and continued onsite treatment of the remaining 10% of "dirty" soil.

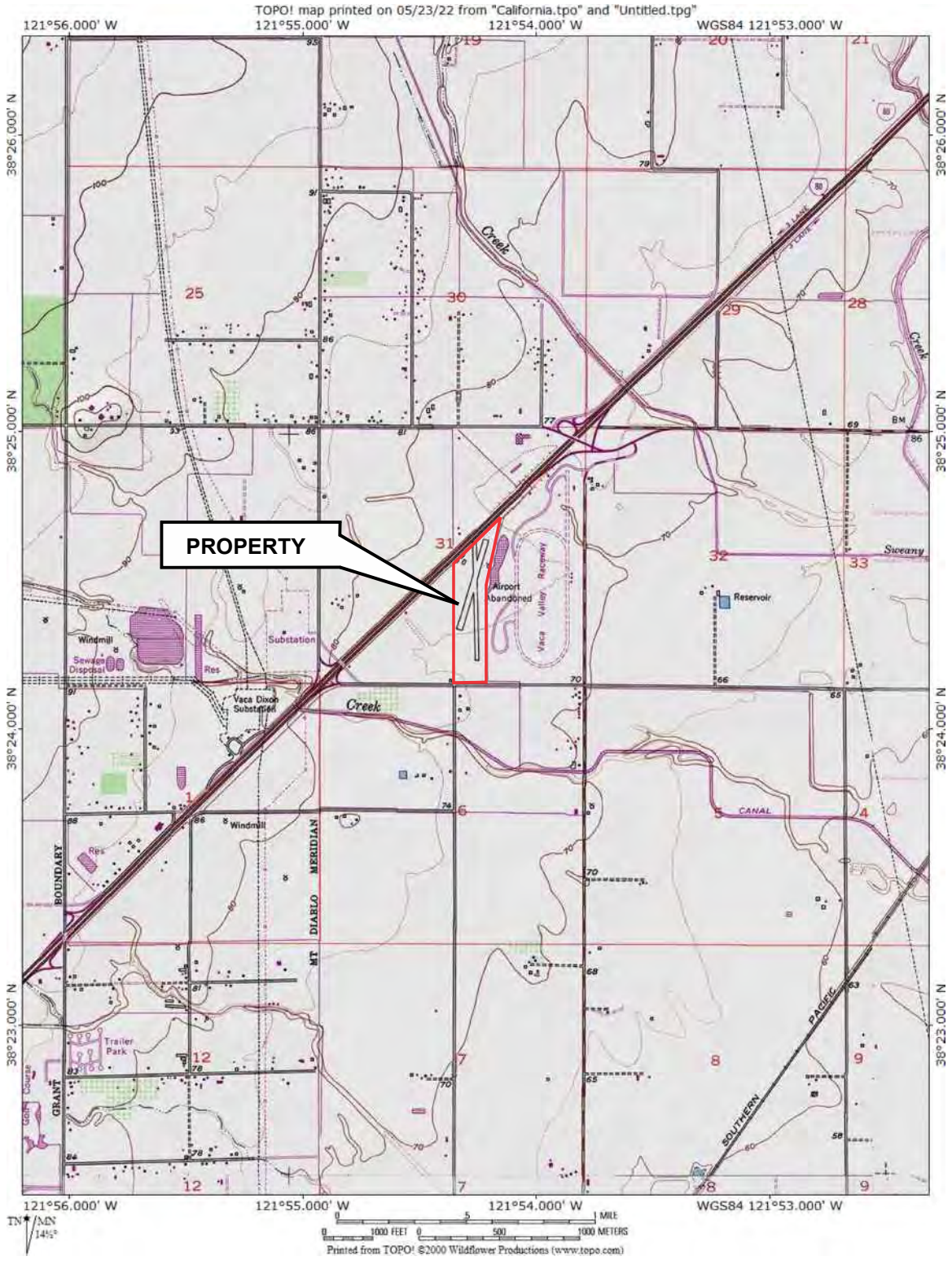
UST Site Remediation, Former ARCO Gas Station, Oakland, California. Directed the removal and overexcavation of underground storage tanks (USTs) and hydraulic lift areas so that client could obtain Alameda County approval that no additional soil remediation would be required. This was necessary so client could sell the property to a large chain retail store with plans to build a new store at the site. Subsurface soils were sampled at strategic locations to prove that the overexcavation activities were effective. After submitting a report of findings, Alameda County issued a partial closure letter, which allowed the sale of the property to close escrow. After conducting five quarters of ground water monitoring, Alameda County granted final site closure.

UST Soil Remediation and Closure, Trucking Distributor, Carpinteria, California. Coordinated removal and documentation of one gasoline/diesel UST. Subsequent overexcavation and soil boring investigation activities revealed that gasoline and diesel constituents had been remediated, but that motor oil-range hydrocarbons were still present in subsurface soils. Utilized historical records and chromatographic evidence to prove that the motor oil-range hydrocarbons resulted from the importation of hydrocarbon-tainted soils from a nearby roadcut which contained tar seeps. Based on these results, Santa Barbara County granted regulatory site closure.

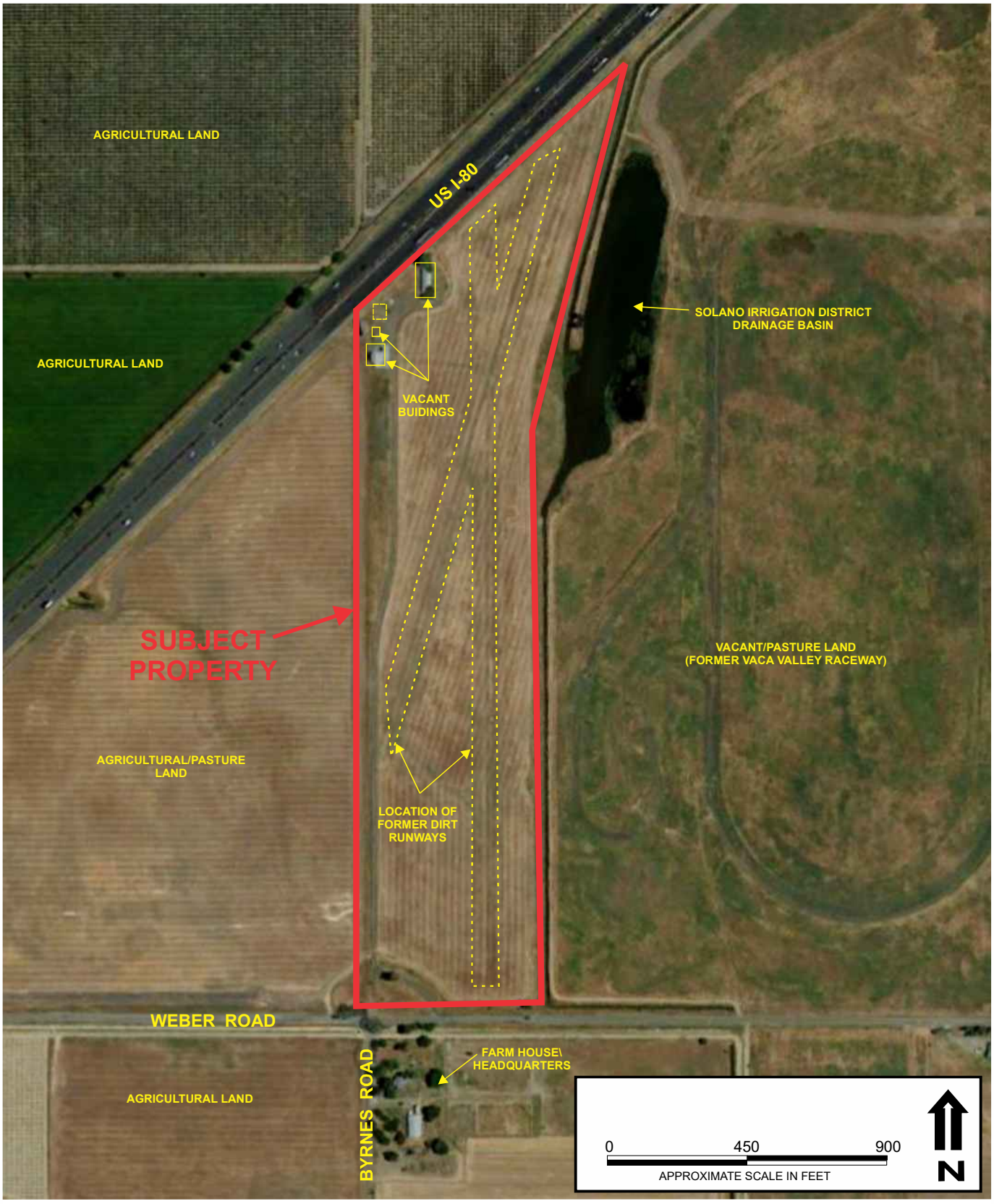
Phase I ESA, Solvent Recycling Facility, Whittier, California. Reviewed Cal-EPA files and Los Angeles County files to assess environmental liability associated with operation of a solvent and oil recycling and storage facility. The Phase I ESA revealed significant levels of chlorinated hydrocarbons in soil and ground water beneath the site. In addition, file reviews and interviews revealed that civil and possible criminal penalties were pending against the TSD operator for numerous violations of state and federal hazardous waste statutes. Based on these results, our client decided not to foreclose on this property.

Phase I and Phase II ESA, Metal Recycling Facility, Oakland, California. A Phase I Environmental Site Assessment of a metal recycling facility was conducted for a lending institution. The results of the Phase I ESA indicated that past and present uses of the project site have not had an adverse impact on the project site environment. However, potential offsite environmental risks included: (1) An underground fuel storage tank located in the sidewalk adjacent to the project site; and (2) The presence of a commercial laundry on a contiguous parcel in the 1930s and 1940s. Based on these results, a Phase II ESA was conducted, which consisted of drilling and sampling two soil borings on the project site. Laboratory analysis of soil and ground water samples indicated that naphtha, a cleaning solvent commonly used in the dry cleaning business in the past, had impacted soil and ground water beneath the project site. These results were useful to the client in limiting their liability pursuant to a delinquent loan on the property.

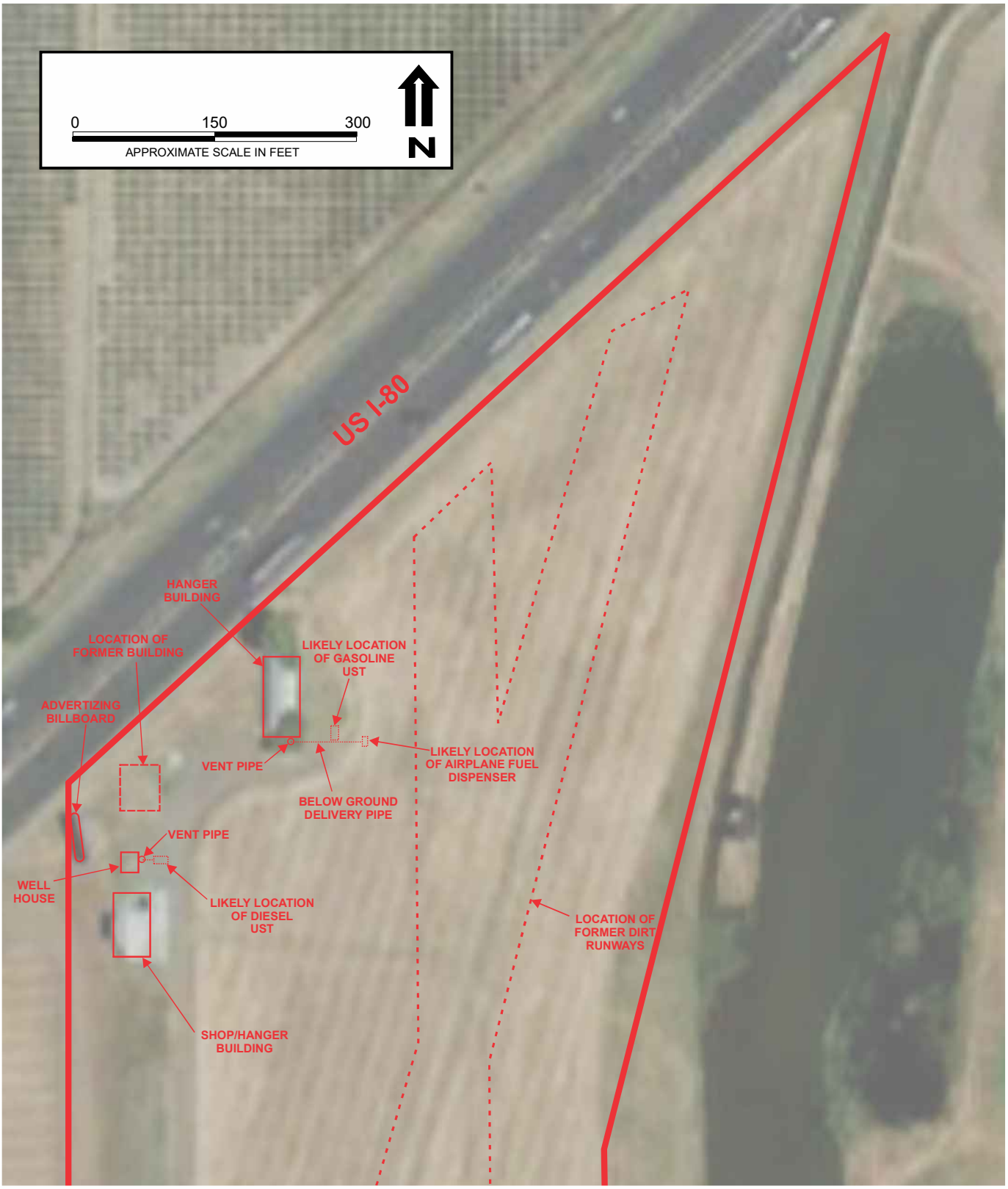
FIGURES



DESIGNED BY:	CHECKED BY:	**SITE VICINITY MAP**	DATE: 05/28/2022	FIGURE: **1**
DRAWN BY: JG	SCALE:			
PROJECT NO:		WEBER ROAD PROPERTY VACAVILLE, CALIFORNIA		



DESIGNED BY:	CHECKED BY:	**SITE PLAN**	DATE: 05/28/2022	FIGURE: **2**
DRAWN BY: JG	SCALE:			
PROJECT NO:		WEBER ROAD PROPERTY VACAVILLE, CALIFORNIA		



DESIGNED BY:	CHECKED BY:	**RESULTS OF ELECTROMAGNETIC SURVEY**	DATE: 05/28/2022	FIGURE: **3**
DRAWN BY: JG	SCALE:			
PROJECT NO:		WEBER ROAD PROPERTY VACAVILLE, CALIFORNIA		

APPENDIX A

SITE PHOTOGRAPHS

VIEW OF PROPERTY LOOKING NORTH FROM SOUTHWEST CORNER OF PROPERTY.

VIEW OF PROPERTY LOOKING NORTH FROM SOUTHEAST CORNER OF PROPERTY.

VIEW OF SHOP/HANGER BUILDING, WELL HOUSE, AND ADVERTISING BILLBOARD LOOKING SOUTHWEST.

VIEW OF WELL HOUSE AND ADVERTISING BILLBOARD LOOKING WEST. NOTE UST VENT PIPE ON RIGHT SIDE OF BUILDING WALL.

VIEW OF HANGER BUILDING LOOKING NORTHWEST. NOTE UST VENT PIPE ON SOUTH WALL OF BUILDING.

VIEW OF INSIDE OF SHOP/HANGER BUILDING.

VIEW OF STORAGE ROOM ON WEST SIDE OF SHOP/HANGER BUILDING.

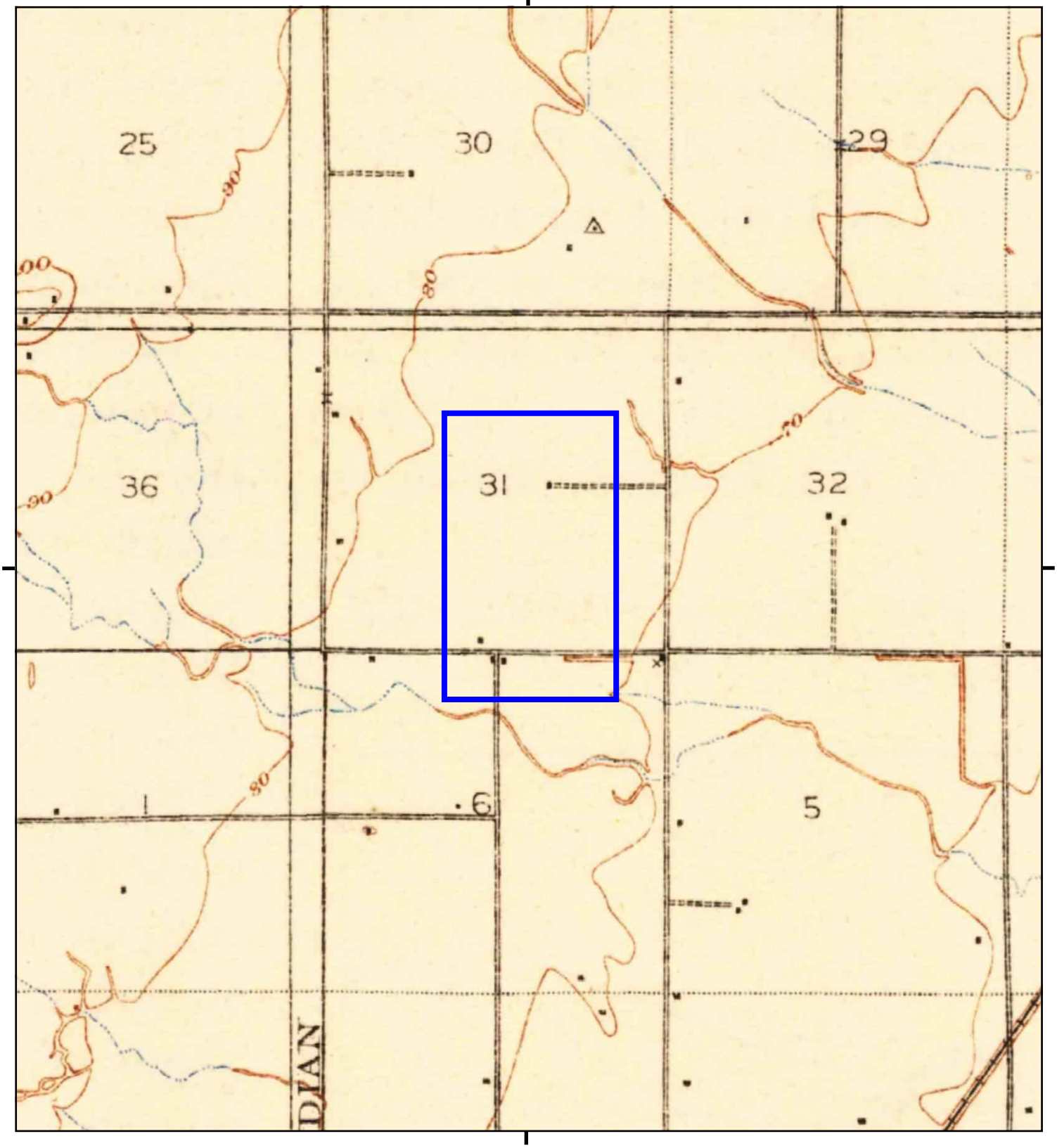
VIEW OF INSIDE OF HANGER BUILDING.

APPENDIX B

HISTORICAL TOPOGRAPHIC MAPS

Historical Topo Map

1908



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

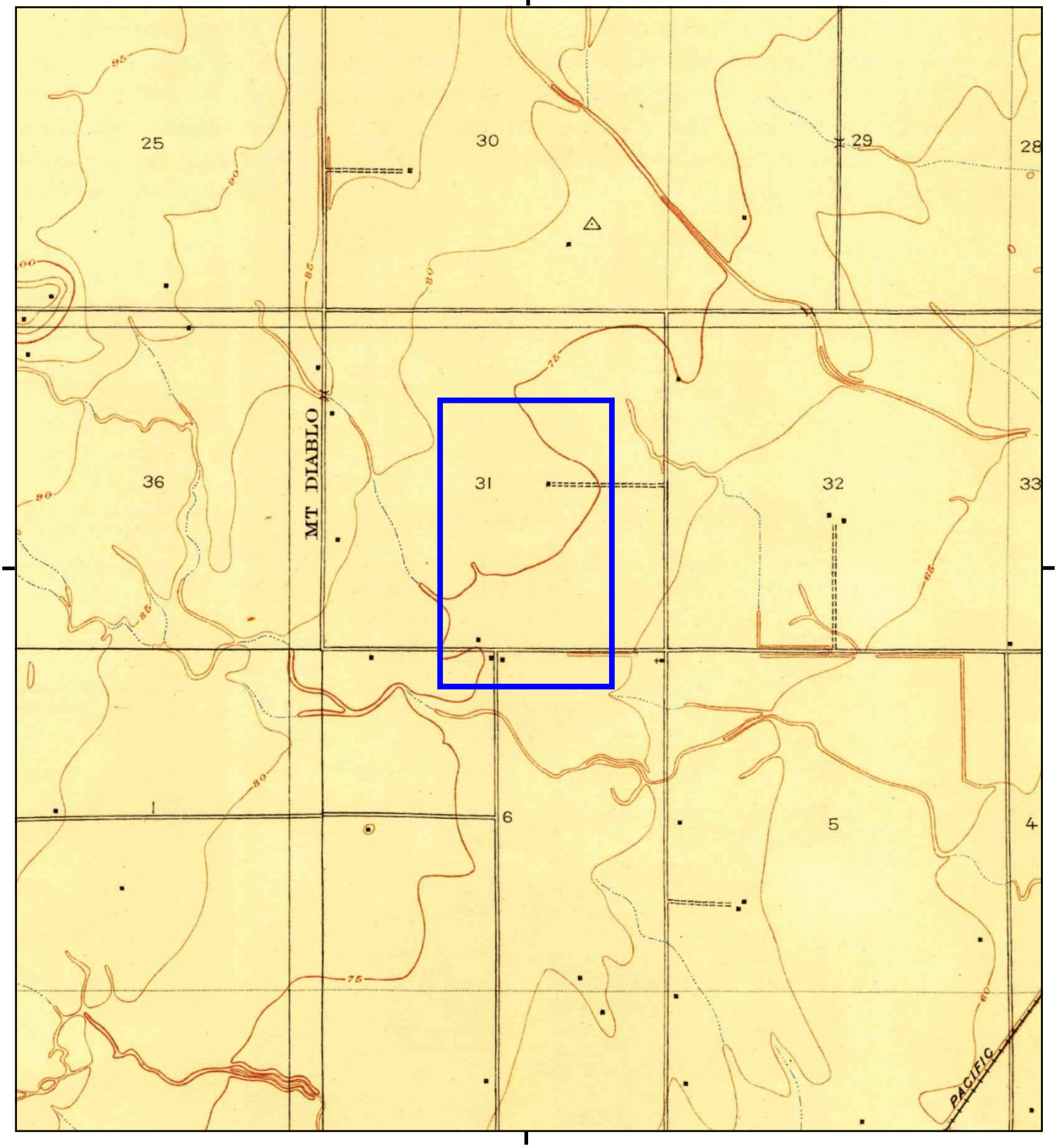
TP, Vacaville, 1908, 15-minute

SITE NAME: Weber Road Property
ADDRESS: Not Reported
Vacaville, CA 95687
CLIENT: Gribi Associates

N

Historical Topo Map

1917



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

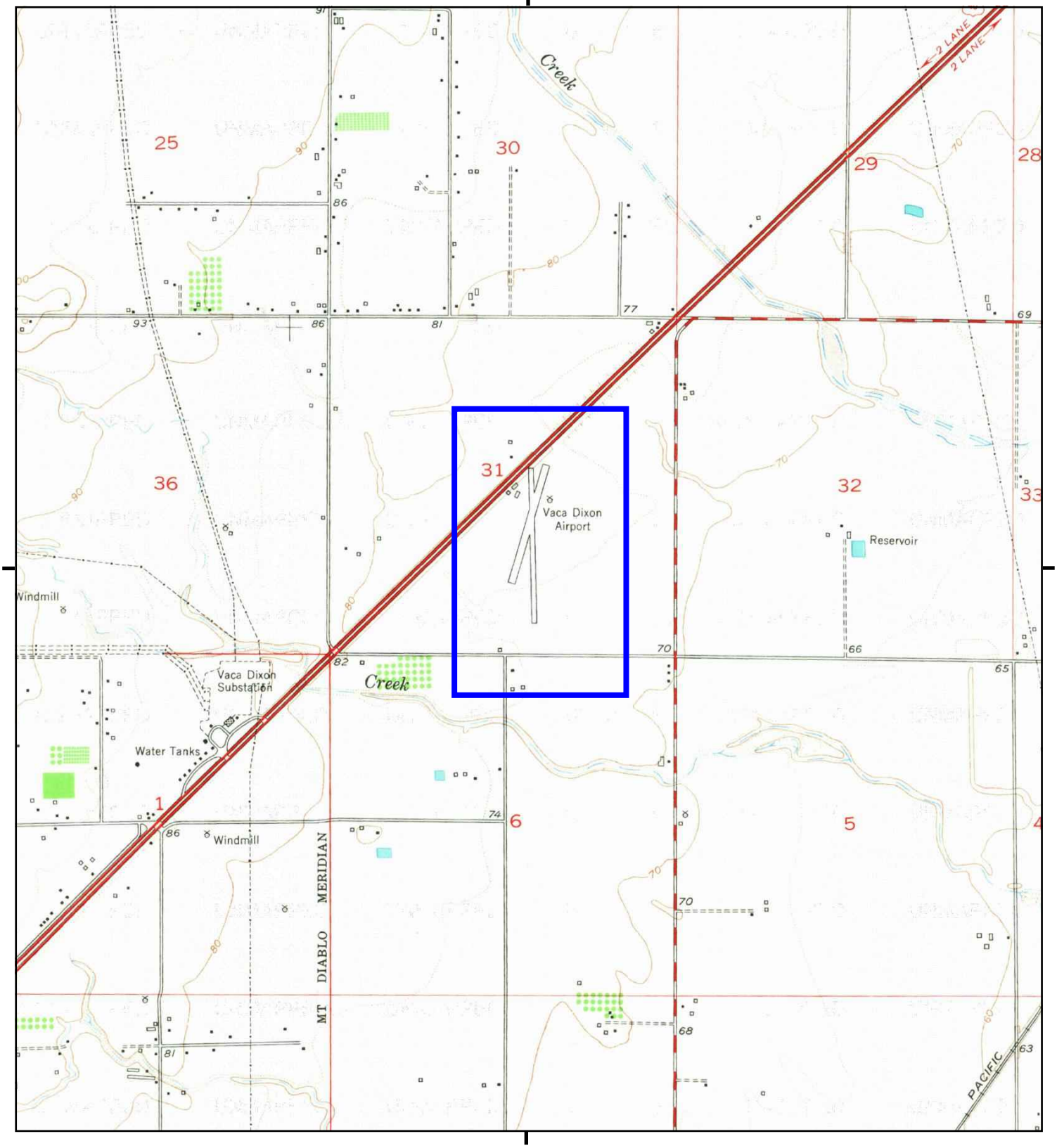
TP, Wolfskill, 1917, 7.5-minute

SITE NAME: Weber Road Property
ADDRESS: Not Reported
Vacaville, CA 95687
CLIENT: Gribi Associates

N

Historical Topo Map

1953



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

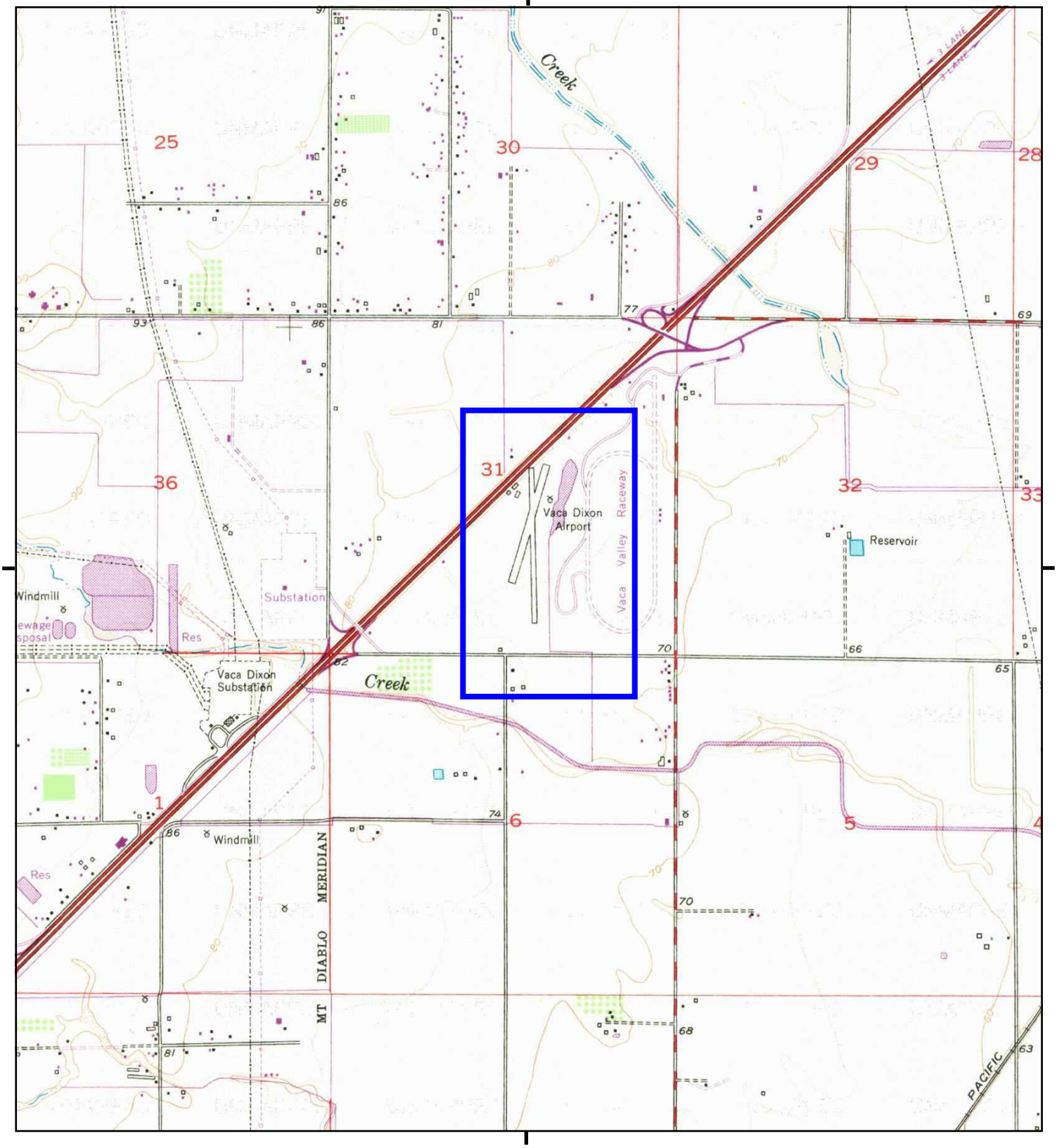
TP, Allendale, 1953, 7.5-minute

SITE NAME: Weber Road Property
ADDRESS: Not Reported
Vacaville, CA 95687
CLIENT: Gribi Associates

N

Historical Topo Map

1968



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

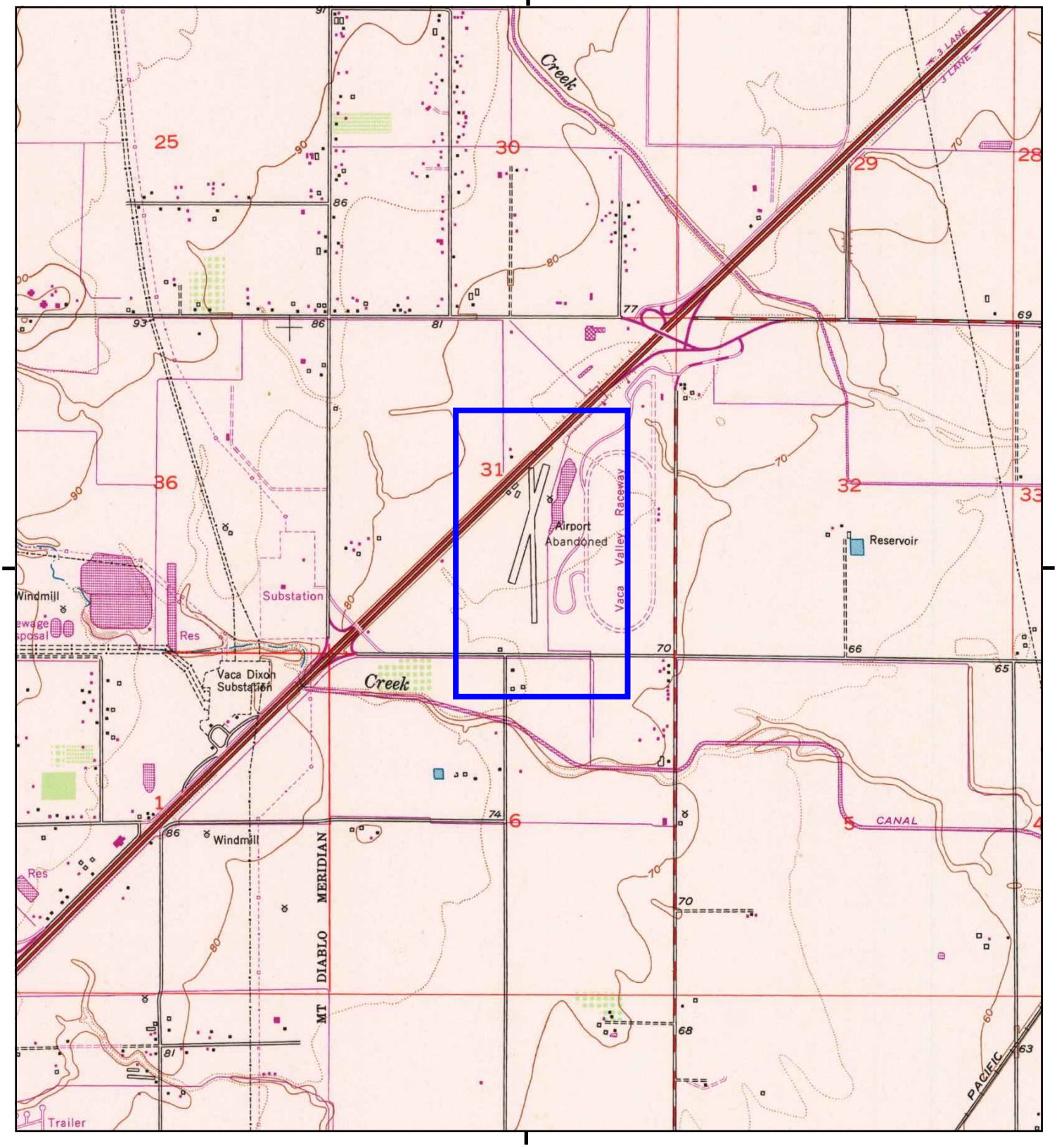
TP, Allendale, 1968, 7.5-minute

SITE NAME: Weber Road Property
ADDRESS: Not Reported
Vacaville, CA 95687
CLIENT: Gribi Associates

N

Historical Topo Map

1978



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

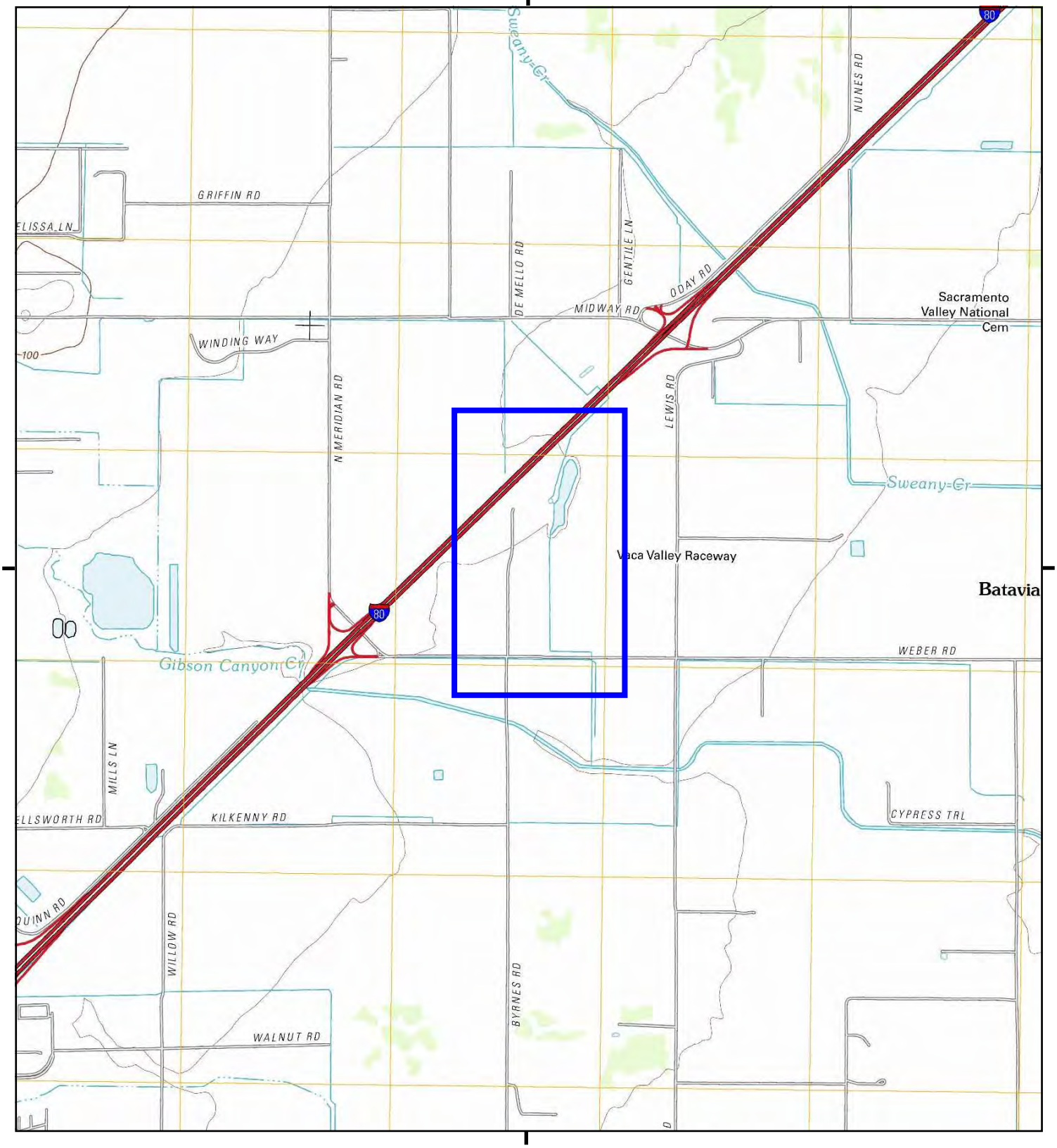
TP, Allendale, 1978, 7.5-minute

SITE NAME: Weber Road Property
ADDRESS: Not Reported
Vacaville, CA 95687
CLIENT: Gribi Associates

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

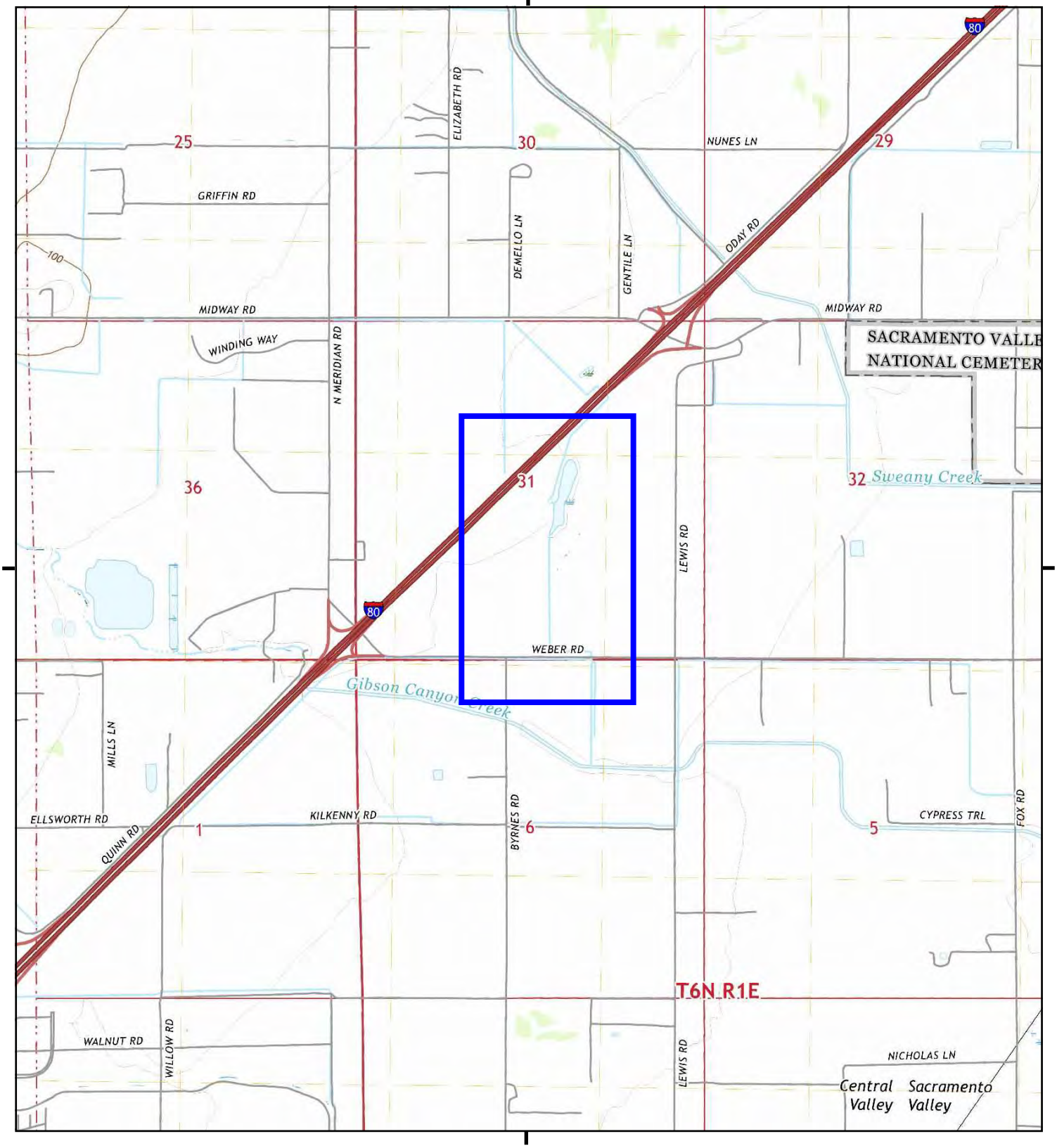
TP, Allendale, 2012, 7.5-minute

SITE NAME: Weber Road Property
ADDRESS: Not Reported
Vacaville, CA 95687
CLIENT: Gribi Associates

N

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Allendale, 2018, 7.5-minute

SITE NAME: Weber Road Property
ADDRESS: Not Reported
Vacaville, CA 95687
CLIENT: Gribi Associates

N

APPENDIX C

HISTORICAL AERIAL PHOTOS

INQUIRY #: 6972357.8
YEAR: 1937
= 500'
N
EDR

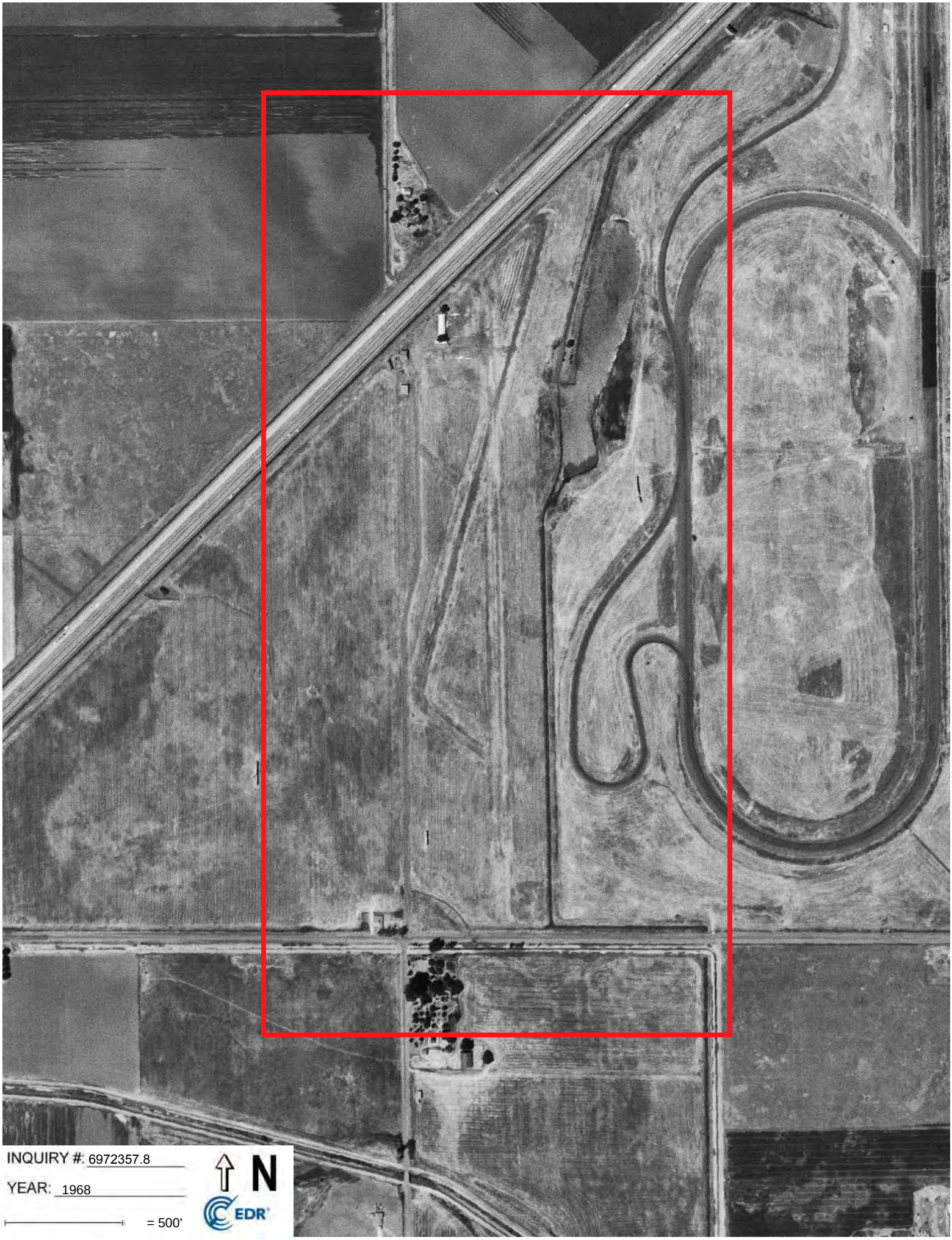
INQUIRY #: 6972357.8

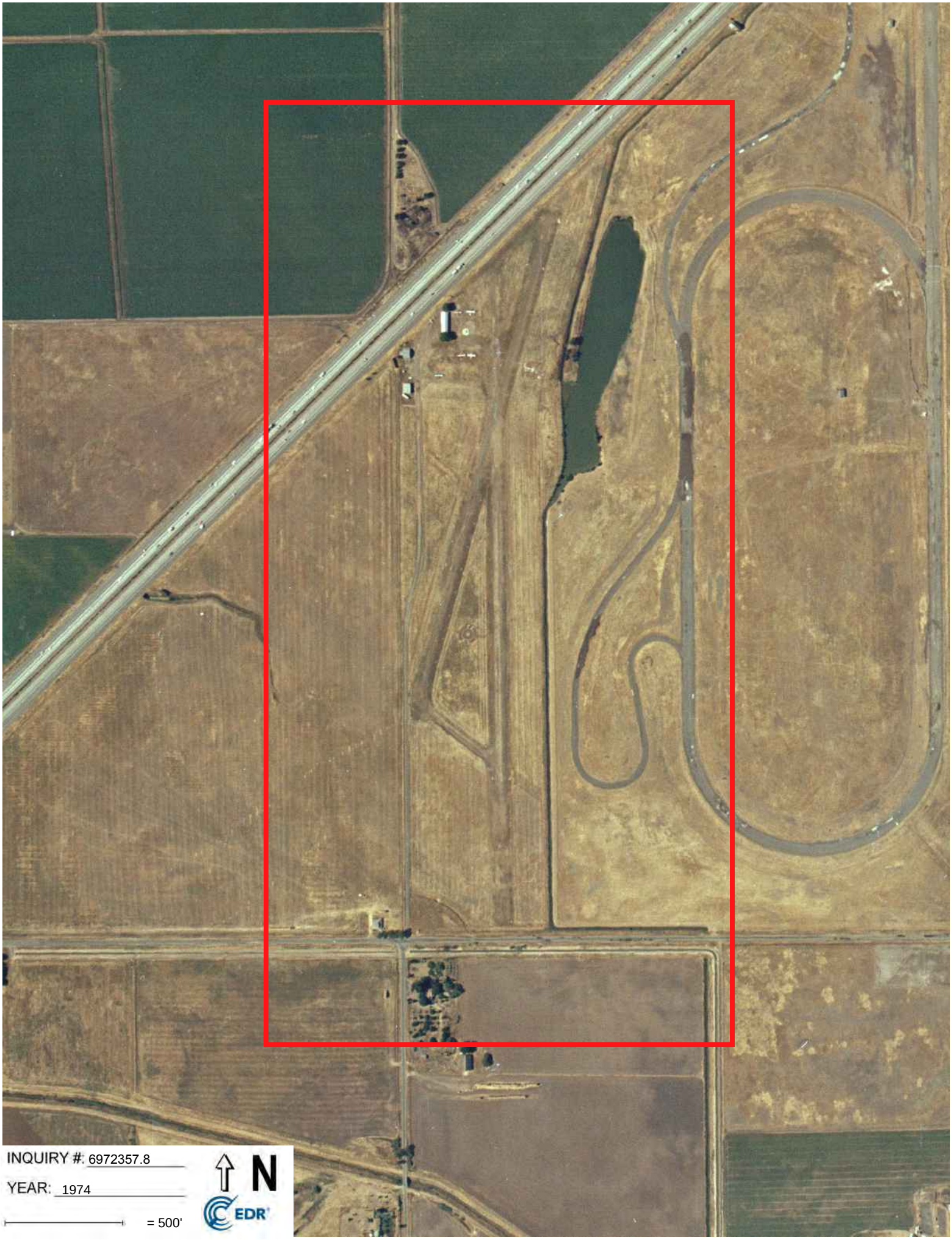
YEAR: 1952

= 500'

N

EDR


INQUIRY #: 6972357.8
YEAR: 1968
= 500'
N
EDR


INQUIRY #: 6972357.8
YEAR: 1974
= 500'
N
EDR

INQUIRY #: 6972357.8

YEAR: 1984

= 500'

N

EDR

INQUIRY #: 6972357.8
YEAR: 1993
= 500'
N
EDR

INQUIRY #: 6972357.8
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 6972357.8
YEAR: 2016
= 500'
N
EDR

APPENDIX D

EDR RADIUS REPORT

Weber Road Property
Not Reported
Vacaville, CA 95687

Inquiry Number: 6972357.2s
May 09, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Executive Summary	ES1
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Detail Map	3
Map Findings Summary	4
Map Findings	9
Orphan Summary	137
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-10
Physical Setting Source Map Findings	A-12
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NOT REPORTED
VACAVILLE, CA 95687

COORDINATES

Latitude (North):	38.4062660 - 38ˆ 24' 22.55''
Longitude (West):	121.9047040 - 121ˆ 54' 16.93''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	595634.9
UTM Y (Meters):	4251254.0
Elevation:	79 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	12021563 ALLENDALE, CA
Version Date:	2018
Northeast Map:	12021587 DIXON, CA
Version Date:	2018
Southeast Map:	12021589 DOZIER, CA
Version Date:	2018
South Map:	12021597 ELMIRA, CA
Version Date:	2018

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140606
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NOT REPORTED
VACAVILLE, CA 95687

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	VACAVILLE AERO SERVI	5419 WEBER RD	UST	Higher	2396, 0.454, SW
2	FORMER ROBERT'S HOME	1416 MIDWAY	LUST, Cortese, HIST CORTESE	Lower	3910, 0.741, NNE
3	ADVANCED ENVIRONMENT	7300 CHEVRON WAY	HAZNET, HWP, HWTS	Lower	5388, 1.020, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE ..... State Response Sites

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR ..... EnviroStor Database

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ..... Solid Waste Information System

Lists of state and tribal leaking storage tanks

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ..... Statewide SLIC Cases

Lists of state and tribal registered storage tanks

FEMA UST ..... Underground Storage Tank Listing
AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Cleanup Program Properties

Lists of state and tribal brownfield sites

BROWNFIELDS ..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
IHS OPEN DUMPS ..... Open Dumps on Indian Land

EXECUTIVE SUMMARY

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
CERS HAZ WASTE	CERS HAZ WASTE
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register
AQUEOUS FOAM	Former Fire Training Facility Assessments Listing
PFAS	PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST	SWEEPS UST Listing
HIST UST	Hazardous Substance Storage Container Database
CA FID UST	Facility Inventory Database
CERS TANKS	California Environmental Reporting System (CERS) Tanks

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System

COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System
CERS	CERS
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)
HWTS	Hazardous Waste Tracking System
MINES MRDS	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 0.75 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER ROBERT'S HOME	***1416 MIDWAY***	***NNE 1/2 - 1 (0.741 mi.)***	***2***	***9***

Database: LUST REG 5, Date of Government Version: 07/01/2008
Database: SOLANO CO. LUST, Date of Government Version: 06/04/2019
Database: LUST, Date of Government Version: 12/06/2021
Status: Completed - Case Closed
Status: Case Closed
Facility Id: 50107
Facility Id: 80048
Global Id: T0609500429
Facility Status: I

EXECUTIVE SUMMARY

Lists of state and tribal registered storage tanks

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VACAVILLE AERO SERVI	5419 WEBER RD	SW 1/4 - 1/2 (0.454 mi.)	1	9
Database: SOLANO CO. UST, Date of Government Version: 09/15/2021 Facility Id: 80121 Facility Status: I				

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 12/16/2021 has revealed that there is 1 Cortese site within approximately 0.75 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER ROBERT'S HOME	***1416 MIDWAY***	***NNE 1/2 - 1 (0.741 mi.)***	***2***	***9***
Cleanup Status: COMPLETED - CASE CLOSED				

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.75 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER ROBERT'S HOME	***1416 MIDWAY***	***NNE 1/2 - 1 (0.741 mi.)***	***2***	***9***
Reg Id: 480192				

HWP: Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

A review of the HWP list, as provided by EDR, and dated 11/15/2021 has revealed that there is 1 HWP site within approximately 1.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ADVANCED ENVIRONMENT	***7300 CHEVRON WAY***	***NE 1 - 2 (1.020 mi.)***	***3***	***12***

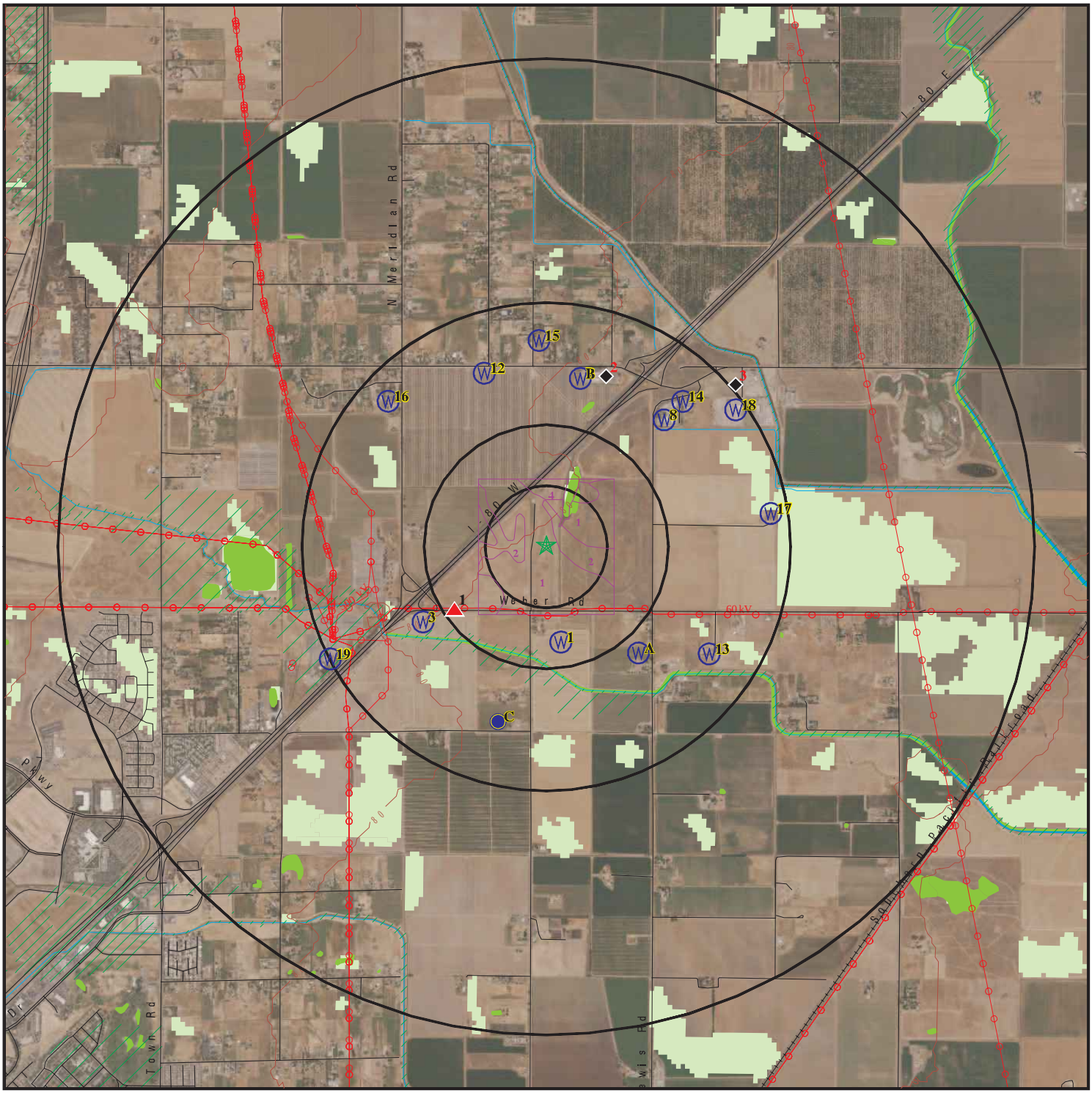
EXECUTIVE SUMMARY

EPA ID: CAT080012602
Cleanup Status: OPERATING PERMIT

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6972357.2S



0 1/2 1 2 Miles

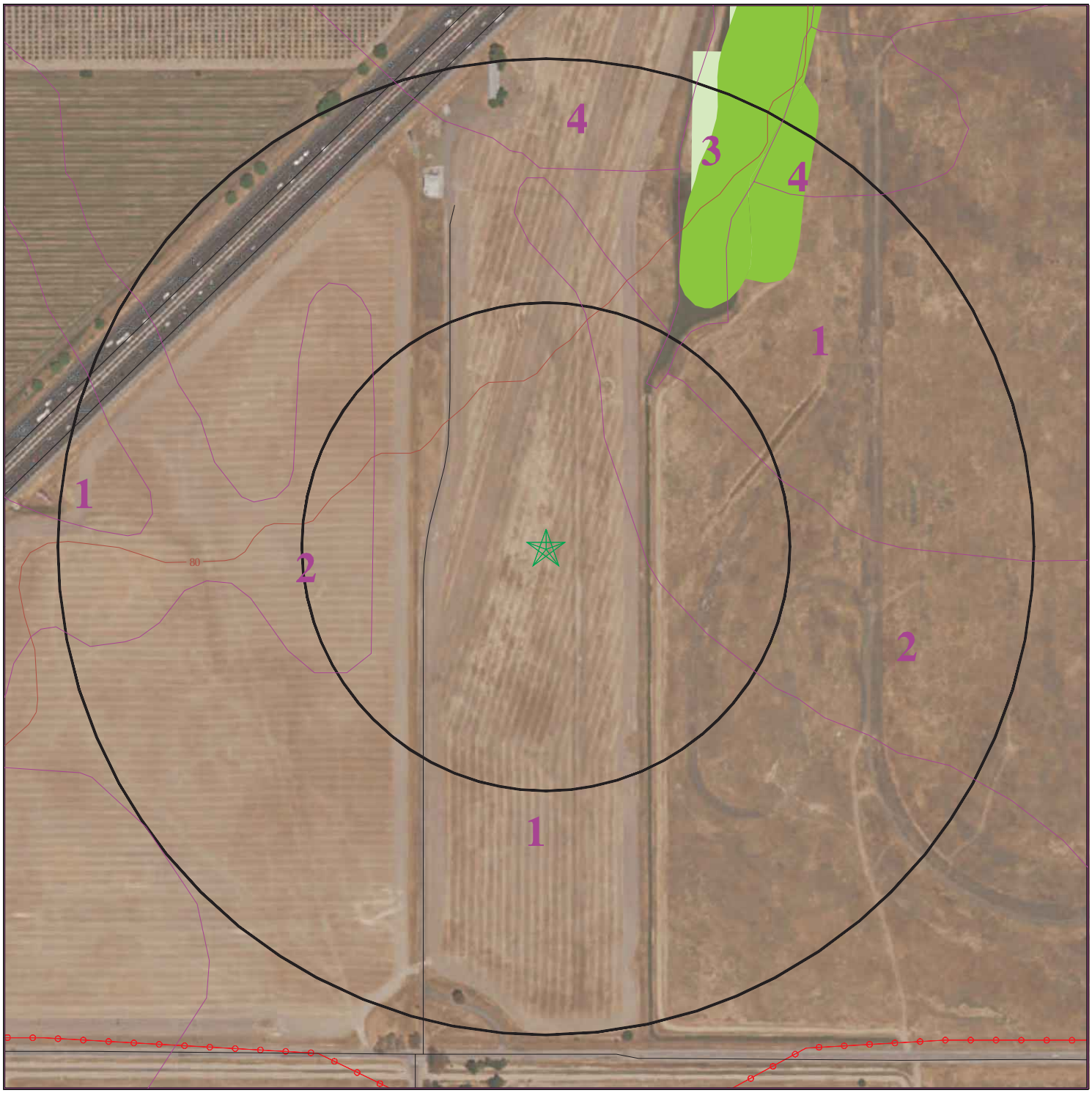
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Weber Road Property	CLIENT:	Gribi Associates
ADDRESS:	Not Reported Vacaville CA 95687	CONTACT:	Jim Gribi
		INQUIRY #:	6972357.2s
LAT/LONG:	38.406266 / 121.904704	DATE:	May 09, 2022 3:11 pm

Copyright © 2022 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 6972357.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Weber Road Property	CLIENT: Gribi Associates
ADDRESS: Not Reported Vacaville CA 95687	CONTACT: Jim Gribi
LAT/LONG: 38.406266 / 121.904704	INQUIRY #: 6972357.2s DATE: May 09, 2022 3:12 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.250		0	0	0	0	0	0
Proposed NPL	1.250		0	0	0	0	0	0
NPL LIENS	1.250		0	0	0	0	0	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.250		0	0	0	0	0	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.750		0	0	0	0	NR	0
SEMS	0.750		0	0	0	0	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.750		0	0	0	0	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.250		0	0	0	0	0	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.750		0	0	0	0	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.500		0	0	0	NR	NR	0
RCRA-SQG	0.500		0	0	0	NR	NR	0
RCRA-VSQG	0.500		0	0	0	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.750		0	0	0	0	NR	0
US ENG CONTROLS	0.750		0	0	0	0	NR	0
US INST CONTROLS	0.750		0	0	0	0	NR	0
Federal ERNS list								
ERNS	0.250		0	0	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.250		0	0	0	0	0	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.250		0	0	0	0	0	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.750		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
LUST	0.750		0	0	0	1	NR	1
INDIAN LUST	0.750		0	0	0	0	NR	0
CPS-SLIC	0.750		0	0	0	0	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.500		0	0	0	NR	NR	0
UST	0.500		0	0	1	NR	NR	1
AST	0.500		0	0	0	NR	NR	0
INDIAN UST	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.750		0	0	0	0	NR	0
VCP	0.750		0	0	0	0	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.750		0	0	0	0	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.750		0	0	0	0	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.750		0	0	0	0	NR	0
SWRCY	0.750		0	0	0	0	NR	0
HAULERS	0.250		0	0	NR	NR	NR	0
INDIAN ODI	0.750		0	0	0	0	NR	0
DEBRIS REGION 9	0.750		0	0	0	0	NR	0
ODI	0.750		0	0	0	0	NR	0
IHS OPEN DUMPS	0.750		0	0	0	0	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.250		0	0	NR	NR	NR	0
HIST Cal-Sites	1.250		0	0	0	0	0	0
SCH	0.500		0	0	0	NR	NR	0
CDL	0.250		0	0	NR	NR	NR	0
CERS HAZ WASTE	0.500		0	0	0	NR	NR	0
Toxic Pits	1.250		0	0	0	0	0	0
US CDL	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
PFAS	0.750		0	0	0	0	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.500		0	0	0	NR	NR	0
HIST UST	0.500		0	0	0	NR	NR	0
CA FID UST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CERS TANKS	0.500		0	0	0	NR	NR	0
Local Land Records								
LIENS	0.250		0	0	NR	NR	NR	0
LIENS 2	0.250		0	0	NR	NR	NR	0
DEED	0.750		0	0	0	0	NR	0
Records of Emergency Release Reports								
HMIRS	0.250		0	0	NR	NR	NR	0
CHMIRS	0.250		0	0	NR	NR	NR	0
LDS	0.250		0	0	NR	NR	NR	0
MCS	0.250		0	0	NR	NR	NR	0
SPILLS 90	0.250		0	0	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.500		0	0	0	NR	NR	0
FUDS	1.250		0	0	0	0	0	0
DOD	1.250		0	0	0	0	0	0
SCRD DRYCLEANERS	0.750		0	0	0	0	NR	0
US FIN ASSUR	0.250		0	0	NR	NR	NR	0
EPA WATCH LIST	0.250		0	0	NR	NR	NR	0
2020 COR ACTION	0.500		0	0	0	NR	NR	0
TSCA	0.250		0	0	NR	NR	NR	0
TRIS	0.250		0	0	NR	NR	NR	0
SSTS	0.250		0	0	NR	NR	NR	0
ROD	1.250		0	0	0	0	0	0
RMP	0.250		0	0	NR	NR	NR	0
RAATS	0.250		0	0	NR	NR	NR	0
PRP	0.250		0	0	NR	NR	NR	0
PADS	0.250		0	0	NR	NR	NR	0
ICIS	0.250		0	0	NR	NR	NR	0
FTTS	0.250		0	0	NR	NR	NR	0
MLTS	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	0.250		0	0	NR	NR	NR	0
COAL ASH EPA	0.750		0	0	0	0	NR	0
PCB TRANSFORMER	0.250		0	0	NR	NR	NR	0
RADINFO	0.250		0	0	NR	NR	NR	0
HIST FTTS	0.250		0	0	NR	NR	NR	0
DOT OPS	0.250		0	0	NR	NR	NR	0
CONSENT	1.250		0	0	0	0	0	0
INDIAN RESERV	1.250		0	0	0	0	0	0
FUSRAP	1.250		0	0	0	0	0	0
UMTRA	0.750		0	0	0	0	NR	0
LEAD SMELTERS	0.250		0	0	NR	NR	NR	0
US AIRS	0.250		0	0	NR	NR	NR	0
US MINES	0.500		0	0	0	NR	NR	0
ABANDONED MINES	0.500		0	0	0	NR	NR	0
FINDS	0.250		0	0	NR	NR	NR	0
DOCKET HWC	0.250		0	0	NR	NR	NR	0
ECHO	0.250		0	0	NR	NR	NR	0
UXO	1.250		0	0	0	0	0	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUELS PROGRAM	0.500		0	0	0	NR	NR	0
CA BOND EXP. PLAN	1.250		0	0	0	0	0	0
Cortese	0.750		0	0	0	1	NR	1
CUPA Listings	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.500		0	0	0	NR	NR	0
EMI	0.250		0	0	NR	NR	NR	0
ENF	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.250		0	0	NR	NR	NR	0
HAZNET	0.250		0	0	NR	NR	NR	0
HIST CORTESE	0.750		0	0	0	1	NR	1
HWP	1.250		0	0	0	0	1	1
HWT	0.500		0	0	0	NR	NR	0
MINES	0.500		0	0	0	NR	NR	0
MWMP	0.500		0	0	0	NR	NR	0
NPDES	0.250		0	0	NR	NR	NR	0
PEST LIC	0.250		0	0	NR	NR	NR	0
PROC	0.750		0	0	0	0	NR	0
Notify 65	1.250		0	0	0	0	0	0
UIC	0.250		0	0	NR	NR	NR	0
UIC GEO	0.250		0	0	NR	NR	NR	0
WASTEWATER PITS	0.750		0	0	0	0	NR	0
WDS	0.250		0	0	NR	NR	NR	0
WIP	0.500		0	0	0	NR	NR	0
MILITARY PRIV SITES	0.250		0	0	NR	NR	NR	0
PROJECT	0.250		0	0	NR	NR	NR	0
WDR	0.250		0	0	NR	NR	NR	0
CIWQS	0.250		0	0	NR	NR	NR	0
CERS	0.250		0	0	NR	NR	NR	0
NON-CASE INFO	0.250		0	0	NR	NR	NR	0
OTHER OIL GAS	0.250		0	0	NR	NR	NR	0
PROD WATER PONDS	0.250		0	0	NR	NR	NR	0
SAMPLING POINT	0.250		0	0	NR	NR	NR	0
WELL STIM PROJ	0.250		0	0	NR	NR	NR	0
HWTS	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.250		0	0	0	0	0	0
EDR Hist Auto	0.375		0	0	0	NR	NR	0
EDR Hist Cleaner	0.375		0	0	0	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.250		0	0	NR	NR	NR	0
RGA LUST	0.250		0	0	NR	NR	NR	0
- Totals --		0	0	0	1	3	1	5

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SW
1/4-1/2
0.454 mi.
2396 ft.

VACAVILLE AERO SERVICE **UST** **U003641638**
5419 WEBER RD **N/A**
VACAVILLE, CA 95687

Relative:
Higher

Actual:
80 ft.

SOLANO CO. UST:

Name:	VACAVILLE AERO SERVICE
Address:	5419 WEBER RD
City,State,Zip:	VACAVILLE, CA 95687
Facility Id:	80121
Facility Status:	Inactive
Decode for Facility Status:	Closed
Facility Phone:	707-447-4500
Inventory Number:	1
Inventory Type:	Underground Storage Tank (1)
Inventory Description:	Not reported
Permit Expire/Last Service:	3/31/1992
Last Service Date:	Not reported
District:	SUP-DIST NO 3031
Inspector:	Dubois, Tristan
Name:	VACAVILLE AERO SERVICE
Address:	5419 WEBER RD
City,State,Zip:	VACAVILLE, CA 95687
Inventory Number:	2
Inventory Type:	Underground Storage Tank (1)
Inventory Description:	Not reported
Permit Expire/Last Service:	3/31/1992
Last Service Date:	Not reported
District:	SUP-DIST NO 3031
Inspector:	Dubois, Tristan
Name:	VACAVILLE AERO SERVICE
Address:	5419 WEBER RD
City,State,Zip:	VACAVILLE, CA 95687
Inventory Number:	3
Inventory Type:	Underground Storage Tank (1)
Inventory Description:	Not reported
Permit Expire/Last Service:	3/31/1992
Last Service Date:	Not reported
District:	SUP-DIST NO 3031
Inspector:	Dubois, Tristan

2
NNE
1/2-1
0.741 mi.
3910 ft.

FORMER ROBERT'S HOMES **LUST** **S104493328**
1416 MIDWAY **Cortese** **N/A**
VACAVILLE, CA 95688 **HIST CORTESE**

Relative:
Lower

Actual:
78 ft.

SOLANO CO. LUST:

Name:	UNION POWER
Address:	1416 MIDWAY RD
City,State,Zip:	VACAVILLE, CA 95688
Region:	SOLANO
Facility ID:	50107
Facility Status:	I

FORMER ROBERT'S HOMES (Continued) **S104493328**

Facility Status Desc: Inactive
Facility Phone: Not reported
Program: 29S
Inventory Number: 1
Inventory Type: LOP - Closed Site (128)
Inventory Description: Not reported
Last service/permit exp: Not reported
Last service date: Not reported
District: SUP-DIST NO 3037
Inspector: Kaltreider, Misty
Call Back: Not reported

Name: ROBERTS HOMES
Address: 1416 MIDWAY RD
City,State,Zip: VACAVILLE, CA 95688
Region: SOLANO
Facility ID: 80048
Facility Status: I
Facility Status Desc: Inactive
Facility Phone: Not reported
Program: 29S
Inventory Number: 1
Inventory Type: LOP - Closed Site (128)
Inventory Description: Not reported
Last service/permit exp: Not reported
Last service date: Not reported
District: SUP-DIST NO 3037
Inspector: Kaltreider, Misty
Call Back: Not reported

LUST:
Name: FORMER ROBERT'S HOMES
Address: 1416 MIDWAY RD
City,State,Zip: VACAVILLE, CA 95688
Lead Agency: SOLANO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0609500429
Global Id: T0609500429
Latitude: 38.416397
Longitude: -121.900178
Status: Completed - Case Closed
Status Date: 05/14/1996
Case Worker: Not reported
RB Case Number: 480192
Local Agency: SOLANO COUNTY
File Location: Not reported
Local Case Number: 50107
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0609500429
Contact Type: Local Agency Caseworker
Contact Name: SOLANO COUNTY
Organization Name: SOLANO COUNTY
Address: 675 TEXAS STREET, SUITE 2500

FORMER ROBERT'S HOMES (Continued) **S104493328**

City: FAIRFIELD
Email: Not reported
Phone Number: Not reported

LUST:
Global Id: T0609500429
Action Type: ENFORCEMENT
Date: 07/14/1995
Action: Closure/No Further Action Letter

Global Id: T0609500429
Action Type: Other
Date: 12/01/1989
Action: Leak Discovery

Global Id: T0609500429
Action Type: Other
Date: 03/07/1995
Action: Leak Reported

Global Id: T0609500429
Action Type: Other
Date: 12/01/1989
Action: Leak Stopped

LUST:
Global Id: T0609500429
Status: Open - Case Begin Date
Status Date: 12/01/1989

Global Id: T0609500429
Status: Open - Site Assessment
Status Date: 03/10/1995

Global Id: T0609500429
Status: Completed - Case Closed
Status Date: 05/14/1996

LUST REG 5:
Name: FORMER ROBERT'S HOMES
Address: 1416 MIDWAY RD
City: VACAVILLE
Region: 5
Status: Case Closed
Case Number: 480192
Case Type: Soil only
Substance: GASOLINE
Staff Initials: JIM
Lead Agency: Local
Program: LUST
MTBE Code: N/A

CORTESE:
Name: FORMER ROBERT'S HOMES

FORMER ROBERT'S HOMES (Continued) **S104493328**

Address:	1416 MIDWAY RD
City,State,Zip:	VACAVILLE, CA 95688
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0609500429
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	FORMER ROBERT'S HOMES
edr_fadd1:	1416 MIDWAY
City,State,Zip:	VACAVILLE, CA 95688
Region:	CORTESE
Facility County Code:	48
Reg By:	LTNKA
Reg Id:	480192

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3 **ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRO** **HAZNET** **S113179584**
NE **7300 CHEVRON WAY** **HWP** **N/A**
> 1 **DIXON, CA 95620** **HWTS**
1.020 mi.
5388 ft.

Relative:
Lower

Actual:
76 ft.

HAZNET:

Name:	D K DIXON
Address:	7300 CHEVRON WAY
Address 2:	Not reported
City,State,Zip:	DIXON, CA 956200000
Contact:	ROSEMARY DOMINO
Telephone:	7076936008
Mailing Name:	Not reported
Mailing Address:	7300 CHEVRON WAY
Year:	2019
Gepaid:	CAT080012602
TSD EPA ID:	CAT080013352
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.00000

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Year:	2019
Gepaid:	CAT080012602
TSD EPA ID:	CAT080013352
CA Waste Code:	135 - Unspecified aqueous solution
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	25.00680
Year:	2019
Gepaid:	CAT080012602
TSD EPA ID:	CAT080013352
CA Waste Code:	133 - Aqueous solution with total organic residues 10 percent or more
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	1903.94277
Year:	2019
Gepaid:	CAT080012602
TSD EPA ID:	NVT330010000
CA Waste Code:	241 - Tank bottom waste
Disposal Method:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	5.21250
Year:	2019
Gepaid:	CAT080012602
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	3.31250
Year:	2019
Gepaid:	CAT080012602
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	455.62671
Year:	2018
Gepaid:	CAT080012602
TSD EPA ID:	CAL000282598
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	22.88079
Year:	2018
Gepaid:	CAT080012602
TSD EPA ID:	CAT080013352
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons:	48.13848
Year:	2018
Gepaid:	CAT080012602

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSD EPA ID: CAD097030993
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.12500

Year: 2018
Gepaid: CAT080012602
TSD EPA ID: CAT080013352
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 375.99639

Click this hyperlink while viewing on your computer to access
341 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:
Year: 2014
Gen EPA ID: CAT080012602

Shipment Date: 20141231
Creation Date: 2/24/2015 22:15:05
Receipt Date: 20141231
Manifest ID: 013806725JJK
Trans EPA ID: FLR000057414
Trans Name: QUALITY CARRIERS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD980887418
Trans Name: SAFETY-KLEEN OF CALIFORNIA INC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 23.3244
Waste Quantity: 6138
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20141231
Creation Date: 3/19/2015 22:14:50
Receipt Date: 20150101
Manifest ID: 013804344JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.5854
Waste Quantity:	6733
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141231
Creation Date:	3/19/2015 22:14:50
Receipt Date:	20150101
Manifest ID:	013808558JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.1256
Waste Quantity:	6612
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141231
Creation Date:	3/19/2015 22:14:50
Receipt Date:	20150101
Manifest ID:	013808557JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.4796

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Quantity:	6442
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141231
Creation Date:	3/19/2015 22:14:50
Receipt Date:	20150101
Manifest ID:	013808556JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.8634
Waste Quantity:	6543
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20141231
Creation Date:	3/19/2015 22:14:50
Receipt Date:	20141231
Manifest ID:	013807671JJK
Trans EPA ID:	CAL000363983
Trans Name:	ALEY & L GROUP CORP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	22.08432
Waste Quantity:	5296
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Shipment Date:	20141231
Creation Date:	3/19/2015 22:14:50
Receipt Date:	20150101
Manifest ID:	012423697JJK
Trans EPA ID:	CAL000322668
Trans Name:	RIO EXPRESS CORP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.7982
Waste Quantity:	6789
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20141231
Creation Date:	6/25/2015 22:15:06
Receipt Date:	20150102
Manifest ID:	013806727JJK
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	SAFETY-KLEEN OF CALIFORNIA INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	23.5182
Waste Quantity:	6189
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20141231
Creation Date:	3/19/2015 22:14:50
Receipt Date:	20150101
Manifest ID:	013804345JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 25.9426
Waste Quantity: 6827
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20141230
Creation Date: 3/19/2015 22:14:50
Receipt Date: 20141231
Manifest ID: 013804343JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: CAL000142074
Trans 2 Name: PAN PACIFIC PETROLEUM COMPANY
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 26.5468
Waste Quantity: 6986
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2005
Gen EPA ID: CAT080012602

Shipment Date: 20051230
Creation Date: 3/22/2006 18:32:18
Receipt Date: 20051230
Manifest ID: 24828425
Trans EPA ID: CAL000287430
Trans Name: CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.3498
Waste Quantity:	6671
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051230
Creation Date:	3/22/2006 18:31:37
Receipt Date:	20051230
Manifest ID:	24827183
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.0356
Waste Quantity:	6062
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051230
Creation Date:	6/22/2006 18:32:46
Receipt Date:	20060104
Manifest ID:	24017353
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	D / K - ENVIRONMENTAL
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051229
Creation Date:	3/22/2006 18:31:37
Receipt Date:	20051229
Manifest ID:	24827605
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.7348
Waste Quantity:	6246
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051228
Creation Date:	3/22/2006 18:32:18
Receipt Date:	20051229
Manifest ID:	24828294
Trans EPA ID:	CAL000287430
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.4746
Waste Quantity:	6967
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051228
Creation Date:	3/22/2006 18:32:18
Receipt Date:	20051229
Manifest ID:	24828426

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans EPA ID:	CAL000287430
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.049
Waste Quantity:	6855
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051228
Creation Date:	3/22/2006 18:31:37
Receipt Date:	20051228
Manifest ID:	24827199
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.857
Waste Quantity:	6015
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20051227
Creation Date:	3/22/2006 18:31:37
Receipt Date:	20051227
Manifest ID:	24827174
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIROMENTAL SERVICE
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.0736
Waste Quantity:	6072
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051223
Creation Date:	3/22/2006 18:31:37
Receipt Date:	20051223
Manifest ID:	24827198
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.8
Waste Quantity:	6000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20051223
Creation Date:	3/22/2006 18:32:18
Receipt Date:	20051224
Manifest ID:	24828290
Trans EPA ID:	CAL000287430
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.5702
Waste Quantity:	6729
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 5: Not reported

Additional Info:
Year: 2015
Gen EPA ID: CAT080012602

Shipment Date: 20151231
Creation Date: 3/4/2016 22:15:32
Receipt Date: 20160103
Manifest ID: 015149801JJK
Trans EPA ID: CAL000142074
Trans Name: PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 133 - Aqueous solution with 10% or more total organic residues
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 11.49669
Waste Quantity: 2757
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151231
Creation Date: 3/4/2016 22:15:32
Receipt Date: 20160101
Manifest ID: 015149688JJK
Trans EPA ID: CAL000322668
Trans Name: RIO EXPRESS CORP
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 25.0838
Waste Quantity: 6601
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151231

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160102
Manifest ID:	015149680JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.8666
Waste Quantity:	6807
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	6/6/2016 18:31:19
Receipt Date:	20160105
Manifest ID:	015149679JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.163
Waste Quantity:	6885
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160102
Manifest ID:	015140590JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.3758
Waste Quantity:	6941
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20150103
Manifest ID:	015149933JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	8.11899
Waste Quantity:	1947
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160101
Manifest ID:	015149678JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

	Regeneration, Organics Recovery Ect
Quantity Tons:	25.8704
Waste Quantity:	6808
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151230
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20151230
Manifest ID:	015149676JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	28.3442
Waste Quantity:	7459
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151230
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160101
Manifest ID:	015140589JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.4404
Waste Quantity:	6958
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151230
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20151231
Manifest ID:	015140588JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.0984
Waste Quantity:	6868
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1997
Gen EPA ID:	CAT080012602
Shipment Date:	19971231
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971231
Manifest ID:	97212466
Trans EPA ID:	CAD981685886
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	20.016
Waste Quantity:	4800
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971231

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Creation Date:	7/23/1998 0:00:00
Receipt Date:	19980105
Manifest ID:	97212468
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	26.22
Waste Quantity:	6900
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19971231
Creation Date:	3/31/1998 0:00:00
Receipt Date:	19980101
Manifest ID:	97212465
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.22
Waste Quantity:	6900
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19971231
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19980105
Manifest ID:	97212452
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	11.7978
Waste Quantity:	2809
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971231
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19980105
Manifest ID:	97212452
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	12.0156
Waste Quantity:	3162
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971231
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19980101
Manifest ID:	97212429
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	26.418
Waste Quantity:	6290
Quantity Unit:	G
Additional Code 1:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971230
Creation Date:	3/31/1998 0:00:00
Receipt Date:	19971231
Manifest ID:	97212451
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.6
Waste Quantity:	7000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971229
Creation Date:	3/31/1998 0:00:00
Receipt Date:	19971229
Manifest ID:	97212450
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.6
Waste Quantity:	7000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971224
Creation Date:	3/31/1998 0:00:00
Receipt Date:	19971227
Manifest ID:	97212463

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.6
Waste Quantity:	7000
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19971223
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971229
Manifest ID:	97212449
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	24.9783
Waste Quantity:	5990
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
Gen EPA ID:	CAT080012602

Shipment Date:	20111230
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111230
Manifest ID:	009000242JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.7032
Waste Quantity:	6764
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111230
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20120102
Manifest ID:	008133934JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAMOIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.5024
Waste Quantity:	6448
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111230
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111231
Manifest ID:	008133933JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Quantity Tons:	25.593
Waste Quantity:	6735
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111230
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111231
Manifest ID:	009569015JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.6424
Waste Quantity:	6748
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111230
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111231
Manifest ID:	008139898JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.05673
Waste Quantity:	5769
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 5:	Not reported
Shipment Date:	20111230
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20120102
Manifest ID:	009000243JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.9876
Waste Quantity:	7102
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111229
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111230
Manifest ID:	009000248JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.0464
Waste Quantity:	6328
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111229
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111230
Manifest ID:	009000244JJK
Trans EPA ID:	CAD028277036

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.605
Waste Quantity:	6475
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111229
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111230
Manifest ID:	009000246JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.8438
Waste Quantity:	6801
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20111229
Creation Date:	3/17/2012 20:30:10
Receipt Date:	20111230
Manifest ID:	009569014JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.5436
Waste Quantity:	6722
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2002
Gen EPA ID:	CAT080012602
Shipment Date:	20021231
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850214
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	18.4414
Waste Quantity:	4853
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021230
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850213
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	19.9576

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Quantity:	5252
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021230
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850212
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	21.2724
Waste Quantity:	5598
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021227
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850211
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.4314
Waste Quantity:	5903
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021226

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850205
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.5074
Waste Quantity:	5923
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021223
Creation Date:	4/2/2003 18:31:15
Receipt Date:	20021223
Manifest ID:	21850209
Trans EPA ID:	NVD982358483
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	NVD982358483
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.2966
Waste Quantity:	6657
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021219
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850204
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	20.7822
Waste Quantity:	5469
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021218
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850203
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.42
Waste Quantity:	5900
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20021217
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850202
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.5454
Waste Quantity:	5933
Quantity Unit:	G
Additional Code 1:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20021216
Creation Date:	4/16/2003 18:31:12
Receipt Date:	Not reported
Manifest ID:	21850197
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	20.6606
Waste Quantity:	5437
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2007
Gen EPA ID:	CAT080012602
Shipment Date:	20071231
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20071231
Manifest ID:	003173401JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.1484
Waste Quantity:	6618
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Shipment Date:	20071231
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20071231
Manifest ID:	003173400JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.358
Waste Quantity:	6410
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20071231
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20071231
Manifest ID:	003173399JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.966
Waste Quantity:	6570
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20071231
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20080101
Manifest ID:	003173398JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.6918
Waste Quantity:	6761
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20071229
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20071229
Manifest ID:	003480440JJK
Trans EPA ID:	CAR000181693
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.2814
Waste Quantity:	6653
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20071229
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20080101
Manifest ID:	003480441JJK
Trans EPA ID:	CAR000181693
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.099
Waste Quantity:	6605
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071228
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20071229
Manifest ID:	003480442JJK
Trans EPA ID:	CAR000181693
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.548
Waste Quantity:	6460
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071228
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20071230
Manifest ID:	003480443JJK
Trans EPA ID:	CAR000181693
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.0578
Waste Quantity:	6331
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071227
Creation Date:	3/8/2008 18:30:14
Receipt Date:	20071228
Manifest ID:	003173402JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.32
Waste Quantity:	6400
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071227
Creation Date:	3/8/2008 18:30:20
Receipt Date:	20071229
Manifest ID:	003480470JJK
Trans EPA ID:	CAL000297859
Trans Name:	R ESPINOZA TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.6532
Waste Quantity:	7014
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	1998
Gen EPA ID:	CAT080012602

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Shipment Date:	19981231
Creation Date:	3/17/1999 0:00:00
Receipt Date:	19980104
Manifest ID:	98249392
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	25.3574
Waste Quantity:	6673
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19981229
Creation Date:	3/15/1999 0:00:00
Receipt Date:	19981230
Manifest ID:	98249405
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.1858
Waste Quantity:	6891
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19981224
Creation Date:	2/8/1999 0:00:00
Receipt Date:	19981228
Manifest ID:	98249407
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	25.3232
Waste Quantity:	6664
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19981223
Creation Date:	2/26/1999 0:00:00
Receipt Date:	19981228
Manifest ID:	98249419
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080012602
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	26.271
Waste Quantity:	6300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19981221
Creation Date:	3/15/1999 0:00:00
Receipt Date:	19981222
Manifest ID:	98249406
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.4524
Waste Quantity:	6698
Quantity Unit:	G

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981218
Creation Date:	2/26/1999 0:00:00
Receipt Date:	Not reported
Manifest ID:	98249408
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD071803985
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	26.8548
Waste Quantity:	6440
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981217
Creation Date:	2/26/1999 0:00:00
Receipt Date:	19981221
Manifest ID:	98249432
Trans EPA ID:	CAT080012602
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080012602
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	2.299
Waste Quantity:	605
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19981216
Creation Date:	3/15/1999 0:00:00
Receipt Date:	19981216

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Manifest ID:	98249409
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	27.4018
Waste Quantity:	7211
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19981215
Creation Date:	3/1/1999 0:00:00
Receipt Date:	19981216
Manifest ID:	98249410
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	27.5272
Waste Quantity:	7244
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19981211
Creation Date:	2/8/1999 0:00:00
Receipt Date:	19981214
Manifest ID:	98249411
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	26.4556
Waste Quantity:	6962
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2001
Gen EPA ID:	CAT080012602
Shipment Date:	20011228
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011229
Manifest ID:	21239007
Trans EPA ID:	Not reported
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	24.3428
Waste Quantity:	6406
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011228
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011231
Manifest ID:	21239025
Trans EPA ID:	Not reported
Trans Name:	Not reported
Trans 2 EPA ID:	FLR000057414
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	17.9398
Waste Quantity:	4721

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011227
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011228
Manifest ID:	21239026
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	19.285
Waste Quantity:	5075
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011226
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011227
Manifest ID:	21239008
Trans EPA ID:	ORD980980775
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	24.3922
Waste Quantity:	6419
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011221
Creation Date:	2/20/2002 0:00:00

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Receipt Date:	20011226
Manifest ID:	21239027
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.2636
Waste Quantity:	6122
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20011221
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011222
Manifest ID:	21239009
Trans EPA ID:	ORD980980775
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.498
Waste Quantity:	6710
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20011221
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011222
Manifest ID:	21239010
Trans EPA ID:	ORD980980775
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.2472
Waste Quantity:	6644
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011219
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011221
Manifest ID:	21239028
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	20.1362
Waste Quantity:	5299
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011219
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011219
Manifest ID:	21239011
Trans EPA ID:	ORD980980775
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.3232
Waste Quantity:	6664
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011218
Creation Date:	2/20/2002 0:00:00
Receipt Date:	20011220
Manifest ID:	21239024
Trans EPA ID:	FLR000057414
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORQ000006601
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.978
Waste Quantity:	6310
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2003
Gen EPA ID:	CAT080012602
Shipment Date:	20031231
Creation Date:	8/19/2004 11:23:00
Receipt Date:	20031231
Manifest ID:	22696583
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	18.6618
Waste Quantity:	4911
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031230

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Creation Date:	8/19/2004 11:23:00
Receipt Date:	20031230
Manifest ID:	22696584
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.0438
Waste Quantity:	5801
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20031230
Creation Date:	8/19/2004 11:23:00
Receipt Date:	20031230
Manifest ID:	22696586
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	17.138
Waste Quantity:	4510
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20031230
Creation Date:	8/19/2004 11:23:00
Receipt Date:	20031230
Manifest ID:	22696585
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	19.8094
Waste Quantity:	5213
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031223
Creation Date:	8/13/2004 7:53:20
Receipt Date:	20031224
Manifest ID:	22696438
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	17.1076
Waste Quantity:	4502
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031223
Creation Date:	8/19/2004 11:23:00
Receipt Date:	20031230
Manifest ID:	22696578
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	18.829
Waste Quantity:	4955
Quantity Unit:	G
Additional Code 1:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031223
Creation Date:	8/13/2004 7:53:20
Receipt Date:	20031229
Manifest ID:	22696437
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.0438
Waste Quantity:	5801
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031222
Creation Date:	8/13/2004 7:53:20
Receipt Date:	20031223
Manifest ID:	22696436
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	18.9544
Waste Quantity:	4988
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20031219
Creation Date:	8/12/2004 8:09:46
Receipt Date:	20031219
Manifest ID:	22696577

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	20.919
Waste Quantity:	5505
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20031218
Creation Date:	8/12/2004 8:09:46
Receipt Date:	20031219
Manifest ID:	22696576
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	22.4618
Waste Quantity:	5911
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2010
Gen EPA ID:	CAT080012602

Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101230
Manifest ID:	007426578JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	CAL000142074
Trans 2 Name:	PAN PACIFIC PETROLEUM CO INC
TSDF EPA ID:	CAT080013352

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.2162
Waste Quantity:	6899
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101231
Manifest ID:	007430436JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	20.88336
Waste Quantity:	5008
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101230
Manifest ID:	007430386JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Quantity Tons:	21.16275
Waste Quantity:	5075
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101231
Manifest ID:	007430344JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.068
Waste Quantity:	6860
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101230
Manifest ID:	007430343JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	23.7766
Waste Quantity:	6257
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 5:	Not reported
Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101231
Manifest ID:	007426579JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	CAL000142074
Trans 2 Name:	PAN PACIFIC PETROLEUM CO INC
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.5088
Waste Quantity:	6976
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101231
Manifest ID:	007432345JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.3264
Waste Quantity:	6928
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101230
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101231
Manifest ID:	007432344JJK
Trans EPA ID:	CAR000190082

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	23.94
Waste Quantity:	6300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101229
Creation Date:	3/28/2011 18:30:20
Receipt Date:	20101230
Manifest ID:	007432343JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.2478
Waste Quantity:	6381
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20101229
Creation Date:	2/23/2011 18:30:18
Receipt Date:	20101229
Manifest ID:	007430341JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.137
Waste Quantity:	6615
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2009
Gen EPA ID:	CAT080012602
Shipment Date:	20091231
Creation Date:	3/11/2010 18:30:23
Receipt Date:	20091231
Manifest ID:	005913223JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	27.2308
Waste Quantity:	7166
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091231
Creation Date:	4/12/2010 18:30:08
Receipt Date:	20100102
Manifest ID:	005922893JJK
Trans EPA ID:	CAL000297859
Trans Name:	R ESPINOZA TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

	Regeneration, Organics Recovery Ect
Quantity Tons:	20.406
Waste Quantity:	5370
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091231
Creation Date:	4/12/2010 18:30:08
Receipt Date:	20100102
Manifest ID:	005922892JJK
Trans EPA ID:	CAL000297859
Trans Name:	R ESPINOZA TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.3416
Waste Quantity:	6932
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091231
Creation Date:	3/11/2010 18:30:23
Receipt Date:	20100108
Manifest ID:	005922056JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	VEOLIA ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.025
Waste Quantity:	50
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091231
Creation Date:	4/12/2010 18:30:08
Receipt Date:	20100102
Manifest ID:	005918597JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.7938
Waste Quantity:	7051
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091231
Creation Date:	3/11/2010 18:30:23
Receipt Date:	20100101
Manifest ID:	005913261JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	CAL000142074
Trans 2 Name:	PAN PACIFIC
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.9008
Waste Quantity:	6816
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091231
Creation Date:	10/8/2010 18:30:56
Receipt Date:	20100105
Manifest ID:	005922043JJK

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD008302903
Trans Name:	VEOLIA ENVIRONMENTAL SERVICES
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Quantity Tons:	12.502
Waste Quantity:	3290
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091230
Creation Date:	3/11/2010 18:30:23
Receipt Date:	20091231
Manifest ID:	005913222JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.9882
Waste Quantity:	6839
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091230
Creation Date:	3/11/2010 18:30:23
Receipt Date:	20091231
Manifest ID:	005913221JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.1756
Waste Quantity:	6362
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20091230
Creation Date:	3/11/2010 18:30:08
Receipt Date:	20091230
Manifest ID:	005913220JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	23.2864
Waste Quantity:	6128
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2000
Gen EPA ID:	CAT080012602
Shipment Date:	20001229
Creation Date:	3/6/2001 0:00:00
Receipt Date:	Not reported
Manifest ID:	20145771
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Quantity Tons:	25.9236
Waste Quantity:	6822
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20001228
Creation Date:	3/6/2001 0:00:00
Receipt Date:	20001228
Manifest ID:	20145812
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	25.6652
Waste Quantity:	6754
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20001228
Creation Date:	3/6/2001 0:00:00
Receipt Date:	20001229
Manifest ID:	20145787
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD099452708
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	24.13
Waste Quantity:	6350
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Shipment Date:	20001226
Creation Date:	3/6/2001 0:00:00
Receipt Date:	20001226
Manifest ID:	20145773
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.1002
Waste Quantity:	6079
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20001221
Creation Date:	3/6/2001 0:00:00
Receipt Date:	20001221
Manifest ID:	20145774
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	24.9394
Waste Quantity:	6563
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20001221
Creation Date:	3/5/2001 0:00:00
Receipt Date:	20001222
Manifest ID:	20145791
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD099452708

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.3548
Waste Quantity:	6146
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20001220
Creation Date:	3/6/2001 0:00:00
Receipt Date:	20001221
Manifest ID:	20145792
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080033681
Trans Name:	Not reported
TSDF Alt EPA ID:	CAT080033681
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	24.1984
Waste Quantity:	6368
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20001219
Creation Date:	3/6/2001 0:00:00
Receipt Date:	20001220
Manifest ID:	20145775
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	23.1876
Waste Quantity:	6102
Quantity Unit:	G

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20001218
Creation Date:	3/6/2001 0:00:00
Receipt Date:	20001218
Manifest ID:	20145629
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.0604
Waste Quantity:	6858
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20001218
Creation Date:	2/1/2001 0:00:00
Receipt Date:	20001219
Manifest ID:	20145790
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD099452708
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	24.1908
Waste Quantity:	6366
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2016
Gen EPA ID:	CAT080012602

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160103
Manifest ID:	015149801JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	11.49669
Waste Quantity:	2757
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	6/6/2016 18:31:19
Receipt Date:	20160105
Manifest ID:	015149679JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.163
Waste Quantity:	6885
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160101
Manifest ID:	015149678JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.8704
Waste Quantity:	6808
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20150103
Manifest ID:	015149933JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	8.11899
Waste Quantity:	1947
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160102
Manifest ID:	015149680JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.8666
Waste Quantity:	6807
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160102
Manifest ID:	015140590JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.3758
Waste Quantity:	6941
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151231
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160101
Manifest ID:	015149688JJK
Trans EPA ID:	CAL000322668
Trans Name:	RIO EXPRESS CORP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.0838
Waste Quantity:	6601
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151230
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20151230
Manifest ID:	015149677JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.3118
Waste Quantity:	6661
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151230
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20151230
Manifest ID:	015149676JJK
Trans EPA ID:	CAL000382098
Trans Name:	R ESPINOZA TRUCKING INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	28.3442
Waste Quantity:	7459
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151230
Creation Date:	3/4/2016 22:15:32
Receipt Date:	20160101

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Manifest ID:	015140589JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.4404
Waste Quantity:	6958
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2013
Gen EPA ID:	CAT080012602
Shipment Date:	20131231
Creation Date:	3/2/2014 22:15:16
Receipt Date:	20140101
Manifest ID:	012421037JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.12762
Waste Quantity:	5786
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131231
Creation Date:	3/2/2014 22:15:16
Receipt Date:	20140102
Manifest ID:	012426184JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.7836
Waste Quantity:	6522
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20131231
Creation Date:	3/2/2014 22:15:16
Receipt Date:	20140101
Manifest ID:	011466547JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.10757
Waste Quantity:	6021
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20131231
Creation Date:	3/2/2014 22:15:16
Receipt Date:	20140101
Manifest ID:	012424745JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.277
Waste Quantity:	6915
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131231
Creation Date:	3/2/2014 22:15:16
Receipt Date:	20140101
Manifest ID:	012424746JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.5018
Waste Quantity:	6711
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131231
Creation Date:	3/7/2014 22:15:07
Receipt Date:	20140101
Manifest ID:	012421499JJK
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS IN
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.7836
Waste Quantity:	6522
Quantity Unit:	G
Additional Code 1:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131231
Creation Date:	3/2/2014 22:15:16
Receipt Date:	20140101
Manifest ID:	012426182JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.2162
Waste Quantity:	6899
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131231
Creation Date:	3/2/2014 22:15:16
Receipt Date:	20140101
Manifest ID:	012426183JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.8096
Waste Quantity:	6792
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20131230
Creation Date:	3/1/2014 22:15:07

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Receipt Date:	20131230
Manifest ID:	012421095JJK
Trans EPA ID:	CAL000316962
Trans Name:	DE LEON'S TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	27.0636
Waste Quantity:	7122
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20131230
Creation Date:	3/2/2014 22:15:06
Receipt Date:	20131231
Manifest ID:	012424744JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.1098
Waste Quantity:	6871
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAT080012602

Shipment Date:	20171229
Creation Date:	8/3/2018 18:30:33
Receipt Date:	20171230
Manifest ID:	017693419JJK
Trans EPA ID:	CAL000142074

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.5202
Waste Quantity:	6979
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171229
Creation Date:	8/3/2018 18:30:33
Receipt Date:	20171231
Manifest ID:	017693420JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.8742
Waste Quantity:	6809
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171229
Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171229
Manifest ID:	017693418JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.9812
Waste Quantity:	6574
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171229
Creation Date:	8/3/2018 18:30:33
Receipt Date:	20171230
Manifest ID:	017693421JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.1218
Waste Quantity:	6611
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171228
Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171229
Manifest ID:	017693417JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.7678
Waste Quantity:	6781
Quantity Unit:	G

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171228
Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171229
Manifest ID:	017693416JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.7406
Waste Quantity:	7037
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171228
Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171228
Manifest ID:	017693415JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.9274
Waste Quantity:	6823
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20171227

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171228
Manifest ID:	017693414JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.764
Waste Quantity:	6780
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20171227
Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171228
Manifest ID:	017693413JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.7532
Waste Quantity:	6514
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20171227
Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171228
Manifest ID:	017693412JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM CO INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	23.9932
Waste Quantity:	6314
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2004
Gen EPA ID:	CAT080012602
Shipment Date:	20041230
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041230
Manifest ID:	24018922
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	24.928
Waste Quantity:	6560
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041230
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041230
Manifest ID:	23593792
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NA
Meth Code:	R01 - Recycler
Quantity Tons:	21.0444
Waste Quantity:	5538
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041228
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041229
Manifest ID:	24025760
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NA
Meth Code:	R01 - Recycler
Quantity Tons:	21.052
Waste Quantity:	5540
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041228
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041229
Manifest ID:	24018921
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NONE
Meth Code:	R01 - Recycler
Quantity Tons:	25.2548
Waste Quantity:	6646
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041228
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041229
Manifest ID:	24025763
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NA
Meth Code:	R01 - Recycler
Quantity Tons:	18.4946
Waste Quantity:	4867
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041228
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041228
Manifest ID:	24025742
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NA
Meth Code:	R01 - Recycler
Quantity Tons:	20.9608
Waste Quantity:	5516
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041227
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041227
Manifest ID:	23431283
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NONE
Meth Code:	- Not reported
Quantity Tons:	24.7532
Waste Quantity:	6514
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041223
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041223
Manifest ID:	24025775
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NA
Meth Code:	R01 - Recycler
Quantity Tons:	20.862
Waste Quantity:	5490
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20041223
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041224
Manifest ID:	23431275
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NONE
Meth Code:	R01 - Recycler

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Quantity Tons:	24.89
Waste Quantity:	6550
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20041221
Creation Date:	3/17/2005 18:34:39
Receipt Date:	20041221
Manifest ID:	24025770
Trans EPA ID:	FLR000057414
Trans Name:	QUALITY CARRIERS
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO KERDOON
TSDF Alt EPA ID:	CAT080013352
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	NA
Meth Code:	R01 - Recycler
Quantity Tons:	22.477
Waste Quantity:	5915
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2008
Gen EPA ID:	CAT080012602
Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20090101
Manifest ID:	005106708JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	23.3168
Waste Quantity:	6136
Quantity Unit:	G
Additional Code 1:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20090101
Manifest ID:	005106707JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	23.8716
Waste Quantity:	6282
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20081231
Manifest ID:	005550134JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.5094
Waste Quantity:	6713
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Receipt Date:	20090102
Manifest ID:	005550133JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.2846
Waste Quantity:	6917
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20081231
Manifest ID:	005550132JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.315
Waste Quantity:	6925
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20090102
Manifest ID:	005550131JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.5436
Waste Quantity:	6722
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20090101
Manifest ID:	005550157JJK
Trans EPA ID:	CAL000142074
Trans Name:	PAN PACIFIC PETROLEUM
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	27.6108
Waste Quantity:	7266
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081231
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20090102
Manifest ID:	005106709JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Quantity Tons:	24.1452
Waste Quantity:	6354
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081230
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20081231
Manifest ID:	005106706JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.004
Waste Quantity:	6580
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20081230
Creation Date:	3/9/2009 18:30:09
Receipt Date:	20081231
Manifest ID:	005106705JJK
Trans EPA ID:	CAR000190082
Trans Name:	ELITE OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.795
Waste Quantity:	6525
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 5: Not reported

Additional Info:
Year: 1999
Gen EPA ID: CAT080012602

Shipment Date: 19991228
Creation Date: 2/15/2000 0:00:00
Receipt Date: 19991229
Manifest ID: 99298495
Trans EPA ID: CAL000161848
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: ORD980980775
Trans Name: Not reported
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: - Not reported
Quantity Tons: 25.764
Waste Quantity: 6780
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 19991228
Creation Date: 2/28/2000 0:00:00
Receipt Date: 19991230
Manifest ID: 99298471
Trans EPA ID: CAL000161848
Trans Name: Not reported
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD099452708
Trans Name: Not reported
TSDF Alt EPA ID: CAD099452708
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: R01 - Recycler
Quantity Tons: 25.9084
Waste Quantity: 6818
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 19991227
Creation Date: 2/28/2000 0:00:00
Receipt Date: 19991228

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Manifest ID:	99298520
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.9002
Waste Quantity:	7079
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991223
Creation Date:	2/28/2000 0:00:00
Receipt Date:	19991227
Manifest ID:	99298502
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD099452708
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD099452708
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.4442
Waste Quantity:	6959
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	19991222
Creation Date:	2/28/2000 0:00:00
Receipt Date:	19991223
Manifest ID:	99298512
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD980887418
TSDF Alt Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.3074
Waste Quantity:	6923
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991221
Creation Date:	3/7/2000 0:00:00
Receipt Date:	20000106
Manifest ID:	99880580
Trans EPA ID:	CAD981694722
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991220
Creation Date:	2/15/2000 0:00:00
Receipt Date:	19991227
Manifest ID:	99298493
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	ORD980980775
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	- Not reported
Quantity Tons:	25.4866
Waste Quantity:	6707
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991220
Creation Date:	2/15/2000 0:00:00
Receipt Date:	19991221
Manifest ID:	99298507
Trans EPA ID:	CAL000161848
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD099452708
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	26.657
Waste Quantity:	7015
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991220
Creation Date:	3/7/2000 0:00:00
Receipt Date:	19991230
Manifest ID:	99298561
Trans EPA ID:	CAD981694722
Trans Name:	Not reported
Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.35
Waste Quantity:	700
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19991220
Creation Date:	3/7/2000 0:00:00
Receipt Date:	19991230
Manifest ID:	99298561
Trans EPA ID:	CAD981694722
Trans Name:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans 2 EPA ID:	CAD982524480
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD028409019
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD028409019
TSDF Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1815
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2006
Gen EPA ID:	CAT080012602
Shipment Date:	20061229
Creation Date:	4/19/2007 18:31:54
Receipt Date:	20061230
Manifest ID:	001604975JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.1484
Waste Quantity:	6618
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061229
Creation Date:	4/19/2007 18:32:02
Receipt Date:	20061229
Manifest ID:	000522820JJK
Trans EPA ID:	CAL000297859
Trans Name:	R ESPINOZA TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.6044
Waste Quantity:	6738
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061228
Creation Date:	4/19/2007 18:32:02
Receipt Date:	20070108
Manifest ID:	001604999JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.525
Waste Quantity:	1050
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061228
Creation Date:	4/19/2007 18:32:02
Receipt Date:	20061228
Manifest ID:	001604974JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.8292

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Quantity:	6534
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061228
Creation Date:	4/19/2007 18:32:02
Receipt Date:	20061229
Manifest ID:	001604972JJK
Trans EPA ID:	CAL000287430
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.054
Waste Quantity:	6330
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20061227
Creation Date:	4/19/2007 18:32:02
Receipt Date:	20061228
Manifest ID:	001604973JJK
Trans EPA ID:	CAL000287430
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.852
Waste Quantity:	6540
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Shipment Date:	20061226
Creation Date:	4/19/2007 18:31:54
Receipt Date:	20061227
Manifest ID:	001605269JJK
Trans EPA ID:	CAL000287430
Trans Name:	CALIFORNIA OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.46
Waste Quantity:	6700
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20061226
Creation Date:	4/19/2007 18:32:02
Receipt Date:	20061226
Manifest ID:	001605278JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.5708
Waste Quantity:	6466
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20061226
Creation Date:	4/19/2007 18:32:02
Receipt Date:	20061226
Manifest ID:	000522819JJK
Trans EPA ID:	CAL000297859
Trans Name:	R ESPINOZA TRUCKING
Trans 2 EPA ID:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 221 - Waste oil and mixed oil
RCRA Code: Not reported
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons: 26.429
Waste Quantity: 6955
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20061226
Creation Date: 4/19/2007 18:32:02
Receipt Date: 20061228
Manifest ID: 001603410JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 223 - Unspecified oil-containing waste
RCRA Code: Not reported
Meth Code: H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons: 7.089
Waste Quantity: 1700
Quantity Unit: G
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:
Year: 2012
Gen EPA ID: CAT080012602

Shipment Date: 20121231
Creation Date: 3/13/2013 22:15:38
Receipt Date: 20121231
Manifest ID: 009893410JJK
Trans EPA ID: CAL000322668
Trans Name: RIO EXPRESS CORP
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAT080013352
Trans Name: DEMENNO / KERDOON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.277
Waste Quantity:	6915
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121231
Creation Date:	3/13/2013 22:15:38
Receipt Date:	20121231
Manifest ID:	009890382JJK
Trans EPA ID:	CAL000322668
Trans Name:	RIO EXPRESS CORP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	133 - Aqueous solution with 10% or more total organic residues
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	21.02931
Waste Quantity:	5043
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121231
Creation Date:	3/4/2013 22:15:14
Receipt Date:	20130101
Manifest ID:	010858343JJK
Trans EPA ID:	CAL000363983
Trans Name:	ALEY & L GROUP CORP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.56964

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Waste Quantity:	5892
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121231
Creation Date:	3/13/2013 22:15:38
Receipt Date:	20121231
Manifest ID:	010861777JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.7108
Waste Quantity:	6766
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20121231
Creation Date:	3/13/2013 22:15:38
Receipt Date:	20121231
Manifest ID:	010861778JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	25.3194
Waste Quantity:	6663
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Shipment Date:	20121230
Creation Date:	3/13/2013 22:15:38
Receipt Date:	20121231
Manifest ID:	009898108JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.2706
Waste Quantity:	6387
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20121229
Creation Date:	3/13/2013 22:15:46
Receipt Date:	20121229
Manifest ID:	009898107JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	24.7
Waste Quantity:	6500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20121229
Creation Date:	3/13/2013 22:15:38
Receipt Date:	20121230
Manifest ID:	009898106JJK
Trans EPA ID:	CAR000217315
Trans Name:	FIRST TEAM OIL TRANSPORT INC
Trans 2 EPA ID:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	26.9116
Waste Quantity:	7082
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20121228
Creation Date:	3/13/2013 22:15:38
Receipt Date:	20121229
Manifest ID:	010858463JJK
Trans EPA ID:	CAL000322668
Trans Name:	RIO EXPRESS CORP
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080025711
Trans Name:	ADVANCED ENVIRONMENTAL INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	25.1484
Waste Quantity:	6618
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Shipment Date:	20121228
Creation Date:	3/13/2013 22:15:38
Receipt Date:	20121229
Manifest ID:	010858462JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080025711
Trans Name:	ADVANCED ENVIRONMENTAL INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	25.688
Waste Quantity:	6760
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWP:

EPA ID:	CAT080012602
Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Address:	7300 CHEVRON WAY
Cleanup Status:	OPERATING PERMIT
Latitude:	38.41582
Longitude:	-121.8891
Facility Type:	Permitted - Operating
Facility Size:	Standardized Series B
Supervisor:	CAMILLE ROGADO
Site Code:	101708
Senate District:	03
Assembly District:	04
Public Information Officer:	Not reported
Commercial Offsite Facility Types:	Used Oil / Antifreeze, Other
Quarterly Update:	QUARTERLY UPDATE Quarterly Update Period: July 2021 to September 2021 No reportable activities this quarter. Approved Application On August 24, 2018, DTSC received a permit renewal application from Advanced Environmental Inc. dba World Oil Environmental Services (Facility). The permit application requested authorization from DTSC to continue its current operation, construct new waste storage and transfer units, conduct truck-to-truck, truck-to-container, container-to-tank, tank-to-containers, container-to-container transfers, and operate with new facility, owner, and operator names. The new waste storage transfer units include six 33,000-gallon tanks, one hundred and twenty 55-gallon drums, and a loading/unloading area. The requested change would increase the Facility s capacity from 50,440 gallons to 272,917 gallons due to the addition of 6 tanks, a container storage area, a drum rinsing unit, a loading and unloading area, and updated current tanks and loading/unloading area storage capacities. DTSC issued the first Notice of Deficiencies (1st NOD) for the permit renewal application on September 23, 2019. On October 18, 2019, DTSC and the Facility participated in a teleconference to discuss the 1st NOD. Following the teleconference call, the Facility requested a 90-day extension for the 1st NOD response. On October 31, 2019, DTSC approved the extension request. On February 20, 2020, the Facility responded to the 1st NOD and provided a revised application. In the revised application, the Facility requested authorization from DTSC to operate a miscellaneous treatment unit at the future container storage area and add new waste streams (i.e., Used aqueous parts washer solutions and empty contaminated containers). DTSC issued a 2nd NOD to the Facility on May 4, 2020. On May 20, 2020, DTSC conducted a video-teleconference meeting with the Facility to review the 2nd NOD comments. On June 17, 2020, the Facility requested a 30‑day extension for the 2nd NOD response. DTSC received three revised

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

applications in resp
Project Manager Lead: H.W. PRISCILLIA CHONG
Project Manager: H.W. PRISCILLIA CHONG
Permit Type: Standardized
Permit Effective Date: 02/20/2021 (OP),
Permit Expiration Date: 02/19/2031 (OP),
Calenviroscreen Score: 56-60%
Total Planned Hours: 1382.5
Total Planned Amount: 307090
Total Actual Hours: 0

Activities:

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes
Permit Being Modified: Not reported
Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: 10/21/2020
Comments: Not reported
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - FINAL PART A & PART B RECEIVED
Actual Date: 10/16/2020

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: Not reported
Type: STND
Title Description: Permit Modification for Non-RCRA Activities (Contingency Plan)
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: Mod Class 1 - No Prior Approval Required - UPDATED APPLICATION RECEIVED
Actual Date: 01/12/2018

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	09/06/2018
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - ADMINISTRATIVE REVIEW APPROVED
Actual Date:	09/06/2018

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	New Operating Permit
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Mod - Facility Name Change
Due Date:	07/30/2019
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - 1ST REQUEST FOR FURTHER INFORMATION
Actual Date:	05/23/2019

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Non-RCRA - No Public Mailing (66270.42.5(b))
Permit Being Renewed:	Not reported
Permit Being Modified:	Renewal - No Changes
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Modification Notification - Pump Replacement
Due Date:	10/14/2021
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Non-RCRA - No Public Mailing (66270.42.5(b)) - MODIFICATION REQUEST / NOTIFICATION RECEIVED
Actual Date:	10/14/2021

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: New Operating Permit
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2008-11-07 00:00:00
Type: STND
Title Description: New Operating Permit for all WMUs
Due Date: Not reported
Comments: Not reported
Unit Names: Unit 1, Unit 2
Event Description: New Operating Permit - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date: 12/07/2006

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: Not reported
Type: STND
Title Description: Permit Modification for Non-RCRA Activities - Facility Name Change
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: Mod Class 1 - No Prior Approval Required - RESPONSE TO 1ST REQUEST FOR FUTHER INFORMATION RECEIVED
Actual Date: 02/06/2018

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: New Operating Permit
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2008-11-07 00:00:00
Type: STND
Title Description: New Operating Permit for all WMUs
Due Date: Not reported
Comments: Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - 2ND NOTICE OF DEFICIENCY ISSUED
Actual Date:	10/25/2007
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - FINAL PART A & PART B RECEIVED
Actual Date:	03/27/2008
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	08/24/2018
Comments:	Permit renewal application dated 8/2/2018 was received on 8/24/2018.
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - APPLICATION PART B RECEIVED
Actual Date:	08/24/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Title Description:	Renewal
Due Date:	10/20/2019
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - RESPONSE TO 1ST NOD RECEIVED
Actual Date:	02/20/2020
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	12/21/2020
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - CEQA DETERMINATION
Actual Date:	02/24/2021
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - APPLICATION PART A RECEIVED
Actual Date:	07/02/2004
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Non-RCRA - No Public Mailing (66270.42.5(b))
Permit Being Renewed:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Permit Being Modified:	New Operating Permit
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Mod - Contingency Plan Change
Due Date:	08/05/2020
Comments:	Received notification for address change for the primary emergency coordinator
Unit Names:	Not reported
Event Description:	Mod Non-RCRA - No Public Mailing (66270.42.5(b)) - MODIFICATION REQUEST / NOTIFICATION RECEIVED
Actual Date:	08/05/2020
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	Not reported
Comments:	Pre-application meeting/cost reimbursement estimate review
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - DTSC MEETING WITH APPLICANT
Actual Date:	09/29/2017
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	Not reported
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities (Contingency Plan)
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - RESPONSE TO 1ST REQUEST FOR FUTHER INFORMATION RECEIVED
Actual Date:	01/23/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - FINAL PERMIT
Actual Date:	11/07/2008

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	04/26/2008
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - DRAFT PERMIT
Actual Date:	03/28/2008

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - PUBLIC COMMENT (BEGIN)
Actual Date:	03/28/2008

EPA ID:	CAT080012602

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - FINAL CEQA
Actual Date:	12/03/2009

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	*Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2012-03-23 00:00:00
Type:	STND
Title Description:	Change in format to Contingency Plan
Due Date:	Not reported
Comments:	Public Notice was not required per CCR, title 22, section 66270.42.5(b)(5)
Unit Names:	Not reported
Event Description:	*Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION (EXPIRES)
Actual Date:	12/06/2018

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Unit Names: Unit 1, Unit 2
Event Description: New Operating Permit - DISCLOSURE (CLEARED)
Actual Date: 10/31/2008

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: *Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2016-11-23 00:00:00
Type: STND
Title Description: Notice of Permit Modification for non-RCRA Activities - Contingency Plan
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: *Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION
Actual Date: 11/23/2016

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: *Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2016-11-23 00:00:00
Type: STND
Title Description: Notice of Permit Modification for non-RCRA Activities - Contingency Plan
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: *Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION (EXPIRES)
Actual Date: 12/07/2018

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Permit Being Modified: Not reported
Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: 10/21/2020
Comments: Not reported
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - TECHNICAL COMPLETE LETTER
Actual Date: 10/21/2020

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2019-07-23 00:00:00
Type: STND
Title Description: Permit Modification-Training Plan
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION
Actual Date: 07/23/2019

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes
Permit Being Modified: Not reported
Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: 10/21/2020
Comments: Not reported
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - TECHNICAL REVIEW COMPLETED
Actual Date: 10/16/2020

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - APPLICATION PART B RECEIVED
Actual Date:	01/31/2005

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - TECHNICAL COMPLETE LETTER
Actual Date:	03/27/2008

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	09/04/2020
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - DRAFT CEQA
Actual Date:	08/25/2020

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	06/06/2017
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - CALL-IN LETTER ISSUED
Actual Date:	06/05/2017

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	09/05/2018
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - INITIAL ADMINISTRATIVE REVIEW COMPLETED
Actual Date:	09/05/2018

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - FINAL PERMIT RENEWAL (EXPIRES)
Actual Date:	02/19/2031

EPA ID:	CAT080012602

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Mod Class 1 - No Prior Approval Required
Final Date:	Not reported
Type:	STND
Title Description:	Permit Mode - Tank 6 Replacement
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - CEQA CONSULTATION
Actual Date:	08/18/2021

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	New Operating Permit
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Mod - Facility Name Change
Due Date:	01/30/2019
Comments:	Language included in public notice and community update for the permit renewal (effective 02/20/2021)
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - PUBLIC NOTICE OF MOD BY PERMITTEE
Actual Date:	10/19/2020

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date:	02/09/2007
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	Not reported
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities - Facility Name Change
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - 1ST REQUEST FOR FURTHER INFORMATION
Actual Date:	02/06/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	Not reported
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities - Facility Name Change
Due Date:	Not reported
Comments:	Notice and acknowledgement of Receipt of Permit Modification for Non-RCRA Activities
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date:	01/29/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - TECHNICAL REVIEW BEGIN
Actual Date:	11/19/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	Not reported
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities (Contingency Plan)
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - 1ST REQUEST FOR FURTHER INFORMATION
Actual Date:	01/23/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Non-RCRA - No Public Mailing (66270.42.5(b))
Permit Being Renewed:	Not reported
Permit Being Modified:	Renewal - No Changes
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Modification Notification - Pump Replacement
Due Date:	11/05/2021
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Non-RCRA - No Public Mailing (66270.42.5(b)) - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date:	11/05/2021
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - FINAL PERMIT (EFFECTIVE)
Actual Date:	12/07/2008

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - PUBLIC COMMENT (END)
Actual Date:	05/12/2008

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - FINAL PERMIT (EXPIRES)
Actual Date:	12/06/2018

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	New Operating Permit
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2008-11-07 00:00:00
Type:	STND
Title Description:	New Operating Permit for all WMUs
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2
Event Description:	New Operating Permit - PUBLIC COMMENT (PUBLIC MEETING)
Actual Date:	04/29/2008

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	*Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2012-03-23 00:00:00
Type:	STND
Title Description:	Change in format to Contingency Plan
Due Date:	Not reported
Comments:	Public Notice was not required per CCR, title 22, section 66270.42.5(b)(5)
Unit Names:	Not reported
Event Description:	*Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION
Actual Date:	03/23/2012

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	*Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2012-03-23 00:00:00
Type:	STND
Title Description:	Change in format to Contingency Plan
Due Date:	Not reported
Comments:	Public Notice was not required per CCR, title 22, section 66270.42.5(b)(5)
Unit Names:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Event Description: *Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION (EFFECTIVE)
Actual Date: 03/23/2012

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: *Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2016-11-23 00:00:00
Type: STND
Title Description: Notice of Permit Modification for non-RCRA Activities - Contingency Plan
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: *Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION (EFFECTIVE)
Actual Date: 11/10/2016

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2017-12-15 00:00:00
Type: STND
Title Description: Permit Modification for Non-RCRA Activities (Contingency Plan)
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION
Actual Date: 12/15/2017

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes
Permit Being Modified: Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	08/08/2020
Comments:	Received partial electronic response on 7/6/2020, receive full electronic response on 08/07/2020, received electronic revision on 08/21/2020 in response to DTSC s 8/18/2020 informal comments. Received last permit application on 10/09/2020 with a subsequen
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - RESPONSE TO 2ND NOD RECEIVED
Actual Date:	08/07/2020
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	Not reported
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities (Contingency Plan)
Due Date:	01/23/2018
Comments:	Public Comment is not required
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - PUBLIC NOTICE OF MOD BY PERMITTEE
Actual Date:	01/23/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Mod Class 1 - No Prior Approval Required
Final Date:	Not reported
Type:	STND
Title Description:	Permit Mode - Tank 6 Replacement
Due Date:	08/30/2020
Comments:	Received notification for the replacement of Tank 6 on 8/3/2020
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date:	08/18/2020
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES -

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

	DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2017-12-15 00:00:00
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities (Contingency Plan)
Due Date:	Not reported
Comments:	Acknowledgment of Receipt for Notice of Permit Modification
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date:	12/15/2017
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	New Operating Permit
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Mod - Facility Name Change
Due Date:	08/30/2019
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - RESPONSE TO 1ST REQUEST FOR FUTHER INFORMATION RECEIVED
Actual Date:	08/15/2019
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	Not reported
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities - Facility Name Change
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - UPDATED APPLICATION

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

	RECEIVED
Actual Date:	02/06/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	*Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	2016-09-06 00:00:00
Type:	STND
Title Description:	Class 1 Permit Modification for Contingency Plan
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Not reported
Event Description:	*Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION (EFFECTIVE)
Actual Date:	08/31/2016
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	Not reported
Comments:	Public Notice and Confirmation Letter received on 10/30/18. Facility mailed out to facility mailing list and appropriate state and local agencies
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - PUBLIC NOTICE - PERMIT RECEIVED
Actual Date:	10/26/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: 12/20/2019
Comments: Approved Facility s Request for Deadline Extension
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - 2ND NOTICE OF DEFICIENCY ISSUED
Actual Date: 05/04/2020

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes
Permit Being Modified: Not reported
Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: Not reported
Comments: Not reported
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - PUBLIC COMMENT (END)
Actual Date: 12/16/2020

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes
Permit Being Modified: Not reported
Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: 10/21/2020
Comments: Not reported
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - PUBLIC COMMENT (BEGIN)
Actual Date: 10/19/2020

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	08/24/2018
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - APPLICATION PART A RECEIVED
Actual Date:	08/24/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported
Final Date:	Not reported
Type:	STND
Title Description:	Permit Modification for Non-RCRA Activities (Contingency Plan)
Due Date:	Not reported
Comments:	Notice of Permit Modification for Non RCRA Activities, Acknowledgement of Permit Mod letter
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date:	01/12/2018
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	New Operating Permit
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Mod - Facility Name Change
Due Date:	11/30/2019
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - UPDATED APPLICATION RECEIVED
Actual Date:	10/16/2020
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Non-RCRA - No Public Mailing (66270.42.5(b))
Permit Being Renewed:	Not reported
Permit Being Modified:	New Operating Permit
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Mod - Contingency Plan Change
Due Date:	08/05/2020
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Non-RCRA - No Public Mailing (66270.42.5(b)) - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date:	08/05/2020

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	New Operating Permit
Final Date:	Not reported
Type:	STND
Title Description:	Non-RCRA Permit Mod - Facility Name Change
Due Date:	10/30/2019
Comments:	Not reported
Unit Names:	Not reported
Event Description:	Mod Class 1 - No Prior Approval Required - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date:	05/23/2019

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	12/21/2020
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Event Description: Renewal - No Changes - FINAL CEQA
Actual Date: 01/14/2021

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes
Permit Being Modified: Not reported
Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: 11/15/2020
Comments: Not reported
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - DRAFT PERMIT RENEWAL
Actual Date: 10/19/2020

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: New Operating Permit
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2008-11-07 00:00:00
Type: STND
Title Description: New Operating Permit for all WMUs
Due Date: Not reported
Comments: Not reported
Unit Names: Unit 1, Unit 2
Event Description: New Operating Permit - CALL-IN LETTER ISSUED
Actual Date: 01/31/2005

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: *Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2016-09-06 00:00:00
Type: STND
Title Description: Class 1 Permit Modification for Contingency Plan

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) S113179584

Due Date:	Not reported
Comments:	Not reported
Unit Names:	Not reported
Event Description:	*Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION
Actual Date:	09/06/2016
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	Not reported
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - FINAL PERMIT RENEWAL (EFFECTIVE)
Actual Date:	02/20/2021
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Renewal - No Changes
Permit Being Renewed:	Renewal - No Changes
Permit Being Modified:	Not reported
Final Date:	2021-01-19 00:00:00
Type:	STND
Title Description:	Renewal
Due Date:	12/31/2020
Comments:	Not reported
Unit Names:	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description:	Renewal - No Changes - FINAL PERMIT RENEWAL
Actual Date:	01/19/2021
EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Facility Status:	OPERATING PERMIT
Activity Type:	Mod Class 1 - No Prior Approval Required
Permit Being Renewed:	Not reported
Permit Being Modified:	Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Final Date: 2019-07-23 00:00:00
Type: STND
Title Description: Permit Modification-Training Plan
Due Date: Not reported
Comments: Not reported
Unit Names: Not reported
Event Description: Mod Class 1 - No Prior Approval Required - FINAL PERMIT MODIFICATION (EFFECTIVE)
Actual Date: 06/18/2019

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Renewal - No Changes
Permit Being Renewed: Renewal - No Changes
Permit Being Modified: Not reported
Final Date: 2021-01-19 00:00:00
Type: STND
Title Description: Renewal
Due Date: 09/20/2019
Comments: Received Disclosure Statement Completeness Determination Ltr on 09/12/2019
Unit Names: Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Event Description: Renewal - No Changes - 1ST NOTICE OF DEFICIENCY ISSUED
Actual Date: 09/23/2019

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Activity Type: Mod Class 1 - No Prior Approval Required
Permit Being Renewed: Not reported
Permit Being Modified: Not reported
Final Date: 2019-07-23 00:00:00
Type: STND
Title Description: Permit Modification-Training Plan
Due Date: Not reported
Comments: Exempted Non-RCRA Activities
Unit Names: Not reported
Event Description: Mod Class 1 - No Prior Approval Required - ACKNOWLEDGEMENT OF PERMIT MOD LETTER
Actual Date: 07/23/2019

Closure:
EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Size: Standardized Series B
Facility Status: OPERATING PERMIT
Activity Type: Closure Administrative
Final Date: Not reported
Type: STND
Title Description: Unit 1 and 2 have been redefined into Unit 1, 2 and 3
Due Date: Not reported
Comments: Closing Unit 1 and Unit 2 in 2008 permit activity
Unit Names: Unit 1, Unit 2
Event Description: Closure Administrative - ISSUE CLOSURE VERIFICATION
Actual Date: 07/30/2021

Maint:
EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Title: 66264.16(f) Training Certification
Document Type: Certification Documents from Facility
Receive Date: 07/09/2021
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Due Date: Not reported

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Title: 20210422_Letter to DTSC Unit-Delineation_WOES-Dixon
Document Type: Permit Condition Implementation
Receive Date: 07/09/2021
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Due Date: 08/01/2021

EPA ID: CAT080012602
Facility Type: Permitted - Operating
Facility Name: ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Title: World Oil Environmental Services - Dixon Notification of PCB contaminated Oil
Document Type: Correspondence
Receive Date: 10/09/2020
Project Manager: H.W. PRISCILLIA CHONG
Project Manager Lead: H.W. PRISCILLIA CHONG
Supervisor: CAMILLE ROGADO
Facility Status: OPERATING PERMIT
Due Date: Not reported

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

Alias:

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Facility Status:	OPERATING PERMIT
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Alias Type:	Project Code (Site Code)
Alias:	101708

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Facility Status:	OPERATING PERMIT
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Alias Type:	FRS
Alias:	110002945804

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Facility Status:	OPERATING PERMIT
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Alias Type:	Alternate Name
Alias:	D/K Dixon

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Facility Status:	OPERATING PERMIT
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Alias Type:	Alternate Name
Alias:	DK Dixon

EPA ID:	CAT080012602
Facility Type:	Permitted - Operating
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Facility Status:	OPERATING PERMIT
Project Manager:	H.W. PRISCILLIA CHONG
Project Manager Lead:	H.W. PRISCILLIA CHONG
Supervisor:	CAMILLE ROGADO
Alias Type:	Alternate Name
Alias:	Previously owned by BC Stocking

ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SE (Continued) **S113179584**

HWTS:

Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Address:	7300 CHEVRON WAY
Address 2:	Not reported
City,State,Zip:	DIXON, CA 95620
EPA ID:	CAT080012602
Inactive Date:	Not reported
Create Date:	07/23/1982
Last Act Date:	Not reported
Mailing Name:	Not reported
Mailing Address:	7300 CHEVRON WAY
Mailing Address 2:	Not reported
Mailing City,State,Zip:	DIXON, CA 956200000
Owner Name:	WORLD OIL ENVIRONMENTAL SERVICES
Owner Address:	1300 S SANTA FE AVE
Owner Address 2:	Not reported
Owner City,State,Zip:	COMPTON, CA 90221
Contact Name:	JASON CHASE
Contact Address:	7300 CHEVRON WAY
Contact Address 2:	Not reported
City,State,Zip:	DIXON, CA 956200000
Facility Status:	Active
Facility Type:	PERMANENT
Category:	FEDERAL
Latitude:	38.414213
Longitude:	-121.894608

NAICS:

EPA ID:	CAT080012602
Create Date:	2009-12-03 12:41:18.000
NAICS Code:	562119
NAICS Description:	Other Waste Collection
Issued EPA ID Date:	1982-07-23 00:00:00
Inactive Date:	Not reported
Facility Name:	ADVANCED ENVIRONMENTAL, INC., DBA WORLD OIL ENVIRONMENTAL SERVICES - DIXON
Facility Address:	7300 CHEVRON WAY
Facility Address 2:	Not reported
Facility City:	DIXON
Facility County:	Not reported
Facility State:	CA
Facility Zip:	956200000

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/01/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 9

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/22/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/07/2022
Date Data Arrived at EDR: 02/08/2022
Date Made Active in Reports: 05/05/2022
Number of Days to Update: 86

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 12/01/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 03/02/2022
Number of Days to Update: 85
Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/10/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 77
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/15/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 09/14/2021
Date Data Arrived at EDR: 11/11/2021
Date Made Active in Reports: 11/23/2021
Number of Days to Update: 12

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Quarterly

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 12/10/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 03/11/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 02/03/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/24/2022
Date Data Arrived at EDR: 02/25/2022
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 78

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/15/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 84

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 10/26/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/15/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/06/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/13/2021
Date Data Arrived at EDR: 12/17/2021
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/06/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/18/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/18/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/19/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/12/2021
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 22

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 87

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/06/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 70

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 19

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/21/2022
Date Data Arrived at EDR: 03/22/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 3

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/02/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/23/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/14/2021
Date Data Arrived at EDR: 12/15/2021
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 85

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/04/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/04/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 95

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/22/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 78

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/16/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 77

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/27/2021
Date Data Arrived at EDR: 09/01/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 79

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 11/17/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/07/2022
Number of Days to Update: 81

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 77

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 78

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/18/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 11/10/2021
Date Data Arrived at EDR: 11/11/2021
Date Made Active in Reports: 02/03/2022
Number of Days to Update: 84

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 84

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/18/2021
Date Data Arrived at EDR: 11/19/2021
Date Made Active in Reports: 02/07/2022
Number of Days to Update: 80

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/03/2022
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/15/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/18/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/17/2022
Number of Days to Update: 79

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/07/2022
Date Data Arrived at EDR: 02/08/2022
Date Made Active in Reports: 05/05/2022
Number of Days to Update: 86
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/17/2022
Number of Days to Update: 79
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 74
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/13/2021
Date Data Arrived at EDR: 12/14/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 79
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/09/2022
Next Scheduled EDR Contact: 06/26/2022
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/03/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/24/2022
Number of Days to Update: 79
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 79
Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/23/2022
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/05/2022
Date Data Arrived at EDR: 04/05/2022
Date Made Active in Reports: 04/26/2022
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 12/28/2021
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 80

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 02/04/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 12/28/2021
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 80

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/17/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 79

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/26/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 12/01/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/06/2022
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 02/10/2022
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 82

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/10/2022
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 82

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 03/24/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List

Cupa facility list

Date of Government Version: 02/10/2022
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 82

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List

Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 03/10/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/04/2022
Date Data Arrived at EDR: 04/05/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 8

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 04/04/2022
Number of Days to Update: 83

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/21/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/23/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/12/2022
Date Made Active in Reports: 04/04/2022
Number of Days to Update: 82

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/13/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 11

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 09/14/2021
Number of Days to Update: 89
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 05/26/2021
Date Data Arrived at EDR: 07/09/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 82
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72
Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/23/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/24/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 74

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 03/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 01/26/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/02/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/02/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/01/2022
Date Made Active in Reports: 04/18/2022
Number of Days to Update: 76

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/03/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/01/2021
Date Data Arrived at EDR: 12/02/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 85
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64
Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/31/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 8
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/31/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 8
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/14/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 06/18/2021
Date Data Arrived at EDR: 09/28/2021
Date Made Active in Reports: 12/14/2021
Number of Days to Update: 77
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/02/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 11/02/2021
Number of Days to Update: 90
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 04/29/2022
Date Data Arrived at EDR: 04/29/2022
Date Made Active in Reports: 05/05/2022
Number of Days to Update: 6

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/01/2021
Date Data Arrived at EDR: 12/02/2021
Date Made Active in Reports: 02/17/2022
Number of Days to Update: 77

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 11/30/2021
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/16/2022
Number of Days to Update: 78

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 02/28/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 02/03/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 7
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 02/03/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

SAN FRANCISO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing
a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/27/2022
Number of Days to Update: 97
Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 05/06/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/10/2022
Next Scheduled EDR Contact: 06/27/2022
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/03/2022
Number of Days to Update: 79

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/11/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/19/2021
Date Data Arrived at EDR: 11/22/2021
Date Made Active in Reports: 02/07/2022
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/17/2022
Next Scheduled EDR Contact: 06/06/2022
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 11/23/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 74

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/24/2022
Next Scheduled EDR Contact: 06/13/2022
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 82

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/06/2022
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 04/26/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/27/2021
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 78

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/23/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/27/2021
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 81
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/29/2021
Date Data Arrived at EDR: 12/07/2021
Date Made Active in Reports: 02/24/2022
Number of Days to Update: 79
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/08/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/27/2021
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 73
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/24/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/26/2022
Date Data Arrived at EDR: 01/27/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 77
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/03/2021
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/06/2022
Number of Days to Update: 84
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/07/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/14/2022
Next Scheduled EDR Contact: 05/30/2022
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 06/20/2022
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WEBER ROAD PROPERTY
NOT REPORTED
VACAVILLE, CA 95687

TARGET PROPERTY COORDINATES

Latitude (North):	38.406266 - 38ˆ 24’ 22.56’’
Longitude (West):	121.904704 - 121ˆ 54’ 16.93’’
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	595634.9
UTM Y (Meters):	4251254.0
Elevation:	79 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12021563 ALLENDALE, CA
Version Date:	2018
Northeast Map:	12021587 DIXON, CA
Version Date:	2018
Southeast Map:	12021589 DOZIER, CA
Version Date:	2018
South Map:	12021597 ELMIRA, CA
Version Date:	2018

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

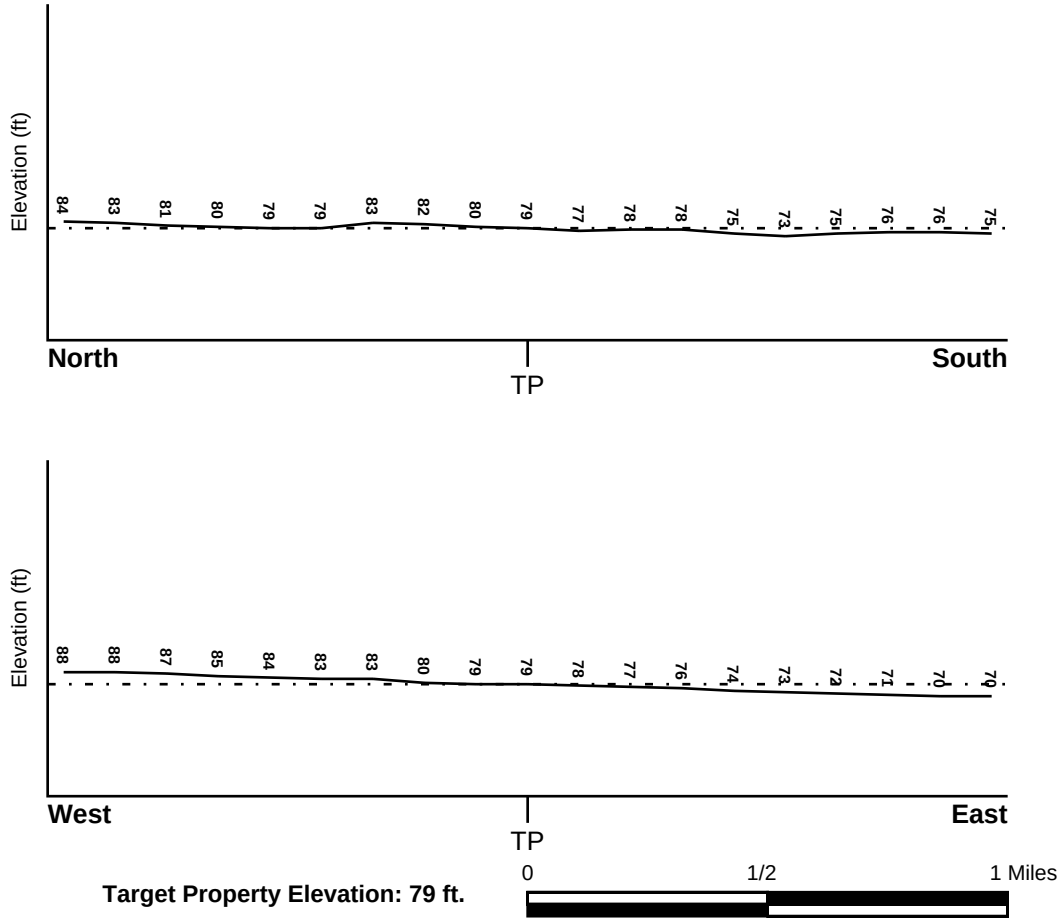
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06095C0169E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06095C0166F	FEMA FIRM Flood data
06095C0167F	FEMA FIRM Flood data
06095C0168E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ALLENDALE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

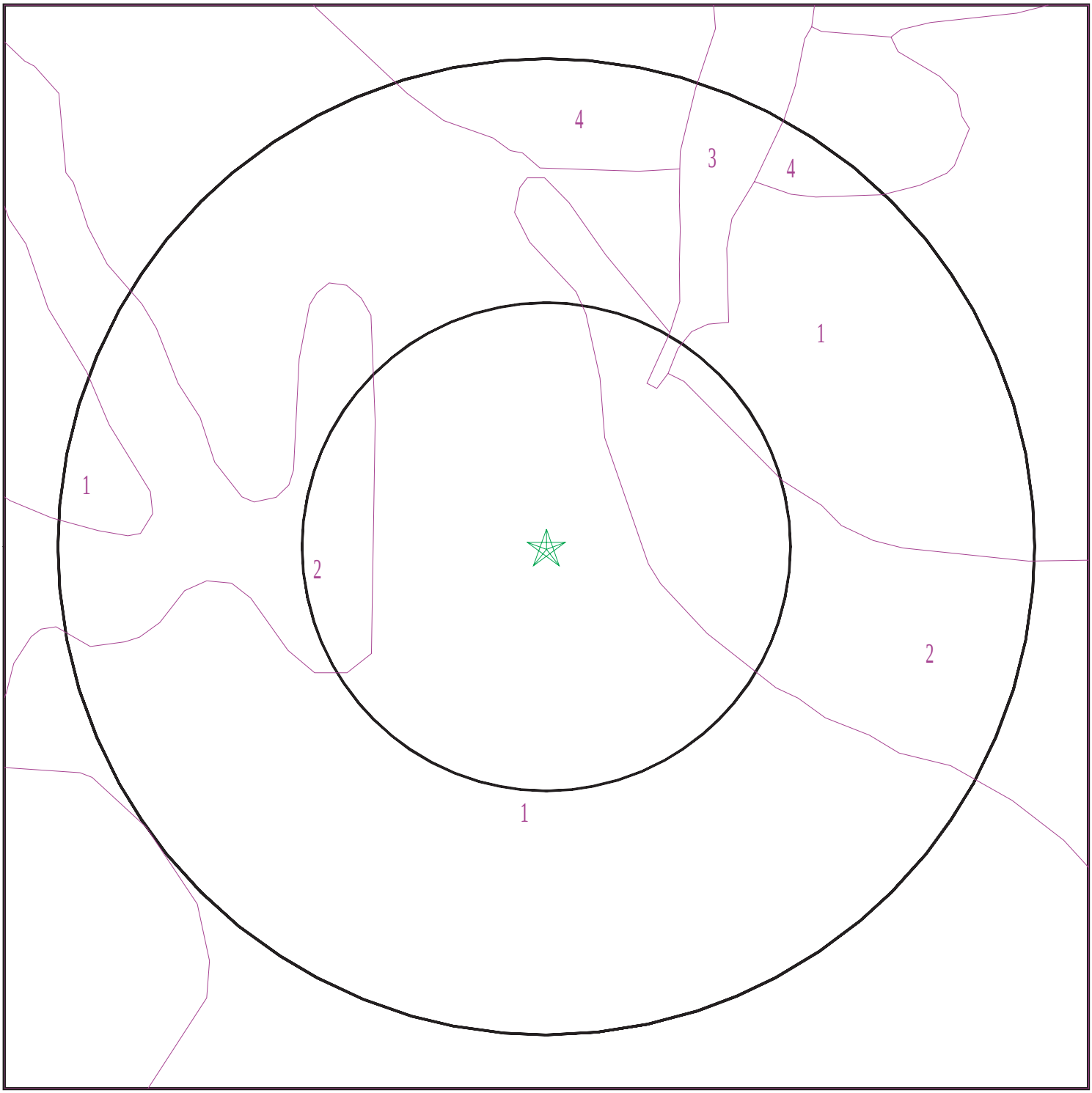
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6972357.2s



SITE NAME:	Weber Road Property	CLIENT:	Gribi Associates
ADDRESS:	Not Reported Vacaville CA 95687	CONTACT:	Jim Gribi
		INQUIRY #:	6972357.2s
LAT/LONG:	38.406266 / 121.904704	DATE:	May 09, 2022 3:12 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: San Ysidro

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	14 inches	27 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
3	27 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
4	53 inches	68 inches	stratified sandy loam to clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 2

Soil Component Name: Clear Lake

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 138 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	44 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.4
2	44 inches	59 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.4

Soil Map ID: 3

Soil Component Name: Water

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 4

Soil Component Name: San Ysidro

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	14 inches	27 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
3	27 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	53 inches	68 inches	stratified sandy loam to clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
C10	USGS40000188091	1/2 - 1 Mile SSW
15	USGS40000188227	1/2 - 1 Mile North
16	USGS40000188193	1/2 - 1 Mile NW
17	USGS40000188155	1/2 - 1 Mile East

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

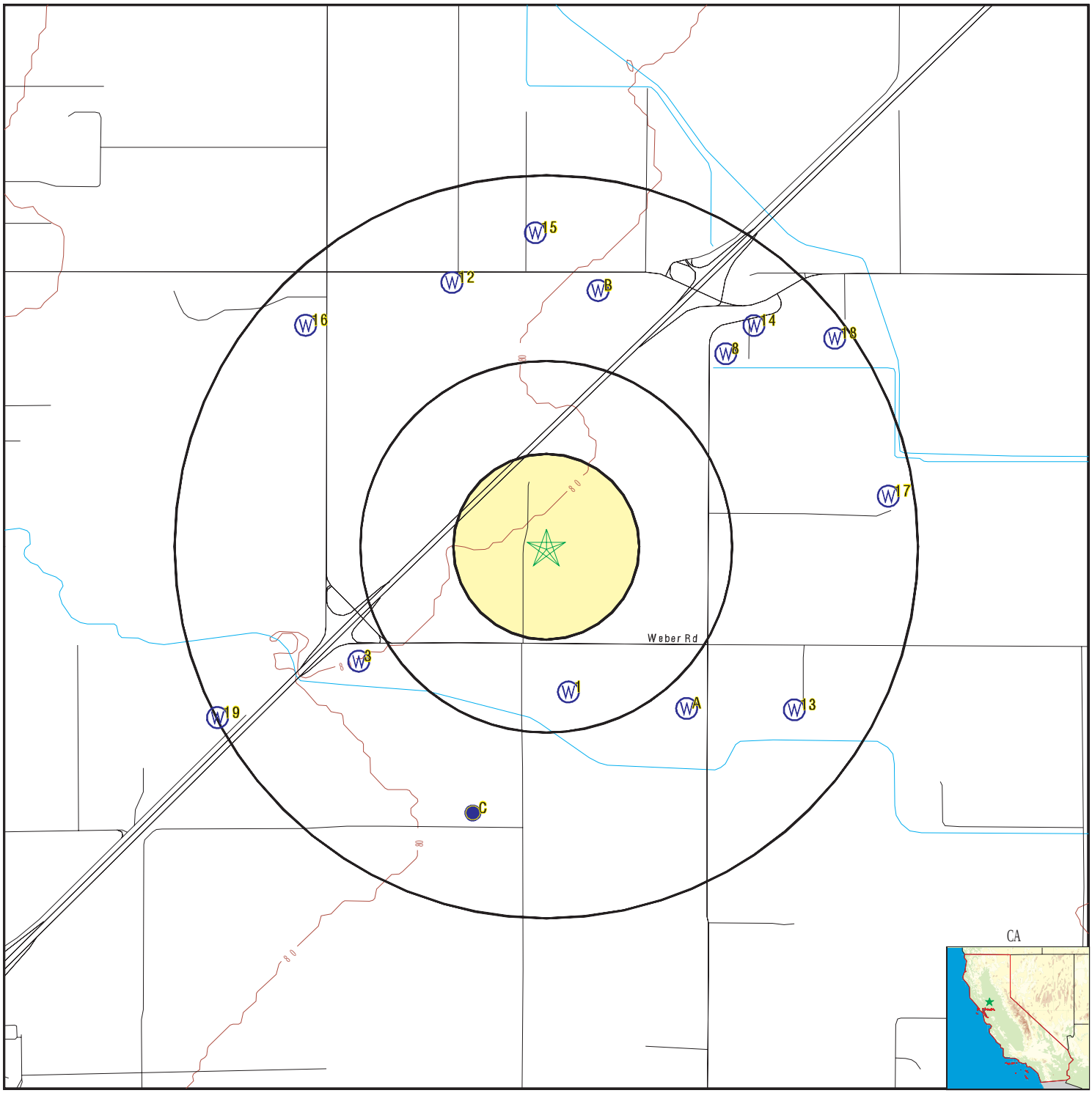
MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CADPR0000003104	1/4 - 1/2 Mile South
A2	6483	1/2 - 1 Mile SE
3	CADWR9000039112	1/2 - 1 Mile WSW
A4	CADDW0000013926	1/2 - 1 Mile SE
B5	CADWR9000039160	1/2 - 1 Mile NNE
B6	CADDW0000016514	1/2 - 1 Mile North
B7	CADWR9000039161	1/2 - 1 Mile NNE
8	CADDW0000018525	1/2 - 1 Mile NE
C9	CADWR0000034293	1/2 - 1 Mile SSW
C11	CAUSGSN00009459	1/2 - 1 Mile SSW
12	7286	1/2 - 1 Mile NNW
13	CADPR0000003036	1/2 - 1 Mile ESE
14	CADDW0000022526	1/2 - 1 Mile NE
18	CAEDF0000136431	1/2 - 1 Mile NE
19	CADWR9000039107	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 6972357.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Weber Road Property	CLIENT:	Gribi Associates
ADDRESS:	Not Reported Vacaville CA 95687	CONTACT:	Jim Gribi
		INQUIRY #:	6972357.2s
LAT/LONG:	38.406266 / 121.904704	DATE:	May 09, 2022 3:12 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
South
1/4 - 1/2 Mile
Lower

CA WELLS **CADPR0000003104**

Well ID:	97370	Well Type:	UNK
Source:	Department of Pesticide Regulation		
Other Name:	97370	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DPR&samp_date=&global_id=&assigned_name=97370&store_num=		
GeoTracker Data:	Not Reported		

A2
SE
1/2 - 1 Mile
Lower

CA WELLS **6483**

Seq:	6483	Prim sta c:	06N/01E-06A02 M
Frds no:	4800716001	County:	48
District:	04	User id:	ENG
System no:	4800716	Water type:	G
Source nam:	WELL 01 - INACTIVE	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	382400.0	Longitude:	1215350.0
Precision:	3	Status:	IR
Comment 1:	7035 LEWIS RD VACAVILLE-LOCATED IN FARMING AREA-MAINLY ROW CROPS		
Comment 2:	Not Reported	Comment 3:	Not Reported
Comment 4:	Not Reported	Comment 5:	Not Reported
Comment 6:	Not Reported	Comment 7:	Not Reported
System no:	4800716	System nam:	Douglas Rentals
Hqname:	Not Reported	Address:	Not Reported
City:	Not Reported	State:	Not Reported
Zip:	Not Reported	Zip ext:	Not Reported
Pop serv:	0	Connection:	0
Area serve:	Not Reported		

3
WSW
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000039112**

State Well #:	06N01E06D001M	Station ID:	27640
Well Name:	06N01E06D001M	Basin Name:	Solano
Well Use:	Unknown	Well Type:	Single Well
Well Depth:	90	Well Completion Rpt #:	Not Reported

A4
SE
1/2 - 1 Mile
Lower

CA WELLS **CADDW0000013926**

Well ID:	4800716-001	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 01 - INACTIVE	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=4800716-001&store_num=		

GeoTracker Data: Not Reported

B5
NNE **CA WELLS** **CADWR9000039160**
1/2 - 1 Mile
Higher

State Well #:	Not Reported	Station ID:	48479
Well Name:	CofV MW-98C	Basin Name:	Solano
Well Use:	Observation	Well Type:	Single Well
Well Depth:	2326	Well Completion Rpt #:	823441/823442

B6
North **CA WELLS** **CADDW0000016514**
1/2 - 1 Mile
Higher

Well ID:	4810008-025	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	DE MELLO WELL - STANDBY	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=4810008-025&store_num=		
GeoTracker Data:	Not Reported		

B7
NNE **CA WELLS** **CADWR9000039161**
1/2 - 1 Mile
Higher

State Well #:	Not Reported	Station ID:	48480
Well Name:	CofV DeMello MW-95ft	Basin Name:	Solano
Well Use:	Observation	Well Type:	Single Well
Well Depth:	95	Well Completion Rpt #:	726580

8
NE **CA WELLS** **CADDW0000018525**
1/2 - 1 Mile
Lower

Well ID:	4810029-001	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 01	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=4810029-001&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C9
SSW
1/2 - 1 Mile
Higher

CA WELLS **CADWR0000034293**

Well ID:	06N01E06F002M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	06N01E06F002M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=06N01E06F002M&store_num=		
GeoTracker Data:	Not Reported		

C10
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000188091**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N001E06F002M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Alluvial Fan Deposits	Aquifer Type:	Not Reported
Construction Date:	19751227	Well Depth:	100
Well Depth Units:	ft	Well Hole Depth:	100
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1980-01-22
Feet below surface:	6.35	Feet to sea level:	Not Reported
Note:	Not Reported		

C11
SSW
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00009459**

Well ID:	USGS-382345121542501	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-382345121542501	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-382345121542501&store_num=		
GeoTracker Data:	Not Reported		

12
NNW
1/2 - 1 Mile
Higher

CA WELLS **7286**

Seq:	7286	Prim sta c:	07N/01E-32D03 M
Frds no:	4800767001	County:	48
District:	04	User id:	ENG
System no:	4800767	Water type:	G

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Source nam:	STOCKING RANCH DEEPWELL 39 - SID	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	382500.0	Longitude:	1215430.0
Precision:	4	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	4800767	System nam:	Sid - Stocking Ranch
Hqname:	Not Reported	Address:	Not Reported
City:	Not Reported	State:	Not Reported
Zip:	Not Reported	Zip ext:	Not Reported
Pop serv:	0	Connection:	0
Area serve:	Not Reported		

Sample date:	04-APR-17	Finding:	0.81
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		

Sample date:	04-APR-17	Finding:	12.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		

Sample date:	04-APR-17	Finding:	290.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		

Sample date:	04-APR-17	Finding:	0.24
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		

Sample date:	04-APR-17	Finding:	97.
Chemical:	MANGANESE	Report units:	UG/L
Dlr:	20.		

Sample date:	04-APR-17	Finding:	320.
Chemical:	IRON	Report units:	UG/L
Dlr:	100.		

Sample date:	04-APR-17	Finding:	110.
Chemical:	BARIUM	Report units:	UG/L
Dlr:	100.		

Sample date:	04-APR-17	Finding:	7.9
Chemical:	ARSENIC	Report units:	UG/L
Dlr:	2.		

Sample date:	04-APR-17	Finding:	22.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		

Sample date:	04-APR-17	Finding:	10.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		

Sample date:	04-APR-17	Finding:	85.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	04-APR-17	Finding:	8.3
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	04-APR-17	Finding:	17.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-APR-17	Finding:	78.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	04-APR-17	Finding:	260.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	04-APR-17	Finding:	220.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	04-APR-17	Finding:	8.2
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	04-APR-17	Finding:	480.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	04-APR-17	Finding:	2.3
Chemical:	ODOR THRESHOLD @ 60 C	Report units:	TON
Dlr:	1.		
Sample date:	15-MAY-14	Finding:	0.46
Chemical:	LANGELIER INDEX @ 60 C	Report units:	Not Reported
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	24.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	15-MAY-14	Finding:	12.
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	480.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	8.4
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	280.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	83.
Chemical:	MANGANESE	Report units:	UG/L
Dlr:	20.		
Sample date:	15-MAY-14	Finding:	170.
Chemical:	IRON	Report units:	UG/L
Dlr:	100.		
Sample date:	15-MAY-14	Finding:	110.
Chemical:	BARIUM	Report units:	UG/L

Dlr:	100.		
Sample date:	15-MAY-14	Finding:	6.7
Chemical:	ARSENIC	Report units:	UG/L
Dlr:	2.		
Sample date:	15-MAY-14	Finding:	0.59
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	15-MAY-14	Finding:	9.3
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	86.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	7.5
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	18.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	76.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	4.1
Chemical:	CARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	260.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	15-MAY-14	Finding:	220.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	23-JAN-13	Finding:	1.16
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	23-JAN-13	Finding:	0.191
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		

13
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADPR0000003036**

Well ID:	97368	Well Type:	UNK
Source:	Department of Pesticide Regulation		
Other Name:	97368	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DPR&samp_date=&global_id=&assigned_name=97368&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

14
NE
1/2 - 1 Mile
Lower

CA WELLS **CADDW0000022526**

Well ID:	4800767-001	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	STOCKING RANCH DEEPWELL 39 - SID		
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=4800767-001&store_num=		
GeoTracker Data:	Not Reported		

15
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000188227**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	007N001E30Q001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19780908	Well Depth:	122
Well Depth Units:	ft	Well Hole Depth:	122
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1979-12-04
Feet below surface:	8.05	Feet to sea level:	Not Reported
Note:	Not Reported		

16
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000188193**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	007N001W36A001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19540417	Well Depth:	395
Well Depth Units:	ft	Well Hole Depth:	395
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1980-03-18
Feet below surface:	6.93	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

17
East
1/2 - 1 Mile
Lower

FED USGS **USGS40000188155**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	007N001E32L001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19530515	Well Depth:	128
Well Depth Units:	ft	Well Hole Depth:	154
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1979-12-18
Feet below surface:	13.0	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1953-05-15	Feet below surface:	41.00
Feet to sea level:	Not Reported	Note:	Not Reported

18
NE
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000136431**

Well ID:	T0609563546-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0609563546&assigned_name=MW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0609563546&assigned_name=MW-1		

19
WSW
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000039107**

State Well #:	06N01W01B001M	Station ID:	27642
Well Name:	PG&E	Basin Name:	Solano
Well Use:	Unknown	Well Type:	Single Well
Well Depth:	150	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95687	29	2

Federal EPA Radon Zone for SOLANO County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 95687

Number of sites tested: 7

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.529 pCi/L	71%	29%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Appendix H CONSTRUCTION NOISE CALCULATIONS

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/29/2023
Case Description: Weber Road - Erosion Control

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Single Family Home Alc	Residential	60	55	50

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Front End Loader	No	40		79.1	234	0
Pickup Truck	No	40		75	234	0

Results

	Calculated (dBA)	
Equipment	Lmax	Leq
Front End Loader	65.7	61.7
Pickup Truck	61.6	57.6
Total	**67.1**	**63.2**

Report date: 7/29/2023
Case Description: Weber Road - Earthwork

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Single Family Home Along B	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	234	0
Scraper	No	40		83.6	234	0
Grader	No	40	85		234	0
Compactor (ground)	No	20		83.2	234	0
Water Truck	No	40		76.5	234	0
Pickup Truck	No	40		75	234	0

Results

	Calculated (dBA)	
Equipment	Lmax	Leq
Dozer	68.3	64.3
Scraper	70.2	66.2
Grader	71.6	67.6
Compactor (ground)	69.8	62.8
Water Truck	63.1	59.1
Pickup Truck	61.6	57.6
Total	**76.5**	**72**

Report date: 7/29/2023
Case Description: Weber Road - Lime / Treat / Subgrade

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Single Family Home Along	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Mixer Truck	No	40		78.8	234	0
Spreader	No	40		76.5	234	0
Compactor (ground)	No	20		83.2	234	0
Water Truck	No	40		76.5	234	0
Pickup Truck	No	40		75	234	0

Results

	Calculated (dBA)	
Equipment	Lmax	Leq
Concrete Mixer Truck	65.4	61.4
Spreader	63.1	59.1
Compactor (ground)	69.8	62.8
Water Truck	63.1	59.1
Pickup Truck	61.6	57.6
Total	**72.7**	**67.4**

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/29/2023
Case Description: Weber Road - Site Utilities

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Single Family Home Along	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	234	0
Compactor (ground)	No	20		83.2	234	0
Front End Loader	No	40		79.1	234	0
Water Truck	No	40		76.5	234	0
Pickup Truck	No	40		75	234	0

Results

	Calculated (dBA)	
Equipment	Lmax	Leq
Excavator	67.3	63.3
Compactor (ground)	69.8	62.8
Front End Loader	65.7	61.7
Water Truck	63.1	59.1
Pickup Truck	61.6	57.6
Total	**73.4**	**68.4**

Report date: 7/29/2023
Case Description: Weber Road - Aggregate Base

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Single Family Home Alon	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		234	0
Front End Loader	No	40		79.1	234	0
Compactor (ground)	No	20		83.2	234	0
Water Truck	No	40		76.5	234	0
Pickup Truck	No	40		75	234	0

Results

	Calculated (dBA)	
Equipment	Lmax	Leq
Grader	71.6	67.6
Front End Loader	65.7	61.7
Compactor (ground)	69.8	62.8
Water Truck	63.1	59.1
Pickup Truck	61.6	57.6
Total	**74.9**	**70.2**

Report date: 7/29/2023
Case Description: Weber Road - Asphalt Paving

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Single Family Home Along I	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	234	0
Front End Loader	No	40		79.1	234	0
Compactor (ground)	No	20		83.2	234	0
Water Truck	No	40		76.5	234	0
Pickup Truck	No	40		75	234	0

Results

	Calculated (dBA)	
Equipment	Lmax	Leq
Paver	63.8	60.8
Front End Loader	65.7	61.7
Compactor (ground)	69.8	62.8
Water Truck	63.1	59.1
Pickup Truck	61.6	57.6
Total	**72.8**	**67.8**